

RELATÓRIO DE ATIVIDADES E CONTAS

ANNUAL REPORT





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MENSAGEM DA DIREÇÃO

MESSAGE FROM THE BOARD

Este documento resume as principais atividades desenvolvidas no Departamento de Engenharia Química (DEQ) da FEUP em 2024, coincidindo com o início do terceiro mandato desta Comissão Executiva. Este ano representou um período de consolidação e de transição responsável. Mantivemos a estrutura organizativa até novembro e realizámos, nesse mês, as eleições para um novo Conselho de Departamento e para Diretor, preparando a integração do Departamento de Engenharia Física (DEF) no novo Departamento de Engenharia Química e Biológica (DEQB), cuja eficácia prática apenas se iniciou em 2025. Por isso, este Relatório retrata exclusivamente a atividade do DEQ no ano civil de 2024.

Em recursos humanos, destaca-se a contratação, em fevereiro, da Prof.^a Auxiliar Vera Maria Ferreira da Cruz Homem e a passagem de três investigadores - Ana Rita Lado Teixeira Ribeiro, Anabela Portela Borges e Miguel Ángel Soria Zúñiga - para contratos por tempo indeterminado, consolidando equipas e competências estratégicas do ALiCE. A todos, desejamos uma carreira de sucesso e que tenham um contributo significativo para as atividades do departamento e das unidades de I&D em que estão inseridos.

O ano de 2024 ficará ainda marcado pela aposentação da Prof.^a Maria Arminda Costa Alves, a quem deixamos um profundo agradecimento pelo contributo determinante no desenvolvimento do DEQ, destacando-se o seu papel na consolidação da área de Métodos Instrumentais de Análise e as suas enormes qualidades como gestora universitária e de ciência, incluindo diretora do DEQ durante 8 anos, coordenadora da unidade de investigação LEPABE durante

10 anos, e o seu papel verdadeiramente decisivo na criação do laboratório associado ALiCE, que reúne atualmente as 3 unidades de investigação do DEQB. Teve ainda um papel crítico para a estabilização da carreira de investigadores do DEQ.

No ensino, assegurámos 681 horas letivas semanais no ano letivo 2023/24, com 96 % desse esforço concentrado nas licenciaturas e mestrados com intervenção do DEQ, servindo 591 estudantes em equivalentes a tempo integral. Em termos de serviço docente, o quadro permanente correspondeu a 32 docentes, reforçado por investigadores das unidades de I&D e por especialistas convidados, garantindo uma cobertura sólida das áreas nucleares e aplicadas. Para o normal funcionamento da atividade letiva, em especial da componente laboratorial, houve um grande contributo do corpo técnico do departamento. Mantivemos ainda uma oferta dinâmica de formação contínua, com nove cursos/unidades, reforçando a ligação às escolas, à indústria e à sociedade.

Uma palavra de confiança e votos de sucesso pessoal e profissional para os 22 doutorados, envolvendo orientadores do DEQ, e para os 183 licenciados e 170 mestres dos cursos com intervenção do DEQ, que concluíram a sua formação na FEUP em 2024.

Em infraestruturas e equipamentos, 2024 marcou a criação e instalação do Laboratório de Cultura Celular, o arranque da intervenção no piso 1 da ETAR (Edifício R) e a assunção da gestão de um SEM de bancada, cedido pelo LSRE-LCM, agora disponível para a comunidade do DEQ. Prosseguimos o investimento em equipamentos de apoio ao ensino e à

investigação (nomeadamente um refratómetro tipo Abbe, um homogeneizador de bancada e uma câmara de fluxo laminar). Destaca-se ainda a inauguração do laboratório e.Biofilm (ERA Chair, 24 de abril) e do laboratório ERA | ARE (bolsa ERC, 20 de setembro), os quais expandem a nossa capacidade instalada em áreas emergentes.

No eixo Ambiente, Segurança e Sustentabilidade, mantivemos a calibração anual dos detetores de hidrogénio, a recolha regular de resíduos laboratoriais e o registo/monitorização de incidentes, promovendo práticas preventivas e cultura de segurança.

Nas atividades de Investigação e Desenvolvimento, em 2024 destaca-se a publicação de 1 livro de autor e de cerca de 400 artigos em revistas científicas internacionais indexadas no JCR e/ou SCOPUS, o início de 14 novos projetos de ID&T com um orçamento para a FEUP de cerca de 2 milhões de euros, a criação de uma nova spin-off e a concessão/submissão de 15 patentes.

A comprovar a qualidade da investigação que se desenvolve nas unidades de investigação do DEQ, realçam-se os vários prémios que distinguiram docentes, investigadores e técnicos do departamento. Entre estes, a inclusão do Prof. Manuel Simões nos Highly Cited Researchers 2023 pela Clarivate Analytics; os 26 investigadores do DEQ incluídos nas listas dos mais influentes do mundo no estudo da Universidade de Stanford; e os 22 investigadores mencionados na lista de melhores investigadores por área temática, elaborada pela Research.com.

A área da Engenharia Química da U. Porto manteve a sua posição de liderança a nível nacional e é das poucas áreas desta universidade genericamente classificada no top 50 europeu e nas 200 primeiras a nível mundial nos diversos rankings internacionais.

Entramos em 2025 com a responsabilidade acrescida da integração do antigo DEF no DEQ, cuja nova designação será DEQB, convictos da relevância da nossa missão - liderar na formação, investigação e intervenção na sociedade nas áreas das engenharias Química, Biológica, Ambiente e Física - e dos valores que nos orientam: ética, procura da verdade, cultura de solidariedade, promoção da pessoa, liberdade com iniciativa, e desenvolvimento sustentável. A todos os docentes, investigadores, técnicos, estudantes e parceiros institucionais, o nosso sincero reconhecimento pelo trabalho realizado em 2024.

MENSAGEM DA DIREÇÃO

MESSAGE FROM THE BOARD

This document summarizes the main activities carried out in the Department of Chemical Engineering (DEQ) of FEUP in 2024, coinciding with the start of this Executive Committee's third term. The year represented a period of consolidation and responsible transition. We maintained the organizational structure until November and, in that month, held elections for a new Department Council and for the Director, preparing the integration of the Department of Physics Engineering (DEF) into the new Department of Chemical and Biological Engineering (DEQB), whose practical effectiveness only began in 2025. Accordingly, this Report covers exclusively the activity of the DEQ in the 2024 calendar year.

In human resources, a particular highlight was the hiring, in February, of Assistant Professor Vera Maria Ferreira da Cruz Homem, and the transition of three researchers — Ana Rita Lado Teixeira Ribeiro, Anabela Portela Borges, and Miguel Ángel Soria Zúñiga — to open-ended contracts, consolidating teams and strategic competencies within ALiCE. We wish them successful careers and a significant contribution to the activities of the department and of the R&D units in which they are embedded.

The year 2024 was also marked by the retirement of Professor Maria Arminda Costa Alves, to whom we express our profound gratitude for her decisive contribution to the development of the DEQ, notably through the consolidation of the Instrumental Methods of Analysis area and her outstanding qualities as a university and

science manager — including serving as DEQ Director for eight years, Coordinator of the LEPABE research unit for ten years, and playing a truly decisive role in the creation of the ALiCE associated laboratory, which currently brings together the three research units of the DEQB. She also played a critical role in stabilizing research careers within the DEQ.

In education, we ensured 681 weekly contact hours in the 2023/24 academic year, with 96 % of this effort concentrated in the bachelor's and master's programs involving the DEQ, serving 591 full-time-equivalent students. In terms of teaching service, the permanent staff comprised 32 faculty members, complemented by researchers from the R&D units and invited specialists, ensuring robust coverage of core and applied areas. The normal functioning of teaching activities — particularly the laboratory component — benefited greatly from the contribution of the department's technical staff. We also maintained a dynamic offer of continuing education, with nine courses/units, strengthening ties with schools, industry, and society.

A word of confidence and our best personal and professional wishes to the 22 PhD graduates (with DEQ supervisors), and to the 183 bachelor's and 170 master's graduates from programs involving the DEQ who completed their studies at FEUP in 2024.

In infrastructures and equipment, 2024 saw the creation and installation of the Cell Culture Laboratory, the start of the refurbishment of ETAR, Floor 1 (Building R), and the department's assumption of the management of a benchtop SEM, made available by LSRE-LCM and now accessible to the DEQ community. We continued to invest in equipment supporting teaching and research (namely an Abbe refractometer, a benchtop homogenizer, and a laminar-flow cabinet). Noteworthy, too, were the inaugurations of the e.Biofilm laboratory (ERA Chair, 24 April) and the ERA | ARE laboratory (ERC grant, 20 September), which expand our installed capacity in emerging areas.

In Environment, Safety and Sustainability, we maintained the annual calibration of hydrogen detectors, the regular collection of laboratory waste, and the logging/monitoring of incidents, fostering preventive practices and a strong safety culture.

In Research and Development, 2024 was marked by the publication of one authored book and around 400 articles in international journals indexed in JCR and/or SCOPUS, the start of 14 new R&D&I projects with a FEUP budget of about €2 million, the creation of one new spin-off, and the granting/submission of 15 patents.

Attesting to the quality of the research carried out in the DEQ's units are several awards recognizing the department's faculty, researchers, and technical staff.

These include the inclusion of Professor Manuel Simões among Clarivate Analytics' Highly Cited Researchers 2023; 26 DEQ researchers listed among the most influential in the world in the Stanford University study; and 22 researchers featured in the list of top researchers by subject area compiled by Research.com.

The Chemical Engineering area at the University of Porto maintained its national leadership and remains among the few areas at this university that are broadly ranked within the European top 50 and the global top 200 across several international rankings.

We enter 2025 with the added responsibility of integrating the former DEF into the DEQ, with the new designation DEQB, firmly convinced of the relevance of our mission — to lead in education, research, and societal engagement in Chemical, Biological, Environmental, and Physical Engineering — and of the values that guide us: ethics, the pursuit of truth, a culture of solidarity, personal development, freedom with initiative, and sustainable development. To all faculty, researchers, technical staff, students, and institutional partners, we offer our sincere appreciation for the work undertaken in 2024.

GESTÃO

MANAGEMENT

Durante o ano de 2024, o Departamento de Engenharia Química (DEQ) manteve a sua estrutura organizativa habitual, com um Conselho de Departamento em funções até novembro de 2024. Nesse mês, na sequência da reformulação departamental promovida pela FEUP, foi eleito um novo Conselho de Departamento, bem como o novo Diretor, em preparação para a integração do Departamento de Engenharia Física (DEF) no novo Departamento de Engenharia Química e Biológica (DEQB).

Importa, no entanto, salientar que a integração formal do DEF no DEQB apenas teve efeitos práticos a partir de 2025. Assim, o presente Relatório de Atividades refere-se exclusivamente às atividades desenvolvidas pelo antigo DEQ durante o ano civil de 2024, não incluindo ainda atividades relacionadas com o DEF.

Throughout 2024, the Department of Chemical Engineering (DEQ) maintained its usual organizational structure, with a Department Council in office until November 2024. In that month, following a departmental reorganization promoted by FEUP, a new Department Council and a new Director were elected, in preparation for the integration of the Department of Physics Engineering (DEF) into the new Department of Chemical and Biological Engineering (DEQB).

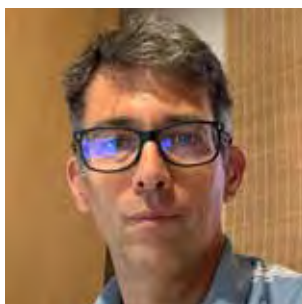
It is important to note, however, that the formal integration of DEF into DEQB only took practical effect in 2025. Therefore, this Activity Report refers exclusively to the activities carried out by the former DEQ during the 2024 calendar year, and does not yet include any activities related to DEF.

COMISSÃO EXECUTIVA EXECUTIVE BOARD



FERNANDO PEREIRA

Diretor do Departamento
Head of Department



FERNÃO MAGALHÃES

Subdiretor, Inovação,
comunicação e imagem
Assistant Director, Innovation,
communication and Image



ANA MAFALDA RIBEIRO

Relações Internacionais e
Sustentabilidade
International Relations and
Sustainability



ADRIÁN SILVA

Investigação e infraestruturas
Research and Infrastructures



LÚCIA SANTOS

Recursos Humanos
Human Resources



MANUEL ALVES

Ensino e comunicação institucional
Teaching and Institutional
Communication

MISSÃO MISSION

Liderança na formação, investigação e intervenção na sociedade nas áreas da engenharia química, biológica e do ambiente, com profissionalismo, competência, e sentido crítico.

Leadership in training, research and intervention in society in the areas of chemical, biological and environmental engineering, with professionalism, competence and critical sense.

VISÃO VISION

Captar os melhores estudantes, docentes, investigadores e técnicos, proporcionando um ambiente favorável para formação avançada, investigação, desenvolvimento e inovação com forte contributo para o desenvolvimento sustentável.

Ser reconhecido como o melhor Departamento de Engenharia Química em Portugal e com reconhecimento internacional – em termos de aprendizagem, investigação e inovação.

Formar cidadãos autónomos, responsáveis, solidários e cultos.

Attract the best students, teachers, researchers and technicians, providing a favourable environment for advanced training, research, development and innovation with a strong contribution to sustainable development.

To be recognized as the best Chemical Engineering Department in Portugal and with international recognition - in terms of learning, research and innovation.

To form autonomous, responsible, supportive and educated citizens.

VALORES VALUES

ÉTICA ETHICS	PROMOÇÃO DA PESSOA PERSONAL DEVELOPMENT
PROCURA DA VERDADE SEARCH FOR TRUTH	GARANTIA DA LIBERDADE E INICIATIVA GUARANTEEING FREEDOM AND INITIATIVE
CULTURA E SOLIDARIEDADE CULTURE AND SOLIDARITY	

SUMÁRIO EXECUTIVO

O Departamento de Engenharia Química (DEQ) agrega os recursos humanos, materiais e financeiros associados às áreas de conhecimento da engenharia química e afins, competindo-lhe assegurar e/ou apoiar o ensino em cursos de licenciatura, mestrado, pós-graduação e formação contínua da FEUP, bem como a investigação científica e o desenvolvimento tecnológico, e ainda a prestação de serviços ao exterior nas áreas das engenharias química, do ambiente e biológica.

Em 2024 o DEQ assegurou os ciclos de estudos de Engenharia Química e teve uma participação significativa nos ciclos de estudos de Engenharia do Ambiente e Bioengenharia da FEUP.

Relativamente aos cursos de 3º ciclo, o DEQ foi responsável pelo Programa Doutoral em Engenharia Química e Biológica (PDEQB), pelo Programa Doutoral em Engenharia do Ambiente (PDEA), pelo Programa Doutoral em Engenharia da Refinação, Petroquímica e Química (PDERPQ) e colaborou no Programa Doutoral em Química (em parceria com a FCUP).

No que diz respeito às atividades de investigação, essas desenvolvem-se num largo espectro de áreas diretamente ligadas ou com grande afinidade à Engenharia Química, Biológica e do Ambiente, e encontram-se enquadradas em Unidades de I&D financiadas pela Fundação para a Ciência e a Tecnologia, três das quais tendo a FEUP como instituição de acolhimento: CEFT, LSRE-LCM e LEPABE. Estas três unidades de investigação formam em consórcio o maior Laboratório Associado Português em Engenharia Química - ALiCE - que tem também uma intervenção muito relevante nas áreas de Engenharia Biológica e Engenharia do Ambiente. A quase totalidade dos docentes e investigadores do DEQ desenvolve a sua atividade de investigação nestas unidades de I&D.

Os recursos humanos e materiais são cruciais nas atividades do DEQ. A sinergia entre docentes, investigadores e técnicos bem como a existência de laboratórios com equipamentos laboratoriais e instalações piloto de elevado nível de sofisticação, permitem promover um ensino de elevada qualidade, desenvolver atividades de investigação de excelência e prestar serviços diferenciados à comunidade.

Na ligação à indústria, também é intensa a atividade desenvolvida, particularmente em serviços de análises laboratoriais, de projeto de engenharia e de consultoria, salientando-se o número significativo de dissertações realizadas em ambiente empresarial pelos estudantes finalistas dos Mestrados em Engenharia Química, Engenharia do Ambiente e Bioengenharia.

EXECUTIVE SUMMARY

The Department of Chemical Engineering (DEQ) aggregates the human, material and financial resources associated with the knowledge areas of chemical engineering and related subjects, being responsible for ensuring and/or supporting teaching in undergraduate, Master, graduate and training courses at FEUP. It is also responsible for ensuring the scientific research and technological development, as well as providing services to the community, in the areas of chemical, environmental and biological engineering.

In 2024, DEQ ensured the study cycles of Chemical Engineering and had significant participation in the Environmental Engineering and Bioengineering study cycles of FEUP.

Regarding the 3rd cycle, DEQ was responsible for the Doctoral Program in Chemical and Biological Engineering (PDEQB), for the Doctoral Programs in Environmental Engineering (PDEA), for the Doctoral Program in Refining, Petrochemical and Chemical Engineering (PDERPQ) and collaborated in the Chemistry doctoral programme (joint program with FCUP).

Concerning the research activities, they are developed in a wide range of areas directly related or with great affinity to Chemical, Biological and Environmental engineering, and are framed in R&D Units financed by the Foundation for Science and Technology, three of which have FEUP as host institution: CEFT, LSRE-LCM and LEPABE. These three research units form, as a consortium, the largest Portuguese Associate Laboratory in Chemical Engineering - ALiCE - which also plays a highly relevant role in the fields of Biological Engineering and Environmental Engineering. Nearly all faculty members and researchers from DEQ carry out their research activities within these R&D units.

Human and material resources are crucial in DEQ's activities. The synergy between lecturers, researchers and technicians, as well as the existence of laboratories with laboratory equipment and pilot facilities of a high level of sophistication, allow the promotion of high quality teaching, the development of research activities of excellence and provide differentiated services to the community.

In the connection with industry, the activity developed is also intense, particularly in services of laboratory analysis, engineering design and consulting, highlighting the significant number of dissertations carried out in a business environment by final-year students of Master degrees in Chemical Engineering, Environmental Engineering and Bioengineering.

A Comissão Executiva do DEQ realizou 12 reuniões em 2024 (12ª à 23ª reuniões do mandato 2022-2026), das quais se destacam as seguintes ações:

ADMINISTRAÇÃO E GESTÃO INTERNA

- Elaboração do Relatório de Atividades e de Contas do DEQB de 2024;
- Aprovação do Plano de Atividades e Orçamento para 2025;
- Aprovação e atualização de procedimentos internos:
 - funcionamento dos serviços técnicos;
 - serviços e recursos de uso comum;
 - procedimentos dos secretariados dos cursos e da direção;
- Análise e aprovação do Catálogo de Serviços do DEQB.
- Apresentação de propostas de colaboração para a Bolsa de colaboradores dos SASUP

RECURSOS HUMANOS

- Tomadas de posse e movimentos de pessoal docente (professores auxiliares, associados, catedráticos) e aposentação de docentes.
- Aprovação e indeferimento de licenças sabáticas 2025/26, bem como alteração das regras internas para atribuição de licenças sabáticas, passando a seguir integralmente o ECDU
- Aprovação do mapa de férias dos técnicos (2025 e dezembro de 2025).
- Discussão e aprovação da avaliação dos técnicos do DEQB.
- Decisão de atribuição de uma verba inicial extra aos novos docentes
- Autorização e ajustamentos ao regime de teletrabalho para técnicos.

ENSINO

- Análise de proposta de alteração curricular da Licenciatura em Engenharia Química (L.EQ) e do Mestrado em Engenharia Química (M.EQ);
- Aprovação de apoios à docência para algumas unidades curriculares.

EQUIPAMENTOS E INFRAESTRUTURAS

- Aprovação da criação de um Laboratório de Cultura Celular;
- Transferência da gestão de um SEM de bancada do LSRE-LCM para o DEQ;
- Aprovação da aquisição de uma câmara de fluxo laminar e de um homogeneizador de bancada;
- Elaboração de uma proposta conjunta do DEQ e unidades I&D, para aquisição de equipamentos e outros investimentos, superiores a 200 mil euros.

COMUNICAÇÃO E IMAGEM

- Aprovação da criação de uma página do DEQ na rede social Instagram.

The Executive Committee of DEQ held 12 meetings in 2024 (12th to 23rd meetings of the 2022–2026 term), during which the following actions re highlighted:

ADMINISTRATION AND INTERNAL MANAGEMENT

- Preparation of the 2023 Activity and Financial Report of DEQ;
- Approval of the 2024 Activity Plan and Budget;
- Preparation for the transition to the new Department of Chemical and Biological Engineering (DEQB): Preparation of the elections for the new Department Council, Drafting of the new departmental regulations, Integration of the teaching, research, and technical staff, update of the institutional image;
- Appointment of DEQ representatives to:
 - The working group for the creation of a new university campus on the site of the former GALP refinery in Matosinhos;
 - The Working Party on Education of the EFCE,
 - The FEUP Museum;
 - UP Digital;
- Nomination of a personality in the field of chemical engineering for the FEUP Career Award 2024;
- Submission of collaboration proposals for the SASUP Collaborators' Grant;
- Execution of an inventory of expired reagents stored in the warehouse for later disposal as waste;
- Discussion and approval of new regulations for the use of the DEQ meeting and formal rooms.

HUMAN RESOURCES

- Appointment of mentoring committees for new Assistant Professors;
- Revision of the rules for the granting of sabbatical leaves;
- Approval of opening academic staff recruitment calls for 1 Full Professor, 3 Assistant Professors and 1 Assistant Professor under FCT Tenure programme;
- Approval to open a recruitment process for 1 Senior Technician;
- Favorable opinion on granting the title of Emeritus Professor to Professor Arminda Alves;
- Discussion and approval of the performance evaluation of DEQ technical staff (SIADUP system);
- Preparation of the 2024 vacation schedule for technical staff.

EDUCATION

- Review of proposed curricular changes to the Bachelor's (L.EQ) and Master's (M.EQ) degrees in Chemical Engineering;
- Approval of teaching support for certain curricular units.

EQUIPMENT AND INFRASTRUCTURE

- Approval of the creation of a Cell Culture Laboratory;
- Transfer of management of a bench-top SEM from LSRE-LCM to DEQ;
- Approval of the acquisition of one Laminar flow cabinet and one Benchtop homogenizer;
- Joint proposal by DEQ and the R&D units for equipment and other investments exceeding €200,000.

COMMUNICATION AND IMAGE

- Approval of the creation of a DEQ Instagram page.

ASSESSORIAS**MANAGEMENT ASSISTANCE****AMBIENTE E SEGURANÇA**
ENVIRONMENT AND SAFETYAmbiente e Segurança
Environment and Safety

Alexandre Ferreira

APOIO À GESTÃO
MANAGEMENT SUPPORTRelatório Financeiro
Financial Reports

Domingos Barbosa

Relatórios, Plano de Atividades e Divulgação
Reports, Activity Plan and Dissemination

Manuel Alves

Informação SIGARRA
SIGARRA Information

Fernando Martins

Distribuição e Vigilância de Exames
Exams Scheduling

Joana Peres

RELAÇÕES COM O EXTERIOR
EXTERNAL RELATIONSRelações com a Indústria
Relations with Industry

Adélio Mendes

Relações com Ex-Estudantes
Relations with Alumni

Alexandra Pinto

Mobilidade e Relações Internacionais
Mobility and International RelationsDiogo Rodrigues, Maria do Carmo Pereira,
Miguel MadeiraVisitas de Estudo e Semana Profissão Engenheiro
Field Trips and Engineer Career Week

Margarida Bastos, Manuel Simões

Estágios dos Cursos Profissionais
Internships for Professional Courses

Lúcia Santos

DOCUMENTAÇÃO E INFORMAÇÃO
DOCUMENTATION AND INFORMATIONBiblioteca
Library

Fernão de Magalhães

Formação Contínua
Continuing Training

Manuel Alves

Informática
Informatics

Fernando Martins

INICIATIVAS FEUP **FEUP INITIATIVES**Universidade Júnior
Junior UniversityAdélio Mendes, Maria do Carmo Pereira,
Margarida Bastos, Manuel Simões, Olga NunesMostra da UP
UP Fair

Adrián Silva, Alexandre Ferreira, Nuno Azevedo

ÓRGÃOS DE GESTÃO E GRUPOS DE TRABALHO DA FEUP FEUP MANAGEMENT BODIES AND WORKING GROUPS

Pró-Diretora para a Cooperação
Pro-Director for Cooperation

Alexandra Rodrigues Pinto

Coordenadora de Mobilidade da FEUP
FEUP Mobility Coordinator

Luísa Andrade

Grupos de Trabalho Working Groups

Cultura e Comunicação
Culture and communication

Fernão Magalhães

Infraestruturas
Infrastructures

Manuel Alves

Internacionalização
Internationalisation

Luísa Andrade

Transformação Digital
Digital transformation

Diogo Rodrigues

CONSELHO DE DEPARTAMENTO * DEPARTMENT COUNCIL

Adélio Mendes

Fernando Martins

Manuel Fernando Pereira

Adrián Silva

Fernão Magalhães

Margarida Bastos

Alexandra Pinto

Filipe Mergulhão

Maria Arminda Alves

Alexandre Ferreira

Francisco Xavier Malcata

Maria do Carmo Pereira

Ana Mafalda Ribeiro

João Campos

Nuno Azevedo

António Ferreira

Joaquim Faria

Nuno Ratola

Cidália Botelho

Lúcia Santos

Olga Nunes

Cláudia Silva

Luís Miguel Madeira

Domingos Barbosa

Manuel Alves

* Composição do Conselho de Departamento até 14-11-2024
Council composition until 14 November 2024

A 31 de dezembro de 2024 as estruturas de gestão dos cursos de 1º, 2º e 3º ciclo (com participação de elementos do DEQ) eram as seguintes:

On 31 December 2024 the management structures of the 1st, 2nd and 3rd cycle courses (with participation of DEQ elements) were as follows:

CURSO COURSE	DIREÇÃO MANAGEMENT	COMISSÃO CIENTÍFICA SCIENTIFIC COMMITTEE	COMISSÃO DE ACOMPANHAMENTO MONITORING COMMITTEE
Licenciatura em Engenharia Química Bachelor in Chemical Engineering	Fernão Magalhães (DEQ) <i>Diretor</i> <i>Director</i>	Fernão Magalhães (DEQ) Ana Mafalda Ribeiro (DEQ) Luís Miguel Madeira (DEQ) Luísa Andrade (DEQ) Maria do Carmo Pereira (DEQ)	Fernão Magalhães (DEQ) Ana Mafalda Ribeiro (DEQ) Maria João Mendonça (Estudante) Maria Serrenho (Estudante) Margarida Bastos (DEQ) <i>Coordenadora pedagógica 1º ano</i> <i>Pedagogical coordinator 1st year</i>
Licenciatura em Engenharia do Ambiente Bachelor in Environmental Engineering	Joana Maia Dias (DEMM) <i>Diretora</i> <i>Director</i> Maria Cristina Vila (DEM) <i>Diretora Adjunta</i> <i>Assistant Director</i>	Joana Dias (DEMM) Cristina Monteiro Santos (DEC) Manuel Fernando Pereira (DEQ) Maria Cristina Vila (DEM) Paulo Silva Coelho (DEMeC)	Joana Dias (DEMM) Adrián Silva (DEQ) Gabriela Teixeira (Estudante) Rita Castro (Estudante) Isabel Silva Magalhães (DEC) <i>Coordenadora pedagógica 1º ano</i> <i>Pedagogical coordinator 1st year</i>
Licenciatura em Bioengenharia * Bachelor in Bioengineering *	Ana Maria Mendonça (DEEC) <i>Codiretor @FEUP</i> <i>Co-director @FEUP</i> Conceição Rangel (ICBAS) <i>Codiretora @ICBAS</i> <i>Co-director @ICBAS</i> Filipe Mergulhão (DEQ) <i>Diretor Adjunto</i> <i>Assistant Director</i>	Ana Maria Mendonça (DEEC) Conceição Rangel (ICBAS) Ana Paula Rego (ICBAS) Filipe Mergulhão (DEQ) Joaquim Mendes (DEMeC) Judite Barbosa (ICBAS) Manuel Vilanova (ICBAS) Maria do Carmo Pereira (DEQ) Maria Ferraz Tavares (DEMM) Rúben Pereira (ICBAS)	Ana Maria Mendonça (DEEC) Conceição Rangel (ICBAS) José Machado Silva (DEEC) Luís Vieira (ICBAS) Carolina Gomes (Estudante) Iris Branco (Estudante)
Mestrado em Engenharia Química Master in Chemical Engineering	Fernão Magalhães (DEQ) <i>Diretor</i> <i>Director</i> Manuel Alves (DEQ) <i>Diretor Adjunto</i> <i>Assistant Director</i>	Fernão Magalhães (DEQ) Alexandre Ferreira (DEQ) Filipe Mergulhão (DEQ) Joaquim Faria (DEQ) Manuel Alves (DEQ)	Fernão Magalhães (DEQ) Alexandre Ferreira (DEQ) Ana Machado (Estudante) Pedro Almeida (Estudante)
Mestrado em Engenharia do Ambiente Master in Environmental Engineering	Joana Maia Dias (DEMM) <i>Diretora</i> <i>Director</i> Maria Cristina Vila (DEM) <i>Diretor Adjunto</i> <i>Assistant Director</i>	Joana Dias (DEMM) Cristina Monteiro Santos (DEC) Manuel Fernando Pereira (DEQ) Maria Cristina Vila (DEM) Paulo Silva Coelho (DEMeC)	Joana Dias (DEMM) Adrián Silva (DEQ) Anselmo Cardoso (Estudante) Inês Poças (Estudante) Isabel Silva Magalhães (DEC) <i>Coordenadora pedagógica 1º ano</i> <i>Pedagogical coordinator 1st year</i>
Mestrado em Bioengenharia * Master in Bioengineering *	Ana Maria Mendonça (DEEC) <i>Codiretor @FEUP</i> <i>Co-director @FEUP</i> Conceição Rangel (ICBAS) <i>Codiretora @ICBAS</i> <i>Co-director @ICBAS</i> Filipe Mergulhão (DEQ) <i>Diretor Adjunto</i> <i>Assistant Director</i>	Ana Maria Mendonça (DEEC) Conceição Rangel (ICBAS) Ana Paula Rego (ICBAS) Filipe Mergulhão (DEQ) Joaquim Mendes (DEMeC) José Machado Silva (DEEC) Judite Barbosa (ICBAS) Manuel Vilanova (ICBAS) Maria Ferraz Tavares (DEMM) Raquel Gonçalves (ICBAS)	Ana Maria Mendonça (DEEC) Conceição Rangel (ICBAS) Luís Vieira (ICBAS) Maria do Carmo Pereira (DEQ) Simão Francisco (Estudante)

* Curso conjunto com ICBAS *Joint programme with ICBAS*

CURSO COURSE	DIREÇÃO MANAGEMENT	COMISSÃO CIENTÍFICA SCIENTIFIC COMMITTEE	COMISSÃO DE ACOMPANHAMENTO MONITORING COMMITTEE
Programa Doutoral em Engenharia Química e Biológica <i>Doctoral Program in Chemical and Biological Engineering</i>	Filipe Mergulhão (DEQ) <i>Diretor</i> <i>Director</i> Alexandra Pinto (DEQ) <i>Diretora Adjunta</i> <i>Assistant Director</i>	Filipe Mergulhão (DEQ) Alexandra Pinto (DEQ) Ana Mafalda Ribeiro (DEQ) Manuel Fernando Pereira (DEQ) Luís Miguel Madeira (DEQ)	Filipe Mergulhão (DEQ) Ana Mafalda Ribeiro (DEQ) Marta Lima (Estudante) Sofia Brandão (Estudante)
Programa Doutoral em Engenharia do Ambiente <i>Doctoral Program in Environmental Engineering</i>	Adrián Silva (DEQ) <i>Diretor</i> <i>Director</i>	Adrián Silva (DEQ) Cristina Santos (DEC) Joana Dias (DEMM) Maria de Lurdes Dinis (DEM) Vítor Vilar (DEQ)	Adrián Silva (DEQ) Maria Cristina Vila (DEM) Ana Fernandes (Estudante) Ana Silva (Estudante)
Programa Doutoral em Engenharia da Refinação, Petroquímica e Química * <i>Doctoral Program in Refining, Petrochemical and Chemical Engineering *</i>	Fernando Martins (DEQ) <i>Diretor</i> <i>Director</i>	Fernando Martins (DEQ) Carla Pedro (APQuímica) Carlos Silva (UA) Francisco Silva Lemos (UL-IST) João Paulo Crespo (UNL-FCT) Marco Ferraz (GALP Energia) Nuno Oliveira (UC-FCT)	
Doutoramento em Química ** <i>Doctoral Degree Program in Chemistry **</i>	Eduardo Marques (FCUP) <i>Diretor</i> <i>Director</i>	Eduardo Marques (FCUP) Joaquim Faria (DEQ) Pedro Fernandes (FCUP)	

* Curso conjunto com UA, UC, UL, UNL *Joint programme with UA, UC, UL, UNL*

** Curso conjunto com FCUP *Joint programme with FCUP*

RECURSOS HUMANOS

HUMAN RESOURCES

CORPO DOCENTE

A 31 de dezembro de 2024, o quadro de docentes do DEQ era constituído por 32 Professores em regime de exclusividade. Para além destes docentes, o DEQ contou igualmente com a atividade regular de docentes aposentados do DEQ, entre os quais 5 Professores Eméritos.

Em fevereiro de 2024 iniciou as suas funções como Professora Auxiliar a Doutora Vera Maria Ferreira da Cruz Homem.

LICENÇAS SABÁTICAS

No ano letivo 2023/24 foi concedida licença sabática no segundo semestre aos Professores Arminda Alves, Helena Soares e Luís Miguel Madeira.

APOSENTAÇÕES

Durante o ano de 2024, a Professora Maria Arminda Costa Alves aposentou-se após vários anos de serviço em que prestou uma contribuição indelével para a formação de várias gerações de engenheiros químicos, na direção do departamento de engenharia química, na coordenação do LEPABE, na criação e coordenação do ALiCE e para o desenvolvimento e qualidade dos serviços prestados pelo DEQ.

ACADEMIC STAFF

As of December 31, 2024, DEQ academic staff consisted of 32 Professors on an exclusive basis. In addition to these faculty members, DEQ also relied on the regular activity of retired DEQ faculty members, including 5 Emeritus Professors.

In February 2024, Dr. Vera Maria Ferreira da Cruz Homem started her functions as Assistant Professor.

SABBATICAL LEAVE

In the academic year 2023/24, Professors Arminda Alves, Helena Soares and Luís Miguel Madeira were granted sabbatical leave in the second semester.

RETIREMENTS

In 2024, Professor Maria Arminda Costa Alves retired after many years of dedicated service, during which she made an enduring contribution to the education of generations of chemical engineers, to the leadership of the Department of Chemical Engineering, to the coordination of LEPABE, to the creation and direction of ALiCE, and to the advancement and quality of the services provided by DEQ.

O DEQ agradece a dedicação e o contributo marcante da Professora Arminda Alves na transformação do DEQ num departamento de referência na área da Engenharia Química.

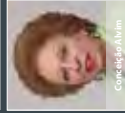
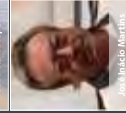
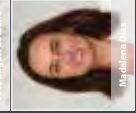
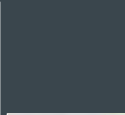
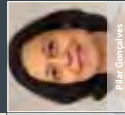
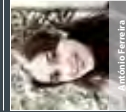
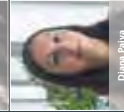
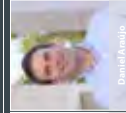
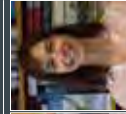
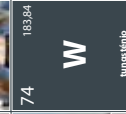
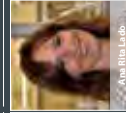
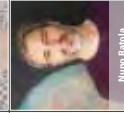
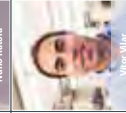
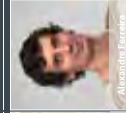
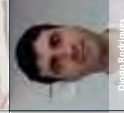
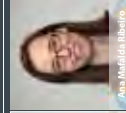
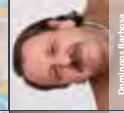
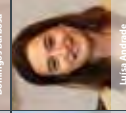
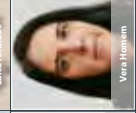
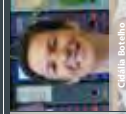
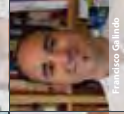
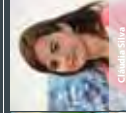
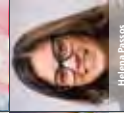
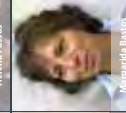
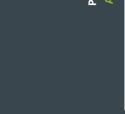
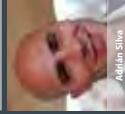
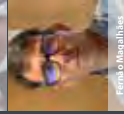
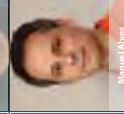
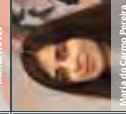
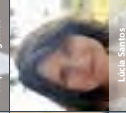
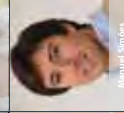
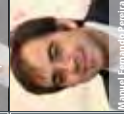
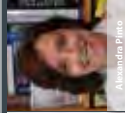
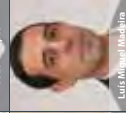
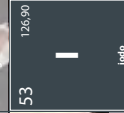
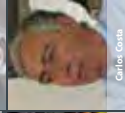
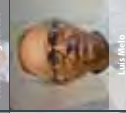
DEQ expresses its gratitude for Professor Arminda Alves's dedication and remarkable contribution to the transformation of the DEQ into a leading department in the field of Chemical Engineering.



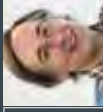
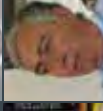
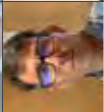
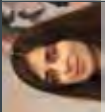
DOCENTES E INVESTIGADORES

PROFESSORS AND RESEARCHERS

PROFESSOR ASSOCIADO
COM VÍNCULO DE PÓS-GRADUAÇÃO
EMERITUS PROFESSOR
WITH LINK TO DQ

PROFESSOR EMÉRITO
EMERITUS PROFESSOR

PROFESSOR ASSOCIADO ASSOCIATE PROFESSOR		PROFESSOR CATEGÓRICO FULL PROFESSOR		PROFESSOR CATEGÓRICO FULL PROFESSOR		PROFESSOR CATEGÓRICO FULL PROFESSOR	
							
Adilson Silva	Fernando Martins	7 14.006	N	15 30.974	P	José Luis Magalhães	Filipe Albuquerque
		33 74.992	As	51 12.176	Sb	José Luis Magalhães	Filipe Albuquerque
Helena Soares	Luca Santos	53 126.90	I	55 126.90	I	José Luis Magalhães	Filipe Albuquerque
		83 208.98	Bi	85 208.98	Po	José Luis Magalhães	Filipe Albuquerque
Rafael Alves	Henrique Santos	87 208.98	At	89 208.98	At	José Luis Magalhães	Filipe Albuquerque
		114 114	Fi	116 114	Lv	José Luis Magalhães	Filipe Albuquerque
Marta do Carmo Pereira	Nuno Azevedo	118 118	Og	120 118	Og	José Luis Magalhães	Filipe Albuquerque
						José Luis Magalhães	Filipe Albuquerque
Olga Nunes	Rafael Alves					José Luis Magalhães	Filipe Albuquerque

INVESTIGADORES

Em 2024, os investigadores Ana Rita Lado Teixeira Ribeiro, Anabela Portela Borges e Miguel Angel Soria Zuniga, assinaram um contrato de trabalho por tempo indeterminado. O DEQ passou assim a contar com a colaboração de 3 investigadores principais e 14 investigadores auxiliares com contrato de trabalho por tempo indeterminado.

Para além destes investigadores, a 31 de dezembro de 2024, o DEQ contava ainda, fruto de financiamentos obtidos por concursos altamente competitivos, com a colaboração de 1 investigador equiparado a coordenador, 2 investigadores equiparados a principal, 12 investigadores equiparados a auxiliar, 54 doutorados de nível inicial, 20 assistentes de investigação e 4 estagiários.

EQUIPARADO A INVESTIGADOR COORDENADOR EQUIVALENT TO RESEARCHER COORDINATOR

Darla Goeres (LEPABE)

EQUIPARADO A INVESTIGADOR PRINCIPAL EQUIVALENT TO PRINCIPAL INVESTIGATOR

Dzmitry Ivanou (LEPABE)

Tiago Santos (CEFT)

EQUIPARADO A INVESTIGADOR AUXILIAR EQUIVALENT TO ASSISTANT RESEARCHER

Ana Pereira (LEPABE)

Berta Estevinho (LEPABE)

Carlos Bernardo (LEPABE)

Erica Doutel Costa (CEFT)

Isabel Martins (LSRE-LCM)

João Miranda (CEFT)

Laura Cerqueira (LEPABE)

Maria José Sampaio (LSRE-LCM)

Soraia Neves (CEFT)

Teresa Augusto (LEPABE)

Vera Duarte (LEPABE)

Yaidelin Manrique (LSRE-LCM)

DOUTORADO DE NÍVEL INICIAL ENTRY LEVEL DOCTORATE

Albertina Rios (LSRE-LCM)

Ana Gomes (LSRE-LCM)

Ana Pereira (LEPABE)

Ana Gonçalves (LSRE-LCM)

Ana Oliveira (LSRE-LCM)

André Torres Pinto (LSRE-LCM)

Andreia Silva (LEPABE)

Andreia Azevedo (LEPABE)

Andreia Ribeiro (LSRE-LCM)

António Martins (LEPABE)

Ariana Pintor (LSRE-LCM)

Artur Pinto (LEPABE)

Carina Costa (LSRE-LCM)

Carla Fonseca (LSRE-LCM)

Carmen Rodrigues (LEPABE)

Catarina Cruzeiro (LSRE-LCM)

Cátia Graça (LSRE-LCM)

Cátia Azenha (LEPABE)

Claúdio Rocha (LEPABE)

Daniela Rodrigues (LEPABE)

Daniela Pereira (LSRE-LCM)

Diogo Santos (CEFT)

Fátima Santos (LEPABE)

Hanane Boumeriame (LSRE-LCM)

Inês Gomes (LEPABE)

Isabel Fernandes (LSRE-LCM)

Joana Pesqueira (LSRE-LCM)

Joana Vilas Boas (LEPABE)

Joana Barbosa (LEPABE)

Jorge Malaquias (CEFT)

Katarzyna Eblagon (LSRE-LCM)

Lucília Ribeiro (LSRE-LCM)

Margarida Brito (LSRE-LCM)

Maria João Ramalho (LEPABE)

Marta Pedrosa (LSRE-LCM)

Marta Barbosa (LSRE-LCM)

Miguel Duarte (LEPABE)

Miguel Almeida (LEPABE)

Mónica Filgueiras (CEFT)

Nuno Guimarães (LEPABE)

Paula Dias (LEPABE)

Paulo Carmo (LSRE-LCM)

Pedro Carneiro (LEPABE)

Pedro Branco (LEPABE)

Raquel Rocha (LSRE-LCM)

Rita Santos (LEPABE)

Rita Sobral Santos (LEPABE)

Rui Ferreira (CEFT)

Rui Ribeiro (LSRE-LCM)

Rute Seabra (LSRE-LCM)

Seyedali Emami (LEPABE)

Stephanie Andrade (LEPABE)

Tânia Silva (LSRE-LCM)

Yuliya Ivanova (LEPABE)

ASSISTENTE DE INVESTIGAÇÃO RESEARCH ASSISTANT

Ana Pereira (LEPABE)

Ana Pires (LEPABE)

Ana Moreira (LEPABE)

Anabela Figueiredo (LEPABE)

Diogo Silva (CEFT)

Inês Freitas (LEPABE)

João Freitas (LEPABE)

Jorge Tomás (LEPABE)

José Marques (LEPABE)

José Silva (LEPABE)

Leonardo Rodrigues (LEPABE)

Mariana Nascimento (LEPABE)

Matilde Lopes (LEPABE)

Nuno Dias (LEPABE)

Ouissal Assila (LSRE-LCM)

Ricardo Coelho (LEPABE)

Ricardo Ferreira (LSRE-LCM)

Rita Fonseca (LEPABE)

Rúben Madureira (LEPABE)

Teresa Gouveia (LEPABE)

ESTAGIÁRIO DE INVESTIGAÇÃO RESEARCH TRAINEE

Ana Maricato (LEPABE)

João Oliveira (LEPABE)

Patrícia Ramalho (LSRE-LCM)

Tânia Ribeiro (LEPABE)

RESEARCHERS

In 2024, researchers Ana Rita Lado Teixeira Ribeiro, Anabela Portela Borges, and Miguel Angel Soria Zuniga signed permanent employment contracts. As a result, the Department of Chemical Engineering (DEQ) at FEUP now includes 3 principal researchers and 14 assistant researchers with permanent contracts.

In addition to these researchers, as of December 31, 2024, the Department of Chemical Engineering also counted, as a result of funding obtained through highly competitive calls, with the collaboration of 1 researcher equivalent to a coordinator, 2 researchers equivalent to principal researchers, 12 researchers equivalent to assistant researchers, 54 early-career PhD researchers, 20 research assistants, and 4 research interns.

PESSOAL TÉCNICO

A 31 de dezembro de 2024, o DEQ contava com a colaboração de 16 técnicos para apoio às atividades de ensino e investigação, e com 3 técnicos de gestão de ciência e tecnologia (José Avelino Silva, José Luís Ribeiro e Maria Inês Romão), integrados em unidades de I&D, que desempenharam funções diversificadas e relevantes no apoio a diversas atividades, incluindo serviços ao exterior. Neste ano a técnica Ana Paula Ferreira solicitou a rescisão de contrato em outubro de 2024.

No âmbito do plano de atividades para promoção da participação em ações de formação, o corpo técnico do DEQ participou em 2024 em várias ações que totalizaram 97,5 horas de formação.

TECHNICAL STAFF

As of December 31, 2024, DEQ counted with the collaboration of 16 technicians supporting teaching and research activities, and 3 research technicians (José Avelino Silva, José Luís Ribeiro, and Maria Inês Romão), integrated into R&D units, who performed diverse and relevant functions in support of various activities, including external services. Technician Ana Paula Ferreira requested contract termination in October 2024.

Within the scope of the activity plan to promote participation in training actions, the technical staff of DEQ took part in several training sessions in 2024, totaling 97.5 hours of training.



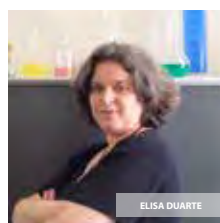
ARMINDA MONTEIRO



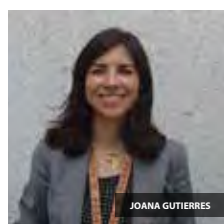
CARLA FERREIRA



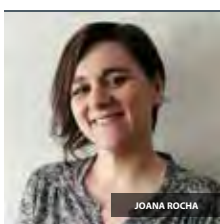
CÉLIA CERQUEIRA



ELISA DUARTE



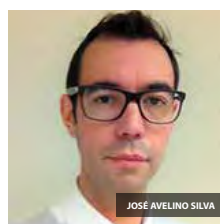
JOANA GUTIERRES



JOANA ROCHA



JOANA SOTTOMAYOR



JOSÉ AVELINO SILVA



JOSÉ LUÍS MOREIRA



JOSÉ LUÍS RIBEIRO



LILIANA PEREIRA



LUÍS CARLOS MATOS



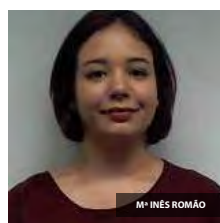
LUÍS MARTINS



M.ª DE FÁTIMA FAUSTINO



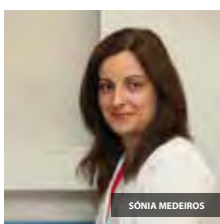
M.ª DE FÁTIMA FERREIRA



M.ª INÊS ROMÃO



SÍLVIA FAIA



SÓNIA MEDEIROS



SUSANA CRUZ

RECURSOS MATERIAIS

MATERIAL RESOURCES

Em 2024, a atividade de ensino e investigação do Departamento de Engenharia Química (DEQ) da FEUP desenvolveu-se em diversos espaços do campus, nomeadamente nos Edifícios E (com 4 298 m² de área útil, dos quais cerca de 20% são ocupados por laboratórios de ensino), R (264 m² dedicados ao ensino e investigação), FEUP-INESC (447 m² exclusivamente destinados a gabinetes e espaços de trabalho para investigadores das unidades de I&D do DEQ) e no Sonae Campus, onde está a ser instalado EnergyLab da FEUP — um laboratório dedicado à investigação, desenvolvimento e demonstração de tecnologias sustentáveis com foco na área da energia.

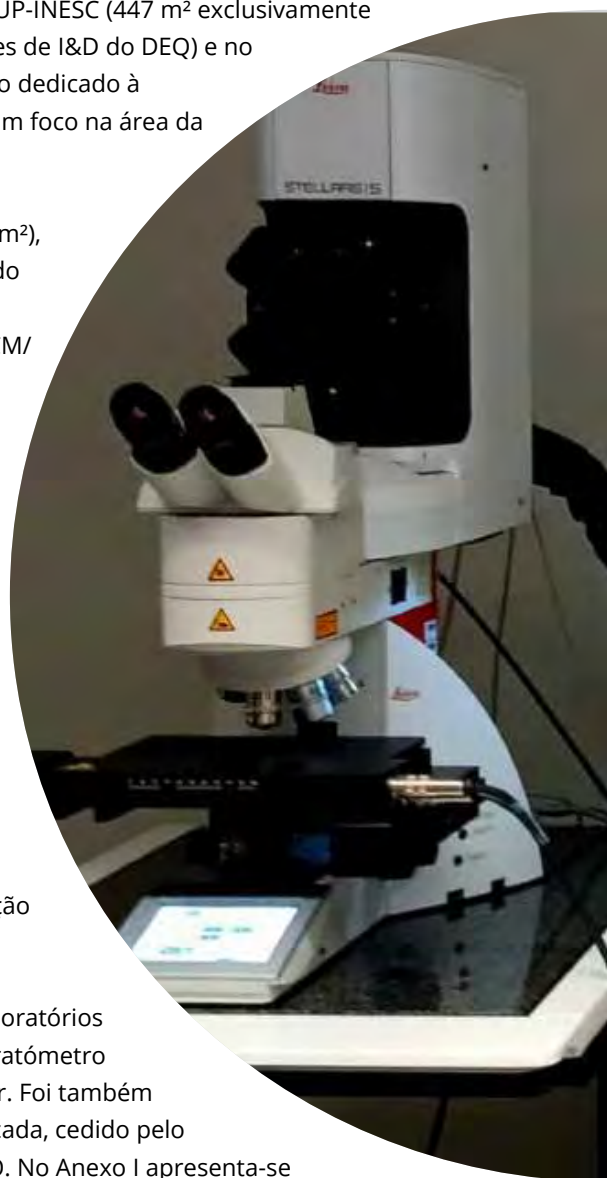
Destaca-se o reforço da capacidade instalada nos Edifícios F (+40 m²) e H (+63 m²), no âmbito da primeira ERA Chair atribuída à FEUP liderada por Nuno F. Azevedo (LEPABE/ALiCE), que culminou na inauguração do laboratório e.Biofilm a 24 de abril; e o projeto financiado por bolsa ERC liderado por Ana Rita Lado (LSRE-LCM/ALiCE), que permitiu a criação do laboratório ERA | ARE, inaugurado a 20 de setembro.

Para além dos espaços físicos, o Departamento de Engenharia Química possui um conjunto de equipamentos e pessoal especializado para a realização de análises físicas, químicas e microbiológicas. Estes equipamentos, localizados nos laboratórios de uso comum do DEQ, para além do apoio à prestação de serviços ao exterior podem ser utilizados pelos investigadores, em períodos fora do horário das aulas, com vista a rentabilizar os recursos instrumentais e as competências disponíveis no DEQ. Os técnicos do DEQ garantem apoio à utilização destes equipamentos, nas suas áreas de competência.

Em 2024, foi criado e equipado um novo Laboratório de Cultura Celular, destinado a apoiar atividades de ensino e investigação, e iniciou-se a intervenção no piso 1 da ETAR (Edifício R) para melhoria das condições de trabalho.

Prosseguiu-se igualmente o investimento em novos equipamentos para os laboratórios de ensino e para suporte à investigação, destacando-se a aquisição de um refratómetro do tipo Abbe, um homogeneizador de bancada e uma câmara de fluxo laminar. Foi também assumida a gestão de um microscópio eletrónico de varrimento (SEM) de bancada, cedido pelo LSRE-LCM, que passou a estar disponível para todos os investigadores do DEQ. No Anexo I apresenta-se a lista dos equipamentos de interesse transversal no departamento, atualmente disponíveis nos laboratórios de ensino do DEQ.

O DEQ possui também equipamentos de uso comum, nomeadamente unidade de produção de água ultrapura, unidade de produção de água purificada por resinas de permuta iónica, unidade de produção de água destilada e máquina de produção de gelo. Para além do suporte aos laboratórios de ensino e investigação do DEQ, as unidades de produção de água e gelo são igualmente disponibilizadas para apoio à atividade de outros departamentos da FEUP.



In 2024, the teaching and research activities of DEQ took place across several facilities on campus, namely in the E Building (with 4,298 m² of usable area, approximately 20% of which is occupied by teaching laboratories), the R Building (264 m² dedicated to teaching and research), the FEUP-INESC building (447 m² exclusively allocated to offices and workspaces for researchers from DEQ's R&D units), and at the Sonae Campus, where the FEUP EnergyLab is being installed — a laboratory focused on research, development, and demonstration of sustainable technologies in the field of energy.

Of particular note was the expansion of DEQ infrastructure in the F (+40 m²) and H (+63 m²) buildings, in the context of the first ERA Chair awarded to FEUP, led by Nuno F. Azevedo (LEPABE/ALiCE), which culminated in the inauguration of the e.Biofilm laboratory in April 24. Also noteworthy is the ERC-funded project led by Ana Rita Lado (LSRE-LCM/ALiCE), which enabled the creation of the ERA | ARE laboratory, inaugurated on September 20.

In addition to its physical facilities, the Department of Chemical Engineering provides a set of equipment and specialized personnel to support physical, chemical, and microbiological analyses. These instruments, located in DEQ's shared laboratories, are available not only for external service provision but can also be used by researchers outside regular class hours, in order to maximize the use of instrumental resources and in-house expertise. DEQ's technical staff provide support for the use of this equipment within their respective areas of competence.

In 2024, a new Cell Culture Laboratory was created and equipped to support teaching and research activities, and renovation work began on the first floor of the WWTP (Building R) to improve working conditions.

Investment also continued in new equipment for teaching laboratories and research support, notably including the acquisition of an Abbe-type refractometer, a benchtop homogenizer, and a laminar flow cabinet. The department also assumed responsibility for managing a benchtop scanning electron microscope (SEM), offered by LSRE-LCM, which is now available to all DEQ researchers. Annex I presents a list of the department's cross-cutting equipment currently available in the DEQ's teaching laboratories.

DEQ also maintains common-use equipment, including an ultrapure water production unit, a purified water unit based on ion exchange resins, a distilled water unit, and an ice maker. In addition to supporting DEQ's teaching and research laboratories, the water and ice production units are also available to support the activities of other departments at FEUP.



GASES ESPECIAIS, REAGENTES E CONSUMÍVEIS DE LABORATÓRIO

Em 2024 o DEQ continuou a gerir a nível da FEUP, ao abrigo de concursos públicos para o efeito, a aquisição de: i) gases especiais; ii) reagentes; iii) consumíveis e material de laboratório e iv) serviços de caracterização de materiais. Dá-se, assim, continuidade à simplificação dos procedimentos de aquisição inerentes.

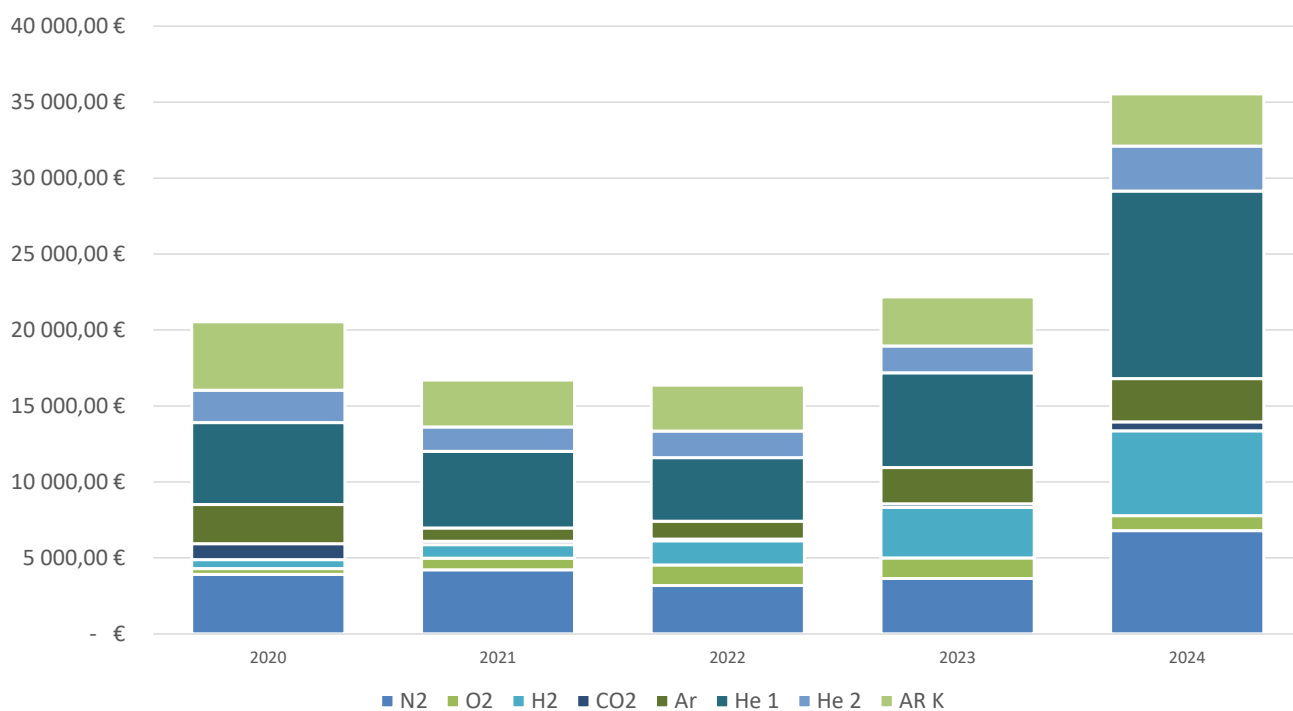
Em 2024, os gastos totais com os gases especiais abastecidos centralmente, utilizados tanto nos laboratórios de ensino como nos de investigação, ascenderam a 35 540,67 €. Este aumento face a anos anteriores deveu-se essencialmente à atualização do preço dos gases, uma vez que os volumes de consumo se mantiveram praticamente inalterados.

SPECIALITY GASES, REAGENTS AND LABORATORY CONSUMABLES

In 2024, DEQ continued to manage, at the FEUP level and under the framework of public procurement procedures, the acquisition of: i) specialty gases; ii) reagents; iii) laboratory consumables and materials and iv) material characterization services. This allows to maintain the simplification of the related procurement processes.

In 2024, total expenditure on centrally supplied specialty gases, used in both teaching and research laboratories, amounted to €35,540.67. This increase compared to previous years was mainly due to price changes, as consumption volumes remained virtually unchanged.

EVOLUÇÃO DO CUSTO ANUAL (€) COM GASES E CONTRIBUTO POR TIPO EVOLUTION OF ANNUAL COST (€) OF GASES AND CONTRIBUTION BY TYPE



AMBIENTE, SEGURANÇA E SUSTENTABILIDADE

O DEQ procura garantir a integração de práticas sustentáveis e seguras em todas as atividades desenvolvidas, implementando medidas preventivas e consciencializando todos os colaboradores para a importância destas práticas.

Destacam-se algumas destas medidas durante o ano de 2024:

- calibração anual dos detetores de hidrogénio existentes nos laboratórios que consomem este tipo de gás, e nas respetivas "courettes".
- Promovida, como habitualmente, a recolha dos resíduos químicos dos laboratórios de ensino e investigação;

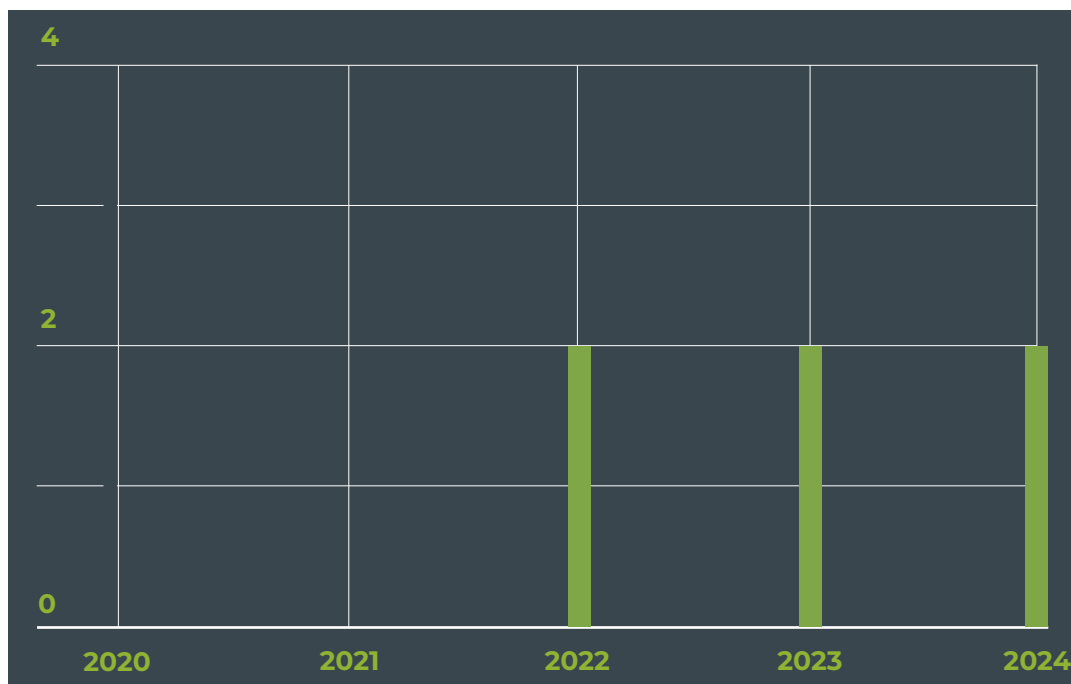
Em 2024 manteve-se o registo e acompanhamento de incidentes de ambiente e segurança, sendo o número das ocorrências indicados na figura abaixo.

SAFETY AND ENVIRONMENT

DEQ seeks to ensure the integration of sustainable and safe practices in all its developed activities, implementing preventive measures and making all its members aware of the importance of these practices. We highlight some of these measures during the year 2024:

- Annual calibration of the hydrogen detectors existing in the laboratories that consume this type of gas, and in the respective "courettes".
- Promoted, as usual, the collection of chemical waste from teaching and research laboratories;

In 2024, the recording and monitoring of environment and safety incidents continued, with the number of occurrences shown in the figure below.



NÚMERO DE OCORRÊNCIAS DE SEGURANÇA NO DEQ
NUMBER OF SAFETY INCIDENTS AT DEQ

ATIVIDADES DE ENSINO

TEACHING ACTIVITIES

No ano letivo de 2023/24, o DEQ foi responsável por 681,25 horas letivas semanais, sendo a maioria (96 %) lecionada nas Licenciaturas e Mestrados de Engenharia Química (408 h), Bioengenharia (126 h), Engenharia do Ambiente (94 h), no Programa Doutoral de Engenharia Química e Biológica (23 h) e no Programa Doutoral de Engenharia do Ambiente (4 h). Considerando apenas o primeiro e segundo ciclo de estudos, o DEQ serviu 591,1 estudantes em equivalentes a tempo integral (ETI), o que correspondeu em média a 313,8 horas por semana lecionadas em cada semestre. Adicionalmente, foram também lecionadas, em média, 13,7 h por semana em cada semestre em ciclos de estudo do terceiro ciclo.

Para efeitos da distribuição de serviço docente, no ano letivo em análise, o quadro de docentes permanentes do DEQ era constituído por 32 docentes em regime de exclusividade e 2 docentes contratados ao abrigo do programa de emprego científico institucional o que, considerando as licenças sabáticas e dispensas de serviço, correspondeu em termos de serviço docente a 28 docentes ETI.

Para além dos docentes integrados na carreira universitária, o DEQ dispôs do serviço docente de investigadores das unidades de I&D sediadas no DEQ, correspondente a 7,8 docentes ETI. Contou ainda com a colaboração de quatro especialistas nas áreas de projeto, petróleos, refinarias e emissões gasosas — respetivamente o Eng.º Vítor Pinto, o Doutor Manuel Leão Tavares, o Doutor Jorge Ribeiro e o Doutor Júlio Paiva — bem como de docentes contratados a termo certo em regime de tempo parcial, sobretudo investigadores doutorados e estudantes de doutoramento. Este serviço docente correspondeu a 1,5 docentes ETI.

In the 2023/24 academic year, DEQ was responsible for 681.25 teaching hours, most of which (96 %) were taught in the BSc and MSc degrees in Chemical Engineering (408 h), Bioengineering (126 h), Environmental Engineering (94 h), in the PhD Programme in Chemical and Biological Engineering (26 h) and in the PhD Programme in Environmental Engineering (3 h). Considering only the first and second study cycles, DEQ served 591.1 full-time equivalent (FTE) students, which corresponded on average to 313.8 hours per week taught in each semester. Additionally, an average of 13.7 hours per week were also taught each semester in third-cycle study cycles.

Regarding teaching service assignment, in the academic year under analysis, DEQ permanent teaching staff consisted of 32 teachers on an exclusive basis and 2 teachers hired under the institutional scientific employment programme, which, considering sabbatical and leave of absence, corresponded in terms of teaching service to 28 FTE teachers.

In addition to the faculty members with university career positions, the DEQ also relied on the teaching contributions of researchers from the R&D units based in the department, corresponding to 7.8 full-time equivalent teaching staff. It further benefited from the collaboration of four specialists in the areas of design, petroleum, refineries, and gas emissions — namely, Eng. Vítor Pinto, Dr. Manuel Leão Tavares, Dr. Jorge Ribeiro and Dr. Júlio Paiva — as well as fixed-term part-time lecturers, mainly PhD researchers and doctoral students. This teaching service corresponded to 1.5 FTE lecturers.

DOCENTES CONVIDADOS

INVITED PROFESSORS

NOME NAME		
Ana Rita Lado Teixeira Ribeiro	José Manuel Henriques Castanheira	Olívia Salomé Gonçalves Pinto Soares
Anabela Portela Borges	José Carlos Magalhães Pires	Paula Manuela Monteiro Costa Dias
António Manuel Azevedo Ferreira	José Daniel Araújo	Paulo Miguel Oliveira Cardoso do Carmo
Ariana Maciel Abranches Pintor	Júlio José da Silva Paiva	Pedro Tiago Barbosa da Silva Branco
Artur Daniel Moreira Pinto	Lucília Graciosa de Sousa Ribeiro	Rafael Osório Marques Dias
Beatriz Teixeira de Magalhães	Luís Carlos Soares Abreu de Ferreira Matos	Ricardo Jorge Nogueira dos Santos
Daniela Sofia de Castro Falcão	Manuel Leão Rosas Castro Tavares	Rui Carlos Barata Ferreira
Diana Patrícia Soares de Paiva	Maria João Barbosa Regufe	Sofia Isabel Vieira de Sousa
Inês Bezerra Gomes	Maria José Fernandes Sampaio	Tânia Sofia Granja Tavares
Joana Angélica de Sousa Loureiro	Marta Sofia Oliveira Barbosa	Tânia Sofia Teixeira Lopes
Joana Filipa de Jesus Rodrigues Pesqueira	Miguel Angel Soria Zuniga	Vânia Sofia Brochado de Oliveira
Joana Maria Pereira Ferreira	Nuno Alexandre Firmino Vaz	Vitor Jorge Pais Vilar
Joana Vieira de Freitas Barbosa	Nuno Eduardo Esteves Formigo	Vítor Manuel Oliveira Pinto
João Mário Miranda	Nuno Miguel Ratola Neto	Yaidelin Josefina Alves Manrique

Para além da participação nos cursos conferentes de grau, o DEQ foi responsável em 2023/24 por 9 cursos ou unidades de formação contínua, nomeadamente:

- Aquisição automatizada de dados laboratoriais;
- CiênciaVitae - o currículo científico;
- Competição BET-Building Engineers of Tomorrow;
- Competição Think Bio;
- Comunicação de Ciência para Audiências Não Especializadas;
- Montagem e Teste de Instalações Laboratoriais;
- Os Desafios do Desenvolvimento Sustentável;
- SAFE - Segurança química e microbiológica em laboratórios de investigação;
- Tecnologia de Tintas e Revestimentos;

In addition to participating in degree conferring courses DEQ was responsible in 2023/24 for 9 continuing education courses or units, namely:

- Automated acquisition of laboratory data;
- CiênciaVitae - the scientific curriculum;
- BET Competition - Building the Engineers of the Future;
- Think Bio Competition;
- Communicating Science to Non-Specialized Audiences;
- Setting Up and Testing Laboratory Facilities;
- The Challenges of Sustainable Development
- SAFE - Chemical and microbiological safety in research laboratories;
- Technology of Paints and Coatings;

INGRESSOS, POPULAÇÃO E DIPLOMADOS

Anualmente, a nível nacional realiza-se o Concurso Nacional de Acesso (CNA), organizado pela Direção-Geral do Ensino Superior. O concurso organiza-se em três fases, sendo a terceira de realização opcional. Para as 3 Licenciaturas afetas ao DEQ foram fixadas para este regime de ingresso 195 vagas às quais concorreram 969 candidatos.

Para além dos estudantes que ingressaram pelo CNA, matricularam-se adicionalmente, provenientes de outros regimes especiais de acesso ou reingresso, 21 estudantes na Licenciatura de Engenharia Química, 17 novos estudantes na Licenciatura de Bioengenharia e 8 novos estudantes na Licenciatura de Engenharia do Ambiente.

Considerando apenas a 1ª fase do CNA em 2023/24, verificou-se que os três ciclos de estudo em que o DEQ participa mais ativamente têm uma razão entre procura e oferta superior a 4 e um índice de satisfação de procura (razão entre o número de candidatos em 1ª opção e as vagas disponibilizadas) superior a 1 para a L.BIO (1,94), de 0,87 para L.EQ e de 0,62 no caso da L.EA. As classificações de ingresso do último candidato colocado na 1ª fase foram de 159,8 para a L.EQ, 133,5 para a L.EA e 184,5 para a L.BIO.

Em 2023/24 ingressaram nos Mestrados de Continuidade 43 estudantes no M.EQ (17 por sucessão de par instituição/ciclo de estudos), 35 no M.BIO (19 por sucessão de par instituição/ciclo de estudos) e 17 no M.EA (8 por sucessão de par instituição/ciclo de estudos). No quadro e figuras seguintes, apresentam-se os dados relativos aos ingressos, número de inscritos e diplomados em 2024. Os temas das dissertações de mestrado cujas provas públicas ocorreram no mesmo ano letivo estão elencadas no anexo II.

INGRESSOS, POPULAÇÃO E DIPLOMADOS

ADMISSIONS, POPULATION AND GRADUATES

CURSO PROGRAMME	COLOCADOS (NOVOS) PLACED (NEW)	COLOCADOS (SUCESSÃO) PLACED (CONTINUING)	INSCRITOS ENROLLED	DIPLOMADOS GRADUATES
L.EQ	84	-	307	76
L.BIO	109	-	339	85
L.EA	45	-	150	22
M.EQ	43	17	180	69
M.BIO	35	19	167	73
M.EA	17	8	93	28

ADMISSIONS, POPULATION AND GRADUATES

Every year, at national level, the National Access Competition (NAC) is organized by the Directorate-General of Higher Education. The competition is organized in three phases, the third of which is optional. For the three DEQ degree programmes 195 vacancies were set for this entrance system, to which 969 candidates applied.

In addition to the students who entered through the NAC, 21 new students from other special access regimes enrolled in the Chemical Engineering degree programme, 17 new students in the Bioengineering degree programme and 8 new students in the Environmental Engineering degree programme.

Considering only the 1st phase of the National Access Competition (CNA), it was found that the three study cycles in which the DEQ is most actively involved have a demand-to-supply ratio higher than 4 and a demand satisfaction index (ratio between the number of first-choice applicants and the available spots) higher than 1 for L.BIO (1.94) of 0.87 for L.EQ and of 0.71 in the case of L.EA. The minimum grade of the last candidates admitted in the 1st phase was 159.8 for L.EQ, 135.5 for L.EA, and 184.5 for L.BIO.

In 2024, 43 students enrolled in the M.EQ Master's Program (17 through succession of institution/degree cycle pair), 35 in the M.BIO Master's Program (19 through succession of institution/degree cycle pair), and 17 in the M.EA Master's Program (8 through succession of institution/degree cycle pair). The table and figures below present data regarding admissions, the number of enrolled students, and graduates in 2024. The topics of the master's dissertations whose public defenses took place in the same academic year are listed in Annex II.

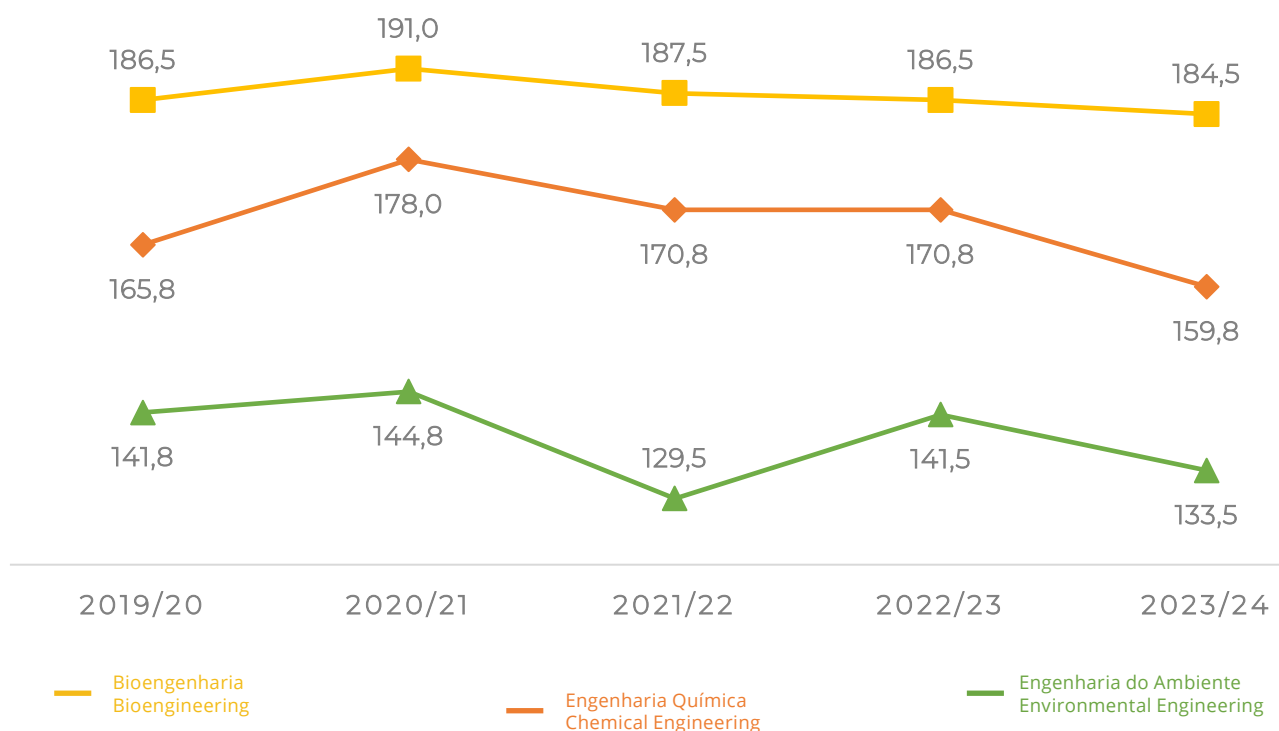
Foram atribuídos pela FEUP 15 diplomas de reconhecimento pedagógico a docentes do DEQ, correspondentes a cerca de 20 % dos diplomas atribuídos na FEUP. A atribuição destes diplomas tem como objetivo reconhecer o mérito pedagógico e incentivar a qualidade nas atividades de ensino/aprendizagem. A lista dos galardoados encontra-se elencada no anexo VI.

Fifteen pedagogical recognition diplomas were awarded by FEUP to DEQ teachers, corresponding to about 20 % of the diplomas awarded. The purpose of these diplomas is to recognize pedagogical merit and encourage quality in teaching/learning activities. The list of the winners can be found in Annex VI.



CLASSIFICAÇÕES MÍNIMAS DE INGRESSO (1ª FASE)

MINIMUM ADMISSION GRADES (1ST STAGE)



A FEUP tem em funcionamento um programa de Mentoria Interpares, destinado aos estudantes que ingressam pela 1ª vez nesta instituição de Ensino Superior, tanto nacionais como internacionais, com o objetivo de os apoiar nesta nova fase do seu percurso académico. A dinamização deste programa de integração social e académica é realizada por estudantes (mentores) que já frequentam os diferentes cursos em anos anteriores, e coordenado por uma equipa de docentes, sendo adaptado a cada curso de acordo com as suas características. Esta iniciativa está atualmente integrada no Programa Transversal de Mentoria Interpares da Universidade do Porto, pelo qual se rege.

A professora Margarida Bastos é a Representante da FEUP na Comissão Coordenadora Transversal do Programa Transversal de Mentoria Interpares da U.Porto, integra a Comissão Coordenadora do projeto Mentoria na FEUP e é também a responsável pelo Programa de Mentoria de Engenharia Química. O DEQ tem também a seu cargo a responsabilidade do Programa de Mentoria de Bioengenharia, através da professora Olga Nunes. Mais informações em <https://paginas.fe.up.pt/~mentoriafeup/>

Integrado no referido programa de mentoria, foi efetuada a receção aos novos estudantes de Engenharia Química, Engenharia do Ambiente e Bioengenharia entre os dias 11 e 13 de setembro de 2024. A receção contou com a participação dos diretores de ciclos de estudos, dos coordenadores do Projeto FEUP, das Comissões de Acompanhamento e dos Núcleos de Estudantes e com um programa de atividades que incluiu visitas guiadas ao campus da FEUP, sessões de apresentação dos cursos e conversas com os Mentores para os novos estudantes.





**CONNEQT
BIOBUDDY**

FEUP has a Mentoring program to promote the integration of new students in the university, adapted to the characteristics of each course. The promotion of this social and academic integration program is carried out by senior students (mentors) who attend different programmes in more advanced years, and coordinated by a team of teachers, being adapted to each course according to their characteristics. This initiative is currently part of the University of Porto's Peer Mentoring Transversal Program.

Professor Margarida Bastos is FEUP's Representative in the Transversal Coordinating Committee of the U.Porto Transversal Mentoring Program, integrates the Mentoring Project Coordinating Commission at FEUP and is also responsible for the Chemical Engineering Mentoring Program. DEQ is also responsible for the Bioengineering Mentoring Program, through Professor Olga Nunes. More information at <https://paginas.fe.up.pt/~mentoriafeup/>

As part of the mentoring program, a reception was held for new Chemical Engineering, Environmental Engineering and Bioengineering students between 11 and 13 September 2024. The reception had the participation of the study cycle directors, FEUP Project coordinators, Monitoring Commissions and Student Groups with a program of activities that included guided tours of the FEUP campus, sessions of presentation of the courses and talks with Mentors for the new students.



ESTÁGIOS, VISITAS DE ESTUDO E PALESTRAS

Para promover o contacto dos estudantes com a realidade industrial portuguesa, têm sido realizadas visitas de estudo a empresas nacionais, cujos encargos são suportados pelos cursos em que as unidades curriculares se inserem. No ano letivo de 2023/24 foram realizadas 15 visitas de estudo no âmbito das unidades curriculares e da atividade dos grupos de investigação sediados no DEQ.

Durante o seu percurso académico na Licenciatura os estudantes têm prevista a realização de um projeto que pode ser feito em ambiente empresarial ou inserido nas unidades de investigação. Em 2023/24 oitenta e sete estudantes efetuaram os seus estágios em 34 instituições, nomeadamente: AgroGrIN Tech, Amnispura, Amorim Cork, ARCP CoLAB, Barbot, Bondalti, CEFT, CeNTI, Centro Tecnológico da Cortiça, Cork Supply, Empresa de Cervejas da Madeira, Formulab, Fresenius Kabi / Labesfal, Frulact, Gran Cruz, HeiQ Iberia, ILOF, I3S, INIAV, INL, ISQ, LEPABE, Licores Xarão, LSRE-LCM, Nestlé, NGC, Novarroz, Rissolaria Tradicional, Simoldes Plásticos, Superbock, Teprel, Navigator e Yazaki Saltano.

VISITAS DE ESTUDO 2023/24

STUDY VISITS 2023/24

UNIDADE CURRICULAR CURRICULAR UNIT	EMPRESA COMPANY	ESTUDANTES STUDENTS
BIOENGENHARIA BIOENGINEERING		
Tecnologia Alimentar	Casa da Cerveja	23
ENGENHARIA DO AMBIENTE ENVIRONMENTAL ENGINEERING		
Introdução à Engenharia do Ambiente	LIPOR e ETA de Lever	47
ENGENHARIA QUÍMICA CHEMICAL ENGINEERING		
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FIELD TRIPS AND LECTURES

To promote contact of students with Portuguese industrial reality, study visits have been carried out to national companies, whose costs are supported by the courses in which the curricular units are inserted. In the 2023/24 academic year 15 study visits were carried out in the scope of the curricular units and the activity of the research groups based in DEQ.

During their academic career, students must complete a project which can be carried out in a business environment or within the research units. In 2023/24 eighty-seven students carried out their internships in 34 institutions, namely: AgroGrIN Tech, Amnispura, Amorim Cork, ARCP CoLAB, Barbot, Bondalti, CEFT, CeNTI, Centro Tecnológico da Cortiça, Cork Supply, Empresa de Cervejas da Madeira, Formulab, Fresenius Kabi / Labesfal, Frulact, Gran Cruz, HeiQ Iberia, ILOF, I3S, INIAV, INL, ISQ, LEPABE, Licores Xarão, LSRE-LCM, Nestlé, NGC, Novarroz, Rissolaria Tradicional, Simoldes Plásticos, Superbock, Teprel, Navigator and Yazaki Saltano.

INTERCÂMBIO DE ESTUDANTES

A Direção do DEQ tem mantido um estímulo constante na participação dos estudantes em programas de mobilidade de excelência, tais como os programas Erasmus e Erasmus-Estágios (oferecidos pela União Europeia), o programa MOBILE (voltado para a mobilidade de estudantes do ensino superior entre a FEUP e instituições parceiras em Timor, Brasil e outros países da América Latina), o programa Almeida Garrett (voltado para a mobilidade nacional de estudantes) ou mesmo através de protocolos de colaboração com instituições de destaque, como a Universidade de Maryland, Baltimore County, nos Estados Unidos, entre outros. As instituições parceiras do DEQ nestes programas de mobilidade no ano letivo 2023/24 são elencadas no anexo III.

Durante este ano letivo, 25 estudantes de Engenharia Química, 9 de Engenharia do Ambiente e 67 de Bioengenharia frequentaram pelo menos um semestre noutra universidade ou numa empresa estrangeira ao abrigo dos vários programas de mobilidade. Neste mesmo período, frequentaram estes ciclos de estudos 70,6 estudantes ETI (29,9 em Engenharia Química; 23,4 em Engenharia do Ambiente; 17,3 em Bioengenharia) oriundos de outras Universidades, nacionais e internacionais.

A professora Maria do Carmo Pereira foi a responsável pelos programas de mobilidade em Bioengenharia, sendo, respetivamente, o professor Luís Miguel Madeira e o professor Diogo Rodrigues os coordenadores do programa Erasmus Estágios e do programa Erasmus Estudos, ambos em Engenharia Química.

STUDENT EXCHANGE

DEQ has constantly encouraged the participation of students in mobility programmes of excellence, such as the Erasmus and Erasmus-Internships programmes (offered by the European Union), the MOBILE programme (aimed at the mobility of higher education students between FEUP and partner institutions in Timor, Brazil and other Latin American countries), the Almeida Garrett programme (aimed at the national mobility of students) or even through collaboration protocols with renowned institutions, such as the University of Maryland, Baltimore County, in the United States, among others. Partner institutions in these mobility programmes in the 2023/24 academic year are listed in Annex III.

In this academic year, 25 students of Chemical Engineering, 9 of Environmental Engineering and 67 of Bioengineering attended at least one semester at another university or a foreign company under the various mobility programmes. In this same period, 70.6 FTE students (29.9 in Chemical Engineering, 23.4 in Environmental Engineering and 17.3 in Bioengineering) from other national and international Universities attended these study cycles.

Professor Maria do Carmo Pereira was responsible for the mobility programmes in Bioengineering and Professor Luís Miguel Madeira and Professor Diogo Rodrigues were the coordinators of the Erasmus Internships programme and the Erasmus Studies programme, both in Chemical Engineering.



PROGRAMAS DOUTORAIS

O ensino pós-graduado é uma componente importante e significativa da atividade do DEQ, estando intimamente relacionado com a investigação e com a imagem que o departamento projeta para o exterior.

Atualmente, os docentes do DEQ intervêm ativamente nos programas doutorais de Engenharia Química e Biológica (PDEQB), Engenharia do Ambiente (PDEA) e Engenharia da Refinação, Petroquímica e Química (PDERPQ) na FEUP, e colaboram no Programa Doutoral em Química (PDQUI), numa parceria entre a FCUP e a FEUP.

Em 2023/24 estavam inscritos 135 estudantes no PDEQB, 49 estudantes no PDEA, 10 estudantes no PDERPQ e 35 estudantes no PDQUI. Desses, 20 correspondem a novas inscrições no PDEQB, 13 no PDEA, 4 no PDERPQ e 8 no PDQUI.

Sob a supervisão de docentes e/ou investigadores do DEQ, concluíram em 2024 o seu doutoramento 22 estudantes 19 dos quais no PDEQB, 1 no PDEA e 2 no programa doutoral de Engenharia Mecânica. Nos anexos II e IV são indicados os estudantes que concluíram os seus cursos de pós-graduação e o título das referidas teses.

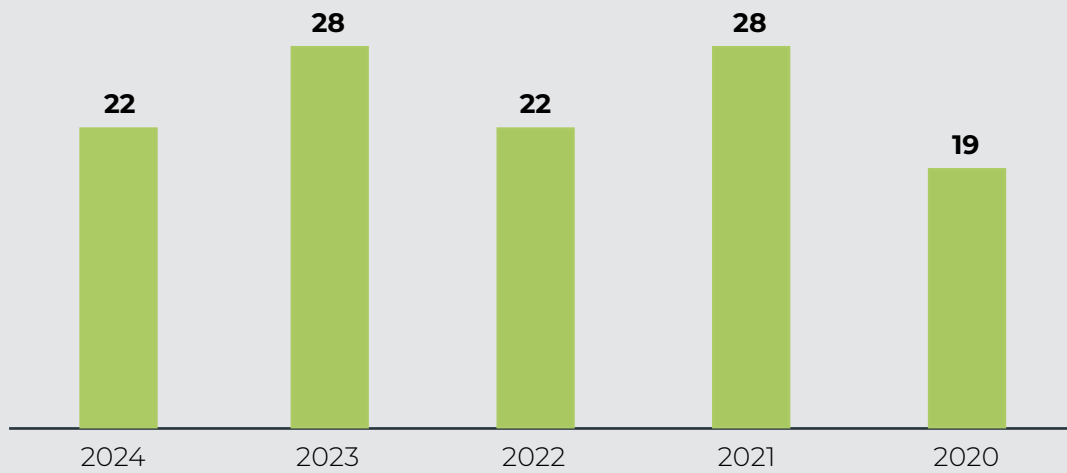
POSTGRADUATE STUDIES

Postgraduate education is an important and significant component of DEQ's activity, being closely related to research and the image that the department projects abroad.

Currently, DEQ teaching staff actively participate in doctoral programs in Chemical and Biological Engineering (PDEQB), Environmental Engineering (PDEA) and Refining, Petrochemical and Chemical Engineering (PDERPQ) at FEUP, as well as in the Doctoral Program in Chemistry (PDQUI), in a partnership between FEUP and FCUP.

In 2023/24 there were 135 students enrolled in PDEQB, 49 students in PDEA, 10 students in PDERPQ and 35 students in PDQUI. Of these, 20 correspond to new enrolments in PDEQB, 13 in PDEA, 4 in PDERPQ and 8 in PDQUI.

Under the supervision of DEQ faculty and/or researchers, 22 students completed their PhD in 2024, 19 of them in PDEQB, 1 in PDEA and 2 in Mechanical Engineering doctoral programme. Annexes II and IV indicate the students who concluded their postgraduate courses and the title of the referred theses.



Nº DE TESES DE DOUTORAMENTO CONCLUÍDAS, COM SUPERVISÃO DE DOCENTES/INVESTIGADORES DO DEQ.

NUMBER OF COMPLETED PHD THESES, SUPERVISED BY DEQ TEACHERS/RESEARCHERS.



ATIVIDADES I&DT

R&TD ACTIVITIES

O DEQ é um Departamento com uma forte componente de I&DT - Investigação e Desenvolvimento Tecnológico - entendendo-se incluída nesta designação a importante componente de Inovação.

A sua missão é assegurar o apoio logístico à atividade de I&D dos docentes e investigadores, tanto em infraestruturas como em serviços. Essa atividade desenvolve-se num largo espetro de áreas diretamente ligadas ou com grande afinidade às engenharias química do ambiente e biológica, e encontra-se enquadrada em Unidades de I&D financiadas pela Fundação para a Ciência e a Tecnologia, 3 das quais tendo a FEUP como instituição de acolhimento:

- **LSRE-LCM** - Laboratório de Processos de Separação e Reação e o Laboratório de Catálise e Materiais
- **LEPABE** - Laboratório de Engenharia de Processos, Ambiente, Biotecnologia e Energia
- **CEFT** - Centro de Estudos de Fenómenos de Transporte

Estas três unidades de investigação associaram-se em consórcio para formar o ALiCE, que é o maior Laboratório Associado Português em Engenharia Química e com uma intervenção muito relevante também nas áreas de Engenharia Biológica e Engenharia do Ambiente.

Nas Unidades referidas anteriormente, desenvolvem a sua atividade a maioria dos docentes e investigadores do DEQ, trabalhando os restantes enquadrados em Unidades de I&D exteriores à FEUP. A formação de jovens investigadores é efetuada nestes laboratórios, em vários casos enquadrada em programas de intercâmbio europeu.

DEQ is a department with a strong component of R&TD - Research and Technological Development - this designation includes the important component of Innovation.

Its mission is to ensure logistic support to the R&D activity of teachers and researchers, both in terms of infrastructures and services. This activity is carried out in a wide range of areas directly linked to or closely related to chemical, environmental and biological engineering, and is organized in R&D units funded by the Foundation for Science and Technology, 3 of which have FEUP as their host institution:

- **LSRE-LCM** - Laboratory of Separation and Reaction Engineering and Laboratory of Catalysis and Materials
- **LEPABE** - Laboratory of Process Engineering, Environment, Biotechnology and Energy
- **CEFT** - Transport Phenomena Research Center

These three research laboratories joined in consortium to form ALiCE, the largest Portuguese Associated Laboratory in Chemical Engineering and with a very relevant intervention in the areas of Biological Engineering and Environmental Engineering.

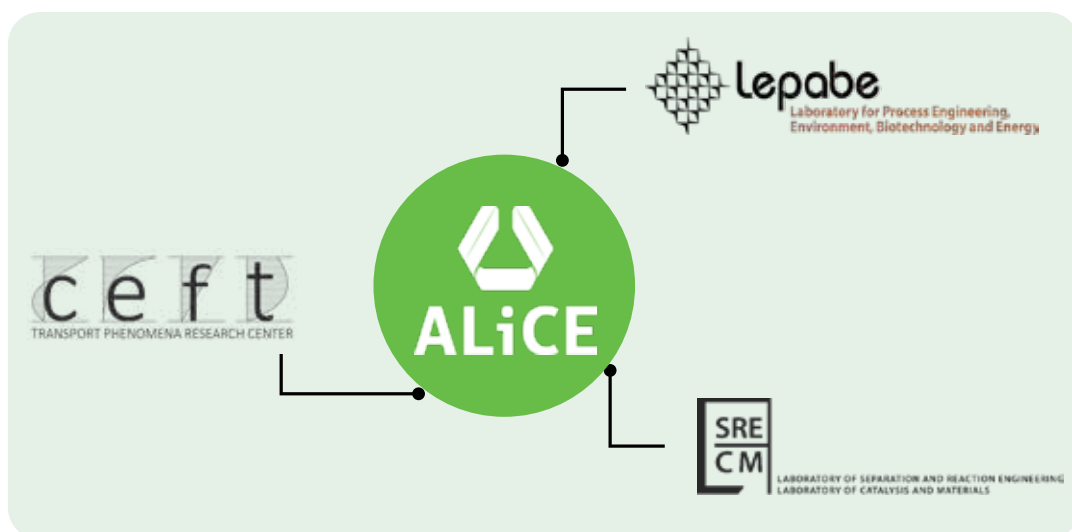
Most of the department's members develop scientific activity within these units, while the rest develop their activity in R&D units external to Faculty. Within these structures several students are working for their Ph.D., in post-doctoral researcher's activities or in the first period of their research training.

A produção resultante da atividade científica dos docentes e investigadores do DEQ manifesta-se em várias vertentes, nomeadamente: autoria e edição de livros, capítulos de livros, artigos publicados em revistas científicas internacionais e nacionais, artigos e resumos publicados em atas de conferências, patentes, pareceres técnicos, protótipos industriais e transferência de tecnologia. Em 2024 os docentes e investigadores do DEQ foram responsáveis pela autoria de 1 livro, pela edição de 3 livros, pela publicação de 16 trabalhos como capítulos de livros e um total de 402 artigos em revistas internacionais e nacionais, 396 dos quais publicados em revistas indexadas no WoS e/ou SCOPUS.

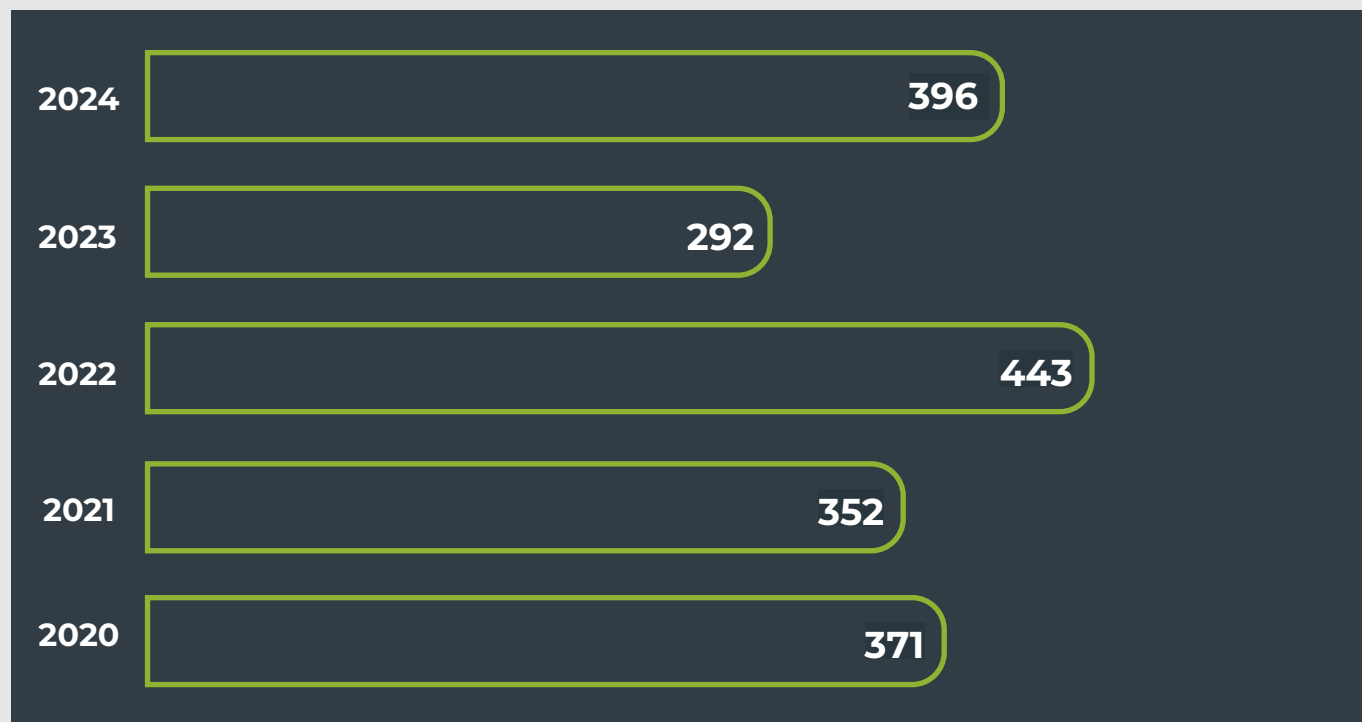
Neste mesmo período foi também criada a *spin-off* HyCarb e iniciados 14 novos projetos de investigação que gerarão mais de 2 milhões de euros de receita para a FEUP.

The outputs resulting from the scientific activity of DEQ professors and researchers is manifested in several ways, namely: author and book edition, book chapters, articles published in international and national scientific journals, articles and abstracts published in conference proceedings, patents, technical advice, industrial prototypes and technology transfer. In 2024, the faculty and researchers of DEQ were responsible for authoring 1 book, editing 3 books, publishing 16 works as book chapters, and a total of 402 articles in international and national journals, 396 of which were published in journals indexed in WoS and/or SCOPUS.

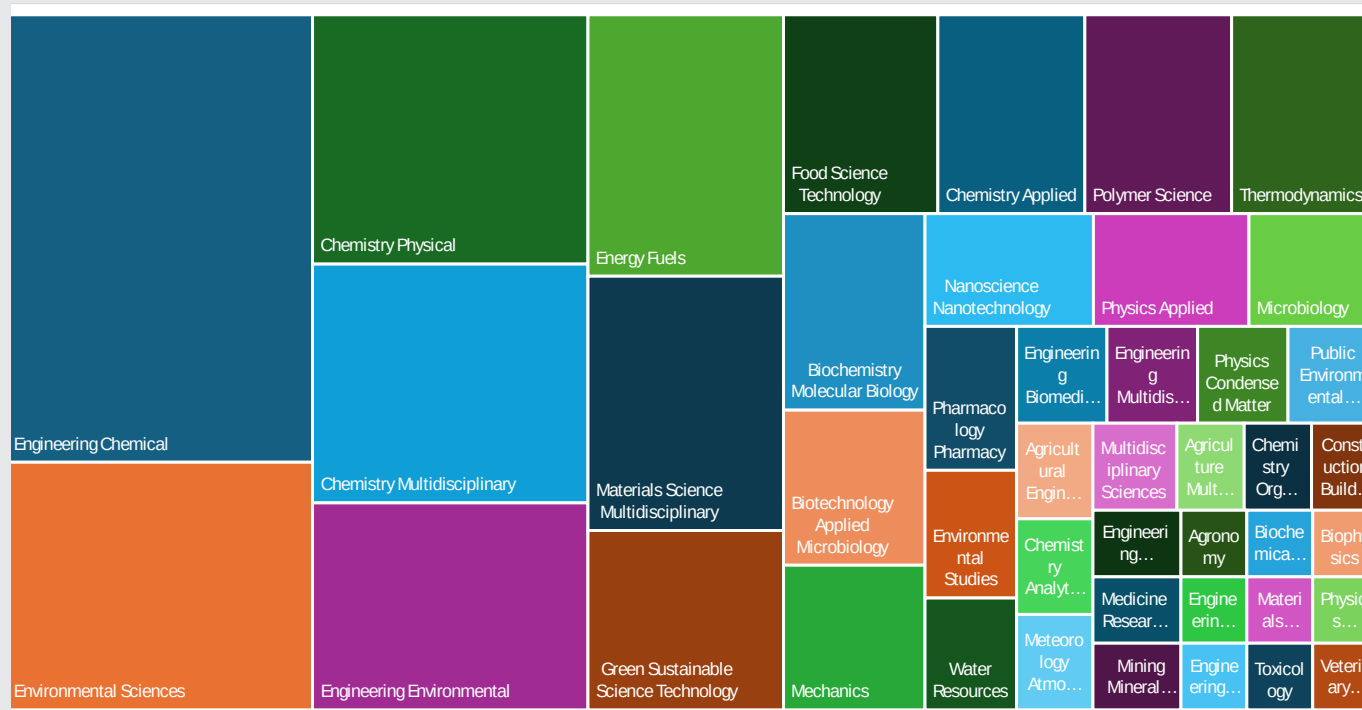
During this same period, the spin-off HyCarb was also created, and 14 new research projects were launched, which will generate over 2 million euros in revenue for FEUP.



Nº DE ARTIGOS PUBLICADOS EM REVISTAS REFERENCIADAS NO JCR-WOS E/OU SCOPUS
NUMBER OF ARTICLES PUBLISHED IN JOURNALS INDEXED IN JCR-WOS AND/OR SCOPUS



PUBLICAÇÕES POR ÁREA DE INVESTIGAÇÃO
ARTICLES BY RESEARCH AREA



Dados obtidos a partir da funcionalidade de análise de resultados da página Web of Science, aplicada aos artigos do DEQ publicados em 2024. A análise devolveu resultados para 363 (263, no caso da análise dos Objectivos de Desenvolvimento Sustentável) de um total de 396 artigos em 2024. As áreas nos gráficos não são estritamente proporcionais aos valores de cada entrada. Nas publicações por área foram apenas considerados na ilustração os casos com pelo menos 3 registos.

CONTRIBUIÇÃO PARA OS OBJETIVOS DE DESENVOLVIMENTO SUSTENTÁVEL
CONTRIBUTION TO SUSTAINABLE DEVELOPMENT GOALS



Data obtained from the Web of Science results analysis feature, applied to DEQ articles published in 2024. The analysis returned results for 363 (263 in the case of the Sustainable Development Goals analysis) out of a total of 396 articles in 2024. The areas in the graphs are not strictly proportional to the values for each entry. In the publications by area, only cases with at least 3 entries were considered in the illustration.

PROJETOS DE INVESTIGAÇÃO INICIADOS EM 2024

RESEARCH PROJECTS STARTED IN 2024

RESPONSÁVEL RESPONSIBLE	TÍTULO TITLE	FEUP FEUP	GLOBAL TOTAL
COMISSÃO EUROPEIA			
Alexandre Filipe Porfírio Ferreira	Zero emissions in a circular military economy: from military individual equipment waste to food and energy	267 472,50 €	2 446 840,50 €
Darla Marie Goeres	Building Consensus on Biofilm Regulatory Decision Making	129 564,75 €	129 564,75 €
	Boosting Sustainable Innovation in Developing New Antibiotic Adjuvants to Control Biofilm Resistance	784 691,70 €	1 483 246,42 €
Sofia Isabel Vieira de Sousa	Network for Indoor Air Cleaning	129 955,75 €	129 955,75 €
Darla Goeres Nuno Azevedo	e.Biofilm :: Creation of a group of Excellence on Engineered Biofilms	2 498 245,00 €	2 498 245,00 €
AIR LIQUIDE S.A.			
Luís Miguel Maderia	CYCON - Cyclic device for continuous CO2 capture and conversion into CH ₄	N.D.	N.D.
FUNDAÇÃO PARA A CIÊNCIA E A TECNOLOGIA			
Adélio Mendes	Eletrocatalise direta do CO2 para a produção de metano renovável	267 472,50 €	2 446 840,50 €
Alexandre Ferreira	Captura de água a partir da humidade atmosférica usando MOFs ecológicos e integração com sistemas de distribuição de água inteligentes	129 564,75 €	129 564,75 €
Maria Francisca Moreira	Tecnologia eNETmix para a produção eletrocatalítica de metanol a partir de CO2 capturado	784 691,70 €	1 483 246,42 €
Nuno Ratola Neto	Gestão de águas pluviais em áreas urbanas para enfrentar eventos hidroclimáticos extremos	129 955,75 €	129 955,75 €
Vítor Vilar	Soluções não convencionais de base natural e de baixo consumo energético para a gestão das fontes de água	864 246,50 €	864 246,50 €
FUNDAÇÃO "LACAIXA"			
Catarina Cruzeiro	Recovery of wastewater resources in agriculture: ReWaterR	305 100,00 €	305 100,00 €
ANI			
Fernão Magalhães	Cola de Colagénio de Alto Desempenho	102 844,56 €	898 659,63 €
Ricardo Santos	Tecnologias de processo para o novo material avançado baseado na polimerização in situ	212 232,75 €	525 889,99 €
CYTED			
Adrián Silva	Productos de valor agregado desde de residuos: (Bio) tecnología para un futuro sostenible	- €	- €
TOTAL		2 414 273,21 €	11 535 653,03 €



15 docentes investigadores do DEQ receberam o diploma de reconhecimento Científico, correspondente a 34 % dos diplomas atribuídos pela FEUP nesse ano. Estes diplomas visam reconhecer os resultados das atividades de investigação. A lista completa dos reconhecidos encontra-se no anexo VI.



15 DEQ researchers received the Scientific Recognition Diploma from FEUP, corresponding to 34 % of the diplomas awarded in this year. These diplomas aim to recognise the results of research activities. The full list of those recognised can be found in Annex VI.



Os Laboratórios Colaborativos (CoLAB) têm como objetivo principal criar, direta e indiretamente, emprego qualificado e emprego científico em Portugal através da implementação de agendas de investigação e de inovação orientadas para a criação de valor económico e social. Em 2024 o DEQ teve participação ativa e relevante em 7 CoLABs: NET4CO₂, VGCoLAB, ARCP, HyLab, BIOREF, MORE e WaterCore.

The main objective of the Collaborative Laboratories (CoLAB) is to create, directly and indirectly, qualified employment and scientific employment in Portugal through the implementation of research and innovation agendas oriented towards the creation of economic and social value. In 2024 DEQ had active and relevant participation in 7 approved CoLABs NET4CO₂, VGCoLAB, ARCP, HyLab, BIOREF, MORE and WaterCore.

A qualidade de investigação desenvolvida no DEQ, juntamente com a qualidade de ensino ministrada, reflete-se na classificação da Universidade do Porto em reputados Rankings internacionais do ensino superior na área do conhecimento da Engenharia Química, em que se posicionou em 2024 como a número 1 (ex aequo com a Universidade de Lisboa) no ranking a nível nacional e no top 200 a nível internacional.

Nos anexos V e VI encontram-se mais detalhes sobre a produção científica dos docentes e investigadores do DEQ em 2024, os principais cargos por eles ocupados em diversas organizações e os prémios e reconhecimentos pela sua atividade.

The quality of the research carried out at DEQ, together with the quality of teaching provided, is reflected in the classification of the University of Porto in renowned international rankings of higher education in the area of Chemical Engineering, in which it was positioned in 2024 as number 1 (ex aequo with the University of Lisbon) in the ranking at a national level and in the top 200 at an international level.

Annexes V and VI provide more details about the scientific production of DEQ teachers and researchers in 2024, the main positions held by them in various organizations and the awards and recognition for their activity.



	SHANGAI RANKING	NTU RANKING	QS RANKING
WORLD	201-300	187	151-200
EUROPE	18-44	18	Top 70
PORTUGAL	1-3	1	1-2

EVENTOS E LIGAÇÃO À SOCIEDADE

EVENTS AND LINK TO SOCIETY

SERVIÇOS AO EXTERIOR

Para além de todo o apoio ao ensino e à investigação, o DEQ oferece também diversos serviços para a sociedade em geral, em particular ensaios e análises para entidades externas.

Adicionalmente, as unidades de investigação sediadas no DEQ desenvolveram várias ações de ligação à sociedade como, entre outras, atividades de valorização económica do conhecimento científico, na esfera de competência dos seus investigadores, que configuram prestações de serviços de elevado valor acrescentado.

Em 2024 foram registados 20 contratos de prestação de serviços, com 13 instituições diferentes, que resultaram numa receita global de 88,3 k€.

EXTERNAL SERVICES

In addition to all support for teaching and research, DEQ also offers several services for society in general.

Additionally, the research units based at DEQ developed several actions to connect with society, such as, among others, activities for the economic valuation of scientific knowledge, in the sphere of competence of its researchers, which constitute services of high added value.

In 2024, 20 service contracts were registered with 13 different institutions, resulting in a global revenue of 88.3 k€.

Antson Farms			
 Estonian Research Council	 FCT Fundação para a Ciência e a Tecnologia		INSTITUTO DA CONSTRUÇÃO
 IGAP juntos para qualificar			 SIMDOURO Grupo Águas de Portugal
			

RELAÇÃO COM AS ESCOLAS

O DEQ empenha-se continuamente em fomentar as suas relações com as escolas de todo o país, fomentando visitas às suas instalações, visitas às próprias escolas ou celebrando protocolos de colaboração com vista a dar apoio a atividades de divulgação científica e transferência de conhecimento.

O DEQ esteve envolvido em atividades resultantes de um protocolo de colaboração com o Agrupamento de Escolas da Maia. Esta parceria, coordenada pelo DEQ, consiste no apoio de consultadoria, tecnológico e laboratorial em pequenas atividades de iniciação à investigação e de extensão. Em 2024/25 foram iniciados os seguintes projetos:

Projeto: Clea

Tutores: Isabel Martins e Yaidelin Manrique

Estudantes: Isabel Oliveira, Maria Toga, Nuno Aroso e Vasco Cardoso

Projeto: GreenFlux

Tutores: Isabel Martins, Andreia Ribeiro e Joana Lains

Estudantes: Ana Catarina Miranda, Francisca Teixeira, Inês Machado.

Projeto: FlavoHeart

Tutores: Andreia Ribeiro

Estudantes: Ana Margarida Alves, Catarina Teixeira, Mariana Filipa Sousa

Projeto: FeatherPlastic

Tutores: Isabel Martins e Carina Costa

Estudantes: Ana Catarina , Catarina Cardoso e Carolina Sousa

Projeto: Alsisafe

Tutores: Cláudia Gomes da Silva e Carla Ferreira

Estudantes: André dos Santos Oliveira, José Rodrigues, Issac Cristo

RELATIONSHIP WITH HIGH SCHOOLS

DEQ continuously strives to foster its relations with schools all over the country, promoting visits to its facilities, visits to the schools themselves or signing collaboration protocols in order to support scientific dissemination and knowledge transfer activities.

DEQ was involved in activities resulting from a collaboration agreement with the Maia School Group. This partnership, coordinated by DEQ, consists of providing consultancy, technological, and laboratory support in small research initiation and outreach activities. In 2024/25, the following projects were initiated:

Project: Clea

Tutor: Isabel Martins e Yaidelin Manrique

Students: Isabel Oliveira, Maria Toga, Nuno Aroso e Vasco Cardoso

Project: GreenFlux

Tutor: Isabel Martins, Andreia Ribeiro e Joana Lains

Students: Ana Catarina Miranda, Francisca Teixeira, Inês Machado.

Project: FlavoHeart

Tutor: Andreia Ribeiro

Students: Ana Margarida Alves, Catarina Teixeira, Mariana Filipa Sousa

Project: FeatherPlastic

Tutor: Isabel Martins e Carina Costa

Students: Ana Catarina , Catarina Cardoso e Carolina Sousa

Project: Alsisafe

Tutor: Cláudia Gomes da Silva e Carla Ferreira

Students: André dos Santos Oliveira, José Rodrigues, Issac Cristo



Em 2024, o DEQ recebeu cerca de 892 visitantes, na grande maioria estudantes e alguns professores que os acompanharam nas visitas, provenientes de várias escolas do ensino secundário em Portugal. Integrando o programa divulgação da FEUP junto das escolas, ‘RoadShow às Escolas’, o DEQ participou nas atividades desenvolvidas junto de 4 escolas da região.

In 2024, DEQ received approximately 892 visitors, mostly students and some teachers accompanying them, coming from various secondary schools across Portugal. As part of FEUP’s outreach program to schools, the ‘RoadShow to Schools’, DEQ participated in activities held at 4 schools in the region.

ESCOLA SCHOOL	DATA DATE	ÂMBITO SCOPE	PARTICIPANTES PARTICIPANTS
VISITANTES VISITORS			
Escola Vieira de Araujo (Vieira do Minho- Braga)	16/01/2024	BIO	40
Escola Básica e Secundária de Caminha (Viana do Castelo)	09/02/2024	EQ	76
Colégio Vasco da Gama (Belas - Lisboa)	16/02/2024	EQ	30
SPE 2024 (94 escolas)	19-21/03/2024	EQ BIO EA ALICE	528
Escola Diogo Macedo (Porto)	17/04/2024	EQ	17
Colégio EFANOR (Porto)	24/04/2024	EQ	40
Escola Secundária Martins Sarmiento (Guimarães)	29/05/2024	EQ BIO	25
Escola Secundária Dr. Manuel Gomes de Almeida (Espinho)	31/10/2024	EQ	100
Escola Monserrate (Viana do Castelo)	12/12/2024	EQ BIO	36
VISITADOS VISITED			
Colégio de Nossa Senhora do Rosário (Porto)	17/12/2024	BIO	-
Escola Secundária Clara de Resende (Porto)	14/11/2024	BIO	-
Escola Secundária Dr. Manuel Gomes de Almeida (Espinho)	06/11/2024	EQ	-
Escola Secundária Eça de Queirós (Póvoa de Varzim)	05/01/2024	BIO EA	-





27/02/2024 :: GLOBAL WOMEN'S BREAKFAST

Como vem sendo hábito, o DEQ participou em 2024 em mais uma edição desta Iniciativa da International Union of Pure and Applied Chemistry (IUPAC). A edição do #GWB2024 teve como tema “Catalizar a Diversidade na Ciência.”

DEQ participated once again in 2024 in this Initiative of the International Union of Pure and Applied Chemistry (IUPAC). The #GWB2024 edition was themed “Catalyzing Diversity in Science.”



19-21/03/2024 :: SEMANA PROFISSÃO ENGENHEIRO

Organizado anualmente pela FEUP, este evento, dirigido aos estudantes do ensino secundário, contou mais uma vez com a participação do DEQ em diversas atividades distribuídas pelos laboratórios de ensino e laboratórios das unidades de investigação.

Organized annually by FEUP, this event, aimed at secondary school students, once again featured the participation of the DEQ in various activities held across the teaching laboratories and the research unit laboratories.



15-17/03/2024 :: SIMPÓSIO DE BIOENGENHARIA

Evento anual, organizado pelos estudantes de Bioengenharia, que pretende retratar o estado atual da Bioengenharia, incentivando a comunicação e a partilha de conhecimento entre estudantes, o mundo académico, a indústria e as empresas emergentes num evento que engloba a Engenharia Biológica / Biomédica e a Biotecnologia Molecular.

Annual event organized by Bioengineering students, aiming to portray the current state of Bioengineering while encouraging communication and knowledge sharing among students, academia, industry, and start-ups, in an event that encompasses Biological/Biomedical Engineering and Molecular Biotechnology.



08-09/04/2024 :: FÓRUM DO AMBIENTE

Organizado pelo Núcleo de Estudantes de Engenharia do Ambiente, da FEUP, pretende discutir temas de distintas áreas de intervenção da Engenharia do Ambiente. A XIII edição deste evento teve como tema “Olhar o Presente. Preparar o Futuro”.

Organized by the Environmental Engineering Students' Group at FEUP, this event aims to discuss topics from various areas of Environmental Engineering. The 13th edition of the event was held under the theme “Looking at the Present. Preparing for the Future.”



10/04/2024 :: OLIMPÍADAS DE QUÍMICA JÚNIOR

A FEUP acolheu uma das semifinais regionais das Olimpíadas de Química Júnior, organizadas pela Sociedade Portuguesa de Química para alunos do ensino básico e secundário. As provas tiveram lugar nos Laboratórios do DEQ e num anfiteatro da FEUP. A atividade foi organizada pelos professores Joaquim Faria e Cláudia Silva, com o apoio de investigadores, técnicos do DEQ e estudantes do Núcleo de Engenharia Química.

FEUP hosted one of the regional semifinals of the Junior Chemistry Olympiad, organized by the Portuguese Chemical Society for basic and secondary school students. The exams held in DEQ Laboratories and in a FEUP amphitheater. The event was organized by professors Joaquim Faria and Cláudia Silva, with the support of researchers, DEQ technicians, and students from the Chemical Engineering Student Group.



11-14/04/2024 :: MOSTRA DA UNIVERSIDADE DO PORTO

A Mostra da Universidade do Porto é um evento de divulgação onde se mostra as possibilidades que a Universidade do Porto tem para oferecer, desde a formação académica e profissional até à investigação científica. Neste evento estiveram representados os cursos de Engenharia Química, Engenharia do Ambiente, Bioengenharia e as unidades de I&D sediadas no DEQ.

The University of Porto Fair is an outreach event showcasing the opportunities the University of Porto offers, from academic and professional training to scientific research. This event featured representations from the Chemical Engineering, Environmental Engineering, and Bioengineering courses, as well as the R&D units based at DEQ.



08-10/05/2024 :: IJUP

Evento de periodicidade anual onde os estudantes da U. Porto têm a oportunidade de apresentar e discutir os resultados dos estudos em que participaram no âmbito de projetos de iniciação à investigação. Na 17ª edição do IJUP o DEQ esteve representado na Comissão Científica pelo professor Manuel Simões e, como tem sido hábito, esta edição contou também com a participação de estudantes ligados ao DEQ.

An annual event where students from the University of Porto have the opportunity to present and discuss the results of studies they participated in as part of research initiation projects. At the 17th edition of IJUP, the DEQ was represented on the Scientific Committee by Professor Manuel Simões and, as usual, this edition also featured participation from students affiliated with DEQ.



16/11/2024 :: XXIII JORNADAS DE ENGENHARIA QUÍMICA

Como habitualmente, o DEQ apoiou a realização de um fórum para a discussão de temas de interesse para a formação dos futuros engenheiros químicos, incluindo temas gerais de interesse nacional. As XXIII jornadas de Engenharia Química foram subordinadas ao tema "Engenharia Química 4.0".

As usual, DEQ supported the organization of a forum to discuss topics of interest for the training of future chemical engineers, including subjects of general national relevance. The 23rd Chemical Engineering Days were held under the theme "Chemical Engineering 4.0."



18-24/11/2024 :: SEMANA DA CIÊNCIA E TECNOLOGIA:

A Semana da Ciência e Tecnologia, promovida pelo DEQ incluiu debates sobre Engenharia Química, Ambiente e Biotecnologia, com especialistas do setor empresarial e investigadores do DEQB. O evento foi dirigido ao público em geral e a estudantes.

The Science and Technology Week, promoted by DEQ, included debates on Chemical Engineering, Environment, and Biotechnology, featuring specialists from the business sector and researchers from DEQB. The event was aimed at the general public and students.

CONSELHEIROS DA AMÉRICA LATINA EM JORNADA DE INTERNACIONALIZAÇÃO

No dia 22 de novembro, a FEUP teve a honra de receber um grupo de orientadores vocacionais de diversas escolas sul-americanas, no âmbito do *Counsellors Workshop*.

A sessão associada à Engenharia Química, coordenada pela Professora Margarida Bastos, contou com a participação de docentes dos cursos de Licenciatura e Mestrado em Engenharia Química e constituiu uma oportunidade privilegiada para discutir os principais fatores que tornam esta área de formação uma escolha académica atrativa, inovadora e alinhada com os desafios do futuro. No mesmo contexto, o laboratório de Engenharia do Ambiente do DEQ acolheu também uma visita orientada para a área da Engenharia do Ambiente, coordenada pela Professora Joana Dias (DEMM). Esta visita permitiu apresentar as valências laboratoriais e as perspetivas formativas e profissionais associadas à Engenharia do Ambiente, contribuindo igualmente para a promoção das áreas de engenharia junto dos participantes.

LATIN AMERICAN COUNSELLORS ON AN INTERNATIONALIZATION JOURNEY

On November 22, FEUP had the honor of welcoming a group of vocational counsellors from various South American schools as part of the *Counsellors Workshop*.

The session dedicated to Chemical Engineering, coordinated by Professor Margarida Bastos, included the participation of faculty members from the Bachelor's and Master's programs in Chemical Engineering. It was a valuable opportunity to discuss the key factors that make this field of study an attractive, innovative academic choice, aligned with future challenges.

In the same context, the Environmental Engineering laboratory of the Department of Chemical Engineering (DEQ) also hosted a visit focused on Environmental Engineering, coordinated by Professor Joana Dias (DEMM). This initiative offered an overview of the laboratory facilities, as well as the educational and professional opportunities associated with Environmental Engineering, further contributing to the promotion of engineering fields among the participants.



RELAÇÃO COM ANTIGOS ESTUDANTES

Em 2024, o DEQB teve o prazer de receber a visita de um grupo de alumni, no âmbito das comemorações dos 50 anos da conclusão do curso de Engenharia Química. Os antigos estudantes foram recebidos pelo Diretor do DEQ, professor Fernando Pereira, que os acompanhou numa visita guiada ao departamento. O DEQ mantém-se sempre disponível para acolher os seus alumni naquela que continua a ser também a sua casa, proporcionando um ambiente caloroso e propício ao reencontro e à partilha de memórias e experiências.



29/04/2024

50º Aniversário do início do curso de Engenharia Química
50th anniversary of the start of the Chemical Engineering

DIVULGAÇÃO DA ATIVIDADE

A juntar à página na internet e no Facebook foi criada em 2024 uma conta do DEQ na rede social Instagram para complementar a divulgação das atividades do Departamento junto da comunidade DEQ, em particular, e da sociedade, no geral.

**ESTAMOS NO
INSTAGRAM**



SICA-NOS E FIQUE A PAR
DE TODAS AS NOVIDADES

@deqb_feup

RELATIONSHIP WITH HIGH SCHOOLS

In 2024, DEQ had the pleasure of welcoming a group of alumni as part of the celebrations marking the 50th anniversary of their graduation in Chemical Engineering. The former students were received by the Director of DEQ, Professor Fernando Pereira, who guided them on a tour of the department. DEQ remains always open to welcoming its alumni back to what is also still their home, offering a warm environment conducive to reunion and the sharing of memories and experiences.



DISSEMINATION OF ACTIVITIES

In addition to the webpage and Facebook account, an Instagram account for DEQ was created in 2024 to complement the dissemination of the Department's activities within the DEQ community in particular, and society in general.



RELATÓRIO DE CONTAS

FINANCIAL REPORT

Nesta secção apresentam-se as contas relativas ao exercício de 2024 (Mapa de Receitas e Despesas por CCO) indicando as receitas, despesas e saldos do DEQ, que não incluem as verbas geridas pelas Unidades de Investigação associadas ao departamento. Neste mapa a designação SDEQ02 refere-se ao Centro de Controlo Orçamental (CCO) do DEQ relativo a verbas comuns (Orçamento de Despesas Correntes e Investimento). O CCO VSQ001, respeitante à prestação de serviços do DEQ, também é referido neste relatório, contudo este CCO não é considerado pela Direção da FEUP aquando da atribuição do orçamento.

A figura seguinte mostra a evolução das receitas e despesas do DEQ ao longo dos últimos 5 anos.

O orçamento atribuído ao DEQ em 2024 reuniu as seguintes contribuições:

Saldo Transitado de 2023 (102 346,19 €): Este valor inclui os saldos disponíveis do Centro de Controlo Orçamental SDEQ02, que engloba a verba de 5 566,32 € para pagamento de faturas de anos anteriores.

Overheads de Projetos e Prestação de Serviços ao Exterior (90 411,85 €): Esta verba, cujo valor é idêntico ao de 2023, compreende a percentagem calculada para o DEQ proveniente dos *overheads* de projetos em que participam/coordenam docentes e investigadores do DEQ, e 2,5 % da faturação relativa às prestações de serviço ao exterior realizadas pelo departamento.

Overheads dos Programas Doutorais (10 692,14 €): Esta dotação orçamental é inferior à do ano de 2023. O valor desta rubrica está dependente das transferências da FCT referentes ao pagamento das propinas associadas às bolsas de doutoramento, que nem sempre se verifica com a periodicidade devida.

Orçamento atribuído pela FEUP (110 838,12 €): Este é o orçamento atribuído pela FEUP, correspondente à verba ODCI. Este valor é idêntico ao atribuído no último ano, e depende do número de estudantes ETI associados ao DEQ e do número de recursos humanos ativos em cada ano.

Taxas por utilização de recursos (5 544,00 €): Esta verba refere-se a taxas pagas por utilização de recursos da FEUP pelos colaboradores externos do DEQ, sendo ligeiramente superior ao valor de 2023.

Receitas Internas (-38 894,87 €): Este valor compreende essencialmente à soma das devoluções ao DEQ de despesas inicialmente suportadas pelo departamento tais como: despesas submetidas através do fundo de maneo, envio de correspondência, etc. Em 2024 esta rubrica inclui a comparticipação do DEQ na aquisição de mobiliário para os laboratórios de investigação e o apoio ao EBEC, em que ambas as despesas foram consideradas como uma redução ao orçamento do DEQ.

Receitas Externas (947,89 €): Esta verba corresponde à regularizações de valores com a Reitoria da UP, relativos à Universidade Júnior de 2023.

Os acertos referem-se a diferenças (arredondamentos) entre os valores atribuídos pela Direção da FEUP e os valores lançados no SIGARRA.

This section presents the accounts for the financial year 2024 (Statement of Income and Expenses by CCO) showing DEQ's income, expenses and balances, which do not include the funds managed by the Research Units associated with the department. In this map the designation SDEQ02 refers to DEQ's Budget Control Centres (BCC) for common funds (Current Expenditures and Investment Budget). The CCO VSQ001, concerning DEQ services, is also referred to in this report, however this CCO is not considered by FEUP's Board when allocating the budget.

The figure below shows the evolution of DEQ's revenues and expenditure over the last 5 years.

The budget allocated to DEQ in 2024 gathered the following contributions:

Balance Carried Forward from 2023 (102 346.19 €): This value includes the available balance from Budget Control Centre SDEQ02, which includes the amount of 5 566.32 € for the payment of invoices from previous years.

Overheads from Projects and External Services (90 411.85 €): This amount, whose value is identical to that of 2023, comprises the percentage calculated for DEQ from the overheads of projects in which DEQ professors and researchers participate/coordinate, and 2.5 % of the invoices related to external services rendered by the department.

Overheads from Doctoral Programmes (10 692.14 €): This budget allocation is lower than that of the year 2023.

This item depends on transfers from the FCT related to the payment of tuition fees associated with doctoral scholarships, which do not always occur with the expected regularity.

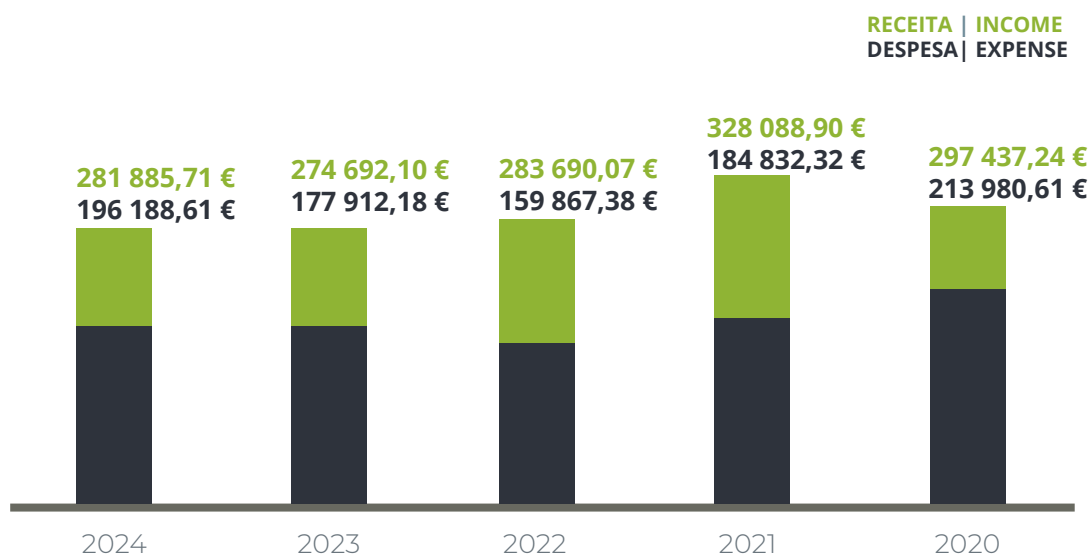
Budget allocated by FEUP (110 838.12 €): This is the budget allocated by FEUP, corresponding to the ODCI budget. This amount is identical to that allocated in the previous year, which depends on the number of FTE students associated with the DEQ and the number of active human resources active each year.

Fees for use of resources (5 544.00 €): This amount refers to fees paid for the use of FEUP resources by external DEQ researchers, being slightly higher than the amount for 2023.

Internal Income (-38 894.87 €): This amount essentially comprises the reimbursement of expenses paid by DEQ through the working capital, such as postage costs. In 2024, this item includes the DEQ's contribution toward the purchase of furniture for the research laboratories and support for EBEC, with both expenses considered as reductions to the DEQ's budget.

External income (947.89 €): This value corresponds to the adjustment of amounts with UP Rectorate related to the 2023 edition of Universidade Júnior.

The account adjustments refer to differences (due to rounding) between the values assigned by the FEUP's Board and the values posted in SIGARRA.



EVOLUÇÃO ANUAL DAS RECEITAS E DESPESAS
ANNUAL INCOME AND EXPENSES EVOLUTION

MAPA DE RECEITAS E DESPESAS POR CCO
MAP OF REVENUES AND EXPENSES PER BCC

CENTROS DE CONTROLO ORÇAMENTAL BUDGET CONTROL CENTRES		SDEQ.02
RECEITA INCOME		
Saldos Iniciais/Transição Anual de Saldos Initial Balances/Annual Balance Transition		96 779,87 €
Transferência para Pagamento de Faturas de Anos Anteriores Transfer for Payment of Invoices from previous years		5 566,32 €
Overheads de Projetos e Serviços ao Exterior Relativos a 2023 Project Overheads and External Services for 2023		90 411,85 €
Overheads de Programas Doutorais Relativos a 2023 Doctoral Programme Overheads for 2023		10 692,14 €
Orçamento de Despesas Correntes e Investimentos (ODCI) Current Expenses and Investment Budget (CEIB)		110 838,12 €
Investimento Investment		- €
Distribuição de Taxas por Utilização de Recursos Relativas a 2023 Distribution of Taxes due to Resources Usage for 2023		5 544,00 €
Encargos com o Espaço Space Charges		- €
Receitas Internas Internal Revenues		-38 894,87 €
Receitas Externas Exnternal Revenues		947,89 €
Acerto Account Settling		0,39 €
Tansferências outros CCOS Transfers to other BCC		- €
DESPESA EXPENSE		
Internas Internal		57 700,38 €
Externa Registada e Liquidada em 2023 External Registered and Settled in 2023		138 488,23 €
Recursos Humanos - Bolsas Human Resources - Grants		- €
RESULTADOS DOS CENTROS DE CUSTO ORÇAMENTAL RESULTS OF BUDGET COST CENTRES		
Total da Receita Total Revenue		281 885,71 €
Total da Despesa Total Expenditure		196 188,61 €
SALDO FINAL FINAL BALANCE		85 697,10 €

EXECUÇÃO ORÇAMENTAL EM 2024

A despesa executada pelo DEQ em 2024 foi de 196 188,61 €. No mapa de receitas e despesas por contas é elencada a distribuição das despesas em 2024 pelas diferentes contas, e no mapa de histórico de receitas/despesas consolidadas é apresentada uma análise comparativa para os últimos anos.

Regularizações internas: Regularização de despesas pendentes relativas a 2023.

Administração geral: A despesa de 37 098,70 € inclui despesas diversas de funcionamento do DEQ nomeadamente: gases dos laboratórios de ensino, consumíveis dos laboratórios de ensino relativas aos anos anteriores, consumíveis (toners / tinteiros, papel de exame, envelopes, águas e material de escritório, entre outros) e serviços (telefones fixos e móveis, correio, transportadoras e fotocópias). Em 2024 inclui igualmente a comparticipação em aluguer de espaços (Energylab FEUP) e os apoios ao BET e Regresso a Casa 2024.

Docentes e Investigadores: As despesas gerais realizadas pelos docentes, aposentados, investigadores permanentes e não permanentes e apoio à docência, totalizaram o valor de 18 689,74 €.

Laboratórios de Ensino: O apoio às atividades das aulas laboratoriais e à leção de unidades curriculares de opção com componente laboratorial totalizou o valor de 16 939,56 €. A fórmula para atribuição de orçamento às unidades curriculares laboratoriais tem em consideração não só a média de estudantes inscritos nos últimos anos na unidade curricular, mas também o número de semanas de funcionamento e o fator de complexidade dos trabalhos laboratoriais.

Infraestruturas: Esta despesa contabiliza as intervenções necessárias no edifício, laboratórios de ensino e investigação, gabinetes, e despesas gerais com as áreas de Ambiente e Segurança. Em 2024 o valor real ultrapassa os 65 000 €, tendo sido contabilizado na despesa o valor de 21 839,12 €, que inclui a reabilitação dos laboratórios de investigação dos edifícios F e H e, como

redução ao orçamento, a verba de 43 477,57€ relativa à comparticipação na aquisição de mobiliário de laboratório para F103 e H118.

Equipamentos: A verba total despendida na aquisição de equipamento em 2024 totalizou 68 832,21 €, que inclui alguns equipamentos de maior dimensão tais como: Liofilizador, Câmara de Segurança Microbiológica e Incubadora, para além de equipamentos de menor dimensão.

Manutenção: As despesas com a manutenção totalizaram 9 942,13 €, das quais 4 210,61 € referem-se a contratos de manutenção (TOC, Centrifuga e Sistema de Água Ultra Pura).

Biblioteca: A verba desta rubrica está relacionada com a subscrição on-line da revista Chemical Engineering Education.

Meios Informáticos: Manteve-se o investimento em meios informáticos, no valor de 7 484,57 €, que inclui as licenças de ESRI, AspenPlus, Adobe Creative Cloud for Teams, Grammarly, LabView Multisim, ANSYS e Polysun Educational.

Relações Externas / Informação e Comunicação: Nestas duas rubricas incluem-se as despesas com representação, júris e convidados; Mostra UP, Universidade Júnior, Jornadas da Engenharia Química, Fórum Ambiente, Simpósio de Bioengenharia, Olimpíadas de Química Júnior, Profissão Engenheiro e outras atividades de divulgação do DEQ. Em 2024, esta verba totalizou 7 008,00 €.

Formação: O DEQ pagou a inscrição dos seus técnicos no Curso de Formação em Culturas de Células, que totalizou 400,00 €.

Recursos Humanos: Não houve despesas a registar.

O saldo total a transitar para 2025 será de 119 234,21 €, do qual 85 697,10 € corresponde ao saldo do CCO DEQ Comuns (SDEQ02) e 33 537,11 € ao CCO de Prestação de Serviços Analíticos (VSQ001).

BUDGET EXECUTION IN 2024

The expenditure executed by DEQ in 2024 was 196 188.61 €. The revenue and expenditure by account statement lists the distribution of expenses in 2024 across the different accounts, and the consolidated revenue/expenditure history map provides a comparative analysis for recent years.

Internal Regularizations: Adjustment of outstanding expenses related to 2023.

General administration: The expenditure of 37 098.70 € includes miscellaneous expenses for DEQ's operation, namely, expenses for the specialty gas network, teaching laboratory expenses for the previous year, consumables (toners/ink cartridges, examination paper, envelopes, water and office supplies, among others) and services (fixed and mobile telephones, mail, carriers and photocopies). In 2024, it also includes contributions toward space rentals (Energylab FEUP) and support for BET and Regresso a Casa 2024.

Professors and Researchers: The general expenses incurred by active and retired DEQ Professors, permanent and non-permanent researchers and teaching support activities amounted to 18 689.74 €.

Teaching Laboratories: The support to the activities of laboratory classes and the teaching of optional curricular units with laboratory component amounted to 16 939.56 €. The formula for allocating budget to laboratory curricular units takes into account not only the average number of students enrolled in recent years in the curricular unit, but also the number of weeks of operation and the complexity factor of laboratory work.

Infrastructure: This expenditure accounts for the necessary interventions in the building, teaching laboratories and offices, and general expenses with the Environment and Safety areas. In 2024, the actual amount exceeds 65 000 €, with an expenditure of 21 839.12 €, which includes the rehabilitation of the research laboratories in buildings F and H, and as a budget

reduction, the amount of 43 477.57 € related to DEQ's contribution toward the acquisition of furniture for laboratories F103 and H118.

Equipment: The total amount spent on the acquisition of equipment in 2024 amounted to 68 832.21 €, which includes some larger equipment for general use, namely: Lyophilizer, Biological Safety Cabinet, and Microbiology Incubator, in addition to other smaller equipment.

Maintenance: Expenditure on maintenance amounted to 9 942.13 €, of which 4 210,61 € refer to maintenance contracts (TOC, Centrifuge, and Ultra-Pure Water System).

Library: The amount under this heading is related to the online subscription to the journal Chemical Engineering Education.

IT Resources: The investment in IT resources was maintained, amounting to 7 484.57 €, which includes licenses for ESRI, AspenPlus, Adobe Creative Cloud for Teams, Grammarly, LabView Multisim, ANSYS e Polysun Educational.

External Relations / Information and Communication: These two items include expenses with representation, juries and guests; Mostra UP, Junior University, Chemical Engineering Day, Environment Forum, Bioengineering Symposium, Profession Engineer, Junior Chemistry Olympiad, and other DEQ dissemination activities. In 2024, this amount totaled 7 008.00 €.

Training: These 400.00 € correspond to the registration fees for DEQ's technicians in the Cell Culture Training Course.

Human Resources: There were no expenses to record.

The total balance to be carried over to 2025 will be 119 234.21 €, of which 85 697.10 € corresponds to the balance of DEQ Common CCO (SDEQ02) and 33 537.11 € to the Analytical Services Provision CCO (VSQ001).

HISTÓRICO DE RECEITAS POR CCO
HISTORIC OF REVENUES PER BCC

CENTROS DE CONTROLO ORÇAMENTAL BUDGET ONTROL N'TRES		2024		2023		2022		2021		2020	
DESCRIÇÃO/CCO DESCRIPTION/BCC		SDEQ.02	SDEQ.40	SDEQ.02	SDEQ.40	SDEQ.02	SDEQ.40	SDEQ.02	SDEQ.40	SDEQ.02	SDEQ.40
Saldos Iniciais/Transição Anual de Saldos Initial Balances/Annual Balance Transition		96 779,87 €	- €	123 817,01 €	- €	143 256,68 €	- €	83 456,63 €	- €	81 857,23 €	3 760,00 €
Transferência para Pagamento de Faturas do ano anterior Transfer for Payment of Invoices from previous year		5 566,32 €	- €	- €	- €	- €	- €	100 400,68 €	- €	21 054,22 €	- €
Overheads de Projetos e Serviços ao Exterior relativos ao ano anterior Project Overheads and External Services for the previous year		90 411,85 €	- €	89 572,50 €	- €	7 469,91 €	- €	39 128,32 €	- €	84 945,74 €	- €
Overheads de Programas Doutorais relativos ao ano anterior Doctoral Programme Overheads for the previous year		10 692,14 €	- €	48 859,95 €	- €	22 436,71 €	- €	20 177,17 €	- €	30 570,80 €	- €
Orçamento de Despesas Correntes e Investimentos (ODCI) Current Expenses and Investment Budget (CEIB)		110 838,12 €	- €	106 214,05 €	- €	104 114,90 €	- €	65 096,71 €	- €	89 603,98 €	- €
Investimento Investment		- €	- €	- €	- €	- €	- €	40 637,55 €	- €	- €	- €
Distribuição de Taxas por Utilização de Recursos relativos a 2022 Distribution of Taxes for Resources Usage for 2022		5 444,00 €	- €	4 405,50 €	- €	2 607,00 €	- €	1 699,50 €	- €	3 465,00 €	- €
Receitas Internas - Outras Internal Revenues - Other		- 38 894,87 €	- €	14 045,23 €	- €	3 625,46 €	- €	10 040,59 €	- €	8 121,25 €	- €
Receitas Externas External Revenues		947,89 €	- €	6,64 €	- €	180,00 €	- €	- €	- €	- €	- €
Encargos com o Espaço Space Charges		- €	- €	- 9 894,80 €	- €	- €	- €	- 32 548,35 €	- €	- 25 941,09 €	- €
Acertos Account Settling		0,39 €	- €	0,36 €	- €	- 0,48 €	- €	0,11 €	- €	0,11 €	- €
TRFs Outros CCOs Transfers Other BCCs		- €	- €	- 102 334,34 €	- €	- €	- €	- €	- €	3 760,00 €	- 3 760,00 €
SUBTOTAL		281 885,71 €	- €	274 692,10 €	- €	283 690,07 €	- €	328 088,90 €	- €	297 437,24 €	- €
TOTAL		281 692,10 €		274 692,10 €		283 690,07 €		328 088,90 €		297 437,24 €	

ORÇAMENTO EXECUTADO
BUDGET EXECUTION

CCO BCC	RÚBRICA ITEM	ANO YEAR				
		2024	2023	2022	2021	2020
SDEQ.40	RH - Bolsas HR - Grants	- €	- €	- €	- €	- €
SDEQ.02	Regularização de Despesas do Ano Anterior Regularization of Previous Year's Expenditure	5 566,32 €	- €	- €	100 400,68 €	21 054,22 €
	Regularizações Internas Internal Regularizations	2 180,50 €	-7 274,31 €	- €	- €	- €
	Administração Geral/ Orçamento General Administration	37 098,70 €	24 307,15 €	15 177,92 €	19 774,23 €	10 838,97 €
	Docentes e Investigadores Professors and Researchers	18 689,74 €	19 830,75 €	16 909,42 €	17 599,47 €	10 563,40 €
	Laboratórios Ensino - Engenharia Química Teaching Labs - Chemical Engineering	8 966,42 €	14 019,21 €	12 710,18 €	9 243,41 €	9 381,31 €
	Laboratórios Ensino - Engenharia do Ambiente Teaching Labs - Environmental Engineering	3 149,25 €	3 496,67 €	3 807,07 €	3 092,44 €	1 541,02 €
	Laboratórios Ensino - Bioengenharia Teaching Labs - Bioengineering	4 823,89 €	3 695,39 €	3 573,03 €	4 545,52 €	1 855,18 €
	Competências Transversais Transferable skills	- €	541,47 €	2 758,72 €	- €	- €
	Infraestruturas Infrastructures	21 839,12 €	5 133,46 €	5 717,48 €	5 260,87 €	15 437,48 €
	Equipamentos Equipment	68 832,21 €	90 785,28 €	56 890,84 €	288,62 €	108 969,60 €
	Manutenção Geral General Maintenance	9 942,13 €	9 902,05 €	18 548,62 €	13 875,88 €	20 645,97 €
	Biblioteca Library	207,76 €	200,34 €	3,60 €	- €	111,47 €
	Informática IT	7 484,57 €	5 950,82 €	3 465,40 €	8 100,84 €	6 953,57 €
	Relações Externas External Relations	1 406,21 €	1 767,55 €	6 774,63 €	182,63 €	253,51 €
	Formação Formation	400 €	- €	- €	- €	- €
	Informação e Comunicação Information and Communication	5 601,79 €	5 556,35 €	13 530,47 €	2 467,73 €	6 374,91 €
TOTAL		196 188,61 €	177 912,18 €	184 832,32 €	213 980,61 €	232 436,67 €

ANEXOS

ANNEXES

ANEXO I: EQUIPAMENTOS

ANNEX I: EQUIPMENTS

EQUIPAMENTO EQUIPMENT	MARCA BRAND	ANO YEAR
[E-101] :: LABORATÓRIO DE PROJETOS TRANSVERSAIS DE BIOENGENHARIA		
Arca a -80 °C	Sanyo	2004
Arca a -30 °C	Sanyo	2004
Câmara de Fluxo Laminar	Baker	2010
Incubadora	Lovibond	2017
[E-102] :: LABORATÓRIO DE CULTURA CELULAR		
Laboratório de Cultura Celular	-	2024
[E-103] :: LABORATÓRIO DE BIOTECNOLOGIAS		
Agitador Orbital	IKA	2015
Centrífuga de bancada	Eppendorf	2009
Espectrofotômetro	VWR	2010
Medidor portátil de oxigênio	WTW	2009
[E-147] :: LABORATÓRIO DE PREPARAÇÃO GERAL		
Arca a 5 °C	Aralab	2010
Autoclave (2)	Uniclave	2008 2010
Estufa de secagem	Argo Lab	2017
Incubadora (2)	Velp	2007 2008
Incubadora orbital	Aralab	2007
[E-104] :: LABORATÓRIO DE BIOLOGIA CELULAR E MOLECULAR		
Espectrofotômetro UV/VIS	Thermo	2008
Incubadora orbital (2)	New Brunswick	2012
Leitor de microplacas	Biotek	2012
[E-105] :: LABORATÓRIO DE MICROBIOLOGIA		
Centrífuga de alta velocidade	Beckman	1996
Microscópio óptico	Leica	1996
Microscópio fluorescência com aquisição de imagem	Nikon	2015
Termociclador	Bio-rad	2007
Transiluminador	Cleaver	2006
[E001] :: LABORATÓRIO DE QUÍMICA GERAL E INORGÂNICA		
Espectrofotômetro	Unicam	1999
Medidor de ângulos de contacto (2)	Biolin Scientific	2015
Tensiómetro	Kruss	2012
Zetasizer	Malvern	2023
[E002] :: LABORATÓRIO DE CIÊNCIAS DO AMBIENTE		
Agitador Orbital	J. P. Selecta	2016
Carbono Orgânico Total – TOC	Shimadzu	2015
Condutivímetro (7 equipamentos)	Crison	2002 a 2004
Digestor para CQO–refluxo fechado	Merck	1999
Digestor para CQO–refluxo aberto	G.Vittadini	1999
Espectrofotômetro/Fotômetro	Hach	2017
Espectrofotômetro UV-VIS de feixe duplo	VWR	2021
	PG Instruments	2005
Fotômetro	Merck	1999
Jar test	Velp	2006
Medidor de pH (4 equipamentos)	Crison	1999
Mufla	Nabertherm	1999
Turbidímetro	Hanna	2014

EQUIPAMENTO EQUIPMENT	MARCA BRAND	ANO YEAR
[E003] :: LABORATÓRIO DE INSTALAÇÕES PILOTO		
Analísadores de CO ₂ e CO	Sensotec	2014 2017
Contador de partículas portátil	Lighthouse	2014
Espectrofotômetro UV-VIS	Sarspec	2014
Liofilizador	Telstar	2024
[E004] :: LABORATÓRIO DE OPERAÇÕES DE TRANSFERÊNCIA		
Refratômetro	Ivymen	2000
[E005] :: LABORATÓRIO DE PROJETOS TRANSVERSAIS EM ENGENHARIA QUÍMICA		
Granulômetro laser	Coulter	1999
Impressora de extrusão 3D	BeeVeryCreative	
Micro Raman	Witec	2020
Porosimetria a mercúrio	Quantachrome	2001
Microscópio invertido	DM IL LED	2000
Reômetro	Anton Paar	2018
[E006] :: LABORATÓRIO DE ENGENHARIA DAS REAÇÕES E PROCESSOS DE SEPARAÇÃO		
Picnometria a hélio	-	2001
[E104] :: LABORATÓRIO DE QUÍMICA ORGÂNICA		
Digestor de microondas	Milestone	2017
Espectrofotômetro FTIR	Perkin Elmer	2022
Prensa hidráulica	Perkin Elmer	1999
[E105] :: LABORATÓRIO DE MÉTODOS INSTRUMENTAIS DE ANÁLISE		
Cromatógrafo gasoso GC-FID e Autosampler headspace	Shimadzu	2017
Cromatógrafo gasoso GC-FID e Injetor On-Column	Shimadzu	2017
Cromatógrafo gasoso GC-FID e Injetor Split/splitless	Shimadzu	2017
Cromatógrafo líquido HPLC-DAD	Perkin Elmer	2022
Cromatógrafo líquido HPLC-UV	Knauer	1999
Espectrofotômetro UV-VIS de feixe duplo	Jasco	1997
Espectrometria de Emissão Atômica por Plasma Acoplado Indutivamente (ICP-OES)	Thermo	2017
Espectrofotômetro de Absorção Atômica de Chama	UNICAM	1992
Liofilizador	VirTis Bench	2006
SEM - Microscópio de Varrimento	Thermo Fischer	2014
[H118] :: E.BIOFILM		
Microscopia Confocal de Varredura a Laser equipado com laser branco	Leica	2024
[R001] :: LABORATÓRIO DE ENGENHARIA DO AMBIENTE (ETAR)		
Balança com terminal de pesagem (150 kg)	Barcebal	2013
Medidor multi-parâmetros para pH/ORP/EC/OD/Pressão/Temperatura	Hanna instruments	2015

ANEXO I: DISSERTAÇÕES DE MESTRADO

ANNEX I: MASTER THESIS

#	NOME NAME	TEMA TITLE	INSTITUIÇÃO INSTITUTION	SUPERVISORES SUPERVISORS
MESTRADO EM BIOENGENHARIA MASTER OF BIOENGINEERING				
1	Ana Sofia Venâncio Monsanto	Melhoria da Atenuação e da Estabilidade da Espuma da Cerveja Super Bock Original	Super Bock	Manuel José Vieira Simões
2	Barbara Miranda Pereira	Value-Added Cream Cheese: Incorporation of Microencapsulated and Nonencapsulated Onion Peel Extract as Natural Preservatives	FEUP	Lúcia Maria da Silveira Santos
3	Beatriz Fernandes Duarte	The Use of Citrus Peel Extracts for Extended Shelf Life and Improved Nutritional Quality in Shortcrust Pastry	FEUP	Lúcia Maria da Silveira Santos
4	Daniel José Rodrigues Trigo	Bioremediation of ibuprofen present in water bodies using 3D printed artificial biofilms	University of Applied Sciences Northwestern Switzerland	Olga Cristina Pastor Nunes
5	Daniela Martins Albuquerque	Natural Compounds and Their Antimicrobial Activity on Fruit and Cereal Preparations	Frulact; FEUP	Manuel José Vieira Simões
6	Filipe Rodrigues Peixoto Pinto da Mota	Nanotech-functional food products for Alzheimer's disease patients	FEUP	Maria do Carmo da Silva Pereira Stephanie Machado Andrade
7	Inês Santos de Macedo Teixeira	Novel biocide-phytochemical combinations for disinfection	FEUP	Manuel José Vieira Simões
8	Margarida Alves de Sousa	Application of Retrobiosynthesis Technology for the Bioproduction of Terpenes with Interest in the Dietary Supplements Industry	SilicoLife; FEUP	Nuno Filipe Ribeiro Pinto de O. Azevedo
9	Maria Carlos Louro Santos	Evaluation of the Interactions Between Non-Alcoholic Spirits and Cork Stoppers	Amorim Top Series	Manuel José Vieira Simões
10	Maria João Neves Carvalho Cabaço	Extraction and Stabilisation of Bioactive Compounds from Chestnut Shell Residues	FEUP	Isabel Maria Duque Martins Carina Andreia Esteves da Costa
11	Maria Manuel Henriques Teixeira	Enhancing Butter Properties through Bioactive Compounds and 3D-Printed Biodegradable Packaging	FEUP	Lúcia Maria da Silveira Santos
12	Mauro Rodrigo Dias Henriques	Engineering nanoformulations for senotherapeutics delivery	CNC – Universidade de Coimbra; FEUP	Erica Doutel Costa
13	Pedro Medeiros Silva	Wastewater treatment with Chlorella vulgaris: microplastics exposure and magnetic flocculation harvesting	FEUP	Manuel José Vieira Simões Teresa Castelo Grande
14	Rita Maria da Costa Miranda	Enhancing The Biological Properties of Food: A Comparison Between Moringa Oleifera Extracts and Microparticles as Natural Ingredients for Food Fortification	FEUP	Lúcia Maria da Silveira Santos
15	Samuel Jorge de Moel Belo	Optimization of a microfluidic chip design to perform optical nanomotion detection for antifungal susceptibility testing in space	Vrije Universiteit Brussel	Manuel António Moreira Alves
MESTRADO EM ENGENHARIA BIOMÉDICA MASTER OF BIOMEDICAL ENGINEERING				
1	Ângela Raquel Brandão Ferreira	Engineered Nanoparticles for the Targeted Delivery of Bioactive Molecules for Alzheimer's Disease	FEUP	Maria do Carmo da Silva Pereira Stephanie Machado Andrade
2	António Costa Gomes de Sá Cachada	Artificial blood to assess bacterial infections in central venous catheters	FEUP	João Mário Rodrigues Miranda
3	Carina Sofia Rodrigues Nóbrega	Nanoparticles for glioblastoma therapy: an approach to increase therapeutic efficacy	FEUP	Maria do Carmo da Silva Pereira Maria João Alves Ramalho
4	João Pedro Cerqueira Pereira	Using nanotechnology to prevent skin aging	FEUP	Joana Angélica de Sousa Loureiro Maria do Carmo da Silva Pereira

#	NOME NAME	TEMA TITLE	INSTITUIÇÃO INSTITUTION	SUPERVISORES SUPERVISORS
4	Maria João Oliveira Capela	Nanotech-Double Functionalized Particles to Target Staphylococcus aureus	FEUP	Joana Angélica de Sousa Loureiro Maria do Carmo da Silva Pereira Stephanie Machado Andrade
MESTRADO EM ENGENHARIA DOS MATERIAIS MASTER IN MATERIALS ENGINEERING				
1	Rayssa Cortez Braga Maia	Effect of additives on the performance of coatings	FEUP	Carmen Susana de Deus Rodrigues Olga Cristina Pastor Nunes
MESTRADO EM ENGENHARIA DO AMBIENTE MASTER IN ENVIRONMENTAL ENGINEERING				
1	Ana Luísa da Rocha Gomes	Aplicação do Processo de Fenton Heterogéneo na Desinfecção de Águas Residuais Urbanas	FEUP	Carmen Susana de Deus Rodrigues Olga Cristina Pastor Nunes
2	Bárbara Mascarenhas Dias Mendes	Life Cycle Assessment of a methodology for minerals and freshwater valorization from seawater desalination brines: a comprehensive study on mono and multi-ion extraction	SEAMORETECH	Adélio Miguel Magalhães Mendes
3	Catarina Bastos Velhas da Silva	Avaliação da Sustentabilidade de Sistemas de Ozonização para Tratamento de Água para Consumo Humano: Injetor Venturi vs NETmix	Simbiente	António Augusto Areosa Martins
4	Diogo de Oliveira Nascimento	Caracterização das Emissões de Odores da Mainbio SA - Identificação dos Compostos Odoríferos e Proposta de Monitorização e Controlo	MainBio	Nuno Miguel Ratola Neto Sofia Isabel Vieira de Sousa
5	Eduardo Luís Rebelo de Araújo Oliveira	Recovery of Platinum Group Metals from spent gasoline automobile catalysts	FEUP	Helena Maria Vieira Monteiro Soares Hugo Alexandre Mendes Bacelo
6	Inês Sousa de Almeida	Improving CO2 capture and microalgal harvesting efficiencies through an oscillatory flow reactor	FEUP	José Carlos Magalhães Pires António Manuel Azevedo Ferreira
7	João Filipe da Silva Pita	Calculation Of the Carbon Footprint of Renewable Methanol Production According to Different Certifications Methodologies	CAPWATT	Tânia Sofia Teixeira Lopes
8	Marta Barrias Ferreira Alves	Impacto Ambiental das fábricas Colep Packaging Espanha e Polónia	COLEP	Joana Filipa de Jesus R. Pesqueira Adrián Manuel Tavares da Silva
9	Mónica Coelho Carvalho	Development of a Microbial Desalination Cell (Mdc) as an alternative to Conventional Desalination Technologies	FEUP	Vânia Sofia Brochado de Oliveira Alexandra Maria P. S. F. Rodrigues Pinto
10	Nuno Henrique da Fonseca Rica Cardoso	Microbial Desalination Cell (MDC): A Promising Technology for Water Treatment and Desalination	FEUP	Vânia Sofia Brochado de Oliveira Alexandra Maria P. S. F. Rodrigues Pinto Joana Isabel Gonçalves Vilas Boas
11	Renata Ferreira Vidal	Assessment of Enantioselective Ecotoxicity of Butylone in Daphnia Magna	FEUP	Ana Rita Lado Teixeira Ribeiro Adrián Manuel Tavares da Silva
12	Robyn dos Santos Martins	Geradores de produção contínua induzidos pela evaporação da água	FEUP	Joana Cassilda R. Espain de Oliveira Adrián Manuel Tavares da Silva
13	Sara Isabel Martins Alves	O relato de indicadores de sustentabilidade em escolas de negócios	FEUP	José Carlos Magalhães Pires
14	Soraia Fortuna Pires	Tecnologia de ponta de ozono para a pré-oxidação de água para consumo humano	FEUP	Vítor Jorge Pais Vilar
15	Tiago Daniel de Sousa Soares	Levantamento Tecnológico e Económico dos Processos de Purificação de Biogás para a Produção de Biometano. Avaliação do Potencial Nacional	FEUP	Alexandra Maria P. S. F. Rodrigues Pinto
MESTRADO EM ENGENHARIA MECÂNICA MASTER IN MECHANICAL ENGINEERING				
1	Frederico Reboredo Couto Van-Zeller Ricca	Predicting the adhesive layer thickness in hybrid bolted-bonded joints	INEGI	Alireza Akhavan Safar Francisco Galindo Rosales
2	José Xavier Vilabril Martins	Automation of a Laser-Assisted Glass Encapsulation System for Double-Laser Low Temperature Sealing	FEUP	Joaquim Gabriel Magalhães Mendes Rúben da Silva Madureira

#	NOME NAME	TEMA TITLE	INSTITUIÇÃO INSTITUTION	SUPERVISORES SUPERVISORS
MESTRADO EM ENGENHARIA QUÍMICA MASTER IN CHEMICAL ENGINEERING				
1	Adriana Maria Soares Correia	Caracterização e otimização do processo de moagem recorrendo à medição de granulometria	CIN	Adélio Miguel Magalhães Mendes
2	Ana Andreia Moreira Pereira	Purification of renewable fuels by innovative membrane separation processes: Experimental and techno-economic analysis for bio-e-methanol purification	Capwatt	Cátia Sofia Ribeiro Azenha Adélio Miguel Magalhães Mendes
3	Ana Beatriz Araújo Frutuoso	Desenvolvimento de embalagens ativas, funcionais e sustentáveis para a indústria cosmética	CeNTI	Lúcia Maria da Silveira Santos
4	Ana Catarina Rocha Moreira Monteiro	CFD application in parametric studies of non-isothermal reactors	FEUP	José Daniel Pacheco Araújo Luís Miguel Palma Madeira
5	Ana Catarina Sousa Moreira	Simulação hidrodinâmica do processo de tratamento de superfície na manufatura automóvel	Star Institute	Ricardo Jorge Nogueira dos Santos
6	Ana Jorge da Silva Garrido	The Applicability of REACH Regulations at Castelbel	Castelbel	Lúcia Maria da Silveira Santos
7	Ana Luísa Rebelo Cabral	Water quality: removal of microcontaminants by carbon-based materials	FEUP	Adrián Manuel Tavares da Silva Ana Rita Lado Teixeira Ribeiro
8	Ana Luzia Ferreira Pires	Modeling and Simulation of a Membrane Reactor for Direct Hydrogenation of CO ₂ to Methanol	FEUP	Andreia de Freitas Silva Cátia Sofia Ribeiro Azenha
9	Ana Margarida Ribeiro da Silva	Reporte Corporativo de Sustentabilidade: Pegada de Carbono de uma Unidade de Negócio da CIN	CIN	Joana Filipa de Jesus R. Pesqueira Adrián Manuel Tavares da Silva
10	Ana Marta Ferreira de Almeida	Validação do desempenho enológico de rolhas de cortiça BW	Amorim Cork	Maria Joana M. de Carvalho Peres Margarida Maria da Silva M. Bastos
11	Ana Rita Castro Lopes	Development of Nanomaterials/Drug Conjugates for Phototherapy of Rectal Cancer	FEUP	Artur Daniel Moreira Pinto Joana Angélica de Sousa Loureiro
12	Beatriz Basto Millán	Encapsulation of Arbutus unedo fruits extracts into keratin-based particles for wound healing	CEB - U. Minho	Artur Jorge Araújo Magalhães Ribeiro Lúcia Maria da Silveira Santos
13	Beatriz Cristina Ribeiro Nogueira	Repurposed and recycled carbon fibers for the development of sustainable fiber reinforced composites	INEGI	Olívia Salomé Gonçalves Pinto Soares
14	Beatriz Santos Coelho	Avaliação da Segurança e do Desempenho Ambiental de um Laboratório de Química	FEUP	Vera Maria Ferreira da Cruz Homem
15	Benedita de Melo Botelho Pascoal Faria	Exploring bioremediation potential of microorganisms isolated from estuarine sediments for biodegradation of emerging contaminants	CIIMAR	Ana Paula de Campos Mucha Ana Rita Lado Teixeira Ribeiro
16	Bruna Rodrigues Cintra	Characterization of organic-acid-based aqueous two-phase systems for critical metal separation	FEUP	Helena Isabel Sousa Passos Maria Eugénia R. Almeida Macedo
17	Bruno de Carvalho Leite Rodrigues	Scents of AI: Utilising Graph Neural Networks and Optimisation to Reproduce Fragrances	NTNU	Ana Mafalda Almeida Peixoto Ribeiro
18	Carolina Almeida Moreira	Transformadores de Potência do Tipo CORE: Integração de CFD e IA para Estudos de Perda de Carga	Efacec	Mónica Cristina Ferreira da Silva Filgueiras
19	Cecília Henriques Amaral Martingo Pato	Material characterisation of textile reinforcements in a wide frequency and temperature range	Continental	Fernão Domingos M. B. M. Magalhães
20	Daniela Sofia Rodrigues Cruz	Otimização dos ciclos de prensagem de painéis de aglomerado de partículas de madeira	Sonae Arauco	Luísa Maria Hora de Carvalho Fernão Domingos M. B. M. Magalhães

#	NOME NAME	TEMA TITLE	INSTITUIÇÃO INSTITUTION	SUPERVISORES SUPERVISORS
21	Eduardo Filipe Torres Santos	Development of an electrochemical process for the selective separation of Co and Ni to be applied in Li-ion batteries	FEUP	Luísa Manuela Madureira Andrade Silva Vera Cristiana Moreira Duarte
22	Eliane Carina Feliciano Cassoma	Viabilidade e Eficiência dos Sistemas de Captura de Carbono: Análise e Alternativas para Mitigação das Emissões de CO ₂	INEGI	Vânia Sofia Brochado de Oliveira
23	Eva Margarida Amaral Brandão	Estudo e otimização do sistema CIP das linhas de enchimento de barril	Superbock	Tânia Sofia Granja Tavares
24	Fernando Monteiro de Oliveira	Contribution to the characterisation of cork use life: impact of different temperatures and time in the mechanical parameters of used corks	Cork Supply	Manuel António Moreira Alves
25	Filipa Soares Silva	Validação de Métodos Analíticos para a Determinação de Pantenol e Pantenil por HPLC-DAD e Benzeno por GC-FID	COLEP	Vera Maria Ferreira da Cruz Homem
26	Francisco Luís Lemos Martins	Aplicação da cerâmica translúcida em produtos decorativos e funcionais para casa de banho	Arch Valadares	Joana Filipa de Jesus R. Pesqueira
27	Gonçalo André Plácido Castro Perestrelo	Enhancing the partitioning of biomolecules through experimental and theoretical phase equilibria studies	FEUP	Maria Eugénia Rebelo de Almeida Macedo
28	Gonçalo de Lima Cabral	Design, assembly and validation of two experimental units to determine the thermodynamic properties of gas adsorption on microporous materials	Sysadvance	Alexandre Filipe Porfírio Ferreira Paulo Miguel Oliveira Cardoso do Carmo
29	Gonçalo Resendes Bettencourt Ferreira Leite	Enhanced performance of sodium-ion batteries via cathode doping, coating and sacrificial salts	FEUP	Adélio Miguel Magalhães Mendes Miguel Araújo Duarte
30	Gustavo Vicente de Carvalho	Scientific Machine Learning for Phenomena Driven Modelling	NTNU	Maria João Barbosa Regufe
31	Héctor Giménez Antón	Scale-up of a NaBH ₄ -H ₂ off-grid system for maritime applications: design and preliminary studies	FEUP	Alexandra Maria P. S. F. Rodrigues Pinto Diogo Luís Almeida Silva
32	Inês Capela de Sousa Moreira	Avaliação do Ciclo de Vida da Produção de Ácido Polilático Reforçado com Nanopartículas para Embalagens Alimentares	ISQ	Joana Filipa de Jesus R. Pesqueira Adrián Manuel Tavares da Silva
33	Inês Leal Feliz	Spray drying Cleaning in Place (CIP) System Study	Hovione	Manuel António Moreira Alves
34	Inês Moura Pires Fraga de Oliveira	Numerical studies on mixing mechanisms in reactive extrusion	FEUP	Margarida Sarmiento e Cunha A. Brito Ricardo Jorge Nogueira dos Santos
35	Isabel Maria da Mota Hilário	Study of the Transport Conditions in a POM-Redox Flow Battery	Litricity GmbH	Adélio Miguel Magalhães Mendes
36	Iva Natacha Santos de Carvalho e Gonçalves	Valorization of macroalgae peptides encapsulated into nanoparticles for the treatment of Alzheimer's disease patients	FEUP	Joana Angélica de Sousa Loureiro Tânia Sofia Granja Tavares Maria Do Carmo Pereira
37	Joana Filipa Ribeiro Coelho	Development of innovative and sustainable finishing for textile applications	HEIQ	Isabel Maria Duque Martins Alíri Egídio Rodrigues
38	Joana Isabel Fernandes Pereira	Valorization of biomass combustion ash for soil application	Capwatt	Tânia Sofia Teixeira Lopes Adélio Miguel Magalhães Mendes
39	Joana Jambela Matias Dele	Estruturas tridimensionais funcionalizadas para o tratamento de águas	FEUP	Adrián Manuel Tavares da Silva André Tiago Torres Pinto Ana María Chávez Águedo
40	Joana Neves Lains	Valorisation of chestnut by-products to produce sustainable emulsions	FEUP	Isabel Maria Duque Martins Andreia Sofia Silva Ribeiro
41	João Catarino Câmara	Melamine Substitution on the Production of Formaldehyde Based Resins	Sonae Arauco	Luísa Maria Hora de Carvalho Fernão Domingos M. B. M. Magalhães
42	João Pedro Senna Oliveira Lemos	Treatment of Effluents with Advanced Oxidation Processes	FEUP	Carmen Susana de Deus Rodrigues Luís Miguel Palma Madeira

#	NOME NAME	TEMA TITLE	INSTITUIÇÃO INSTITUTION	SUPERVISORES SUPERVISORS
43	João Victor Pereira Nunes	Dynamic Optimization of Chemical and Electrochemical Processes Based on Black-Box and White-Box Models	Efacec	Diogo Filipe Mateus Rodrigues Alexandre Filipe Porfírio Ferreira
44	Joaquim Manuel Igreja Mendes	Stationary energy storage: Optimisation of sustainable electrolytes for redox flow batteries	FEUP	Miguel Araújo Duarte Paula Manuela Monteiro P. Costa Dias
45	Leonardo José Fernandes do Rosário	Assessment of non-carcinogenic risk from exposure to anesthetic gases	FEUP	Mónica Sofia Freitas dos Santos Nuno Miguel Ratola Neto
46	Lucas Zulchner Rios	Revisiting Chemometrics: Feature Selection and Convolutional Neural Networks	DataHow	Fernando Gomes Martins
47	Luís Filipe Silva dos Santos	Slot-die coating for efficient and scalable inverted Perovskite Solar Cells in ambient air	FEUP	Luísa Manuela Madureira Andrade Silva Vera Cristiana Moreira Duarte
48	Margarida Lopes Fernandes	Melhoramento da resistência térmica de produtos abrasivos diamantados	KGS Diamond	Fernão Domingos M. B. M. Magalhães
49	Maria Carolina Pinheiro Dias	New 2D-nanomaterials drug conjugates for cancer phototherapy using light-emitting diode devices	FEUP	Artur Daniel Moreira Pinto Fernão Domingos M. B. M. Magalhães
50	Maria Inês Giesteira Carneiro	Revestimentos funcionais para controlo da transferência de calor para o interior dos edifícios	CIN	Carlos Gabriel Pires Morgado Bernardo
51	Maria João Costa Lima Gomes	Caracterização reológica de tintas em pó utilizando o reómetro Kinexus Pro+	CIN	Carlos Gabriel Pires Morgado Bernardo
52	Maria Teresa Pereira Marramaque Ribeiro	Electrochemical CO ₂ Capture from Seawater: A Comprehensive Multiphysics Modeling and Simulation Study	FEUP	Ana Mafalda Vaz Martins Pereira Cátia Sofia Ribeiro Azenha
53	Mariana Costa Pacheco	Desenvolvimento de metodologia para avaliação do desempenho térmico de vestuário com soluções de gestão térmica passiva e ativa	CeNTI	Soraia Ferreira Neves
54	Mariana Lopes Figueiras	Impact of the temperature of the UF resin in the manufacturing of wood-based panels	Sonae Arauco	Luísa Maria Hora de Carvalho Fernão Domingos M. B. M. Magalhães
55	Milana Liubarskaya Barata	Feasibility study of methanol synthesis by CO ₂ reduction towards a new electrolyzer design (e-NetMIX)	Net4CO ₂	Maria Francisca da Costa Moreira
56	Nuno Emanuel dos Santos Mendes Dias	Catalytic conversion of methanol to renewable jet fuel using nanosized ZSM-5 particles	Luleå University of Technology	Luís Miguel Palma Madeira
57	Patrícia Azevedo Gomes	"Development of Novel Surface Treatments for Cork Stoppers"	ARCP	Fernão Domingos M. B. M. Magalhães Manuel José Vieira Simões
58	Pedro Tomás Abreu Sargo	Synthesis of carbon dots-based hybrids for the oxygen reduction reaction	FEUP	Rui Sérgio da Silva Ribeiro Manuel Fernando Ribeiro Pereira Rafael Gomes Morais
59	Rita Joana Neto de Sá Cachada	Development of edible Pickering emulsions as food sauces alternatives using lupin-derived ingredients	FEUP	Andreia Sofia Silva Ribeiro Dalila da Assunção Maia Vieira Margarida Sarmento e Cunha A. Brito
60	Rodrigo José de Sousa Fernandes Cardoso	Projeto de Sistema de Flares em Unidades de Extração de Petróleo com Recuperação de Gases	TechnoEdif	Manuel Leão Rosas Castro Tavares Fernando Gomes Martins
61	Sara Carolina Afonseca Pestana	Development and investigation of efficient polyoxometalate-based electrolytes for Redox-Flow Batteries	VG Colab	Yuliya Ivanova Miguel Araújo Duarte
62	Sara Iolanda Pinho Alves Barbosa	Estudo do desempenho de rolhas de cortiça submetidas a condições de degradação acelerada	Amorim Cork	Margarida Maria da Silva M. Bastos Maria Joana M.de Carvalho Peres
63	Sara Raquel Ferreira Gomes	Valorização de resíduos industriais por pirólise	Bondalti	Manuel Fernando Ribeiro Pereira Olívia Salomé Gonçalves Pinto Soares
64	Sérgio Paulo Monteiro dos Santos	Extrusão e reologia de perfis rígidos de PVC	CIRES	Ricardo Jorge Nogueira dos Santos
65	Sofia Dias Paulo Pereira Coelho	I&D de soluções compósitas a partir de bio-SMC's de base biológica	CITEVE	Manuel Fernando Ribeiro Pereira

#	NOME NAME	TEMA TITLE	INSTITUIÇÃO INSTITUTION	SUPERVISORES SUPERVISORS
66	Sofia Sousa Fernandes dos Santos	Development of a coating for a new range of HPL with improved flame retardance properties	Surforma	Fernão Domingos M. B. M. Magalhães Luísa Maria Hora de Carvalho
67	Thalita Regina Pacheco Tavares	Optimization of an amine-based carbon capture processes based on innovative mixing technology.	Net4CO2	Vítor Jorge Pais Vilar
68	Tiago André Rebelo Borges Amado de Campos	Towards numerical simulation of falling liquid films over complex surfaces	IFP	Manuel António Moreira Alves
69	Tiago Dião Vieira Canário Mendes	Thermodynamic Analysis of Waste Cooking Oil Steam Reforming	FEUP	Miguel Angel Soria Cláudio da Silva Rocha Luís Miguel Palma Madeira
70	Vasco Gabriel Machado Lopes	Experimental study of Anion Exchange Membrane Water Electrolyzer – Effect of operating conditions and materials	FEUP	Rui Carlos Barata Ferreira Daniela Sofia de Castro Falcão
71	Zaira Arenas Borrego	Engineered nanoparticles for enhanced drug delivery	FEUP	Maria do Carmo da Silva Pereira Maria João Alves Ramalho

ANEXO I: INSTITUIÇÕES PARCEIRAS DE MOBILIDADE

ANNEX I: MOBILITY PARTNER INSTITUTIONS

ALEMANHA GERMANY

Center for Regenerative Therapies Dresden
Continental Tires
Deutsches Zentrum für Neurodegenerative Erkrankungen (DZNE)
Georg Simon Ohm Fachhochschule Nürnberg
GSI Helmholtzzentrum für Schwerionenforschung GmbH
Heinrich-Heine-Universität Düsseldorf
Institut für Pharmakologie und Toxikologie - Tu Dresden
Litricity GmbH
MaxPlanck Institute of Molecular Physiology
Rheinisch-Westfälische Technische Hochschule Aachen
Technische Universität Berlin
Technische Universität Dresden
Universität Stuttgart
Universität zu Köln
University Hospital Carl Gustav Carus

ARGENTINA ARGENTINA

Instituto Tecnológico de Buenos Aires

ÁUSTRIA AUSTRIA

Technische Universität Wien

BÉLGICA BELGIUM

Haute École ICHEC-ECAM-ISFSC
Katholieke Universiteit Leuven
Universiteit Gent
Vrije Universiteit Brussel

BRASIL BRAZIL

Centro Federal de Educação Tecnológica de Minas Gerais
Escola de Artes, Ciências e Humanidades, Universidade de São Paulo
Escola de Engenharia de São Carlos-USP
Pontifícia Universidade Católica do Rio de Janeiro
Universidade de Pernambuco
Universidade de Ribeirão Preto
Universidade de São Paulo - Escola Politécnica
Universidade do Estado de Santa Catarina
Universidade Federal da Paraíba
Universidade Federal de Lavras
Universidade Federal de Mato Grosso
Universidade Federal de Minas Gerais
Universidade Federal de Ouro Preto
Universidade Federal de São Carlos
Universidade Federal de São Paulo
Universidade Federal do ABC
Universidade Federal do Ceará
Universidade Federal do Rio de Janeiro
Univ. Federal do Rio Grande do Norte
Univ. Federal Fluminense
Universidade Tecnológica Federal do Paraná

CHILE CHILE

Facultad de Ciencias Físicas e Matemáticas - Universidad Chile
Pontifícia Universidad Católica de Chile

COLÔMBIA COLOMBIA

Universidad de Los Andes

CROÁCIA CROATIA

Sveuciliste u Zagrebu

DINAMARCA DENMARK

Aarhus Universitet
Danmarks Tekniske Universitet

ESLOVÁQUIA SLOVAKIA

Slovenská Technická Univerzita v Bratislave

ESPAÑA SPAIN

Universidad Autónoma de Madrid
Universidad Complutense de Madrid
Universidad de Almería
Universidad de Murcia
Universidad De Oviedo
Universidad de Sevilla
Universidad de Valladolid
Universidad de Zaragoza
Universidad Rey Juan Carlos
Universitat de Barcelona
Universitat de Valencia
Universitat Politècnica de Catalunya

FINLÂNDIA FINLAND

Aalto University
Oulun Yliopisto

FRANÇA FRANCE

École des Ingénieurs de la Ville de Paris
École Supérieure d'Ingénieurs en Électronique et Électrotechnique
IFP - Instituto Francês do Petróleo
IMT Atlantique
Institut polytechnique de Grenoble
Sorbonne Université
Université de Lorraine

GRÉCIA GREECE

Panepistimio Patron

HUNGRIA HUNGARY

Budapesti Muszaki ES Gazdasagtudományi Egyetem
Magyar Agrár- és Élettudományi Egyetem

IRLANDA IRELAND

National University of Ireland

ITÁLIA ITALY

Politecnico di Milano
Sapienza Università di Roma
Università degli Studi di Padova
Università Degli Studi di Palermo
Università di Pisa

MÉXICO MEXICO

Instituto Tecnológico y de Estudios Superiores de Monterrey
Universidad Autónoma del Estado de Hidalgo

NORUEGA NORWAY

Norges Teknisk-Naturvitenskapelige Universitet

PAÍSES BAIXOS NETHERLANDS

Amsterdam UMC - University Medical Centers
Bosch Transmission Technology BV
Netherlands Cancer Institute
Technische Universiteit Delft
The Netherlands Cancer Institute
Universiteit Maastricht
Universiteit Twente
Universiteit Utrecht
University Medical Center Utrecht
Vrije Universiteit Amsterdam
WAGENINGEN UNIVERSITEIT

POLÓNIA POLAND

Stanisława Staszica w Krakowie
Politechnika Krakowska
Politechnika Poznańska
Politechnika Śląska
Uniwersytet Przyrodniczy w Poznaniu

REPÚBLICA CHECA CZECH REPUBLIC

Czech University of Life Sciences Prague
Univerzita Jana Evangelisty Purkyně v Ústí nad Labem
Vysoká škola Chemicko-Technologická v Praze
Vysoká škola Báňská - Technická Univerzita Ostrava
Vysoké učení technické v Brně

SUÉCIA SWEDEN

Luleå University of Technology
Chalmers Tekniska Högskola
Lunds Universitet

ANEXO IV: TESES DE DOUTORAMENTO

ANNEX IV: PHD THESES

#	NOME NAME	TEMA TITLE	SUPERVISORES SUPERVISORS
PROGRAMA DOUTORAL EM ENGENHARIA DO AMBIENTE DOCTORAL PROGRAM IN ENVIRONMENTAL ENGINEERING			
1	Ana Filipa Cruz Esteves	Shaping microalgal biomass composition for targeted product accumulation: impact of operational parameters	José Carlos Magalhães Pires Ana Luísa da Cunha Gonçalves Vitor Jorge Pais Vilar
PROGRAMA DOUTORAL EM ENGENHARIA QUÍMICA E BIOLÓGICA DOCTORAL PROGRAM IN CHEMICAL AND BIOLOGICAL ENGINEERING			
1	Ana Cristina Oliveira Afonso	The role of aggregating bacterial strains in drinking water safety - a contribution to understand cell-cell interactions	Manuel José Vieira Simões
2	Ana Sofia dos Reis Gonçalves	Lignosulphonate-based adhesive systems for furniture and construction applications	Fernão Domingos Magalhães Luísa Maria Hora de Carvalho
3	Beatriz Teixeira de Magalhães	Assessing the Internalisation and Diffusion of Nucleic Acid Mimics in Bacteria: A Computational and In Vitro Approach	Nuno Filipe Ribeiro Azevedo Rita Sobral Fernandes Santos
4	Catarina de Sousa Moreira	Miniaturization of a passive Direct Methanol Fuel Cell: design and performance studies	Vânia Sofia Brochado de Oliveira Alexandra Maria Rodrigues Pinto
5	Daniela Filipa Sousa Morais	Innovative (photo) electrocatalytic technologies for the sustainable oxidation of organic compounds	Vitor Jorge Pais Vilar Maria Francisca da Costa Moreira
6	Isabel Sofia Oliveira Barbosa	Photocatalytic Technologies for Sustainable Ammonia Production: reactor design and prototyping	Cláudia Sofia Castro Gomes da Silva Ricardo Jorge Nogueira dos Santos
7	Isabella Pires Ferreira Corrêa	Innovative strategies for the production of solketal based on the simulated moving bed reactor technology	Alirio Egídio Rodrigues Rui Pedro Vieira Faria
8	Joana Carvalho Lopes	Photocatalytic synthesis of imines: Novel routes to ever-new molecules	Joaquim Luís Faria Cláudia Sofia Castro Gomes da Silva Maria José Fernandes Sampaio
9	João Pedro Rocha Vale	Numerical Analysis of Transport Phenomena to Control Reactive Processes in Microfluidic Applications	Tiago Sotto Mayor Moura Santos
10	Judith Margarita Pereira Monteiro Pedroso	High Performance Polymer Binders for Tribological Coatings	Fernão Domingos M. B. M. Magalhães
11	Liliana Patrícia Teixeira Carneiro	A new vision for fuel cells: application in cancer biomarker screening	Maria Goreti Ferreira Sales Alexandra Maria P. S. F. Rodrigues Pinto
12	Maria Amélia Gabriel de Barros	Photoactivated metal-free smart textiles with self-cleaning and antibacterial properties	Joaquim Luís Faria Cláudia Sofia Castro Gomes da Silva Maria José Fernandes Sampaio
13	Maria Salomé Oliveira Macedo	Glycerol steam reforming for renewable hydrogen production in multifunctional reactors	Luís Miguel Palma Madeira Miguel Angel Soria
14	Marta Sofia Ramos de Oliveira Santos	Heat Transformer based on an Absorption Cycle - Implementation and Development	Carlos Manuel Tavares de Pinho João Bernardo Moreira de Campos
15	Patrícia Sofia Ferreira Ramalho	Selective reduction of nitric oxide (NOx) over carbon-based catalysts	Manuel Fernando Ribeiro Pereira Olívia Salomé Pinto Soares
16	Sofia Teixeira de Sousa Delgado	Cutting-edge materials and deposition processes for drastic cost-reduction of Polymer Electrolyte Membrane Water Electrolysis	Adélio Miguel Magalhães Mendes
17	Susana Maria da Fonseca Fernandes	Development of a biocidal formulation for effective biofouling control	Manuel José Vieira Simões
18	Teresa Isabel Araújo Gouveia	Cost-effective technology to mitigate the cytostatic threat	Mónica Sofia Freitas dos Santos
19	Vinicius Viena Santana	Cyber-physical oriented chemical process for green and sustainable production	Idelfonso Bessa dos Reis Nogueira Ana Mafalda Almeida Peixoto Ribeiro
PROGRAMA DOUTORAL EM ENGENHARIA MECÂNICA DOCTORAL PROGRAM IN MECHANICAL ENGINEERING			
1	Ângela Margarida Vergas Ribau	Theoretical and numerical studies of viscoelastic fluid flows	Alexandre Miguel Prior Afonso Manuel António Moreira Alves
2	Tomás Schuller de Almeida e Graça Barbosa	Optimization of Fused Filament Fabrication (FFF) printing nozzles: Experimental and numerical approaches	Francisco Galindo Rosales

ANEXO V: PRODUÇÃO CIENTÍFICA E ATIVIDADES DE RELEVO

ANNEX V: SCIENTIFIC OUTPUTS AND RELEVANT ACTIVITIES

LIVROS (AUTOR)

BOOKS (AUTHOR)

1. Malcata, F. X. (2024). **Fundamentals of Biocatalysts: Cell Structure and Function**. Springer.

LIVROS (EDITOR)

BOOKS (EDITOR)

2. Andrade, S., Loureiro, J. A., & Ramalho, M. J. (Eds.). (2024). **Polymeric Nanoparticles for Biomedical Applications**. MDPI. <https://doi.org/10.3390/books978-3-7258-0151-0>.
3. Pires, J. C. M., Esteves, A. F. C., & de Azevedo Campos Salgado, E. M. (Eds.). (2024). **Advances in Sustainable Applications of Microalgae** [Book]. Elsevier. <https://doi.org/10.1016/C2023-0-00530-1>.
4. Ratola, N., & Homem, V. (Eds.). (2024). **Fragrances in the Environment**. Springer. <https://doi.org/10.1007/978-3-031-59049-8>.

CAPÍTULOS /ARTIGOS EM LIVRO

BOOK SECTIONS

1. Costa, E., Valdez, I., Almeida, M. F., Alvim-Ferraz, M. C., & Dias, J. M. (2024). **Chapter 4 - Nonedible crops as alternative raw materials for biodiesel production: an overview**. In L. M. Grajales, J. C. V. Serra, & E. Collicchio (Eds.), *Agroenergy* (pp. 41-91). Woodhead Publishing. <https://doi.org/https://doi.org/10.1016/B978-0-443-21430-1.00017-X>
2. Eblagon, K. M., Rocha, R. P., Pereira, M. F. R., & Figueiredo, J. L. (2024). **Carbon-based Catalysts for Sustainable Chemical Processes**. In *Catalysis for a Sustainable Environment* (pp. 207-223). <https://doi.org/https://doi.org/10.1002/9781119870647.ch11>
3. Fernandes, S., Oliveira, I., Gomes, I. B., & Simões, M. (2024). **Surface Disinfection – New Approaches**. In *Prevention of the Biological Contamination of Food* (pp. 269-299). <https://doi.org/https://doi.org/10.1002/9781394299188.ch12>
4. Fernandes, S., Oliveira, I., Gomes, I. B., & Simões, M. (2024). **Surface Disinfection – State of the Art**. In *Prevention of the Biological Contamination of Food* (pp. 239-267). <https://doi.org/https://doi.org/10.1002/9781394299188.ch11>
5. Figueiredo, J. L. (2024). **The dawn of the Chemical Industry in Portugal**. In *Academia das Ciências de Lisboa*. <http://hdl.handle.net/10400.26/52927>
6. Figueiredo, J. L. (2024). **A economia circular do carbono na Indústria Química**. In *Academia das Ciências de Lisboa*. <http://hdl.handle.net/10400.26/52734>
7. Lopez del Castillo, I., Vegas-Gomez, L., Loureiro, J., & Moreno-Gonzalez, I. (2024). **Chapter 1 - Natural molecules in neuroprotection and neurotoxicity in neurodegenerative diseases**. In M. R. d. Oliveira (Ed.), *Natural Molecules in Neuroprotection and Neurotoxicity* (pp. 3-28). Academic Press. <https://doi.org/10.1016/B978-0-443-23763-8.00001-4>
8. Martins, R. A., Salgado, E. M., Gonçalves, A. L., Pires, J. C. M., & Esteves, A. F. (2024). **Chapter 7 - Microalgal role in sustainable business models for the textile industry**. In J. C. M. Pires, A. F. C. Esteves, & E. M. d. A. C. Salgado (Eds.), *Advances in Sustainable Applications of Microalgae* (pp. 163-182). Elsevier Science Ltd. <https://doi.org/https://doi.org/10.1016/B978-0-443-22127-9.00007-X>
9. Miladi, M., Mata, T. M., Selva, S., Ruiz-Canales, A., & Martins, A. A. (2024). **Carbon Footprint of Oil Extraction from Spent Coffee Grounds Using Ultrasound-Assisted Extraction**. *Environmental Science and Engineering*,
10. Pardilho, S., Dias, J. M., Oliveira, J., & Pires, J. C. (2024). **Thermal acid hydrolysis of marine macroalgae waste aiming bioethanol production**. *WASTES: Solutions, Treatments and Opportunities IV - Selected papers from the 6th International Conference Wastes, 2023*,
11. Peixoto, C., Slezakova, K., do Carmo Pereira, M., & Morais, S. (2024). **Indoor Air Quality in Fitness Centers with/without the Restrictions of COVID-19**. In *Studies in Systems, Decision and Control* (Vol. 492, pp. 341-353). https://doi.org/10.1007/978-3-031-38277-2_27
12. Rey-Raap, N., Figueiredo, J. L., & Pereira, M. F. R. **Biomass-Derived Carbon Materials for Sustainable Energy Storage and Conversion**. In *Synthesis and Applications in Chemistry and Materials* (pp. 537-567). https://doi.org/10.1142/9789811283239_0046
13. Rocha, C., Soria, M. A., & Madeira, L. M. (2024). **From conventional to new processes for hydrogen production in membrane reactors**. In *Current Trends and Future Developments on (Bio)-Membranes: Recent Achievements in Chemical Processes in Membrane Reactors* (pp. 217-248). <https://doi.org/10.1016/B978-0-443-13876-8.00006-9>

14. Rocha, F., Ratola, N., & Homem, V. (2024). **Fragrances in the Environment: Properties, Applications, and Emissions**. In Handbook of Environmental Chemistry (pp. 1-36). Springer Berlin Heidelberg. https://doi.org/10.1007/698_2023_983
15. Slezakova, K., Esteves, F., Vaz, J., Costa, S., Alves, M. J., Madureira, J., Barros, B., Fernandes, A., Teixeira, J. P., Morais, S., & Pereira, M. C. (2024). **Indoor Air Quality at Portuguese Firehouses**. In Studies in Systems, Decision and Control (Vol. 492, pp. 433-442). https://doi.org/10.1007/978-3-031-38277-2_35
16. Sousa, S. A., Esteves, A. F., Pires, J. C. M., & Salgado, E. M. (2024). **Chapter 6 - Microalgal growth in urban wastewater: biomass production with nutrient removal**. In J. C. M. Pires, A. F. C. Esteves, & E. M. d. A. C. Salgado (Eds.), Advances in Sustainable Applications of Microalgae (pp. 141-162). Elsevier Science Ltd. <https://doi.org/https://doi.org/10.1016/B978-0-443-22127-9.00006-8>
6. Aldana, J. C., Pedrosa, M., Silva, A. M. T., Faria, J. L., Acero, J. L., & Alvarez, P. M. (2024). **Nanocomposite PVDF/TiO₂ Photocatalytic Membranes for Micropollutant Removal in Secondary Effluent**. *Catalysts*, 14(2), 21. <https://doi.org/10.3390/catal14020109>
7. Almeida, A., Martins, C., Dias, R. C. S., & Costa, M. R. P. F. N. (2024). **Competitive Adsorption of Phenolic Acids, Secoiridoids, and Flavonoids in Quercetin Molecularly Imprinted Polymers and Application for Fractionation of Olive Leaf Extracts**. *Journal of Chemical and Engineering Data*, 69(10), 3629-3644. <https://doi.org/10.1021/acs.jced.3c00543>
8. Almeida, C. F., Manrique, Y. A., Lopes, J. C. B., Martins, F. G., & Dias, M. M. (2024). **Recovery of ergosterol from *Agaricus bisporus* mushrooms via supercritical fluid extraction: A response surface methodology optimisation**. *Heliyon*, 10(2), 13. <https://doi.org/10.1016/j.heliyon.2023.e21943>
9. Almeida, C. F., Manrique, Y. A., Lopes, J. C. B., Martins, F. G., & Dias, M. M. (2024). **Screening of Equation-of-State Models for Pure Carbon Dioxide Properties and Binary Mixture (Carbon Dioxide/Water and Carbon Dioxide/Ethanol) Phase Equilibrium**. *Journal of Chemical and Engineering Data*, 69(10), 3244-3264. <https://doi.org/10.1021/acs.jced.3c00528>
10. Almeida, F., Castro, F., Teixeira, J. A., Rocha, F., & Ferreira, A. (2024). **Effect of high solids loading on gas-liquid mass transfer in an oscillatory flow reactor for process intensification**. *Chemical Engineering Science*, 300, 24. <https://doi.org/10.1016/j.ces.2024.120600>
11. Almeida, H. H. S., Crujeira, P. J. L., Amaral, J. S., Rodrigues, A. E., & Barreiro, M. F. (2024). **Disclosing the potential of *Cupressus leylandii* AB Jacks & Dallim, *Eucalyptus globulus* Labill., *Aloysia citrodora* Paláu, and *Melissa officinalis* L. hydrosols as eco-friendly antimicrobial agents**. *Natural Products and Bioprospecting*, 14(1), 12. <https://doi.org/10.1007/s13659-023-00417-9>
12. Almeida, H. H. S., Fernandes, I. P., Amaral, J. S., Rodrigues, A. E., & Barreiro, M. F. (2024). **Unlocking the Potential of Hydrosols: Transforming Essential Oil Byproducts into Valuable Resources**. *Molecules*, 29(19). <https://doi.org/10.3390/molecules29194660>
13. Alves, A., de Brito, E. H. S., de Araújo, M. F. M., Celestino, J. J. D., Leite, A., Cruz, G. S., Azevedo, N. F., & Rodrigues, C. F. (2024). **Antifungal Susceptibility and *Candida* sp. Biofilm Production in Clinical Isolates of HIV-Positive Brazilian Patients under HAART Therapy**. *Biomedicines*, 12(2), 12. <https://doi.org/10.3390/biomedicines12020310>

PUBLICAÇÕES EM REVISTAS WOS & SCOPUS

PUBLICATIONS IN WOS & SCOPUS ARTICLES

1. Abreu, A. P., Gomes, J., Mota, J., Almeida, A. P., Carvalhal, R., Vidal, F., Medeiros, R., Sousa, H., Lawall, M., da Costa, R. M. G., Brito, H. O., & Brito, L. M. O. (2024). **GSTM1 and GSTT1 deletions in penile cancer are associated with TNM stage but not with HPV DNA status**. *Pathology Research and Practice*, 264, 6. <https://doi.org/10.1016/j.prp.2024.155686>
2. Afonso, A. C., Botting, J., Gomes, I., Saavedra, M. J., Simoes, L. C., Liu, J., & Simoes, M. (2024). **Elucidating bacterial coaggregation through a physicochemical and imaging surface characterization**. *Science of the Total Environment*, 948, 10. <https://doi.org/10.1016/j.scitotenv.2024.174872>
3. Afonso, A. C., Gomes, I. B., Massano, F., Saavedra, M. J., Simoes, M., & Simoes, L. C. (2024). **Coaggregation dynamics in drinking water biofilms and implications for chlorine disinfection**. *Journal of Hazardous Materials*, 480, 9. <https://doi.org/10.1016/j.jhazmat.2024.135948>
4. Afonso, A. C., Simões, M., Saavedra, M. J., Simões, L., Lema, J. M., & Trueba-Santiso, A. (2024). **Exploring coaggregation mechanisms involved in biofilm formation in drinking water through a proteomic-based approach**. *Journal of Applied Microbiology*, 135(6). <https://doi.org/10.1093/jambio/lxae143>
5. Aguiar, L. G., Godoy, W. M., Graça, N. A. B. S., & Rodrigues, A. E. (2024). **Resin-catalyzed reaction modeling integrating catalyst swelling and sites accessibility: Application to solketal synthesis**. *Chemical Engineering Research and Design*, 212, 58-70. <https://doi.org/10.1016/j.cherd.2024.10.016>

14. Alves, L., Pereira, V., Delgado, S., Atashi, N., Dias, P., Lagarteira, T., Prieto, G., & Mendes, A. (2024). **Regeneration of methane splitting catalysts by interfacial hydrogenation**. *Chemical Engineering Journal*, 500, 11. <https://doi.org/10.1016/j.cej.2024.157046>
15. Alves, S., Silva, F., Esteves, F., Costa, S., Slezakova, K., Alves, M., Pereira, M., Teixeira, J., Morais, S., Fernandes, A., Queiroga, F., & Vaz, J. (2024). **The Impact of Sleep on Haematological Parameters in Firefighters**. *Clocks & Sleep*, 6(3), 291-311. <https://doi.org/10.3390/clockssleep6030021>
16. Alvim-Ferraz, M. C. M., Sousa, S. I. V., Martins, F. G., & Ferraz, M. P. (2024). **Tropospheric and Stratospheric Ozone: Scientific History and Shifts in Early Perspectives Regarding the Impact on Human Health**. *Atmosphere*, 15(12). <https://doi.org/10.3390/atmos15121504>
17. Aly, E., Zafanelli, L. F. A. S., Henrique, A., Gleichmann, K., Rodrigues, A. E., Da Silva Freitas, F. A., & Silva, J. A. C. (2024). **Separation of CO₂/N₂ in Ion-Exchange binder-free beads of zeolite NaY for Post-Combustion CO₂ capture**. *Separation and Purification Technology*, 348. <https://doi.org/10.1016/j.seppur.2024.127722>
18. Amaral, S. I., Silva, F., Costa-Almeida, R., Timochenco, L., Fernandes, J. R., Sarmento, B., Gonçalves, I. C., Magalhaes, F. D., & Pinto, A. M. (2024). **Pharmaceutical Formulations Containing Graphene and 5-Fluorouracil for Light-Emitting Diode-Based Photochemotherapy of Skin Cancer**. *Acs Applied Materials & Interfaces*, 16(4), 4333-4347. <https://doi.org/10.1021/acsami.3c13409>
19. Amorim, V. E., Silva Ferreira, A. C., Cruzeiro, C., & Cardoso, P. G. (2024). **Enhancement of per- and Polyfluoroalkyl Substances (PFAS) quantification on surface waters from marinas in the douro river, Portugal**. *Environmental Research*, 262. <https://doi.org/10.1016/j.envres.2024.119805>
20. Antonopoulou, M., Tzamaría, A., Pedrosa, M. F. F., Ribeiro, A. R. L., Silva, A. M. T., Kaloudis, T., Hiskia, A., & Vlastos, D. (2024). **Spirulina-based carbon materials as adsorbents for drinking water taste and odor control: Removal efficiency and assessment of cyto-genotoxic effects**. *Science of the Total Environment*, 927, 12. <https://doi.org/10.1016/j.scitotenv.2024.172227>
21. Araujo, C. M. B., Rios, A. G., Motta Sobrinho, M. A., Ghislandi, M. G., Ferreira, A. F. P., & Rodrigues, A. E. (2024). **Hybrid nano-biocomposite based on polysaccharide and graphene oxide for the practical separation of proteins in a fixed bed adsorption column**. *Journal of Molecular Liquids*, 414. <https://doi.org/10.1016/j.molliq.2024.126066>
22. Araújo, D., Oliveira, R., Silva, B. L., Castro, J., Ramos, C., Matos, F., Almeida, C., & Silva, S. (2024). **Antimicrobial resistance patterns of Staphylococcus spp. isolated from clinical specimens of companion animals in Northern Portugal, 2021-2023**. *Veterinary Journal*, 305, 7. <https://doi.org/10.1016/j.tvjl.2024.106153>
23. Araújo, J. C., Silva, P. M., Cerqueira, M. A., Teixeira, P., Tira-Picos, V., Neto, P., Soares, O. S. G. P., Graça, C. L., Figueiro, R., & Ferreira, D. P. (2024). **Protective fibrous structures based on cellulose fibers functionalized with metal oxide nanoparticles by electrospinning and electrospray deposition**. *International Journal of Biological Macromolecules*, 282. <https://doi.org/10.1016/j.ijbiomac.2024.137218>
24. Araújo, T., Bernardo, G., & Mendes, A. (2024). **High-performance hydrogen separation using cellulose-based carbon molecular sieve membranes**. *Journal of Membrane Science*, 693, 15. <https://doi.org/10.1016/j.memsci.2023.122337>
25. Araujo, T., Lopes, T. D., Bernardo, G., & Mendes, A. (2024). **Techno-economic analysis of carbon molecular sieve membranes to produce oxygen enrichment air**. *Journal of Membrane Science*, 694, 12. <https://doi.org/10.1016/j.memsci.2024.122430>
26. Arcas, A., Sadeghi, S. M., Lucena, J. J., Vindeirinho, J. M., Soares, E. V., Soares, H. M. V. M., & López-Rayó, S. (2024). **Alleviation of Fe-induced chlorosis of soybean plants grown in calcareous soil by a freeze-dried iron fertilizer containing siderophores produced by Rhizobium radiobacter**. *Journal of Agriculture and Food Research*, 18. <https://doi.org/10.1016/j.jafr.2024.101504>
27. Ariati, R., Souza, A., Souza, M., Zille, A., Soares, D., Lima, R., & Ribeiro, J. (2024). **Mechanical and optical properties assessment of an innovative PDMS/ beeswax composite for a wide range of applications**. *Journal of the Mechanical Behavior of Biomedical Materials*, 160, 12. <https://doi.org/10.1016/j.jmbbm.2024.106716>
28. Asfawu, F., Nayagam, G., Fikiru, E., & Azmach, G. (2024). **Breeding Maize (*Zea mays* L.) for Aluminum Tolerance through Heterosis and Combining Ability**. *International Journal of Agronomy*, 2024, 7. <https://doi.org/10.1155/2024/9950925>
29. Azenha, I. S., Simões, M. M. Q., Mendes, A., & Silva, C. M. (2024). **Adsorbents, mobile phases, and strategies for the chromatographic separation of betulinic, oleanolic, and ursolic acids**. *Biomass Conversion and Biorefinery*, 14(13), 13747-13778. <https://doi.org/10.1007/s13399-022-03723-3>

30. Azevedo, A., Teixeira-Santos, R., Carvalho, F. M., Gomes, L. C., Monteiro, G. A., & Mergulhao, F. J. (2024). **Influence of Surface Material and Nutrient Conditions on Green Fluorescent Protein Production in *Escherichia coli* Biofilms** . *Applied Sciences-Basel*, 14(23), 17. <https://doi.org/10.3390/app142311029>
31. Azevedo, T., Ferreira, T., Peña-Corona, S. I., Cortes, H., Silva-Reis, R., da Costa, R. M. G., Faustino-Rocha, A. I., Oliveira, P. A., Calina, D., Cardoso, S. M., Büsselberg, D., Leyva-Gómez, G., Sharifi-Rad, J., & Cho, W. C. (2024). **Natural products-based antiangiogenic agents: New frontiers in cancer therapy** . *Food Frontiers*, 5(6), 2423-2466. <https://doi.org/10.1002/fft2.466>
32. Bahend, K., El Fazdoune, M., Oubella, M., Ben Jadi, S., Bazzouai, E. A., Garcia-Garcia, F. J., Martins, J. I., Ezahri, M., & Bazzouai, M. (2024). **A novel poly(Rhodamine B) coated polylactic acid doped carbon black electrode for nitrite detection in drinking water** . *Journal of Food Measurement and Characterization*, 18(11), 9631-9644. <https://doi.org/10.1007/s11694-024-02909-9>
33. Barbosa, A., Azevedo, N. F., Goeres, D. M., & Cerqueira, L. (2024). **Ecology of *Legionella pneumophila* biofilms: The link between transcriptional activity and the biphasic cycle** . *Biofilm*, 7, 12. <https://doi.org/10.1016/j.biofilm.2024.100196>
34. Barbosa, F., Nobrega, G., Souza, R. R., Ralha, R. P., Cardoso, E. M., Pereira, J. E., Afonso, I. S., Marques, F., Teixeira, J. C. F., Lima, R., & Moita, A. S. (2024). **Heat transfer experimental and numerical study of a three-sided serpentine with the operating fluid directly contacting the PV cell back** . *Case Studies in Thermal Engineering*, 61, 16. <https://doi.org/10.1016/j.csite.2024.105029>
35. Barbosa, J. R. M., Santos, A. S. G. G., Viana, A. T., Gonçalves, A. G., Nunes, O. C., Pereira, M. F. R., & Soares, O. S. G. P. (2024). **Carbon-based materials for water disinfection and heavy metals removal** . *Environmental Technology (United Kingdom)*, 45(9), 1810-1828. <https://doi.org/10.1080/09593330.2022.2154173>
36. Barbosa, J. V., Alvim-Ferraz, M. C. M., Martins, F. G., & Sousa, S. I. V. (2024). **Occupational exposure of firefighters to hazardous pollutants during prescribed fires in Portugal** . *Chemosphere*, 352. <https://doi.org/10.1016/j.chemosphere.2024.141355>
37. Barbosa, J. V., Branco, P., Alvim-Ferraz, M. C. M., Martins, F. G., & Sousa, S. I. V. (2024). **Firefighters' occupational exposure to air pollution: impact on COPD and asthma-study protocol** . *Bmj Open Respiratory Research*, 11(1), 6. <https://doi.org/10.1136/bmjresp-2023-001951>
38. Barbosa, J. V., Nunes, R. A. O., Alvim-Ferraz, M. C. M., Martins, F. G., & Sousa, S. I. V. (2024). **Health and economic burden of wildland fires PM2.5-related pollution in Portugal - A longitudinal study** . *Environmental Research*, 240, 8. <https://doi.org/10.1016/j.envres.2023.117490>
39. Barroca, L. R., Velho, P., & Macedo, E. A. (2024). **Novel Green Aqueous Two-Phase Systems (ATPSs) based on choline salts and application to the removal of pharmaceutical pollutants from water** . *Fluid Phase Equilibria*, 586, 12. <https://doi.org/10.1016/j.fluid.2024.114193>
40. Barroca, L. R., Velho, P., & Macedo, E. A. (2024). **Removal of Acetaminophen (Paracetamol) from Water Using Aqueous Two-Phase Systems (ATPSs) Composed of Choline-Amino Acid Ionic Liquids** . *Journal of Chemical and Engineering Data*, 69(1), 215-226. <https://doi.org/10.1021/acs.jced.3c00602>
41. Barros, A. C., Narciso, D. A. C., Melo, L. F., & Pereira, A. (2024). **Influence of Dead Cells Killed by Industrial Biocides (BAC and DBNPA) on Biofilm Formation** . *Antibiotics-Basel*, 13(2), 16. <https://doi.org/10.3390/antibiotics13020140>
42. Barros, B., Paiva, A. M., Oliveira, M., Alves, S., Esteves, F., Fernandes, A., Vaz, J., Slezakova, K., Costa, S., Teixeira, J. P., & Morais, S. (2024). **Baseline data and associations between urinary biomarkers of polycyclic aromatic hydrocarbons, blood pressure, hemogram, and lifestyle among wildland firefighters** . *Frontiers in Public Health*, 12, 19. <https://doi.org/10.3389/fpubh.2024.1338435>
43. Barros, M. M., Castro, J., Araujo, D., Oliveira, R., Campos, A. M., Silva, S., Outor-Monteiro, D., & Almeida, C. (2024). **Application of DNA aptamers to block enterotoxigenic *Escherichia coli* toxicity in a *Galleria mellonella* larval model** . *Frontiers in Chemistry*, 12, 9. <https://doi.org/10.3389/fchem.2024.1425903>
44. Barros, R. A. M., Cristóvão, R. O., Carneiro, I. G., Barros, M. A., Pereira, M. M., Carabineiro, S. A. C., Freire, M. G., Faria, J. L., Santos-Ebinuma, V. C., Tavares, A. P. M., & Silva, C. G. (2024). **Improved L-Asparaginase Properties and Reusability by Immobilization onto Functionalized Carbon Xerogels** . *ChemPlusChem*, 89(9). <https://doi.org/10.1002/cplu.202400025>

45. Bastos, Y., Rocha, F., & Estevinho, B. N. (2024). **Microencapsulation of Extracts of Strawberry (*Fragaria vesca*) By-Products by Spray-Drying Using Individual and Binary/Ternary Blends of Biopolymers** . *Molecules*, 29(19), 21. <https://doi.org/10.3390/molecules29194528>
46. Batool, S., Schubert, J. S., Ayala, P., Saito, H., Sampaio, M. J., Da Silva, E. S., Silva, C. G., Faria, J. L., Eder, D., & Cherevan, A. (2024). **A thiomolybdate cluster for visible-light-driven hydrogen evolution: comparison of homogeneous and heterogeneous approaches** . *Sustainable Energy & Fuels*, 8(6), 12. <https://doi.org/10.1039/d3se01658g>
47. Beltrán-Flores, E., Blázquez, P., Gorito, A. M., Sarrà, M., & Silva, A. M. T. (2024). **Combining fungal bioremediation and ozonation for rinse wastewater treatment** . *Science of the Total Environment*, 912. <https://doi.org/10.1016/j.scitotenv.2023.169198>
48. Bernardo, F., Ratola, N., Sánchez-Soberón, F., Alves, A., & Homem, V. (2024). **Presence, behaviour, and risk assessment of volatile methylsiloxanes in wastewater: A year-long comprehensive study within a wastewater treatment plant** . *Science of the Total Environment*, 951, 12. <https://doi.org/10.1016/j.scitotenv.2024.175486>
49. Bezerra de Araujo, C. M., Rios, A. G., Ghislandi, M. G., Ferreira, A. F. P., Alves da Motta Sobrinho, M., & Rodrigues, A. E. (2024). **Separation of the heme protein cytochrome C using a 3D structured graphene oxide bionanocomposite as an adsorbent** . *Soft Matter*, 20(7), 1475-1485. <https://doi.org/10.1039/d3sm01053h>
50. Blyweert, P., Restivo, J., Soares, O., Nicolas, V., Fierro, V., Pereira, M. F. R., & Celzard, A. (2024). **First Insight into the Catalytic Activity of Stereolithographically 3D-Printed Tannin-Based Carbon Architectures** . *Chemcatchem*, 16(16), 9. <https://doi.org/10.1002/cctc.202400190>
51. Boas, D. V., Castro, J., Araujo, D., Nobrega, F. L., Keevil, C. W., Azevedo, N. F., Vieira, M. J., & Almeida, C. (2024). **The Role of Flagellum and Flagellum-Based Motility on *Salmonella* Enteritidis and *Escherichia coli* Biofilm Formation** . *Microorganisms*, 12(2), 12. <https://doi.org/10.3390/microorganisms12020232>
52. Borges, K. R. A., Wolff, L. A. S., da Silva, M., Silva, A. K. D., Campos, C. D. L., Souza, F. S., Teles, A. M., Vale, A. A. M., Pascoa, H., Lima, E. M., de Sousa, E. M., Nunes, A. C. S., da Costa, R. M. G., Faustino-Rocha, A. I., Carvalho, R. C., & Nascimento, M. (2024). **Açaí (*Euterpe oleracea* Mart.) Seed Oil and Its Nanoemulsion: Chemical Characterisation, Toxicity Evaluation, Antioxidant and Anticancer Activities** . *Current Issues in Molecular Biology*, 46(5), 3763-3793. <https://doi.org/10.3390/cimb46050235>
53. Bôto, J. M., Neto, B., Miguéis, V., & Rocha, A. (2024). **Development of the Dietary Pattern Sustainability Index (DIPASI): A novel multidimensional approach for assessing the sustainability of an individual's diet** . *Sustainable Production and Consumption*, 50, 139-154. <https://doi.org/10.1016/j.spc.2024.07.029>
54. Braga, C. S. N., Martins, G., Soares, O., Pereira, M. F. R., Pereira, I. A. C., Pereira, L., Alves, M. M., & Salvador, A. F. (2024). **Non-conductive silicon-containing materials improve methane production by pure cultures of methanogens** . *Bioresource Technology*, 408, 7. <https://doi.org/10.1016/j.biortech.2024.131144>
55. Branco, P., Pinto, A. J. S., & Sousa, S. I. V. (2024). **Characterising indoor air quality in private vehicle cabins under unprecedented traffic conditions during COVID-19 lockdown** . *Building and Environment*, 262, 17. <https://doi.org/10.1016/j.buildenv.2024.111797>
56. Branco, P. T. B. S., Sousa, S. I. V., Dudzińska, M. R., Ruzgar, D. G., Mutlu, M., Panaras, G., Papadopoulos, G., Saffell, J., Scutaru, A. M., Struck, C., & Weersink, A. (2024). **A review of relevant parameters for assessing indoor air quality in educational facilities** . *Environmental Research*, 261. <https://doi.org/10.1016/j.envres.2024.119713>
57. Brás, I., Silva, E., Raimondo, R., Saetta, R., Mignano, V., Fabbicino, M., & Ferreira, J. (2024). **Valorisation of Forest and Agriculture Residual Biomass-The Application of Life Cycle Assessment to Analyse Composting, Mulching, and Energetic Valorisation Strategies** . *Sustainability*, 16(2), 20. <https://doi.org/10.3390/su16020630>
58. Brito, H. O., Reis, R. C., Bini, I., Wilhelms, D., Engblom, D., da Costa, R. M. G., Brito, L. O., Nascimento, M., de Andrade, M. S., Zamprônio, A. R., & Cavichiolo, C. C. (2024). **NK1 receptor mediates cerebral cellular and extracellular morphological changes during the LPS-induced febrile response** . *Brain Research*, 1842, 8. <https://doi.org/10.1016/j.brainres.2024.149107>

59. Bzainia, A., Igrejas, G., Pereira, M. J. V., Costa, M. R. P. F. N., & Dias, R. C. S. (2024). **Purification of stilbenes from grape stems in a continuous process based on photo-molecularly imprinted adsorbents and hydroalcoholic solvents**. *Separation and Purification Technology*, 349. <https://doi.org/10.1016/j.seppur.2024.127798>
60. Campos, M. T., Silva, F., Fernandes, J. R., Santos, S. G., Magalhaes, F. D., Oliveira, M. J., & Pinto, A. M. (2024). **New MoS₂/Tegafur-Containing Pharmaceutical Formulations for Selective LED-Based Skin Cancer Photo-Chemotherapy**. *Pharmaceutics*, 16(3), 23. <https://doi.org/10.3390/pharmaceutics16030360>
61. Carneiro, L. P. T., Pinto, A., Ivanou, D., Mendes, A. M., & Sales, M. G. F. (2024). **Portable and Autonomous PEDOT-Modified Flexible Paper-Based Methanol Fuel Cell Sensing Platform Applied to L1CAM Recombinant Protein Detection**. *Acs Applied Polymer Materials*, 6(6), 3207-3221. <https://doi.org/10.1021/acsapm.3c02781>
62. Carneiro, M. A., Pintor, A. M. A., Boaventura, R. A. R., & Botelho, C. M. S. (2024). **Arsenic and antimony desorption in water treatment processes: Scaling up challenges with emerging adsorbents**. *Science of the Total Environment*, 929, 16. <https://doi.org/10.1016/j.scitotenv.2024.172602>
63. Carneiro, M. A., Silva, T. A., Teixeira, P. J. S., Boaventura, R. A. R., Botelho, C. M. S., & Pintor, A. M. A. (2024). **New insights on antimony removal and recovery from water and wastewater using iron-coated cork granulates: Desorption on batch and fixed-bed column systems**. *Chemical Engineering Science*, 296. <https://doi.org/10.1016/j.ces.2024.120207>
64. Carreira, A. R. F., Nogueira, A. F. M., Rocha, I. L. D., Sosa, F., Lopes, A. M. D., Passos, H., Schaeffer, N., & Coutinho, J. A. P. (2024). **Repurposing Kraft black Liquor as Reductant for Enhanced Lithium-Ion Battery Leaching**. *Chemsuschem*, 17(12), 13. <https://doi.org/10.1002/cssc.202301801>
65. Carvalho, A. R., Morao, A. M., Gonçalves, V. M. F., Tiritan, M. E., Gorito, A. M., Pereira, M. F., Silva, A. M. T., Castro, B. B., Carrola, J. S., Amorim, M. M., Ribeiro, A. R. L., & Ribeiro, C. (2024). **Toxicity of butylone and its enantiomers to Daphnia magna and its degradation/toxicity potential using advanced oxidation technologies**. *Aquatic Toxicology*, 271, 11. <https://doi.org/10.1016/j.aquatox.2024.106906>
66. Carvalho, V., Gonçalves, I. M., Rodrigues, N., Sousa, P., Pinto, V., Minas, G., Kaji, H., Shin, S. R., Rodrigues, R. O., Teixeira, S., & Lima, R. A. (2024). **Numerical evaluation and experimental validation of fluid flow behavior within an organ-on-a-chip model**. *Computer Methods and Programs in Biomedicine*, 243, 13. <https://doi.org/10.1016/j.cmpb.2023.107883>
67. Carvalho, V., Rodrigues, R. O., Shin, S. R., Lima, R., & Teixeira, S. (2024). **Advancing Blood-Brain Barrier-on-a-Chip Models Through Numerical Simulations**. *Biochip Journal*, 18(4), 546-565. <https://doi.org/10.1007/s13206-024-00168-w>
68. Castelo-Grande, T., Augusto, P. A., Gomes, L., Calvo, E., & Barbosa, D. (2024). **Portable Homemade Magnetic Hyperthermia Apparatus: Preliminary Results**. *Nanomaterials*, 14(22), 25. <https://doi.org/10.3390/nano14221848>
69. Castelo-Grande, T., Augusto, P. A., Gomes, L., Lopes, A. R. C., Araújo, J. P., & Barbosa, D. (2024). **Economic and Accessible Portable Homemade Magnetic Hyperthermia System: Influence of the Shape, Characteristics and Type of Nanoparticles in Its Effectiveness**. *Materials*, 17(10), 27. <https://doi.org/10.3390/ma17102279>
70. Castillo-Sánchez, H. A., de Araújo, M. S. B., Bertoco, J., Fernandes, C., Ferrás, L. L., & Castelo, A. (2024). **Numerical simulation of a thixotropic-viscoelastic model in contraction geometries**. *Physics of Fluids*, 36(1), 26. <https://doi.org/10.1063/5.0186505>
71. Castro, J., Araújo, D., Oliveira, H., Fernandes, L., Oliveira, R., Brinks, E., Cho, G. S., Franz, C., Saavedra, M. J., Silva, S., & Almeida, C. (2024). **Multidrug-resistant Klebsiella pneumoniae and Klebsiella variicola isolated from patients in Portuguese hospitals: Genomic and phenotypic characterization**. *Microbe (Netherlands)*, 5. <https://doi.org/10.1016/j.microb.2024.100172>
72. Castro, J., Oliveira, R., Fernandes, L., Carvalho, I., Oliveira, H., Brinks, E., Cho, G. S., Franz, C., Almeida, C., Silva, S., & Araújo, D. (2024). **Molecular characterization and virulence profile of Klebsiella pneumoniae and Klebsiella oxytoca isolated from ill cats and dogs in Portugal**. *Veterinary Microbiology*, 292, 8. <https://doi.org/10.1016/j.vetmic.2024.110056>
73. Cedillo-Servin, G., Dahri, O., Meneses, J., van Duijn, J., Moon, H., Sage, F., Silva, J., Pereira, A., Magalhães, F. D., Malda, J., Geijsen, N., Pinto, A. M., & Castilho, M. (2024). **3D Printed Magneto-Active Microfiber Scaffolds for Remote Stimulation and Guided Organization of 3D In Vitro Skeletal Muscle Models**. *Small*, 20(12). <https://doi.org/10.1002/sml.202307178>

74. Cerqueira, P., Rocha, C., Soria, M. A., & Madeira, L. M. (2024). **Autothermal reforming of distillery wastewater: Thermodynamic modelling and experimental results** . *Energy Conversion and Management*, 309, 11. <https://doi.org/10.1016/j.enconman.2024.118442>
75. Chaouk, H., Obeid, E., Halwani, J., Abdelbaki, W., Dib, H., Mouhtady, O., Hanna, E. G., Fernandes, C., & Younes, K. (2024). **Investigating the Physical and Operational Characteristics of Manufacturing Processes for MFI-Type Zeolite Membranes for Ethanol/Water Separation via Principal Component Analysis** . *Processes*, 12(6), 15. <https://doi.org/10.3390/pr12061145>
76. Chavez, A. M., Torres-Pinto, A., Alvarez, P. M., Faria, J. L., Silva, C. G., & Silva, A. M. T. (2024). **One-pot synthesis and immobilization of urea-derived graphitic carbon nitride onto ceramic foams for visible-light photocatalytic wet peroxide oxidation in water treatment** . *Chemical Engineering Journal*, 481, 16. <https://doi.org/10.1016/j.cej.2023.148141>
77. Chojer, H., Branco, P., Martins, F. G., Alvim-Ferraz, M., & Sousa, S. I. V. (2024). **Source identification and mitigation of indoor air pollution using monitoring data - Current trends** . *Environmental Technology & Innovation*, 33, 21. <https://doi.org/10.1016/j.eti.2024.103534>
78. Chojer, H., Branco, P., Martins, F. G., & Sousa, S. I. V. (2024). **A novel low-cost sensors system for real-time multipollutant indoor air quality monitoring - Development and performance** . *Building and Environment*, 266, 16. <https://doi.org/10.1016/j.buildenv.2024.112055>
79. Coelho, B. S., Oliveira, I. M. P. F., Hilário, I. M. M., Nunes, J. V. P., Coelho, S. D. P. P., & Mendes, T. D. V. C. (2024). **Pompan: A bread production alternative using apple pomace** . *U.Porto Journal of Engineering*, 10(2), 22-34. https://doi.org/10.24840/2183-6493_0010-002_002611
80. Coelho, C., Costa, M. F. P., & Ferrás, L. L. (2024). **Neural Fractional Differential Equations: Optimising the Order of the Fractional Derivative** . *Fractal and Fractional*, 8(9), 16. <https://doi.org/10.3390/fractalfract8090529>
81. Coelho, S. C., Giron, A., Rocha, F., & Estevinho, B. N. (2024). **Electrosprayed B-complex vitamins/zein microparticles for drug sustained release and antioxidant applications** . *Journal of Chemical Technology and Biotechnology*, 99(1), 217-226. <https://doi.org/10.1002/jctb.7526>
82. Colucci, G., Gigli, M., Sgarzi, M., Rodrigues, A. E., Crestini, C., & Barreiro, M. F. (2024). **Modulation of physicochemical and antioxidant properties of Pickering emulsions using colloidal lignin particles based on kraft softwood and hardwood acetone fractions** . *Separation and Purification Technology*, 347, 9. <https://doi.org/10.1016/j.seppur.2024.127570>
83. Corrêa, I., Faria, R. P. V., & Rodrigues, A. E. (2024). **Enhanced simulated moving bed reactor performance for the synthesis of solketal by implementing the ModiCon strategy** . *Adsorption- Journal of the International Adsorption Society*, 30(1), 79-93. <https://doi.org/10.1007/s10450-023-00427-6>
84. Costa, C. A. E., Casimiro, F. M., Manrique, Y. A., & Rodrigues, A. E. (2024). **From sulfite liquor to vanillin: effect of crystallization process on the yield, purity, and polymorphic form of crystals** . *Separation Science and Technology*, 59(1), 87-98. <https://doi.org/10.1080/01496395.2024.2315612>
85. Costa, E. A., Rebello, C. M., Schnitman, L., Loureiro, J. M., Ribeiro, A. M., & Nogueira, I. B. R. (2024). **Adaptive digital twin for pressure swing adsorption systems: Integrating a novel feedback tracking system, online learning and uncertainty assessment for enhanced performance** . *Engineering Applications of Artificial Intelligence*, 127, 15. <https://doi.org/10.1016/j.engappai.2023.107364>
86. Couto, A. F., & Estevinho, B. N. (2024). **Valorization of Agricultural By-Products (*Fragaria vesca*) through the Production of Value-Added Micro/Nanostructures Using Electrohydrodynamic Techniques** . *Foods*, 13(8), 15. <https://doi.org/10.3390/foods13081162>
87. Couto, A. F., Paquis, R., Favretto, M., & Estevinho, B. N. (2024). **Electrohydrodynamic methods applied for the co-encapsulation of polyphenols and vitamins in pullulan microstructures** . *Powder Technology*, 439. <https://doi.org/10.1016/j.powtec.2024.119724>
88. Cruz-Quesada, G., Sampaio, M. J., Espinal-Viguri, M., Lopez-Ramón, M. V., Garrido, J. J., Silva, C. G., & Faria, J. L. (2024). **Design of Novel Photoactive Modified Titanium Silicalites and Their Application for Venlafaxine Degradation under Simulated Solar Irradiation** . *Solar Rrl*, 8(3), 12. <https://doi.org/10.1002/solr.202300593>
89. Cullen, L. J. R., Fernandes, I. S., Brito, M., Dias, M. M., Lopes, J. C. B., Santos, R. J., & Vilar, V. J. P. (2024). **Flow dynamics studies in the NETmix reactor for a large range of flowrate ratios between feed streams** . *Chemical Engineering Science*, 298, 13. <https://doi.org/10.1016/j.ces.2024.120339>

90. de Olivera, A. R., Santos, C. S., Mena, I. F., Montiel, M. A., Montes, R., Quintana, J. B., Rodil, R., Gomes, A. I., Moreira, F. C., Gabler, J., Schäfer, L., Saez, C., Rodrigo, M. A., & Vilar, V. J. P. (2024). **Integration of a 3D-printed electrochemical reactor with a tubular membrane photoreactor to promote sulfate-based advanced oxidation processes**. *Chemical Engineering Journal*, 500, 14. <https://doi.org/10.1016/j.cej.2024.156900>
91. de Rezende, S. C., Ferreira, O., Santamaria-Echart, A., Dias, M. M., & Barreiro, M. F. (2024). **Evaluating the potential of natural polymers for water-dispersible curcumin-based solid dispersion colourant systems for food applications**. *Journal of Food Engineering*, 371, 11. <https://doi.org/10.1016/j.jfoodeng.2024.111986>
92. de Vries, S., Schuller, T., Galindo-Rosales, F. J., & Fanzio, P. (2024). **Pressure drop non-linearities in material extrusion additive manufacturing: A novel approach for pressure monitoring and numerical modeling**. *Additive Manufacturing*, 80, 13. <https://doi.org/10.1016/j.addma.2024.103966>
93. Dias, J., de Holanda, J. N. F., Pinho, S. C., de Miranda, G. M., Jr., & da Silva, A. G. P. (2024). **Systematic LCA-AHP Approach to Compare Hydrometallurgical Routes for Copper Recovery from Printed Circuit Boards: Environmental Analysis**. *Sustainability*, 16(18), 17. <https://doi.org/10.3390/su16188002>
94. Domingues, P. S., Sousa, H. P., Oliveira, N. S., Ribeiro, A. M., & Ferreira, A. (2024). **Determination of the biochemical methane potential of swine hydrolyzate**. *Renewable Energy*, 235. <https://doi.org/10.1016/j.renene.2024.121287>
95. Domingues, R., Oliveira, R., Silva, S., Araújo, D., Almeida, C., Cho, G. S., Franz, C., Saavedra, M. J., Azeredo, J., & Oliveira, H. (2024). **Molecular Detection of Carbapenemases in *Acinetobacter baumannii* Strains of Portugal and Association With Sequence Types, Capsular Types, and Virulence**. *Clinical Therapeutics*, 46(12), e9-e15. <https://doi.org/10.1016/j.clinthera.2024.09.005>
96. dos Reis, R. A., Rangel, G. P., & Neto, B. (2024). **Social life cycle assessment of green hydrogen production: Evaluating a projected Portuguese industrial production plant**. *Renewable Energy*, 235, 21. <https://doi.org/10.1016/j.renene.2024.121293>
97. Duarte, M., Holz, L. I. V., Fernandes, C., Ribeirinha, P., Fagg, D. P., & Mendes, A. (2024). **Modelling ammonia and nitrous oxide decomposition reactions in solid oxide fuel cells for combined energy generation and treatment of flue gas streams**. *Applied Energy*, 368. <https://doi.org/10.1016/j.apenergy.2024.123465>
98. Duarte, V. C. M., & Andrade, L. (2024). **Recent Advancements on Slot-Die Coating of Perovskite Solar Cells: The Lab-to-Fab Optimisation Process**. *Energies*, 17(16). <https://doi.org/10.3390/en17163896>
99. Eblagon, K. M., Figueiredo, J. L., & Pereira, M. F. R. (2024). **Catalytic valorization of industrial grade sugarcane molasses to 5-hydroxymethylfurfural in water**. *Catalysis Today*, 441, 13. <https://doi.org/10.1016/j.cattod.2024.114898>
100. El Fazdoune, M., Bahend, K., Oubella, M., Ben Jadi, S., El Guerra, A., Bazzaoui, E. A., García-García, F. J., Martinis, J. I., & Bazzaoui, M. (2024). **Poly(methylene blue) Modified PLA-CB Conductive 3D Printer Filament as a Promising Platform for Electrochemical Sensing of Uric Acid**. *Journal of Polymers and the Environment*, 32, 2105-2119. <https://doi.org/10.1007/s10924-023-03100-9>
101. Esquius, J. R., LaGrow, A. P., Jin, H., Yu, Z., Araujo, A., Marques, R., Mendes, A., & Liu, L. (2024). **Mixed iridium-nickel oxides supported on antimony-doped tin oxide as highly efficient and stable acidic oxygen evolution catalysts**. *Materials Futures*, 3(1). <https://doi.org/10.1088/2752-5724/ad16d2>
102. Esteves, A. F., Gonçalves, A. L., Vilar, V. J., & Pires, J. C. M. (2024). **Comparative assessment of microalgal growth kinetic models based on light intensity and biomass concentration**. *Bioresource Technology*, 394, 9. <https://doi.org/10.1016/j.biortech.2023.130167>
103. Esteves, A. F., Salgado, E. M., Vilar, V. J. P., Gonçalves, A. L., & Pires, J. C. M. (2024). **A growth phase analysis on the influence of light intensity on microalgal stress and potential biofuel production**. *Energy Conversion and Management*, 311, 8. <https://doi.org/10.1016/j.enconman.2024.118511>
104. Esteves, B. M., Morales-Torres, S., Maldonado-Hódar, F. J., & Madeira, L. M. (2024). **Catalytic peroxidation of winery wastewater contaminants using activated carbon-supported magnetite nanoparticles**. *Journal of Water Process Engineering*, 58, 13. <https://doi.org/10.1016/j.jwpe.2024.104772>
105. Esteves, F., Slezakova, K., Madureira, J., Vaz, J., Fernandes, A., Morais, S., Pereira, M. D., Teixeira, J. P., & Costa, S. (2024). **Firefighters' Occupational Exposure in Preparation for Wildfire Season: Addressing Biological Impact**. *Toxics*, 12(3), 15. <https://doi.org/10.3390/toxics12030201>

106. Ettalibi, O., Boumeriame, H., Achak, O., & Chafik, T. (2024). **Advanced electrolyte materials based on natural minerals for low- temperature solid oxide fuel cells applications** . *Fuel*, 377. <https://doi.org/10.1016/j.fuel.2024.132848>
107. Fdez-Sanromán, A., Torres-Pinto, A., Rosales, E., Silva, C. G., Faria, J. L., Pazos, M., & Silva, A. M. T. (2024). **Optimisation of a photoelectrochemical system for the removal of pharmaceuticals in water using graphitic carbon nitride** . *Catalysis Today*, 432, 11. <https://doi.org/10.1016/j.cattod.2024.114578>
108. Felgueiras, M. B. S., Pereira, M. F. R., & Soares, O. (2024). **Effect of the support on the CO₂ hydrogenation to C₂-C₄ products** . *Catalysis Today*, 441, 9. <https://doi.org/10.1016/j.cattod.2024.114900>
109. Félix, F., Hidalgo, V. B., de Carvalho, A. K. F., Caetano, N. D., & Da Rós, P. C. M. (2024). **Assessing the application of marine microalgae *Dunaliella salina* in a biorefinery context: production of value-added biobased products** . *Biofuels Bioproducts & Biorefining-Biofpr*, 18(2), 439-452. <https://doi.org/10.1002/bbb.2577>
110. Fernandes, A. S., Bragança, I., & Homem, V. (2024). **Personal care products in soil-plant and hydroponic systems: Uptake, translocation, and accumulation** . *Science of the Total Environment*, 912. <https://doi.org/10.1016/j.scitotenv.2023.168894>
111. Fernandes, C., Holz, L. I. V., Loureiro, F. J. A., Duarte, M., Fagg, D. P., & Mendes, A. (2024). **Nitrous oxide abatement and valorization in an ammonia-fueled SOFC stack - Nitric oxide and electricity production** . *Chemical Engineering Journal*, 502, 13. <https://doi.org/10.1016/j.cej.2024.157921>
112. Fernandes, I. S., Dias, M. M., Lopes, J. C. B., & Santos, R. J. (2024). **A new reduced geometric model for simulation and design of NETmix reactors: LoopNUB** . *Chemical Engineering Science*, 293, 15. <https://doi.org/10.1016/j.ces.2024.120061>
113. Fernandes, I. S., Domingos, M. G., Costa, M. F., Santos, R. J., & Lopes, J. C. B. (2024). **Preparation and pipeline transport of CO₂ as a hydrate slurry - Modelling and techno-economic analysis** . *Chemical Engineering and Processing-Process Intensification*, 205, 13. <https://doi.org/10.1016/j.cep.2024.109973>
114. Fernandes, R. A., Ferreira, N., Lopes, S., Santos, J., Pereira, N. B., Ferreira, N. O., Nunes, L., Martins, J. M., & Carvalho, L. H. (2024). **Development of an Innovative Lightweight Composite Material with Thermal Insulation Properties Based on Cardoon and Polyurethane** . *Polymers*, 16(1), 16. <https://doi.org/10.3390/polym16010137>
115. Fernandes, S., Gomes, I. B., Simoes, M., & Simoes, L. C. (2024). **Novel chemical-based approaches for biofilm cleaning and disinfection** . *Current Opinion in Food Science*, 55, 14. <https://doi.org/10.1016/j.cofs.2024.101124>
116. Fernandes, S., Sousa, M., Martins, F. G., Simoes, M., & Sousa, S. F. (2024). **Protocol for in silico characterization of natural-based molecules as quorum-sensing inhibitors** . *Star Protocols*, 5(4), 20. <https://doi.org/10.1016/j.xpro.2024.103367>
117. Ferreira, A. S., Silva, A. M., Laveriano-Santos, E. P., Lozano-Castellón, J., Lamuela-Raventós, R. M., Svarc-Gajíc, J., Delerue-Matos, C., Estevinho, B. N., Costa, P. C., & Rodrigues, F. (2024). **Development and characterization of spray-drying microparticles loaded with chestnut shells extract: New insights for oral mucositis therapy** . *Powder Technology*, 446, 11. <https://doi.org/10.1016/j.powtec.2024.120182>
118. Ferreira, J., Araújo, S., Ferreira, A., Teixeira, J., Campos, J. M., Rocha, F., & Castro, F. (2024). **Insulin nucleation kinetics in an oscillatory flow-based platform: Protein crystallization as a highly reproducible separation process** . *Chemical Engineering Research & Design*, 203, 453-466. <https://doi.org/10.1016/j.cherd.2024.01.057>
119. Ferreira, J., Domínguez-Arca, V., Carneiro, J., Prieto, G., Taboada, P., & de Campos, J. M. (2024). **Classical and Nonclassical Nucleation Mechanisms of Insulin Crystals** . *Acs Omega*, 9(22), 23364-23376. <https://doi.org/10.1021/acsomega.3c10052>
120. Ferreira, K. K., Di Stasi, C., Ayala-Cortés, A., Ribeiro, L. S., Pinilla, J. L., Suelves, I., & Pereira, M. F. R. (2024). **Hydroprocessing of waste cooking oil to produce liquid fuels over Ni-Mo and Co-Mo supported on carbon nanotubes** . *Biomass & Bioenergy*, 191, 9. <https://doi.org/10.1016/j.biombioe.2024.107480>
121. Ferreira, K. K., Ribeiro, L. S., & Pereira, M. F. R. (2024). **Analysis of Reaction Conditions in Palmitic Acid Deoxygenation for Fuel Production** . *Catalysts*, 14(12), 11. <https://doi.org/10.3390/catal14120853>
122. Ferreira, M., Kuzniarska-Biernacka, I., Soares, O., Figueiredo, J. L., Pereira, M. F. R., Neves, I. C., Fonseca, A. M., & Parpot, P. (2024). **From waste to value: Electrocatalytic reduction of nitrate into ammonia at mono and bimetallic-CNT modified electrodes** . *Chemical Engineering Science*, 300, 11. <https://doi.org/10.1016/j.ces.2024.120526>
123. Ferreira, R. B., Santos, D. F. M., Pinto, A., & Falca, D. S. (2024). **Development and testing of a PEM fuel cell stack envisioning unmanned aerial vehicles applications** . *International Journal of Hydrogen Energy*, 51, 1345-1353. <https://doi.org/10.1016/j.ijhydene.2023.05.090>

- 124.Ferreira, S. M., Gomes, S. M., & Santos, L. (2024). **The Chemistry Behind Biological Properties of Agro-industrial Portuguese By-Products . Waste and Biomass Valorization**, 15(5), 2721-2733. <https://doi.org/10.1007/s12649-023-02366-3>
- 125.Ferreira, S. M., Matos, L. C., & Santos, L. (2024). **Harnessing the potential of chestnut shell extract to enhance fresh cheese: a sustainable approach for nutritional enrichment and shelf-life extension . Journal of Food Measurement and Characterization**, 18(2), 1559-1573. <https://doi.org/10.1007/s11694-023-02260-5>
- 126.Ferreira, T., Homem, V., Cereceda-Balic, F., Fadic, X., Alves, A., & Ratola, N. (2024). **Are volatile methylsiloxanes in downcycled tire microplastics? Levels and human exposure estimation in synthetic turf football fields . Environmental Science and Pollution Research**, 31(8), 11950-11967. <https://doi.org/10.1007/s11356-024-31832-1>
- 127.Fidelis, M. Z., Abreu, E., Andreo, O. A. B., Soares, O. S. G. P., Janzen, F. C., & Lenzi, G. G. (2024). **Application of Structured Sol-Gel Nb2O5 Catalyst in Photocatalytic Continuous Process Prototype for Ibuprofen Degradation . Topics in Catalysis**, 67(9-12), 828-842. <https://doi.org/10.1007/s11244-023-01870-z>
- 128.Fidelis, M. Z., Santos, A. S. G. G. D., Paula, E. T. D., Lenzi, G. G., Soares, O. S. G. P., & Andreo, O. A. B. (2024). **Nb2O5/MWCNT nanocomposites for the degradation of ibuprofen via photocatalysis and catalytic ozonation . Catalysis Communications**, 187. <https://doi.org/10.1016/j.catcom.2024.106853>
- 129.Figueiredo, A., Soria, M. A., Madeira, L. M., & Rocha, C. (2024). **Preparation and Characterization of Materials for Low- to Intermediate-Temperature CO₂ Adsorption . Processes**, 12(11), 24. <https://doi.org/10.3390/pr12112403>
- 130.Figueiredo, R. A., Oishi, C. M., Pinho, F. T., & Thompson, R. L. (2024). **On more insightful dimensionless numbers for computational viscoelastic rheology . Journal of Non-Newtonian Fluid Mechanics**, 331, 16. <https://doi.org/10.1016/j.jnnfm.2024.105282>
- 131.Flouris, A. D., Petmezas, S. B., Asimoglou, P. I., Vale, J. P., Mayor, T. S., Giakas, G., Jamurtas, A. Z., Koutedakis, Y., Wardle, K., & Wardle, D. (2024). **Analysis of Greek prehistoric combat in full body armour based on physiological principles: A series of studies using thematic analysis, human experiments, and numerical simulations . Plos One**, 19(5), 20. <https://doi.org/10.1371/journal.pone.0301494>
- 132.Fonseca, A., Botelho, C., Boaventura, R. A. R., & Vilar, V. J. P. (2024). **Evaluating the Effects of Parameter Uncertainty on River Water Quality Predictions . Resources-Basel**, 13(8), 19. <https://doi.org/10.3390/resources13080106>
- 133.Fonseca, F. D., Symochko, L., & Pinheiro, M. N. C. (2024). **Grape Pomace (*Vitis vinifera* L.) Waste Valorization: Assessing Its Potential as a Sustainable Natural Dye for Textiles Applications . Sustainability**, 16(8), 17. <https://doi.org/10.3390/su16083167>
- 134.Fonseca-Gomes, J., Costa-Coelho, T., Ferreira-Manso, M., Inteiro-Oliveira, S., Vaz, S. H., Aleman-Serrano, N., Atalaia-Barbacena, H., Ribeiro-Rodrigues, L., Ramalho, R. M., Pinto, R., Miranda, H. V., Tanqueiro, S. R., de Almeida-Borlido, C., Ramalho, M. J., Miranda-Lourenço, C., Belo, R. F., Ferreira, C. B., Neves, V., Rombo, D. M., . . . Diógenes, M. J. (2024). **A small TAT-TrkB peptide prevents BDNF receptor cleavage and restores synaptic physiology in Alzheimer's disease . Molecular Therapy**, 32(10), 3372-3401. <https://doi.org/10.1016/j.ymthe.2024.08.022>
- 135.Garcia-Costa, A. L., Gouveia, T. I. A., Alves, A., Madeira, L. M., & Santos, M. S. F. (2024). **Degradation of the cytostatic drug bicalutamide by photo-assisted catalytic wet peroxide oxidation . Journal of Water Process Engineering**, 58, 9. <https://doi.org/10.1016/j.jwpe.2024.104790>
- 136.Garoma, B., Azimach, G., Bante, K., & Menkir, A. (2024). **Assessing the carotenoid profiles and allelic diversity of yellow maize inbred lines adapted to mid-altitude subhumid maize agroecology in Ethiopia . Frontiers in Plant Science**, 15, 9. <https://doi.org/10.3389/fpls.2024.1406550>
- 137.Garrido, N., Martins, J., Davim, J. P., & Carvalho, L. (2024). **Influence of machining parameters on edge quality of particleboards: modeling and optimization . International Journal of Advanced Manufacturing Technology**, 133(11-12), 5463-5482. <https://doi.org/10.1007/s00170-024-14033-5>
- 138.Gomes, C. P., Duarte, C. N., Martins, C. D., Amaral, J. S., Igrejas, G., Pereira, M. J. V., Costa, M. R. P. F. N., & Dias, R. C. S. (2024). **Scale-up of a sorption process working with molecularly imprinted adsorbents for enrichment of winemaking residues and improvement of bioactivity . Cleaner and Circular Bioeconomy**, 8. <https://doi.org/10.1016/j.clcb.2024.100093>
- 139.Gómez-Losada, A., & Pires, J. C. M. (2024). **Air quality assessment during the low emission zone implementation in Madrid (Spain) . Urban Climate**, 55, 15. <https://doi.org/10.1016/j.uclim.2024.101995>

140. Gonçalves, A., Viegas, O., Faria, M. A., Ferreira, I., Rocha, F., & Estevinho, B. N. (2024). **In vitro bioaccessibility and intestinal transport of retinoic acid in ethyl cellulose-based microparticles and impact of meal co-ingestion** . *International Journal of Biological Macromolecules*, 258, 8. <https://doi.org/10.1016/j.ijbiomac.2023.128991>
141. Gonçalves, A. S. C., Leitaó, M. M., Fernandes, J. R., Saavedra, M. J., Pereira, C., Simoes, M., & Borges, A. (2024). **Photodynamic activation of phytochemical-antibiotic combinations for combatting Staphylococcus aureus from acute wound infections** . *Journal of Photochemistry and Photobiology B-Biology*, 258, 18. <https://doi.org/10.1016/j.jphotobiol.2024.112978>
142. Gonçalves, F. D., Almeida, M. L., Martins, J. M., Carvalho, L. H., Rodrigues, J. A., & Ramos, R. M. (2024). **Gas-diffusion microextraction combined with HPLC-DAD for the comprehensive analysis of volatile carbonyl compounds in wood-based panels** . *Talanta*, 272, 8. <https://doi.org/10.1016/j.talanta.2024.125818>
143. Gonçalves, F. D., Martins, J. M., Carvalho, L. H., Rodrigues, J. A., & Ramos, R. M. (2024). **Volatile Carbonyl Compounds Emission in Dry-Process Fibreboard: Identification through a Selective GDME-HPLC-DAD-MS/MS Method** . *Separations*, 11(4), 15. <https://doi.org/10.3390/separations11040092>
144. Gonçalves, L. P. L., Ben, J. G., Strutynski, K., Rodriguez-Lorenzo, L., Araújo, J., Santos, A., Soares, O., Pereira, M. F. R., Kolen'ko, Y., Melle-Franco, M., & Salonen, L. M. (2024). **Covalent organic frameworks as catalyst support: A case study of thermal, hydrothermal, and mechanical pressure stability of β -ketoenamine-linked TpBD-Me2** . *Microporous and Mesoporous Materials*, 366, 10. <https://doi.org/10.1016/j.micromeso.2023.112916>
145. Gonçalves, M., Gonçalves, I. M., Borges, J., Faustino, V., Soares, D., Vaz, F., Minas, G., Lima, R., & Pinho, D. (2024). **Polydimethylsiloxane Surface Modification of Microfluidic Devices for Blood Plasma Separation** . *Polymers*, 16(10), 17. <https://doi.org/10.3390/polym16101416>
146. Gonçalves, S., Paiva, N. T., Martins, J., Carvalho, L. H., & Magalhaes, F. D. (2024). **Fast-Curing 3-Layer Particleboards with Lignosulfonate and pMDI Adhesives** . *Forests*, 15(6), 13. <https://doi.org/10.3390/f15060948>
147. Gonçalves, S., Paiva, N. T., Martins, J., Magalhaes, F. D., & Carvalho, L. H. (2024). **Effect of Lignosulphonates on the Moisture Resistance of Phenol-Formaldehyde Resins for Exterior Plywood** . *Materials*, 17(15), 22. <https://doi.org/10.3390/ma17153715>
148. Gonçalves, S., Paiva, N. T., Martins, J., Magalhaes, F. D., & Carvalho, L. H. (2024). **Water resistant lignosulphonate-phenol-formaldehyde resin for mineral wool** . *Industrial Crops and Products*, 222, 9. <https://doi.org/10.1016/j.indcrop.2024.119943>
149. Gonçalves, S., Quitério, P., Freitas, J., Ivanou, D., Lopes, T., Mendes, A., Araújo, J. P., Sousa, C. T., & Apolinario, A. (2024). **Unveiling Morphology-Structure Interplay on Hydrothermal WO₃ Nanoplatelets for Photoelectrochemical Solar Water Splitting** . *ACS Applied Materials and Interfaces*, 16(47), 64389-64409. <https://doi.org/10.1021/acsami.4c11729>
150. Gonzalez-Prada, I., Borges, A., Santos-Torres, B., Magariños, B., Simoes, M., Concheiro, A., & Alvarez-Lorenzo, C. (2024). **Antimicrobial cyclodextrin-assisted electrospun fibers loaded with carvacrol, citronellol and cinnamic acid for wound healing** . *International Journal of Biological Macromolecules*, 277, 20. <https://doi.org/10.1016/j.ijbiomac.2024.134154>
151. Gorito, A. M., Ribeiro, A. R. L., Ramos, S., Silva, A. M. T., & Almeida, C. M. R. (2024). **Occurrence of micropollutants in surface waters: Monitoring of Portuguese Lima and Douro River estuaries and interconnecting northwest coast** . *Marine Pollution Bulletin*, 209, 11. <https://doi.org/10.1016/j.marpolbul.2024.117140>
152. Graça, C. A. L., Freitas, G. D., Soares, O., & Parizi, M. P. S. (2024). **Peroxydisulfate Activation by Carbon Materials for the Degradation of the Herbicide Ametryn in Waters** . *Acs Omega*, 9(6), 6569-6577. <https://doi.org/10.1021/acsomega.3c07479>
153. Graça, C. A. L., & Soares, O. (2024). **From Waste to Resource: Evaluating Biomass Residues as Ozone-Catalyst Precursors for the Removal of Recalcitrant Water Pollutants** . *Environments*, 11(8), 14. <https://doi.org/10.3390/environments11080172>
154. Gracher-Teixeira, L., Pituco, S. C. S., Colucci, G., Santamaria-Echart, A., Peres, A. M., Dias, M. M., & Barreiro, M. F. (2024). **Developing High-Coloring Natural Systems Using Double Emulsions with *Daucus carota* L. Extract to Meet High-Performance Requirements** . *Foods*, 13(24), 17. <https://doi.org/10.3390/foods13244147>

155. Guimaraes, M. C., Pinho, F. T., & da Silva, C. B. (2024). **The similarity theory of free turbulent shear flows of viscoelastic fluids**. *Journal of Non-Newtonian Fluid Mechanics*, 323, 24. <https://doi.org/10.1016/j.jnnfm.2023.105148>
156. Hemnani, M., da Silva, P. G., Thompson, G., Poeta, P., Rebelo, H., & Mesquita, J. R. (2024). **Presence of Alphacoronavirus in Tree- and Crevice-Dwelling Bats from Portugal**. *Viruses-Basel*, 16(3), 12. <https://doi.org/10.3390/v16030434>
157. Holz, L. I. V., Loureiro, F. J. A., Graça, V. C. D., Mikhalev, S. M., Fernandes, C., Mendes, A., & Fagg, D. P. (2024). **Strontium iron molybdenum oxide as electrocatalyst for nitrous oxide reduction in solid oxide fuel cells**. *International Journal of Hydrogen Energy*, 54, 25-36. <https://doi.org/10.1016/j.ijhydene.2023.05.251>
158. Ispolnov, K., Luz, T. M. R., Aires, L. M. I., & Vieira, J. S. (2024). **Progress on the Use of Hydroponics to Remediate Hog Farm Wastewater after Vermifiltration Treatment**. *Water*, 16(11), 20. <https://doi.org/10.3390/w16111524>
159. Jiménez, A., Esteves, B. M., Trujillano, R., Soria, M. A., Madeira, L. M., Rives, V., & Vicente, M. A. (2024). **Tyrosol removal by photo-Fenton-like process using CaAlFe mixed oxides synthesized via hydrocalumite from aluminum salt cake**. *Journal of Environmental Chemical Engineering*, 12(2), 14. <https://doi.org/10.1016/j.jece.2024.112423>
160. Joy, A., Viswanathan, M. R., Vijayan, B. K., Silva, C. G., Basheer, I., Sugathan, S., Mohamed, P. A., Solaiappan, A., & Shereef, A. (2024). **Solar photocatalysts: non-metal (C, N, and S)-doped ZnO synthesized through an industrially sustainable *in situ* approach for environmental remediation applications**. *Rsc Advances*, 14(30), 21655-21667. <https://doi.org/10.1039/d4ra03492a>
161. Karimi, M., Siqueira, R. M., Rodrigues, A. E., Nouar, F., Silva, J. A. C., Serre, C., & Ferreira, A. (2024). **Biogas upgrading using shaped MOF MIL-160(Al) by pressure swing adsorption process: Experimental and dynamic modelling assessment**. *Separation and Purification Technology*, 344, 13. <https://doi.org/10.1016/j.seppur.2024.127260>
162. Karimi, M., Siqueira, R. M., Rodrigues, A. E., Nouar, F., Silva, J. A. C., Serre, C., & Ferreira, A. F. P. (2024). **Separation of CO₂/N₂ onto Shaped MOF MIL-160(Al) Using the Pressure Swing Adsorption Process for Post-combustion Application**. *Industrial & Engineering Chemistry Research*, 63(19), 8772-8785. <https://doi.org/10.1021/acs.iecr.4c00611>
163. Kessler, J. C., Martins, I. M., Manrique, Y. A., Rodrigues, A. E., Barreiro, M. F., & Dias, M. M. (2024). **Advancements in conventional and supercritical CO₂ extraction of Moringa oleifera bioactives for cosmetic applications: A review**. *Journal of Supercritical Fluids*, 214. <https://doi.org/10.1016/j.supflu.2024.106388>
164. Kilbride, R. C., Spooner, E. L. K., Burg, S. L., Oliveira, B. L., Charas, A., Bernardo, G., Dalglish, R., King, S., Lidzey, D. G., Jones, R. A. L., & Parnell, A. J. (2024). **The Nanoscale Structure and Stability of Organic Photovoltaic Blends Processed with Solvent Additives**. *Small*, 20(33), 9. <https://doi.org/10.1002/sml.202311109>
165. Kondor, A. C., Vancsik, A. V., Bauer, L., Szabó, L., Szalai, Z., Jakab, G., Maász, G., Pedrosa, M., Sampaio, M. J., & Lado Ribeiro, A. R. (2024). **Efficiency of the bank filtration for removing organic priority substances and contaminants of emerging concern: A critical review**. *Environmental Pollution*, 340. <https://doi.org/10.1016/j.envpol.2023.122795>
166. Langa, I. M., Ribeiro, A. R. L., Ratola, N., Gonçalves, V. M. F., Tiritan, M. E., & Ribeiro, C. (2024). **Amphetamine-like substances and synthetic cathinones in Portuguese wastewater influents: Enantiomeric profiling and role of suspended particulate matter**. *Forensic Science International*, 361, 12. <https://doi.org/10.1016/j.forsciint.2024.112128>
167. Leitao, M. M., Vieira, T. F., Sousa, S. F., Borges, F., Simoes, M., & Borges, A. (2024). **Dual action of benzaldehydes: Inhibiting quorum sensing and enhancing antibiotic efficacy for controlling *Pseudomonas aeruginosa* biofilms**. *Microbial Pathogenesis*, 191, 22. <https://doi.org/10.1016/j.micpath.2024.106663>
168. Lemos, P., Silva, P., Sousa, C. A., & Duarte, A. J. (2024). **Polluted Rivers-A Case Study in Porto, Portugal**. *Ecologies*, 5(2), 188-197. <https://doi.org/10.3390/ecologies5020012>
169. Li, M. S., Xu, X., Teixeira, M. C., Xue, M., Xue, H. L., Zhu, K. F., & Huang, H. (2024). **Improved Orographic Gravity Wave Drag Parameterization Accounting for the Nonhydrostatic Effect in the Weather Research and Forecasting Model: Tests for Short-Range Forecast of Northeast China Cold Vortices**. *Monthly Weather Review*, 152(12), 2623-2637. <https://doi.org/10.1175/mwr-d-24-0097.1>
170. Lopes, A. R., Magalhães, F. D., Loureiro, J. A., & Pinto, A. M. (2024). **Tungsten Disulfide-Based Materials and Their Conjugates for Cancer Photothermal Therapy**. *Journal of Composites Science*, 8(11). <https://doi.org/10.3390/jcs8110460>

171. Lopes, C., Restivo, J., Orge, C. A., Pereira, M. F. R., & Soares, O. (2024). **Catalytic hydrodechlorination of 4-chlorophenol: Role of metal phase supports and reaction pH**. *Journal of Water Process Engineering*, 67, 9. <https://doi.org/10.1016/j.jwpe.2024.106240>
172. Lopes, D., Puga, H., Teixeira, J., Lima, R., Grilo, J., Dueñas-Pamplona, J., & Ferrera, C. (2024). **Comparison of RANS and LES turbulent flow models in a real stenosis**. *International Journal of Heat and Fluid Flow*, 107, 15. <https://doi.org/10.1016/j.ijheatfluidflow.2024.109340>
173. Lopes, J., Marques-da-Silva, D., Videira, P. A., Samhan-Arias, A. K., & Lagoa, R. (2024). **Cardiolipin Membranes Promote Cytochrome c Transformation of Polycyclic Aromatic Hydrocarbons and Their In Vivo Metabolites**. *Molecules*, 29(5), 17. <https://doi.org/10.3390/molecules29051129>
174. Lopes, J. C., Alberio, J., Sampaio, M. J., Silva, C. G., García, H., & Faria, J. L. (2024). **Selective oxidative coupling of amines through light-activated bismuth halide perovskites**. *Chemcatchem*, 16(8), 11. <https://doi.org/10.1002/cctc.202301432>
175. Lopes, J. C., Sampaio, M. J., Silva, C. G., & Faria, J. L. (2024). **Selective Conversion of Furfural to Furfuryl Alcohol by Heterogeneous TiO₂ Photocatalysis**. *Chemphotochem*, 8(9), 10. <https://doi.org/10.1002/cptc.202400062>
176. López-Vázquez, J., Santos, C. S., Montes, R., Rodil, R., Quintana, J. B., Gäbler, J., Schäfer, L., Moreira, F. C., & Vilar, V. J. P. (2024). **Insights into the application of the anodic oxidation process for the removal of per- and polyfluoroalkyl substances (PFAS) in water matrices**. *Chemical Engineering Journal*, 482, 13. <https://doi.org/10.1016/j.cej.2024.148925>
177. Lorenzo, B., Graça, N. S., Ortega, J., & Rodrigues, A. E. (2024). **Operation and Modeling of a Process for 1,1-Diethoxybutane Synthesis in a Simulated Moving Bed Reactor Pilot Unit**. *Industrial & Engineering Chemistry Research*, 63(49), 21190-21199. <https://doi.org/10.1021/acs.iecr.4c02701>
178. Macedo, M. S., Kraveva, E., Ehrich, H., Soria, M. A., & Madeira, L. M. (2024). **Ni-based catalysts supported on La/AlZn/AlLa oxides for hydrogen production via glycerol steam reforming**. *Renewable Energy*, 223, 16. <https://doi.org/10.1016/j.renene.2024.120076>
179. Machado, C. A., Esteves, A. F., & Pires, J. C. M. (2024). **Chlorella vulgaris Harvesting: Chemical Flocculation with Chitosan, Aluminum Sulfate, and Ferric Sulfate**. *Applied Sciences-Basel*, 14(2), 12. <https://doi.org/10.3390/app14020598>
180. Magalhaes, B. T., Coimbra, J. T. S., Silva, R. M., Ferreira, M., Santos, R. S., Gameiro, P., Azevedo, N. F., & Fernandes, P. A. (2024). **Crosstalk of Nucleic Acid Mimics with Lipid Membranes: A Multifaceted Computational and Experimental Study**. *Biochemistry*, 63(24), 3381-3394. <https://doi.org/10.1021/acs.biochem.4c00349>
181. Magalhães, F. F., Pereira, A. F., Cristóvão, R. O., Barros, R. A. M., Faria, J. L., Silva, C. G., Freire, M. G., & Tavares, A. P. M. (2024). **Recent Developments and Challenges in the Application of Fungal Laccase for the Biodegradation of Textile Dye Pollutants**. *Mini-Reviews in Organic Chemistry*, 21(6), 609-632. <https://doi.org/10.2174/1570193X20666221104140632>
182. Magalhaes, R., Paiva, N. T., Ferra, J. M., Magalhaes, F. D., & Martins, F. G. (2024). **Improving feedstock quality control in formaldehyde-based resin and wood-based panel production through near infrared spectroscopy**. *Journal of near Infrared Spectroscopy*, 32(1-2), 29-37. <https://doi.org/10.1177/09670335241228407>
183. Maia, C., Pôjo, V., Tavares, T., Pires, J. C. M., & Malcata, F. X. (2024). **Surfactant-Mediated Microalgal Flocculation: Process Efficiency and Kinetic Modelling**. *Bioengineering-Basel*, 11(7), 14. <https://doi.org/10.3390/bioengineering11070722>
184. Maia, R., Sousa, P., Pinto, V., Soares, D., Lima, R., Minas, G., & Rodrigues, R. O. (2024). **PDMS porous microneedles used as engineered tool in advanced microfluidic devices and their proof-of-concept for biomarker detection**. *Chemical Engineering Journal*, 485, 12. <https://doi.org/10.1016/j.cej.2024.149725>
185. Malaquias, A. F., & Campos, J. (2024). **Sudden water exposure on geared firefighters may cause unexpected burns in post-fire periods**. *Thermal Science and Engineering Progress*, 49, 11. <https://doi.org/10.1016/j.tsep.2024.102452>
186. Manaia, C. M., Aga, D. S., Cytryn, E., Gaze, W. H., Graham, D. W., Guo, J., Leonard, A. F. C., Li, L., Murray, A. K., Nunes, O. C., Rodriguez-Mozaz, S., Topp, E., & Zhang, T. (2024). **The Complex Interplay Between Antibiotic Resistance and Pharmaceutical and Personal Care Products in the Environment**. *Environmental Toxicology and Chemistry*, 43(3), 637-652. <https://doi.org/10.1002/etc.5555>
187. Marques, A., Paulo, A., & Caetano, N. S. (2024). **Assessment of the Potential of Sunflower Grown in Metal-Contaminated Soils for Production of Biofuels**. *Sustainability*, 16(5), 16. <https://doi.org/10.3390/su16051829>

188. Marques, M. P., Sanchez-Salvador, J. L., Monte, M. C., Blanco, A., Santos, R. J., Dias, M. M., Manrique, Y. A., & Brito, M. S. C. A. (2024). **Development of O/W Pickering Emulsions Stabilized with Leek Leaf Trimmings Using Batch and Continuous Modes** . *Food and Bioprocess Technology*, 17(10), 3191-3206. <https://doi.org/10.1007/s11947-023-03296-7>
189. Marrocos, P. H., Fernandes, I. S., Lopes, J. C. B., Dias, M. M., Santos, R. J., & Vilar, V. J. P. (2024). **Evaluation of NETmix geometrical properties on gas-liquid mass transfer performance** . *Journal of Environmental Chemical Engineering*, 12(5), 16. <https://doi.org/10.1016/j.jece.2024.113771>
190. Marrocos, P. H., Fernandes, I. S., Pituco, M. M., Lopes, J. C. B., Dias, M. M., Santos, R. J., & Vilar, V. J. P. (2024). **CFD and lower order mechanistic models for gas-liquid flow in NETmix: Pressure drop and gas hold-up** . *Chemical Engineering Science*, 284, 11. <https://doi.org/10.1016/j.ces.2023.119478>
191. Martelo, L. M., Bastos, M. M. S. M., & Soares, H. M. V. M. (2024). **Separation of the metallic and non-metallic fractions of waste printed circuit boards – A review focused on the organic swelling** . *Minerals Engineering*, 206. <https://doi.org/10.1016/j.mineng.2023.108529>
192. Martins, F. F., Castro, H., Smitková, M., Felgueiras, C., & Caetano, N. (2024). **Energy and Circular Economy: Nexus beyond Concepts** . *Sustainability*, 16(5), 19. <https://doi.org/10.3390/su16051728>
193. Martins, J., Pereira, M., Emami, S., Ivanou, D., & Mendes, A. (2024). **Decal Ni mesh to enhance the conductivity of carbon back contacts in dye sensitized and perovskite solar cells** . *Energy Advances*, 3(1), 307-315. <https://doi.org/10.1039/d3ya00476g>
194. Martins, R. A., Salgado, E. M., Gonçalves, A. L., Esteves, A. F., & Pires, J. C. M. (2024). **Microalgae-Based Remediation of Real Textile Wastewater: Assessing Pollutant Removal and Biomass Valorisation** . *Bioengineering-Basel*, 11(1), 16. <https://doi.org/10.3390/bioengineering11010044>
195. Martins, R. J. E., & Grabowski, T. T. (2024). **Treatment and Valorisation of Pomace Olive Oil Wastewater** . *Inzynieria Mineralna-Journal of the Polish Mineral Engineering Society*(1), 5. <https://doi.org/10.29227/im-2024-01-84>
196. Martins, R. J. E., Pinheiro, L. F. D., & Grabowski, T. T. (2024). **Treatment for the Olive Pomace Oil Extraction Industry by Applying Peroxy-Electrooxidation** . *Inzynieria Mineralna-Journal of the Polish Mineral Engineering Society*(1), 5-8. <https://doi.org/10.29227/im-2024-01-85>
197. Martins, R. J. E., Tesuka, L. H., & Grabowski, T. T. (2024). **Treatment of Pomace Olive Oil Wastewater by Peroxy-Electrocoagulation with Aluminium Sheets** . *Inzynieria Mineralna-Journal of the Polish Mineral Engineering Society*(1), 6. <https://doi.org/10.29227/im-2024-01-86>
198. Mateus, A. R. S., Serrano, C., Almeida, C., Soares, A., Lopes, V. R., & Sanches-Silva, A. (2024). **Beyond Thymol and Carvacrol: Characterizing the Phenolic Profiles and Antioxidant Capacity of Portuguese Oregano and Thyme for Food Applications** . *Applied Sciences-Basel*, 14(19), 19. <https://doi.org/10.3390/app14198924>
199. Mateus, A. R. S., Teixeira, J. D., Barros, S. C., Almeida, C., Silva, S., & Sanches-Silva, A. (2024). **Unlocking the Potential of *Citrus medica* L.: Antioxidant Capacity and Phenolic Profile across Peel, Pulp, and Seeds** . *Molecules*, 29(15), 11. <https://doi.org/10.3390/molecules29153533>
200. Matiazzo, T., Vilar, V. J. P., Padoin, N., & Soares, C. (2024). **CFD and radiation field modeling of the NETmix milli-photocatalytic reactor: Evaluation of illumination systems composed of LEDs with distinct view angles** . *Chemical Engineering Science*, 285, 7. <https://doi.org/10.1016/j.ces.2023.119576>
201. Matin, M., Yeung, A. W. K., Joshi, T., Tzvetkov, N. T., Matin, F. B., Strzalkowska, N., Ksepka, N., Wysocki, K., Tomasik, C., Mickael, M. E., Szymanska-Czerwinska, M., Niemczuk, K., Koszarska, M., Frazzini, S., Rossi, L., Adamska, O., Kaminska, A., Lapinski, M., Stolarczyk, A., . . . Atanasov, A. G. (2024). **Ginger: a total-scale analysis of the scientific literature on a widely used spice and phytotherapeutic** . *Animal Science Papers and Reports*, 42(4), 349-364. <https://doi.org/10.2478/aspr-2023-0042>
202. Matos, J., Santos, R. J., Dias, M. M., & Lopes, J. C. B. (2024). **Chaos and mixing in NETmix** . *Aiche Journal*, 70(9), 12. <https://doi.org/10.1002/aic.18461>
203. Mattera, M., Ngo, A. T., Vale, J. P., Franco, C., Sevim, S., Guix, M., Matheu, R., Mayor, T. S., Pané, S., & Puigmartí-Luis, J. (2024). **Large-Scale and Rapid Processing of 3D COFs via 3D-Controlled Reaction-Diffusion Zones** . *Chemistry of Materials*, 36(2), 959-967. <https://doi.org/10.1021/acs.chemmater.3c02853>
204. Mba Wright, M., Tan, E. C. D., Tu, Q., Martins, A., Parvatker, A. G., Yao, Y., Sunol, A., & Smith, R. L. (2024). **Life Cycle Inventory Availability: Status and Prospects for Leveraging New Technologies** . *ACS Sustainable Chemistry and Engineering*, 12(34), 12708-12718. <https://doi.org/10.1021/acssuschemeng.4c02519>

205. Medeiros-Fonseca, B., Faustino-Rocha, A. I., Pires, M. J., Neuparth, M. J., Vala, H., Vasconcelos-Nóbrega, C., Gouvinhas, I., Barros, A. N., Dias, M. I., Barros, L., Bastos, M. M. S. M., Gonçalves, L., Félix, L., Venâncio, C., Medeiros, R., da Costa, R. M. G., & Oliveira, P. A. (2024). **Exploring the therapeutic potential of *Quercus ilex* acorn extract in papillomavirus-induced lesions**. *Veterinary World*, 17(11), 2644-2658. <https://doi.org/10.14202/vetworld.2024.2644-2658>
206. Medeiros-Fonseca, B., Faustino-Rocha, A. I., Silva, J., Silva, M. G., Pires, M. J., Neuparth, M. J., Vala, H., Vasconcelos-Nóbrega, C., Dias, M. I., Barros, L., Gonçalves, L., Gaivão, I., Bastos, M. M. S. M., Félix, L., Venâncio, C., Medeiros, R., Gil da Costa, R. M., & Oliveira, P. A. (2024). **Aloisia citrodora extract as a chemopreventive agent against HPV16-induced lesions: findings from K14-HPV16 mice**. *Exploration of Medicine*, 5(3), 416-433. <https://doi.org/10.37349/emed.2024.00228>
207. Megía, P. J., Soria, M. A., Cerqueira, P., Vizcaino, A. J., Carrero, A., Calles, J. A., & Madeira, L. M. (2024). **Influence of Rh addition to transition metal-based catalysts in the oxidative steam reforming of acetic acid**. *Catalysis Today*, 429, 8. <https://doi.org/10.1016/j.cattod.2023.114479>
208. Mendes, T. P. G., Ribeiro, A. M., Schnitman, L., & Nogueira, I. B. R. (2024). **A PLC-Embedded Implementation of a Modified Takagi-Sugeno-Kang-Based MPC to Control a Pressure Swing Adsorption Process**. *Processes*, 12(8), 21. <https://doi.org/10.3390/pr12081738>
209. Miranda, S. M., Matiazzo, T., Padoin, N., Silva, T., & Vilar, V. J. P. (2024). **Photocatalytic oxidation of *n*-decane in a NETmix photoreactor: Insights into the reactor geometry and illumination mechanism**. *Chemical Engineering Journal*, 497, 13. <https://doi.org/10.1016/j.cej.2024.154705>
210. Mohanty, A., Sethi, D., & Mohanty, A. R. (2024). **Fiscal autonomy and public expenditure performance: Some panel-data evidence from Indian states**. *Bulletin of Economic Research*, 76(4), 1065-1093. <https://doi.org/10.1111/boer.12460>
211. Monteiro, J. P., Cruzeiro, C., Duarte, M. S., Pereira, M. A., & Vilar, V. J. P. (2024). **Innovative waste activated sludge pre-treatment using a raceway pond Reactor: Integration of Low-Temperature and solar radiation**. *Chemical Engineering Journal*, 498, 9. <https://doi.org/10.1016/j.cej.2024.155324>
212. Montenegro, M., Campo-Deaño, L., & Galindo-Rosales, F. J. (2024). **Formulating, assessing and using shear thickening fluids for cork helmet liners**. *Composite Structures*, 327, 18. <https://doi.org/10.1016/j.compstruct.2023.117707>
213. Montenegro, M., & Galindo-Rosales, F. J. (2024). **On the Complex Flow Dynamics of Shear Thickening Fluids Entry Flows**. *Micromachines*, 15(11), 24. <https://doi.org/10.3390/mi15111281>
214. Morais, D. F. S., Lopes, J. C. B., Dias, M. M., Vilar, V. J. P., & Moreira, F. C. (2024). **e⁻NETmix: A pioneering electrochemical flow reactor with enhanced mass transfer**. *Chemical Engineering Journal*, 481, 11. <https://doi.org/10.1016/j.cej.2023.148244>
215. Morais, R. G., Rey-Raap, N., Figueiredo, J. L., & Pereira, M. F. R. (2024). **Insights into the Electrocatalytic Activity of Fe,N-Glucose/Carbon Nanotube Hybrids for the Oxygen Reduction Reaction**. *C-Journal of Carbon Research*, 10(2), 17. <https://doi.org/10.3390/c10020047>
216. Morais, R. G., Ribeiro, L. S., Orfao, J. J. M., & Pereira, M. F. R. (2024). **Low-Cost Ni-W Catalysts Supported on Glucose/Carbon Nanotube Hybrid Carbons for Sustainable Ethylene Glycol Synthesis**. *Molecules*, 29(16), 13. <https://doi.org/10.3390/molecules29163962>
217. Moreira, A. I., Carneiro, J., Campos, J., & Miranda, J. M. (2024). **Production and characterization of a blood analogue based on alginate microparticles**. *Colloids and Surfaces a-Physicochemical and Engineering Aspects*, 693, 10. <https://doi.org/10.1016/j.colsurfa.2024.134022>
218. Moreira, C. S., Pinto, A., & Oliveira, V. B. (2024). **The Effect of a Reduction in the Catalyst Loading on a Mini Passive Direct Methanol Fuel Cell**. *Energies*, 17(20), 15. <https://doi.org/10.3390/en17205174>
219. Moreira, L., Guimarães, N. M., Santos, R. S., Loureiro, J. A., Pereira, M. C., & Azevedo, N. F. (2024). **Promising strategies employing nucleic acids as antimicrobial drugs**. *Molecular Therapy Nucleic Acids*, 35(1). <https://doi.org/10.1016/j.omtn.2024.102122>
220. Moreira, L. C. D. S., Rebello, C. M., Costa, E. A., Sánchez, A. S., Ribeiro, L. S., & Nogueira, I. B. R. (2024). **Digital Transformation in the Chemical Industry: The Potential of Augmented Reality and Digital Twin**. *Applied Sciences (Switzerland)*, 14(24). <https://doi.org/10.3390/app142411607>
221. Morillas, C., Alvarez, S., Pires, J. C. M., Garcia, A. J., & Martinez, S. (2024). **Impact of the implementation of Madrid's low emission zone on NO2 concentration using Sentinel-5P/TROPOMI data**. *Atmospheric Environment*, 320, 14. <https://doi.org/10.1016/j.atmosenv.2024.120326>

222. Morozova, T. V., Shevchuk, A. V., Tkach, V. V., Shevchuk, I. V., Kushnir, M. V., Martins, J. I. F. D. P., Garcia, J. R., Ivanushko, Y. G., Velyka, A. V., Kucher, M. M., Kormosh, Z. O., Yagodynets, P. I., Monteiro, M. J., & Khrutba, V. O. (2024). **The Theoretical Description for Gyromitrin and Orellanin Electrochemical Determination Mushroom Pulp and Biological Liquids for Forensic Purposes**. *Letters in Applied NanoBioScience*, 13(3). <https://doi.org/10.33263/LIANBS133.150>
223. Moura, D., Rohringer, S., Ferreira, H. P., Pereira, A. T., Barrias, C. C., Magalhaes, F. D., Bergmeister, H., & Gonçalves, I. C. (2024). **Long-term *in vivo* degradation and biocompatibility of degradable pHEMA hydrogels containing graphene oxide**. *Acta Biomaterialia*, 173, 351-364. <https://doi.org/10.1016/j.actbio.2023.11.012>
224. Narciso, D. A. C., Pereira, A., Dias, N. O., Monteiro, M., Melo, L. F., & Martins, F. G. (2024). **3D Optical Coherence Tomography image processing in BISCAP: characterization of biofilm structure and properties**. *Bioinformatics*, 40(2), 8. <https://doi.org/10.1093/bioinformatics/btae041>
225. Neves, C. V., Módenes, A. N., Scheufele, F. B., Rocha, R. P., Pereira, M. F. R., Figueiredo, J. L., & Borba, C. E. (2024). **Improving the performance of activated carbon towards dibenzothiophene adsorption by functionalization and sulfur-metal interactions**. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 686. <https://doi.org/10.1016/j.colsurfa.2024.133372>
226. Neves, M. C., Filgueiras, J., Kokkinogenis, Z., Silva, M. C. F., Campos, J., & Reis, L. P. (2024). **Enhancing experimental image quality in two-phase bubbly systems with super-resolution using generative adversarial networks**. *International Journal of Multiphase Flow*, 180, 14. <https://doi.org/10.1016/j.ijmultiphaseflow.2024.104952>
227. Nobre, M. L. F., Tavares, D., Fraga, C., Oliveira, B., Dias, M., Mesquita, S., Oliveira, C. M., & Pires, J. C. M. (2024). **Techno-economic analysis of a circular microalgal approach for enhanced wastewater treatment and resource recovery in Northern Portugal**. *Journal of Cleaner Production*, 434, 9. <https://doi.org/10.1016/j.jclepro.2023.140389>
228. Nobrega, G., Afonso, I. S., Cardoso, B., de Souza, R. R., Moita, A., Ribeiro, J. E., & Lima, R. A. (2024). **Exploring heat exchange in space: Recent advances in two-phase fluid experiments in microgravity**. *Thermal Science and Engineering Progress*, 56, 18. <https://doi.org/10.1016/j.tsep.2024.103025>
229. Nobrega, G., Souza, R., Cardoso, B., Ribeiro, J., Pereira, J., Afonso, I., Cardoso, E., Moita, A., & Lima, R. (2024). **Experimental evaluation of green nanofluids in heat exchanger made of PDMS**. *Thermal Science and Engineering Progress*, 55, 13. <https://doi.org/10.1016/j.tsep.2024.102978>
230. Novais, R., Mata, T. M., Madureira, L., Maciel, F., Vicente, A. A., & Martins, A. A. (2024). **Life cycle assessment of lipid production from Pavlova gyrams : Influence of the culture medium composition**. *Journal of Cleaner Production*, 468, 12. <https://doi.org/10.1016/j.jclepro.2024.143073>
231. Nunes, B., Cagide, F., Borges, F., & Simoes, M. (2024). **Antimicrobial activity and cytotoxicity of novel quaternary ammonium and phosphonium salts**. *Journal of Molecular Liquids*, 401, 12. <https://doi.org/10.1016/j.molliq.2024.124616>
232. Nunes, B., Cagide, F., Fernandes, C., Borges, A., Borges, F., & Simoes, M. (2024). **Efficacy of Novel Quaternary Ammonium and Phosphonium Salts Differing in Cation Type and Alkyl Chain Length against Antibiotic-Resistant *Staphylococcus aureus***. *International Journal of Molecular Sciences*, 25(1), 30. <https://doi.org/10.3390/ijms25010504>
233. Nunes, D., Tavares, T. G., Malcata, F. X., Loureiro, J. A., & Pereira, M. C. (2024). **Development and Validation of a Simple UV-HPLC Method to Quantify the Memantine Drug Used in Alzheimer's Treatment**. *Pharmaceuticals*, 17(9), 14. <https://doi.org/10.3390/ph17091162>
234. Nunes, R. A. O., Alvim-Ferraz, M. C. M., Martins, F. G., & Sousa, S. I. V. (2024). **Local mortality and costs from ship-related emissions in three major Portuguese ports**. *Urban Climate*, 53, 14. <https://doi.org/10.1016/j.uclim.2023.101780>
235. Oliveira, I. M., Gomes, I. B., Simões, L. C., & Simões, M. (2024). **A review of research advances on disinfection strategies for biofilm control in drinking water distribution systems**. *Water Research*, 253. <https://doi.org/10.1016/j.watres.2024.121273>
236. Oliveira, J., Costa, E., Dias, J. M., & Pires, J. C. (2024). **Biodiesel Production by Biocatalysis using Lipids Extracted from Microalgae Oil of *Chlorella vulgaris* and *Aurantiochytrium* sp**. *Bioenergy Research*, 17(2), 1080-1089. <https://doi.org/10.1007/s12155-023-10706-3>
237. Oliveira, M. T., Marques, J. F., Driller, M., Branco, R. S., Pinto, S., & Barros, R. A. M. (2024). **PHArmed: A Biological Process for PHA Production from Apple Waste Residues**. *U.Porto Journal of Engineering*, 10(2), 3-21. https://doi.org/10.24840/2183-6493_0010-002_002577

- 238.Oliveira, R., Barbosa, A., Sousa, M., Azevedo, N. F., Cerqueira, L., & Almeida, C. (2024). **Using peptide nucleic acid fluorescence in situ hybridization (PNA-FISH) to detect *Campylobacter* spp. in food samples** . *Lwt-Food Science and Technology*, 198, 9. <https://doi.org/10.1016/j.lwt.2024.115922>
- 239.Oliveira, R., Pinho, E., Azevedo, N. F., & Almeida, C. (2024). **Post-SELEX modifications with locked nucleic acids (LNA) of a SEA-specific DNA aptamer assisted by in silico modelling** . *Molecular Systems Design & Engineering*, 9(8), 847-855. <https://doi.org/10.1039/d4me00043a>
- 240.Oliveira, R., Pinho, E., Barros, M. M., Azevedo, N. F., & Almeida, C. (2024). **In vitro selection of DNA aptamers against staphylococcal enterotoxin A** . *Scientific Reports*, 14(1), 14. <https://doi.org/10.1038/s41598-024-61094-3>
- 241.Orge, C. A., Graça, C. A. L., Restivo, J., Pereira, M. F. R., & Soares, O. S. G. P. (2024). **Catalytic ozonation of pharmaceutical compounds using carbon-based catalysts** . *Catalysis Communications*, 187. <https://doi.org/10.1016/j.catcom.2024.106863>
- 242.Oubella, M., Jadi, S. B., El Fazdoune, M., Bahend, K., Bazzouai, E. A., Martins, J. I., Wang, R., de la Rosa, J. E., Garcia-Garcia, F. J., & Bazzouai, M. (2024). **Effect of surface pretreatment on the polypyrrole coating of acrylonitrile butadiene styrene. Part A: Synthesis and characterization** . *Progress in Organic Coatings*, 195. <https://doi.org/10.1016/j.porgcoat.2024.108654>
- 243.Paiva, A. M., Barros, B., Azevedo, R., Oliveira, M., Alves, S., Esteves, F., Fernandes, A., Vaz, J., Alves, M. J., Slezakova, K., Pereira, M. D., Teixeira, J. P., Costa, S., Almeida, A., & Morais, S. (2024). **Biomonitoring of firefighters' exposure to priority pollutant metal(loid)s during wildland fire combat missions: Impact on urinary levels and health risks** . *Science of the Total Environment*, 953, 14. <https://doi.org/10.1016/j.scitotenv.2024.176105>
- 244.Paiva, A. M., Barros, B., Oliveira, M., Alves, S., Esteves, F., Fernandes, A., Vaz, J., Slezáková, K., Teixeira, J. P., Costa, S., & Morais, S. (2024). **Biomonitoring of polycyclic aromatic hydrocarbons exposure and short-time health effects in wildland firefighters during real-life fire events** . *Science of the Total Environment*, 926, 14. <https://doi.org/10.1016/j.scitotenv.2024.171801>
- 245.Pardilhó, S., Oliveira, J., Pires, J. C., & Dias, J. M. (2024). **Bioethanol Production from Marine Macroalgae Waste: Optimisation of Thermal acid Hydrolysis** . *Waste and Biomass Valorization*, 15(6), 3639-3649. <https://doi.org/10.1007/s12649-023-02320-3>
- 246.Paulista, L. O., Ferreira, A. F. P., Castanheira, B., Dolic, M. B., Martins, R. J. E., Boaventura, R. A. R., Vilar, V. J. P., & Silva, T. (2024). **Solar-driven thermo-photocatalytic CO₂ methanation over a structured RuO₂:TiO₂/SBA-15 nanocomposite at low temperature** . *Applied Catalysis B-Environment and Energy*, 340, 25. <https://doi.org/10.1016/j.apcatb.2023.123232>
- 247.Paulista, L. O., Ferreira, A. F. P., Rodrigues, A. E., Martins, R. J. E., Boaventura, R. A. R., Vilar, V. J. P., & Silva, T. (2024). **Solar thermo-photocatalytic methanation using a bifunctional RuO₂:TiO₂/Z13X photocatalyst/adsorbent material for efficient CO₂ capture and conversion** . *Journal of Environmental Chemical Engineering*, 12(3), 19. <https://doi.org/10.1016/j.jece.2024.112418>
- 248.Pedreira, A., Fernandes, S., Simoes, M., García, M. R., & Vázquez, J. A. (2024). **Synergistic Bactericidal Effects of Quaternary Ammonium Compounds with Essential Oil Constituents** . *Foods*, 13(12), 16. <https://doi.org/10.3390/foods13121831>
- 249.Pedrosa, M. F. F. (2024). **An overview of bio-cellulose derived materials for catalytic water treatment** . *International Journal of Biological Macromolecules*, 258. <https://doi.org/10.1016/j.ijbiomac.2023.128789>
- 250.Peixoto, M. L. R., Brito, M., Santos, R. J., & Vilar, V. J. P. (2024). **Kinetic model implementation in raceway pond reactors with hydrodynamic and radiation fields** . *Chemical Engineering Research & Design*, 210, 150-162. <https://doi.org/10.1016/j.cherd.2024.08.030>
- 251.Peñas-Garzón, M., Sampaio, M. J., Chávez, A. M., Silva, A. M. T., Silva, C. G., & Faria, J. L. (2024). **Film-immobilized carbon nitride for the degradation of pharmaceuticals: A continuous flow photoreactor performance upheld by excitation-emission matrix fluorescence spectroscopy** . *Chemical Engineering Journal*, 500, 14. <https://doi.org/10.1016/j.cej.2024.157384>
- 252.Perdana, M. C., Sochacki, A., Çömez, F., Silva, A. M. T., Tiritan, M. E., Berchová, K., Chval, Z., Lexa, M., Ren, T. X., Beesley, L., Ribeiro, A. R. L., & Vymazal, J. (2024). **The resilience of constructed wetlands treating greywater: the effect of operating conditions and seasonal temperature decline** . *Environmental Science-Water Research & Technology*, 10(12), 3206-3216. <https://doi.org/10.1039/d4ew00637b>

253. Perdigao-Lima, T., De Tuesta, J. L. D., Feliciano, M., Furst, L. C., Roman, F. F., Silva, A. S., Wilken, A. A. P., Silva, A. M. T., & Gomes, H. T. (2024). **Removal of gaseous ammonia released from leachate by adsorption on carbon-based adsorbents prepared from agro-industrial wastes**. *Global Nest Journal*, 26(4), 8. <https://doi.org/10.30955/gnj.004862>
254. Pereira, A., Ferreira, A. F. P., Rodrigues, A., Ribeiro, A. M., & Regufe, M. J. (2024). **Study of methane upgrading using an activated carbon 3D-printed adsorbent**. *Journal of Environmental Chemical Engineering*, 12(1). <https://doi.org/10.1016/j.jece.2023.111730>
255. Pereira, A. R., Brandao, E., Pinto, J., de Pinho, P. G., Costa, C. A. E., Rodrigues, A. E., Michelin, M., Soares, S., de Freitas, V., Mateus, N., & Oliveira, J. (2024). **First Insight into Lignin Valorization as a Promising Biopolymer for the Modulation of the Physicochemical Properties of Port Wine**. *Journal of Agricultural and Food Chemistry*, 72(38), 21208-21220. <https://doi.org/10.1021/acs.jafc.4c05442>
256. Pereira, A. R., Bravo, C., Ramos, R. M., Costa, C., Rodrigues, A., de Freitas, V., Mateus, N., Dias, R., Soares, S., & Oliveira, J. (2024). **New Insights into pH-dependent Complex Formation between Lignosulfonates and Anthocyanins: Impact on Color and Oxidative Stability**. *Journal of Agricultural and Food Chemistry*, 72(48), 26820-26831. <https://doi.org/10.1021/acs.jafc.4c05842>
257. Pereira, A. R., & Gomes, I. B. (2024). **The effects of methylparaben exposure on biofilm tolerance to chlorine disinfection**. *Journal of Hazardous Materials*, 476, 10. <https://doi.org/10.1016/j.jhazmat.2024.134883>
258. Pereira, A. R., Gomes, I. B., Santos, L., & Simoes, M. (2024). **Track of methylparaben in the bulk phase and on the extracellular matrix of dual-species biofilms: Biodegradation and bioaccumulation**. *Journal of Hazardous Materials*, 480, 10. <https://doi.org/10.1016/j.jhazmat.2024.136222>
259. Pereira, A. R., Gomes, I. B., & Simões, M. (2024). **Parabens alter the surface characteristics and antibiotic susceptibility of drinking water bacteria**. *Chemosphere*, 368. <https://doi.org/10.1016/j.chemosphere.2024.143704>
260. Pereira, A. R., Rooney, L. M., Gomes, I. B., Simoes, M., & McConnell, G. (2024). **The impact of methylparaben and chlorine on the architecture of *Stenotrophomonas maltophilia* biofilms**. *Science of the Total Environment*, 951, 10. <https://doi.org/10.1016/j.scitotenv.2024.175646>
261. Pereira, J. L. S., Costa, T., Figueiredo, V., Marques, F., Perdigao, A., Bras, I., Silva, M. E. F., & Wessel, D. F. (2024). **Influence of Different Agro-Food Waste on Ammonia and Greenhouse Gas Emissions during Composting**. *Agronomy-Basel*, 14(1), 16. <https://doi.org/10.3390/agronomy14010220>
262. Pereira, S. G., Martins, A. A., Mata, T. M., Pereira, R. N., Teixeira, J. A., & Rocha, C. M. R. (2024). **Life cycle assessment and cost analysis of innovative agar extraction technologies from red seaweeds**. *Bioresource Technology*, 414, 11. <https://doi.org/10.1016/j.biortech.2024.131649>
263. Peres, C. B., de Moraes, L. C., & Resende, P. M. R. (2024). **Carbon adsorption on waste biomass of passion fruit peel: A promising machine learning model for CO₂ capture**. *Journal of CO₂ Utilization*, 80, 12. <https://doi.org/10.1016/j.jcou.2024.102680>
264. Pérez-Pereira, A., Gonçalves, V. M. F., Ribeiro, A. R. L., Fernandes, C., Carrola, J. S., Ribeiro, C., & Tiritan, M. E. (2024). **Development of an Enantioselective Method by Liquid Chromatography to Monitor 3,4-Methylenedioxypyrovalerone in Culture Media from Ecotoxicity Assays**. *Separations*, 11(8), 19. <https://doi.org/10.3390/separations11080248>
265. Pesqueira, J., Pereira, M. F. R., & Silva, A. M. T. (2024). **Carbon-based composites in advanced wastewater treatment: A life cycle assessment of TiO₂ and GO-TiO₂ solar photocatalysis**. *Journal of Cleaner Production*, 444, 10. <https://doi.org/10.1016/j.jclepro.2024.140845>
266. Pimenta, F., Alves, M. A., & Pinho, F. T. (2024). **Numerical simulation of vortex rings in non-Newtonian fluids**. *Journal of Non-Newtonian Fluid Mechanics*, 330. <https://doi.org/10.1016/j.jnnfm.2024.105280>
267. Piva, D. H., Barbosa, J. R. M., Oliveira, I., Sousa, J., Restivo, J., Orge, C. A., Pereira, M. F. R., & Soares, O. S. G. P. (2024). **Catalytic performance of PdCu supported on mesoporous MCM-41 with different morphologies for reduction of aqueous oxyanion pollutants**. *Journal of Environmental Chemical Engineering*, 12(6). <https://doi.org/10.1016/j.jece.2024.114816>
268. Polesca, C., Passos, H., Nakasu, P. Y. S., Coutinho, J. A. P., Freire, M. G., & Hallett, J. P. (2024). **Ionic-liquid-processed keratin-based biocomposite films with cellulose and chitin for sustainable dye removal**. *Rsc Sustainability*, 2(8), 2239-2248. <https://doi.org/10.1039/d4su00179f>

269. Polesca, C., Passos, H., Sousa, A. C. A., Tue, N. M., Coutinho, J. A. P., Kunisue, T., & Freire, M. G. (2024). **Sustainable pretreatment of blood samples using hydrophobic eutectic solvents to improve the detection of bisphenol A**. *Green Chemistry*, 27(1), 200-208. <https://doi.org/10.1039/d4gc03396e>
270. Prada-Vásquez, M. A., Pituco, M. M., Caixeta, M. P., Cardona Gallo, S. A., Botero-Coy, A. M., Hernández, F., Torres-Palma, R. A., & Vilar, V. J. P. (2024). **Ozonation using a stainless-steel membrane contactor: Gas-liquid mass transfer and pharmaceuticals removal from secondary-treated municipal wastewater**. *Chemosphere*, 349. <https://doi.org/10.1016/j.chemosphere.2023.140888>
271. Prudente, A. N., Santos, R. V. A., Ribeiro, A. M., Pontes, K., & Nogueira, I. B. R. (2024). **An integrated approach for parameter estimation of a propyl propionate synthesis model**. *Chemical Engineering Research & Design*, 202, 317-326. <https://doi.org/10.1016/j.cherd.2023.12.037>
272. Ptaszynska, K., Eblagon, K. M., Malaika, A., Figueiredo, J. L., & Kozlowski, M. (2024). **The role of mechanochemical treatment of carbon nanotubes in promoting glycerol etherification**. *Catalysis Science & Technology*, 14(11), 3184-3200. <https://doi.org/10.1039/d4cy00203b>
273. Ptaszynska, K., Malaika, A., Eblagon, K. M., Figueiredo, J. L., & Kozlowski, M. (2024). **Promoting Effect of Ball Milling on the Functionalization and Catalytic Performance of Carbon Nanotubes in Glycerol Etherification**. *Molecules*, 29(7), 19. <https://doi.org/10.3390/molecules29071623>
274. Puri, K., Paltasingh, K. R., & Mohanty, C. K. (2024). **Are crimes against women in India converging? Some empirical observations**. *Global Crime*, 25(3-4), 177-196. <https://doi.org/10.1080/17440572.2024.2371315>
275. Queiroz, L. P., Nogueira, I. B. R., & Ribeiro, A. M. (2024). **Flavor Engineering: A comprehensive review of biological foundations, AI integration, industrial development, and socio-cultural dynamics**. *Food Research International*, 196. <https://doi.org/10.1016/j.foodres.2024.115100>
276. Ramalho, M. J., Alves, B., Andrade, S., Lima, J., Loureiro, J. A., & Pereira, M. C. (2024). **Folic-Acid-Conjugated Poly (Lactic-Co-Glycolic Acid) Nanoparticles Loaded with Gallic Acid Induce Glioblastoma Cell Death by Reactive-Oxygen-Species-Induced Stress**. *Polymers*, 16(15), 19. <https://doi.org/10.3390/polym16152161>
277. Ramalho, M. J., Serra, E., Lima, J., Loureiro, J. A., & Pereira, M. C. (2024). **Chitosan-PLGA mucoadhesive nanoparticles for gemcitabine repurposing for glioblastoma therapy**. *European Journal of Pharmaceutics and Biopharmaceutics*, 200, 11. <https://doi.org/10.1016/j.ejpb.2024.114326>
278. Ramalho, M. J., Serra, E., Loureiro, J. A., & Pereira, M. C. (2024). **Repurposing gemcitabine for glioblastoma treatment: The role of drug-conjugates and nanoparticles as drug delivery systems**. *Journal of Drug Delivery Science and Technology*, 96. <https://doi.org/10.1016/j.jddst.2024.105714>
279. Ramalho, P. S. F., Soares, O., Orfao, J. J. M., & Pereira, M. F. R. (2024). **Magnetic Metallic Nanoparticles Coated with Carbon for the Catalytic Removal of Bromate from Water**. *Catalysts*, 14(2), 14. <https://doi.org/10.3390/catal14020149>
280. Rebelo, C. S., Velho, P., & Macedo, E. A. (2024). **eNRTL modelling and partition of phenolics in the ATPSs {ethyl lactate (1) + potassium sodium tartrate or disodium succinate (2) + water (3)} at 298.2 K and 0.1 MPa**. *Fluid Phase Equilibria*, 582, 11. <https://doi.org/10.1016/j.fluid.2024.114087>
281. Rebelo, C. S., Velho, P., & Macedo, E. A. (2024). **Partition Studies of Resveratrol in Low-Impact ATPS for Food Supplementation**. *Industrial and Engineering Chemistry Research*, 63(6), 2885-2894. <https://doi.org/10.1021/acs.iecr.3c03969>
282. Redfern, J., Cunliffe, A. J., Goeres, D. M., Azevedo, N. F., & Verran, J. (2024). **Critical analysis of methods to determine growth, control and analysis of biofilms for potential non-submerged antibiofilm surfaces and coatings**. *Biofilm*, 7, 13. <https://doi.org/10.1016/j.biofilm.2024.100187>
283. Reis, M. J. A., Pereira, A. M. V. M., Moura, N. M. M., & Neves, M. G. P. M. S. (2024). **Porphyrin-Based Hole-Transporting Materials for Perovskite Solar Cells: Boosting Performance with Smart Synthesis**. *Acs Omega*, 9(29), 31196-31219. <https://doi.org/10.1021/acsomega.4c01961>
284. Relvas, M. E., Ghirro, L. C., Martins, I. M., Lopes, J. C. B., Dias, M. M., Barreiro, M. F., & Ribeiro, A. (2024). **Nano-hydroxyapatite Pickering emulsions as edible mayonnaise-like food sauce templates: A novel approach for food design**. *Journal of Food Engineering*, 381. <https://doi.org/10.1016/j.jfoodeng.2024.112181>

285. Restivo, J., Orge, C. A., Soares, O. S. G. P., & Pereira, M. F. R. (2024). **A review of current and prospective catalytic routes for the management of PFAs contamination in water**. *Journal of Environmental Chemical Engineering*, 12(3). <https://doi.org/10.1016/j.jece.2024.112859>
286. Ribeiro, A. M., Goncalves, A., Rocha, F., & Estevinho, B. N. (2024). **Statistical simplex centroid experimental design for evaluation of pectin, modified chitosan and modified starch as encapsulating agents on the development of vitamin E-loaded microparticles by spray-drying**. *International Journal of Biological Macromolecules*, 269, 12. <https://doi.org/10.1016/j.ijbiomac.2024.131792>
287. Ribeiro, L. S., Morais, R. G., Orfao, J. J. D., & Pereira, M. F. (2024). **Unlocking the value of food waste: sustainable production of ethylene glycol over low-cost Ni-W catalysts supported on glucose-derived carbons**. *Sustainable Energy & Fuels*, 8(19), 4588-4601. <https://doi.org/10.1039/d4se00823e>
288. Ribeiro, L. S., Orfao, J. J. M., & Pereira, M. F. R. (2024). **Direct Catalytic Conversion of Lignocellulosic Biomass Wastes to Ethylene Glycol: Practical Learning for Chemical Engineering Students**. *Journal of Chemical Education*, 101(8), 3493-3499. <https://doi.org/10.1021/acs.jchemed.4c00527>
289. Ribeiro, L. S., & Pereira, M. F. R. (2024). **Sustainable Aviation Fuel Production through Catalytic Processing of Lignocellulosic Biomass Residues: A Perspective**. *Sustainability*, 16(7), 14. <https://doi.org/10.3390/su16073038>
290. Ricca, F., Galindo-Rosales, F. J., Akhavan-Safar, A., da Silva, L. F. M., Fkyerat, T., Yokozeki, K., Vallée, T., & Evers, T. (2024). **Predicting the Adhesive Layer Thickness in Hybrid Joints Involving Pre-Tensioned Bolts**. *Polymers*, 16(16), 26. <https://doi.org/10.3390/polym16162284>
291. Rijo, P. C., & Galindo-Rosales, F. J. (2024). **The building blocks behind the electrohydrodynamics of non-polar 2D-inks**. *Applied Materials Today*, 36, 13. <https://doi.org/10.1016/j.apmt.2023.102042>
292. Rijo, P. C., & Galindo-Rosales, F. J. (2024). **Electrorheological characterization of complex fluids used in electrohydrodynamic processes: Technical issues and challenges**. *Applied Rheology*, 34(1). <https://doi.org/10.1515/arh-2024-0024>
293. Rijo, P. C., Vega, E. J., Galindo-Rosales, F. J., & Montanero, J. M. (2024). **On the electrohydrodynamic jet printing of two-dimensional material-based inks for printed electronics**. *Physics of Fluids*, 36(11), 11. <https://doi.org/10.1063/5.0234191>
294. Rios, A. G., Costa, C. A. E., Ribeiro, A. M., Rodrigues, A. E., & Ferreira, A. F. P. (2024). **Competitive Adsorption of Vanillin, Vanillic Acid, and Acetovanillone onto SP700 Resin**. *Journal of Chemical and Engineering Data*, 69(10), 3660-3667. <https://doi.org/10.1021/acs.jced.4c00193>
295. Rita Pereira, A., Gomes, I. B., Harir, M., Santos, L., & Simões, M. (2024). **Parabens transformation products in water and their (eco)toxicological implications**. *Chemical Engineering Journal*, 498. <https://doi.org/10.1016/j.cej.2024.155129>
296. Rocha, C., Knöri, T., Ribeirinha, P., & Gazdzicki, P. (2024). **A review on flow field design for proton exchange membrane fuel cells: Challenges to increase the active area for MW applications**. *Renewable and Sustainable Energy Reviews*, 192. <https://doi.org/10.1016/j.rser.2023.114198>
297. Rodrigues, D., Abreu, C. M. R., Sauvage, F., Coelho, J. F. J., Serra, A. C., Ivanou, D., & Mendes, A. (2024). **Improved Interfacial Electron Dynamics with Block Poly(4-vinylpyridine)-Poly(styrene) Polymers for Efficient and Long-Lasting Dye-Sensitized Solar Cells**. *Acs Applied Polymer Materials*, 6(15), 8939-8949. <https://doi.org/10.1021/acsapm.4c01238>
298. Rodrigues, D., Martins, J., Sauvage, F., Abreu, C. M. R., Coelho, J. F. J., Serra, A. C., Ivanou, D., & Mendes, A. (2024). **Suppression of back electron recombination on the photoanode-electrolyte interface with poly(4-vinylbenzoic acid) and poly(4-vinylpyridine) co-adsorbents for stable and efficient dye-sensitized solar cells**. *Surfaces and Interfaces*, 44, 10. <https://doi.org/10.1016/j.surfin.2023.103627>
299. Rodrigues, T., Mota, R., Gales, L., Tamagnini, P., & Campo-Deaño, L. (2024). **Microrheological characterisation of Cyanoflan in human blood plasma**. *Carbohydrate Polymers*, 326, 12. <https://doi.org/10.1016/j.carbpol.2023.121575>
300. Rodrigues-Silva, F., Santos, C. S., Marrero, J. A., Montes, R., Quintana, J. B., Rodil, R., Nunes, O. C., Starling, M. C. V. M., Amorim, C. C., Gomes, A. I., & Vilar, V. J. P. (2024). **Continuous UV-C/H₂O₂ and UV-C/Chlorine applied to municipal secondary effluent and nanofiltration retentate: Removal of contaminants of emerging concern, ecotoxicity, and reuse potential**. *Chemosphere*, 361. <https://doi.org/10.1016/j.chemosphere.2024.142355>

301. Romeu, M. J., Miranda, J. M., de Jong, E. D., Morais, J., Vasconcelos, V., Sjollem, J., & Mergulhao, F. J. (2024). **Understanding the flow behavior around marine biofilms** . *Biofilm*, 7, 10. <https://doi.org/10.1016/j.biofilm.2024.100204>
302. Rosa, C. H., Morais, D. F. S., Rosa, G. R., dos Santos, J. H. Z., Lopes, J. C. B., Dias, M. M., Montes, R., Rodil, R., Quintana, J. B., Cerrón-Calle, G. A., Garcia-Segura, S., Tavares, C. J., Vilar, V. J. P., & Moreira, F. C. (2024). **Selective electrochemical oxidation of organic compounds in a mass transfer-enhanced electrochemical flow reactor (e⁻-</sup>NETmix)** . *Journal of Environmental Chemical Engineering*, 12(5), 15. <https://doi.org/10.1016/j.jece.2024.113424>
303. Sá, J. P., Chojer, H., Branco, P., Forstmaier, A., Alvim-Ferraz, M. C. M., Martins, F. G., & Sousa, S. I. V. (2024). **Selection and evaluation of commercial low-cost devices for indoor air quality monitoring in schools** . *Journal of Building Engineering*, 98, 17. <https://doi.org/10.1016/j.jobee.2024.110952>
304. Santana, V. V., Carmo, P., Seabra, R., Rodrigues, A. E., Ribeiro, A. M., Nogueira, I. B. R., Yoon, J. W., Cho, K. H., Yun, J. S., Lee, U. H., Kim, K., & Ferreira, A. F. P. (2024). **Ethylene Purification by Pressure Swing Adsorption with the Paraffin Selective Metal-Organic Framework-DUT-8** . *Industrial & Engineering Chemistry Research*, 63(5), 2307-2319. <https://doi.org/10.1021/acs.iecr.3c02808>
305. Santana, V. V., Rebello, C. M., Queiroz, L. P., Ribeiro, A. M., Shardt, N., & Nogueira, I. B. R. (2024). **PUFFIN: A path-unifying feed-forward interfaced network for vapor pressure prediction** . *Chemical Engineering Science*, 286, 10. <https://doi.org/10.1016/j.ces.2023.119623>
306. Santinon, C., Borges, A., Simoes, M., Gonçalves, A. S. C., Beppu, M. M., & Vieira, M. G. A. (2024). **Visible-light photoactivated proanthocyanidin and kappa-carrageenan coating with anti-adhesive properties against clinically relevant bacteria** . *International Journal of Biological Macromolecules*, 263, 15. <https://doi.org/10.1016/j.ijbiomac.2024.130611>
307. Santos, A., Restivo, J., Orge, C. A., Pereira, M. F. R., & Soares, O. (2024). **Green synthesis of carbon coated macrostructured catalysts: Optimized methodology and enhanced catalytic performance** . *Applied Materials Today*, 38, 11. <https://doi.org/10.1016/j.apmt.2024.102158>
308. Santos, A. S. G. G., Orge, C. A., Pereira, M. F. R., & Soares, O. S. G. P. (2024). **Carbon Materials Application in Heterogeneous Catalysis for Water Treatment: A Pathway to Process Intensification** . *Catalysts*, 14(12). <https://doi.org/10.3390/catal14120947>
309. Santos, A. S. G. G., Restivo, J., Troutman, J. P., Werth, C. J., Orge, C. A., Pereira, M. F. R., & Soares, O. S. G. P. (2024). **Immobilization of carbon composite materials on structured frameworks for application in continuous catalytic experiments: Application in NO₃- conversion** . *Applied Catalysis A: General*, 688. <https://doi.org/10.1016/j.apcata.2024.119997>
310. Santos, D. F. M., Falcao, D. S., Pinto, A., & Ferreira, R. B. (2024). **Effect of membrane electrode assembly characteristics on the performance of a proton exchange membrane fuel cell stack designed for unmanned aerial vehicle applications** . *International Journal of Green Energy*, 21(6), 1226-1237. <https://doi.org/10.1080/15435075.2023.2244062>
311. Santos, F., Ivanou, D., & Mendes, A. (2024). **Solid-State Monolithic Dye-Sensitized Solar Cell Exceeding 10% Efficiency Using a Copper-Complex Hole Transport Material and a Carbon Counter-Electrode** . *Solar Rrl*, 8(2), 1. <https://doi.org/10.1002/solr.202470023>
312. Santos, F., Ivanou, D., & Mendes, A. (2024). **Solid-State Monolithic Dye-Sensitized Solar Cell Exceeding 10% Efficiency Using a Copper-Complex Hole Transport Material and a Carbon Counter-Electrode** . *Solar Rrl*, 8(2). <https://doi.org/10.1002/solr.202300574>
313. Santos, J., Fernandes, R. A., Ferreira, N., Ferreira, I., Vieira, C., Magalhaes, F. D., Martins, J. M., & de Carvalho, L. H. (2024). **New particleboards for food-packaging from poplar peeling by-products using a circular economy approach** . *International Journal of Adhesion and Adhesives*, 129, 12. <https://doi.org/10.1016/j.ijadhadh.2023.103563>
314. Santos, J. V., Padron-Monedero, A., Bikbov, B., Grad, D. A., Plass, D., Mechili, E. A., Gazzelloni, F., Fischer, F., Sulo, G., Ngwa, C. H., Noguer-Zambrano, I., Peñalvo, J. L., Haagsma, J. A., Kissimova-Skarbek, K., Monasta, L., Ghith, N., Sarmiento-Suárez, R., Hrzic, R., Haneef, R., . . . Devleeschauwer, B. (2024). **The state of health in the European Union (EU-27) in 2019: a systematic analysis for the Global Burden of Disease study 2019** . *Bmc Public Health*, 24(1), 19. <https://doi.org/10.1186/s12889-024-18529-3>

- 315.Santos Silva, A., Roman, F. F., Ribeiro, R. S., Garcia, J., & Gomes, H. T. (2024). **Beyond batch experiments: unveiling the potential of bimetallic carbon xerogels for catalytic wet peroxide oxidation of hospital wastewater in continuous mode** . *Environmental Science and Pollution Research*, 31(57), 65208-65219. <https://doi.org/10.1007/s11356-024-35546-2>
- 316.Schreiner, T. B., Santamaria-Echart, A., Peres, A. M., Dias, M. M., Pinho, S. P., & Barreiro, M. F. (2024). **Study of binary mixtures of Tribulus terrestris extract and Quillaja bark saponin as oil-in-water nanoemulsion emulsifiers** . *Journal of Surfactants and Detergents*, 27(1), 123-133. <https://doi.org/10.1002/jsde.12710>
- 317.Schuller, T., Fanzio, P., & Galindo-Rosales, F. J. (2024). **Assessing nozzle flow dynamics in fused filament fabrication through the parametric map α - λ** . *Physics of Fluids*, 36(3), 12. <https://doi.org/10.1063/5.0193715>
- 318.Schuller, T., Jalaal, M., Fanzio, P., & Galindo-Rosales, F. J. (2024). **Optimal shape design of printing nozzles for extrusion-based additive manufacturing** . *Additive Manufacturing*, 84, 18. <https://doi.org/10.1016/j.addma.2024.104130>
- 319.Sebastiao, F., Vaz, D. C., Pires, C. L., Cruz, P. F., Moreno, M. J., Brito, R. M. M., Cotrim, L., Oliveira, N., Costa, A., Fonseca, A., Rodrigues, M., Ispolnov, K., Bernardino, R., & Vieira, J. (2024). **Nutrient-efficient catfish-based aquaponics for producing lamb's lettuce at two light intensities** . *Journal of the Science of Food and Agriculture*, 104(11), 6541-6552. <https://doi.org/10.1002/jsfa.13478>
- 320.Sharkawy, A., & Rodrigues, A. E. (2024). **Plant gums in Pickering emulsions: A review of sources, properties, applications, and future perspectives** . *Carbohydrate Polymers*, 332. <https://doi.org/10.1016/j.carbpol.2024.121900>
- 321.Shen, Y., de Vidades, M. J., Gorni, G., Sampaio, M. J., Silva, A. M. T., Ribeiro, A. R., & Dos Santos-García, A. J. (2024). **Composition-dependent PMS activation in $\text{Sr}_{1-x}\text{La}_{2-x}\text{CoO}_{4\pm\delta}$ perovskite-derivatives: From radical to strengthen the electron-transfer pathway** . *Applied Catalysis B-Environment and Energy*, 357, 12. <https://doi.org/10.1016/j.apcatb.2024.124291>
- 322.Shiyadeh, Z. S., Farahyar, S., Larijani, L. V., Beardsley, J., Nouri, N., Mahmoudi, S., Mohammadi, S. R., Rodrigues, C. F., & Roudbary, M. (2024). **Hospitalized COVID-19 Patients with Urinary Tract Infection in Iran: Candida Species Distribution and Antifungal Susceptibility Patterns** . *Antibiotics-Basel*, 13(7), 9. <https://doi.org/10.3390/antibiotics13070633>
- 323.Silva, A. C., & Loureiro, J. A. (2024). **A Simple Method for the Preparation and Characterization of Nanostructured Lipid Carriers (NLC) Formulations for Cutaneous Use** . *Journal of Chemical Education*, 101(10), 4333-4338. <https://doi.org/10.1021/acs.jchemed.4c00503>
- 324.Silva, A. C. T., Branco, P., & Sousa, S. I. V. (2024). **Health and economic burden avoided due to air pollution reduction during the COVID-19 Lockdown: Portugal case study** . *Sustainable Cities and Society*, 106, 9. <https://doi.org/10.1016/j.scs.2024.105371>
- 325.Silva, A. R., Melo, L. F., Keevil, C. W., & Pereira, A. (2024). **Legionella colonization and 3D spatial location within a Pseudomonas biofilm** . *Scientific Reports*, 14(1), 13. <https://doi.org/10.1038/s41598-024-67712-4>
- 326.Silva, A. S., de Tuesta, J. L. D., Henrique, A., Roman, F. F., Omralinov, D., Steldinger, H., Gläsel, J., Etzold, B. J. M., Silva, J. A. C., Silva, A. M. T., Pereira, A. I., & Gomes, H. T. (2024). **3D printed photopolymer derived carbon catalysts for enhanced wet peroxide oxidation** . *Chemical Engineering Journal*, 499, 14. <https://doi.org/10.1016/j.cej.2024.156574>
- 327.Silva, F., Pinto, S., Santos, S. G., Magalhaes, F. D., Sarmento, B., & Pinto, A. M. (2024). **New graphene-containing pharmaceutical formulations for infrared lamps-based phototherapy of skin cancer: In vitro validation and ex-vivo human skin permeation** . *Nanomedicine-Nanotechnology Biology and Medicine*, 57, 10. <https://doi.org/10.1016/j.nano.2024.102734>
- 328.Silva, F., Timochenco, L., Costa-Almeida, R., Fernandes, J. R., Santos, S. G., Magalhaes, F. D., & Pinto, A. M. (2024). **UV-C driven reduction of nanographene oxide opens path for new applications in phototherapy** . *Colloids and Surfaces B-Biointerfaces*, 233, 11. <https://doi.org/10.1016/j.colsurfb.2023.113594>
- 329.Silva, F. A. L. S., Chang, H. P., Incorvia, J. A. C., Oliveira, M. J., Sarmento, B., Santos, S. G., Magalhães, F. D., & Pinto, A. M. (2024). **2D Nanomaterials and Their Drug Conjugates for Phototherapy and Magnetic Hyperthermia Therapy of Cancer and Infections** . *Small*, 20(13). <https://doi.org/10.1002/smll.202306137>
- 330.Silva, J., Goncalves, J. C., Rocha, C., Vilaca, J., & Madeira, L. M. (2024). **Biomethane production from biogas obtained in wastewater treatment plants: Process optimization and economic analysis** . *Renewable Energy*, 220, 14. <https://doi.org/10.1016/j.renene.2023.119469>

331. Soares, L., Perez-Herrera, R. A., Novais, S., Ferreira, A., Silva, S., & Frazao, O. (2024). **Linear Fiber Laser Configurations for Optical Concentration Sensing in Liquid Solutions** . *Photonics*, 11(5), 9. <https://doi.org/10.3390/photonics11050393>
332. Sousa, C. A., Ribeiro, M., Vale, F., & Simões, M. (2024). **Phenazines: Natural products for microbial growth control** . *hLife*, 2(3), 100-112. <https://doi.org/10.1016/j.hlif.2023.11.005>
333. Sousa, D., Rodrigues, D., Castro, P. M., & Matos, H. A. (2024). **Equation-Oriented Modeling and Optimization of a Biorefinery Based on Avocado Waste** . *Processes*, 12(1), 18. <https://doi.org/10.3390/pr12010091>
334. Sousa, J., Lakhtaria, P., Ribeirinha, P., Huhtinen, W., Tallgren, J., & Mendes, A. (2024). **Kinetic Characterization of Pt/Al₂O₃ Catalyst for Hydrogen Production via Methanol Aqueous-Phase Reforming** . *Catalysts*, 14(10), 17. <https://doi.org/10.3390/catal14100741>
335. Sousa, J. F., Amaro, H. M., Ribeirinho-Soares, S., Esteves, A. F., Salgado, E. M., Nunes, O. C., & Pires, J. C. M. (2024). **Native Microalgae-Bacteria Consortia: A Sustainable Approach for Effective Urban Wastewater Bioremediation and Disinfection** . *Microorganisms*, 12(7), 19. <https://doi.org/10.3390/microorganisms12071421>
336. Sousa, J. M., Barbosa, A., Araujo, D., Castro, J., Azevedo, N. F., Cerqueira, L., & Almeida, C. (2024). **Evaluation of Simultaneous Growth of *Escherichia coli* O157:H7, *Salmonella* spp., and *Listeria monocytogenes* in Ground Beef Samples in Different Growth Media** . *Foods*, 13(13), 13. <https://doi.org/10.3390/foods13132095>
337. Sousa, M., Oliveira, I. M., Correia, L., Gomes, I. B., Sousa, C. A., Braga, D. F. O., & Simões, M. (2024). **Far-UV-C irradiation promotes synergistic bactericidal action against adhered cells of *Escherichia coli* and *Staphylococcus epidermidis*** . *Science of the Total Environment*, 917, 10. <https://doi.org/10.1016/j.scitotenv.2024.170352>
338. Sousa, M., Rocha, R., Araújo, D., Castro, J., Barbosa, A., Azevedo, N. F., Cerqueira, L., & Almeida, C. (2024). **A New Peptide Nucleic Acid Fluorescence In Situ Hybridization Probe for the Specific Detection of *Salmonella* Species in Food Matrices** . *Foodborne Pathogens and Disease*, 21(5), 298-305. <https://doi.org/10.1089/fpd.2023.0127>
339. Sousa, S. A., Esteves, A. F., Ab, E. M. S., & Ab, J. (2024). **Enhancing urban wastewater treatment: *Chlorella vulgaris* performance in tertiary treatment and the impact of anaerobic digestate addition** . *Environmental Technology & Innovation*, 34, 14. <https://doi.org/10.1016/j.eti.2024.103601>
340. Souto-Lopes, M., Grenho, L., Manrique, Y., Dias, M. M., Lopes, J. C. B., Fernandes, M. H., Monteiro, F. J., & Salgado, C. L. (2024). **Bone regeneration driven by a nano-hydroxyapatite/chitosan composite bioaerogel for periodontal regeneration** . *Frontiers in Bioengineering and Biotechnology*, 12. <https://doi.org/10.3389/fbioe.2024.1355950>
341. Souza, A., Lopes, D., Souza, S., Ribeiro, J., Lima, R. A., & Ferrera, C. (2024). **Experimental and numerical analyses of the hemodynamics impact on real intracranial aneurysms: A particle tracking approach** . *Results in Engineering*, 24, 12. <https://doi.org/10.1016/j.rineng.2024.103566>
342. Swetha, K., Samantaray, S., Silva, F., Silva, F. C., Freitas, B., Incorvia, J. A. C., Fernandes, J. R., Jayaraj, A., Banerjee, S., Singh, N. S., Magalhaes, F. D., Pinto, A. M., & Kurapati, R. (2024). **Biodegradability of partially reduced nanographene oxide by human, plant and microbial enzymes: Impact of magnetic nanoparticles** . *Carbon*, 229, 14. <https://doi.org/10.1016/j.carbon.2024.119486>
343. Teixeira, C. S. S., Carriço-Sá, B., Villa, C., Costa, J., Mafra, I., Ferreira, I., Faria, M. A., & Tavares, T. G. (2024). **Uncovering the Potential Somatic Angiotensin-Converting Enzyme (sACE) Inhibitory Capacity of Peptides from *Acheta domesticus*: Insights from In Vitro Gastrointestinal Digestion** . *Foods*, 13(21), 12. <https://doi.org/10.3390/foods13213462>
344. Teixeira, F., Silva, A. M., Macedo, C., Estevinho, B., Sut, S., Dall'Acqua, S., Delerue-Matos, C., Costa, P. C., & Rodrigues, F. (2024). **Design of advanced buccal films with kiwiberry extract to prevent oral mucositis: From in vitro buccal models to ex vivo studies** . *Journal of Drug Delivery Science and Technology*, 96, 13. <https://doi.org/10.1016/j.jddst.2024.105725>
345. Teixeira, L. S., Sousa, M., Massano, F., & Borges, A. (2024). **Exploring grape pomace extracts for the formulation of new bioactive multifunctional chitosan/alginate-based hydrogels for wound healing applications** . *Food Bioscience*, 62, 13. <https://doi.org/10.1016/j.fbio.2024.105073>

346. Teixeira-Santos, R., Azevedo, A., Romeu, M. J., Amador, C. I., Gomes, L. C., Whitehead, K. A., Sjollem, J., Burmolle, M., & Mergulhao, F. J. (2024). **The use of biomimetic surfaces to reduce single- and dual-species biofilms of *Escherichia coli* and *Pseudomonas putida***. *Biofilm*, 7, 13. <https://doi.org/10.1016/j.biofilm.2024.100185>
347. Testa, D. J., Nagarwala, Z., Vale, J. P., Carrillo, A. E., Sargent, C. T., Amollo, S., Nyamai, M., Carballo-Leyenda, B., Onyima, B. N., Afolabi, I., Mayor, T. S., Hargreaves, S., Markovic, M., & Flouris, A. D. (2024). **Measuring the Impact of the Coronavirus Disease 2019 Pandemic on Mobility Aspirations and Behaviours**. *Covid*, 4(2), 261-275. <https://doi.org/10.3390/covid4020018>
348. Tiihonen, L. V., Bernardo, G., Dalglish, R., Mendes, A., & Parnell, S. R. (2024). **Influence of the coagulation bath on the nanostructure of cellulose films regenerated from an ionic liquid solution**. *Rsc Advances*, 14(18), 12888-12896. <https://doi.org/10.1039/d4ra00971a>
349. Tkach, V. V., Kushnir, M. V., Andrusyak, N. S., de Oliveira, S. C., Ivanushko, Y. G., Ahafonova, O. V., Yagodynets, P. I., Romaniv, L. V., da Silva, A. O., Derevyanko, N. P., Kobets, O. V., Zavorodnii, M. P., Odyntsova, V. M., Krasko, M. P., Vasylieva, O. O., Hrabovska, O. V., Vitriak, O. P., Musayeva, D. M., Samadov, B., . . . Kushnir, L. O. (2024). **The Theoretical Description for Sulfite and Nitrite Anodic Detection and Removal from Wine over Poly(9-Triphenylphosphazo)Acridine-Modified Electrode**. *Letters in Applied NanoBioScience*, 13(2). <https://doi.org/10.33263/LIANBS132.056>
350. Tkach, V. V., Kushnir, M. V., de Oliveira, S. C., de Zea Bermudez, V., Garcia, J. R., Yagodynets, P. I., Ivanushko, Y. G., Morozova, T. V., de Paiva Martins, J. I. F., Paientko, V. V., & Franus, W. (2024). **Theoretical Description for Melatonin Electrochemical Sensing on Cobalt(III) Oxyhydroxide-Modified Zeolite Matrix During the Modification Interchange**. *Letters in Applied NanoBioScience*, 13(2). <https://doi.org/10.33263/LIANBS132.058>
351. Tkach, V. V., Kushnir, M. V., de Oliveira, S. C., Ivanushko, Y. G., Kryvetskyi, V. V., Kryvetska, I. I., Kryvetskyi, I. V., Banul, B. Y., Honchar, T. V., Yagodynets, P. I., da Silva, A. O., Derevianko, N. P., Zavorodnii, M. P., Serhata, N. S., Serhatyi, M. O., Bandurina, K. V., Baryshok, T. V., Odyntsova, V. M., Krasko, M. P., . . . Lavrik, R. V. (2024). **Diclofenac and Omeprazole Electrochemical Determination on Cobalt (III) Oxyhydroxide-Modified Electrode. A Theoretical Study**. *Letters in Applied NanoBioScience*, 13(2). <https://doi.org/10.33263/LIANBS132.098>
352. Tkach, V. V., Kushnir, M. V., de Oliveira, S. C., Ivanushko, Y. G., Kryvetskyi, V. V., Kryvetska, I. I., Kryvetskyi, I. V., Yagodynets, P. I., da Silva, A. O., Derevianko, N. P., Zavorodnii, M. P., Serhata, N. S., Serhatyi, M. O., Bandurina, K. V., Baryshok, T. V., Odyntsova, V. M., Krasko, M. P., Bilai, I. M., Bilai, A. I., . . . Melnyk, M. V. (2024). **The Theoretical Description for Chlorthalidone Electrochemical Sensing on Vanadium(III)Oxyhydroxide-Modified Electrode**. *Letters in Applied NanoBioScience*, 13(2). <https://doi.org/10.33263/LIANBS132.064>
353. Tkach, V. V., Kushnir, M. V., de Oliveira, S. C., Ivanushko, Y. G., Yagodynets, P. I., Pochenchuk, G. M., da Silva, A. O., Derevianko, N. P., Zavorodnii, M. P., Odyntsova, V. M., Krasko, M. P., Karakoyun, N., Musayeva, D. M., Samadov, B., Niyazov, L. N., Morozova, T. V., Garcia, J. R., da Paiva Martins, J. I. F., Kormosh, Z. O., . . . Kushnir, L. O. (2024). **The Theoretical Description for Economical and Green Electrochemical Detection and Removal of Heavy Metals by a Conducting Polymer Material, Based on Poisonous Mushrooms *C. Orellanus*, *P. Involutus*, and *A. Xanthodermus***. *Biointerface Research in Applied Chemistry*, 14(2). <https://doi.org/10.33263/BRIAC142.039>
354. Tkach, V. V., Kushnir, M. V., de Oliveira, S. C., Sydorchuk, L. P., Kryvetskyi, V. V., Kryvetska, I. I., Kryvetskyi, I. V., Sarkisova, Y. V., Yagodynets, P. I., da Silva, A. O., Derevianko, N. P., Zavorodnii, M. P., Odyntsova, V. M., Krasko, M. P., Bilai, I. M., Bilai, A. I., Serhata, N. S., Karakoyun, N., Niyazov, L. N., . . . Melnyk, M. V. (2024). **The Theoretical Description for Electrochemical Hydroxyquinol and Phloroglucinol Electrochemical Detection Over CoO(OH)-Modified Electrode**. *Letters in Applied NanoBioScience*, 13(3). <https://doi.org/10.33263/LIANBS133.136>
355. Tkach, V. V., Kushnir, M. V., de Oliveira, S. C., V. kryvetskyi, V., I. kryvetska, I., V. kryvetskyi, I., Banul, B. Y., Diyuchuk, V. V., Ivanushko, Y. G., Yagodynets, P. I., da Silva, A. O., Derevianko, N. P., Zavorodnii, M. P., Odyntsova, V. M., Krasko, M. P., Bilai, I. M., Bilai, A. I., Koval, O. A., Niyazov, L. N., . . . Chornovol, A. O. (2024). **The Theoretical Description for CoO(OH)-Assisted Electrochemical Determination of Sucralose and Perillartine in Beverages**. *Letters in Applied NanoBioScience*, 13(3). <https://doi.org/10.33263/LIANBS133.117>
356. Tkach, V. V., Kushnir, M. V., Kryvetskyi, V. V., Kryvetska, I. I., Kryvetskyi, I. V., Ivanushko, Y. G., Yagodynets, P. I., Kormosh, Z. O., & Martins, J. I. D. F. D. P. (2024). **First a priori Theoretical Evaluation of the Electroanalytical Cathodic Determination of Antibiotic Flavocillin**. *Orbital*, 16(1), 26-29. <https://doi.org/10.17807/orbital.v15i5.18803>

357. Tkach, V. V., Kushnir, M. V., Romaniv, L. V., de Oliveira, S. C., Ivanushko, Y. G., Nazymok, Y. V., Ahafonova, O. V., Yagodynets, P. I., da Silva, A. O., Derevianko, N. P., Zavorodnii, M. P., Odyntsova, V. M., Krasko, M. P., Vasylieva, O. O., Hrabovska, O. V., Musayeva, D. M., Sharipova, R., Samadov, B., Niyazov, L. N., . . . Kushnir, L. O. (2024). **The Theoretical Description for Ibotenic Acid and Muscimol Electrochemical Determination in Mushroom Pulp and Mushroom-based Alcoholic Beverages on Nano-CuS Composite with Conducting Polymer** . *Letters in Applied NanoBioScience*, 13(1). <https://doi.org/10.33263/LIANBS131.037>
358. Tkach, V. V., Kushnir, M. V., Romaniv, L. V., Pishak, O. V., de Oliveira, S. C., Dos Reis, L. V., Ivanushko, Y. G., Banul, B. Y., Honchar, T. V., Garcia, J. R., da Silva, A. O., Yagodynets, P. I., Kormosh, Z. O., Luganska, O. V., Omelyanchik, L. O., Kapiika, V. V., Martins, J. I. F. P., Khmeliar, I. M., Kushnir, L. O., . . . Lysytsia, D. L. (2024). **The Theoretical Description for Paracetamol and Naproxen Electrochemical Determination, Assisted by Conducting Polymer Composite with Cobalt (III) Oxyhydroxide** . *Letters in Applied NanoBioScience*, 13(1). <https://doi.org/10.33263/LIANBS131.026>
359. Tkach, V. V., Kushnir, M. V., Storoshchuk, N. M., Luganska, O. V., Kapiika, V. V., Novosad, N. V., Lukanova, S. M., Ivanushko, Y. G., Ostapchuk, V. G., Melnychuk, S. P., Yagodynets, P. I., de Oliveira, S. C., Ferrão de Paiva Martins, J. I., de Mascarenhas Gaivão, I. O., Monteiro, M. J., Kormosh, Z. O., Garcia, J. R., da Silva Filho, E. A., & Vitriak, O. P. (2024). **The theoretical description for cobalt oxyhydroxide-assisted resveratrol electrochemical determination in vines and juices** . *Revista Colombiana de Ciencias Químico-Farmacéuticas(Colombia)*, 53(2), 336-353. <https://doi.org/10.15446/rcciquifa.v53n2.114424>
360. Tkach, V. V., Kushnir, M. V., Storoshchuk, N. M., Luganska, O. V., Kapiika, V. V., Novosad, N. V., Lukanova, S. M., Ivanushko, Y. G., Ostapchuk, V. G., Melnychuk, S. P., Yagodynets, P. I., de Oliveira, S. C., Martins, J. I. F. D. P., Monteiro, M. J., Kormosh, Z. O., & Morozova, T. V. (2024). **A descrição teórica da detecção eletroanalítica do ledol em méis, assistida pelo composto do polímero condutor com o oxihidróxido de cobalto** . *Revista Colombiana de Ciencias Químico-Farmacéuticas(Colombia)*, 53(1), 101-113. <https://doi.org/10.15446/rcciquifa.v52n3.112979>
361. Tkach, V. V., Morozova, T. V., Hlukhonets, A. O., Kushnir, M. V., de Oliveira, S. C., Kryvetskyi, V. V., Kryvetska, I. I., Kryvetskyi, I. V., Biryuk, I. G., Sykrytska, T. B., Ivanushko, Y. G., Besplitnik, M. G., Yagodynets, P. I., da Silva, A. O., Garcia, J. R., Martins, J. I. F. P., Tkach, G. F., Melnyk, O. P., Melnyk, O. O., . . . Ziuziun, V. I. (2024). **The Mathematical Model for Dantrolene Electrochemical Determination on VO(OH)' Modified Electrode** . *Letters in Applied NanoBioScience*, 13(3). <https://doi.org/10.33263/LIANBS133.144>
362. Tkach, V. V., Morozova, T. V., Hlukhonets, A. O., Kushnir, M. V., de Oliveira, S. C., Kryvetskyi, V. V., Kryvetska, I. I., Kryvetskyi, I. V., Biryuk, I. G., Sykrytska, T. B., Ivanushko, Y. G., Besplitnik, M. G., Yagodynets, P. I., da Silva, A. O., Garcia, J. R., Martins, J. I. F. P., Tkach, G. F., Melnyk, O. P., Melnyk, O. O., . . . Odyntsova, V. M. (2024). **The Theoretical Description for the Use of Poly(7-hydroxyphenoxazone) as Electrode Modifier for pH Monitoring** . *Biointerface Research in Applied Chemistry*, 14(5). <https://doi.org/10.33263/BRIAC145.111>
363. Tkach, V. V., Morozova, T. V., Kushnir, M. V., de Oliveira, S. C., Kryvetskyi, V. V., Kryvetska, I. I., Kryvetskyi, I. V., Biryuk, I. G., Sykrytska, T. B., Ivanushko, Y. G., Velyka, A. V., Yagodynets, P. I., da Silva, A. O., Garcia, J. R., Martins, J. I. F. D. P., Tkach, G. F., Melnyk, O. P., Melnyk, O. O., Melnyk, M. V., . . . Mohelnytska, L. (2024). **Theoretical Description for Psilocin and Coprine Electrochemical Determination in Mushroom Pulp and Biological Liquids over Cobalt (II) Oxyhydroxide-Modified Electrode** . *Letters in Applied NanoBioScience*, 13(4). <https://doi.org/10.33263/LIANBS134.173>
364. Tkach, V. V., Morozova, T. V., Kushnir, M. V., de Oliveira, S. C., Odyntsova, V. M., Kras'ko, M. P., Antonyuk, I. Y., Hrabovska, O. V., Fedorova, D. V., Kormosh, Z. O., Ivanushko, Y. G., Melnyk, O. P., Melnyk, O. O., Melnyk, M. V., Ahafonova, O. V., Yagodynets, P. I., Masna, Z. Z., Kotsarenko, M. V., Adamovych, O. O., . . . Pochenchuk, G. M. (2024). **The Theoretical Description of Sucralose and Lugduname Electrochemical Determination in Beverages** . *Letters in Applied NanoBioScience*, 13(4). <https://doi.org/10.33263/LIANBS134.192>
365. Tkach, V. V., Morozova, T. V., Kushnir, M. V., Prymachenko, S. V., de Oliveira, S. C., Yuzkova, V. D., Ivanushko, Y. G., Garcia, J. R., Nikitchenko, L. O., Yagodynets, P. I., Kormosh, Z. O., Palamarek, K. V., Chychun, V. A., Bagrii, K. L., Martins, J. I. F. P., Khmeliar, I. M., Kushnir, L. O., Sabadyshyn, R. O., Lysytsia, D. L., . . . Khrutba, V. O. (2024). **Theoretical Description for Lugduname and Perillartin Electrochemical Determination by Cathodic Route** . *Letters in Applied NanoBioScience*, 13(4). <https://doi.org/10.33263/LIANBS134.162>

366. Tkach, V. V., Morozova, T. V., Storoshchuk, N. M., Storoshchuk, B. D., de Oliveira, S. C., Vaz Dos Reis, L., Ivanushko, Y. G., Banul, B. Y., Honchar, T. V., Garcia, J. R., Paientko, V. V., Yagodynets, P. I., Kormosh, Z. O., Palamarek, K. V., Chychun, V. A., Bagrii, K. L., Martins, J. I. F. D. P., Khmeliar, I. M., Kushnir, L. O., . . . Sharipova, R. G. (2024). **The Theoretical Description for VO(OH)-Assisted Electrochemical Determination for the Cathodic Removal of Environmentally Unfriendly Artificial Sweetener Sucralose and the Chemical Warfare Agent Chloropicrin** . *Letters in Applied NanoBioScience*, 13(1). <https://doi.org/10.33263/LIANBS131.028>
367. Tomasi, I. T., Boaventura, R. A. R., & Botelho, C. M. S. (2024). **Solid-liquid extraction of polyphenols from chestnut shells: A sustainable approach for coagulant synthesis** . *Sustainable Chemistry and Pharmacy*, 42, 10. <https://doi.org/10.1016/j.scp.2024.101806>
368. Torlakcik, H., Sevim, S., Alves, P., Mattmann, M., Llacer-Wintle, J., Pinto, M., Moreira, R., Flouris, A. D., Landers, F. C., Chen, X. Z., Puigmartí-Luis, J., Boehler, Q., Mayor, T. S., Kim, M., Nelson, B. J., & Pané, S. (2024). **Magnetically Guided Microcatheter for Targeted Injection of Magnetic Particle Swarms** . *Advanced Science*, 11(38), 12. <https://doi.org/10.1002/advs.202404061>
369. Torres-Pinto, A., Díez, A. M., Silvaa, C. G., Fariaa, J. L., Sanromán, M. A., Silva, A. M. T., & Pazos, M. (2024). **Tuning graphitic carbon nitride (g-C₃N₄) electrocatalysts for efficient oxygen evolution reaction (OER)** . *Fuel*, 360, 12. <https://doi.org/10.1016/j.fuel.2023.130575>
370. Torres-Pinto, A., Fernandes, A. R. T., Silva, C. G., Faria, J. L., & Silva, A. M. T. (2024). **The role of added oxidising agents in assisting the photocatalytic treatment of olive mill wastewater using a metal-free g-C₃N₄ optical semiconductor** . *Journal of Water Process Engineering*, 58. <https://doi.org/10.1016/j.jwpe.2023.104722>
371. Trajkovic, J. R., Krstic, V., Milovanovic, A., Calheiros, C. S. C., Cujic, M., Karanac, M., Kazak, J. K., Di Lonardo, S., Pineda-Martos, R., Mateo, M. C. G., Milosevic, D., Milousi, M., Nita, M. R., Palermo, S. A., Piro, P., Pirouz, B., Siscan, Z., Turco, M., Vaccari, M., . . . Dolic, M. (2024). **Moving Towards a Holistic Approach to Circular Cities: Obstacles and Perspectives for Implementation of Nature-Based Solutions in Europe** . *Sustainability*, 16(16), 24. <https://doi.org/10.3390/su16167085>
372. Troutman, J. P., Restivo, J., Ha, H., Bajalan, Z., Brady, C. E., Costa, J. M. B., Vigil-Hernandez, C., Barbosa, J. R. M., Orge, C. A., Pereira, M. F. R., Humphrey, S. M., Henkelman, G., Werth, C. J., & Soares, O. (2024). **Mechanisms of aqueous bromate reduction activity enhancement with well-defined bimetallic palladium-based catalysts** . *Applied Catalysis a-General*, 676, 11. <https://doi.org/10.1016/j.apcata.2024.119654>
373. Varanda, C., Almeida, M. P., Portugal, I., Ribeiro, J., Silva, C. M., & Silva, A. M. S. (2024). **By-Products of Arabian Light Crude Oil Refining: Profiling Properties for Bitumen Production** . *Petroleum Chemistry*, 64(6), 669-680. <https://doi.org/10.1134/s0965544124050177>
374. Vaz, D. C., Rodrigues, J. R., Loureiro-Ferreira, N., Müller, T. D., Sebald, W., Redfield, C., & Brito, R. M. (2024). **Lessons on protein structure from interleukin-4: All disulfides are not created equal** . *Proteins-Structure Function and Bioinformatics*, 92(2), 219-235. <https://doi.org/10.1002/prot.26611>
375. Veiga, A., Silva, I. V., Dias, J. R., Alves, N. M., Oliveira, A. L., & Ribeiro, V. P. (2024). **Streamlining Skin Regeneration: A Ready-To-Use Silk Bilayer Wound Dressing** . *Gels*, 10(7), 22. <https://doi.org/10.3390/gels10070439>
376. Velho, P., Barroca, L. R., & Macedo, E. A. (2024). **A Geometric Approach for the Calculation of the Nonrandomness Factor Using Computational Chemistry** . *Journal of Chemical and Engineering Data*, 69(10), 3573-3583. <https://doi.org/10.1021/acs.jced.3c00532>
377. Velho, P., Estevinho, B. N., & Macedo, E. A. (2024). **Thermophysical Properties of Mixtures Containing Cholinium I-Alaninate and Water, Ethanol, or Propan-1-ol** . *Journal of Chemical and Engineering Data*, 69(2), 338-347. <https://doi.org/10.1021/acs.jced.3c00247>
378. Velho, P., Lopes, C., & Macedo, E. A. (2024). **Water Purification Using Choline-Amino Acid Ionic Liquids: Removal of Amoxicillin** . *Industrial & Engineering Chemistry Research*, 63(23), 10427-10435. <https://doi.org/10.1021/acs.iecr.4c01002>
379. Velho, P., Madaleno, A., & Macedo, E. A. (2024). **Liquid-Liquid Equilibria Determination and Modeling of ATPS Based on PEG4000 and PVP29000 at 298.15 K and 0.1 MPa** . *Journal of Chemical and Engineering Data*, 69(7), 2585-2595. <https://doi.org/10.1021/acs.jced.4c00055>

- 380.Velho, P., Oliveira, R. A., & Macedo, E. A. (2024). **Correlating Excess Volumes for Binary Mixtures of Green Solvents with the Help of Density Functional Theory** . *Industrial & Engineering Chemistry Research*, 63(36), 15990-15998. <https://doi.org/10.1021/acs.iecr.4c02413>
- 381.Velho, P., Perestrelo, G., & Macedo, E. A. (2024). **Partition of Chlorogenic and Nicotinic Acids Using Eco-Friendly ATPSs Containing Ethyl Lactate at 298.15 K and 0.1 MPa** . *Journal of Chemical and Engineering Data*, 69(9), 3054-3063. <https://doi.org/10.1021/acs.jced.4c00197>
- 382.Velho, P., Sousa, E., & Macedo, E. A. (2024). **Extraction of Salicylic Acid Using Sustainable ATPSs and Respective Immobilization as API-IL at Small Pilot Scale** . *Journal of Chemical and Engineering Data*, 69(12), 4420-4429. <https://doi.org/10.1021/acs.jced.3c00594>
- 383.Velho, P., Sousa, E., & Macedo, E. A. (2024). **Measurement and modelling of liquid density (298.15 and 313.15 K) and vapour pressure osmometry (313.15 K) for binary aqueous solutions of organic salts** . *Journal of Chemical Thermodynamics*, 194, 9. <https://doi.org/10.1016/j.jct.2024.107287>
- 384.Veronico, N. S., Macedo, A. C., & Costa, R. V. (2024). **The influence of intellectual capital on the financial performance of European professional football clubs** . *International Journal of Learning and Intellectual Capital*, 21(2), 26. <https://doi.org/10.1504/ijlic.2024.137577>
- 385.Viegas, C., Peixoto, C., Gomes, B., Dias, M., Cervantes, R., Pena, P., Slezakova, K., Pereira, M. D., Morais, S., Carolino, E., Twaruzek, M., Viegas, S., & Caetano, L. A. (2024). **Assessment of Portuguese fitness centers: Bridging the knowledge gap on harmful microbial contamination with focus on fungi** . *Environmental Pollution*, 350, 12. <https://doi.org/10.1016/j.envpol.2024.123976>
- 386.Vieira, T. A. S., Trugilho, P. F., Carabineiro, S. A. C., Zanuncio, A. J. V., Carvalho, A. G., da Silva, L. F., Branco-Vieira, M., da Silva, C. M. S., & Carneiro, A. D. O. (2024). **Production of high-quality forest wood biomass using artificial intelligence to control thermal modification** . *Biomass Conversion and Biorefinery*, 14(2), 1731-1747. <https://doi.org/10.1007/s13399-022-02666-z>
- 387.Vieira, T. F., Cerqueira, N., Simoes, M., & Sousa, S. F. (2024). **In silico identification of novel PqsD inhibitors: promising molecules for quorum sensing interference in Pseudomonas aeruginosa** . *Molecular Systems Design & Engineering*, 9(1), 7-19. <https://doi.org/10.1039/d3me00107e>
- 388.Vieira, T. F., Leitao, M. M., Cerqueira, N., Sousa, S. F., Borges, A., & Simoes, M. (2024). **Montelukast and cefoperazone act as anti-quorum sensing and antibiofilm agents against Pseudomonas aeruginosa** . *Journal of Applied Microbiology*, 135(5), 14. <https://doi.org/10.1093/jambio/lxae088>
- 389.Vilamova, Z., Sampaio, M. J., Svoboda, L., Bednar, J., Simonova, Z., Dvorsky, R., Silva, C. G., & Faria, J. L. (2024). **Enhancing photocatalytic g-C3N4/PVDF membranes through new insights into the preparation methods** . *Polymer*, 307. <https://doi.org/10.1016/j.polymer.2024.127238>
- 390.Vilanova, A., Dias, P., Lopes, T., & Mendes, A. (2024). **The route for commercial photoelectrochemical water splitting: a review of large-area devices and key upscaling challenges** . *Chemical Society Reviews*, 53(5), 2388-2434. <https://doi.org/10.1039/d1cs01069g>
- 391.Vilas-Boas, C., Sousa, J., Lima, E., Running, L., Resende, D., Ribeiro, A. R. L., Sousa, E., Santos, M. M., Aga, D. S., Tiritan, M. E., Ruivo, R., Atilla-Gokcumen, G. E., & Correia-da-Silva, M. (2024). **Preliminary hazard assessment of a new nature-inspired antifouling (NIAF) agent** . *Science of the Total Environment*, 933, 11. <https://doi.org/10.1016/j.scitotenv.2024.172824>
- 392.Vindeirinho, J. M., Oliveira, R., Pinho, E., Guiomar, R., Azevedo, N. F., & Almeida, C. (2024). **The potential of tailed amplicons for SARS-CoV-2 detection in Nucleic Acid Lateral Flow Assays** . *Plos One*, 19(5), 14. <https://doi.org/10.1371/journal.pone.0301234>
- 393.Wilson-Nieuwenhuis, J., Taylour, J., Gomes, L. C., Lynch, S., Whitehead, D., & Whitehead, K. A. (2024). **Non-chlorine detergent formulations as an alternative for unpasteurised milk removal from stainless steel surfaces** . *Journal of Food Engineering*, 374, 12. <https://doi.org/10.1016/j.jfoodeng.2024.112031>
- 394.Zafanelli, L., Aly, E., Henrique, A., Rodrigues, A. E., Mouchaham, G., & Silva, J. A. C. (2024). **Green Hydrogen Recovery from Natural Gas Grids by Vacuum Pressure Swing Adsorption** . *Industrial & Engineering Chemistry Research*, 63(14), 6333-6346. <https://doi.org/10.1021/acs.iecr.3c04532>
- 395.Zhou, L., Brântuas, P., Henrique, A., Reinsch, H., Wahiduzzaman, M., Grenèche, J. M., Rodrigues, A. E., Silva, J. A. C., Maurin, G., & Serre, C. (2024). **A Microporous Multi-Cage Metal-Organic Framework for an Effective One-Step Separation of Branched Alkanes Feeds** . *Angewandte Chemie - International Edition*, 63(15). <https://doi.org/10.1002/anie.202320008>

396. Ziminska, A., Lipska, I., Gajewska, J., Draszanowska, A., Simoes, M., & Olszewska, M. A. (2024). **Antibacterial and Antibiofilm Effects of Photodynamic Treatment with *Curcuma L.* and *Trans-Cinnamaldehyde* against *Listeria monocytogenes***. *Molecules*, 29(3), 15. <https://doi.org/10.3390/molecules29030685>

PUBLICAÇÕES NOUTRAS REVISTAS

PUBLICATIONS IN OTHER JOURNALS

1. Figueiredo, J. L. (2024). **Júlio Máximo de Oliveira Pimentel (1809-1884), 2º Visconde de Vila Maior.. QUÍMICA, Boletim da Sociedade Portuguesa de Química**, 48(175). <https://doi.org/10.52590/M3.P719.A30002915>
2. Gorito, A. M., & Ribeiro, A. R. L. (2024). **Contaminantes Emergentes na Água: Presença de Antibióticos, e Agora? QUÍMICA, Boletim da Sociedade Portuguesa de Química**, 48(119). <https://doi.org/10.52590/M3.P710.A30002835>
3. M.S.C.A., B. (2024). **Mecanismos de Mistura em Reatores Químicos 2D. QUÍMICA, Boletim da Sociedade Portuguesa de Química**, 48(174). <https://doi.org/10.52590/M3.P710.A30002837>
4. Rodrigues, A. E. (2024). **My adsorption journey: Ups and downs and other stories. Engenharia Sanitaria e Ambiental**, 29. <https://doi.org/10.1590/S1413-4152ESP00001>
5. Tkach, V. V., Kushnir, M. V., Shevchuk, I. M., Oliveira, S. C. D., Lystvan, V. V., Silva, A. O. D., Akinay, Y., Karakoyun, N., Luganska, O. V., Yagodynets, P. I., Kormosh, Z. O., Ivanushko, Y. G., & Martins, J. I. F. d. P. (2024). **The Theoretical Description For The Electrochemical Pyrogallol And Hydroxyquinol Electrochemical Determination Over CoO(OH)-Modified Electrode. Applied Journal of Environmental Engineering Science**, 10, 20-26. <https://doi.org/10.48422/IMIST.PRSM/ajees-v10i1.36901>
6. Torres-Pinto, A., Silva, A. M. T., Silva, C. G. F., & Faria, J. L. (2024). **Optimised 2D Carbon Materials Activated by Artificial Light and Electrical Current for Catalytic Water and Wastewater Treatment. QUÍMICA, Boletim da Sociedade Portuguesa de Química**, 48(205). <https://doi.org/10.52590/M3.P709.A30002766>

EDITORIAIS

EDITORIALS

1. Almeida, C., & Cerqueira, L. (2024). **Editorial: Molecular diagnostic methods for bacteria and fungi detection. Frontiers in Cellular and Infection Microbiology**, Volume 14 - 2024. <https://doi.org/10.3389/fcimb.2024.1430630>
2. Andrade, S., Ramalho, M. J., & Loureiro, J. A. (2024). **Polymeric Nanoparticles for Biomedical Applications. Polymers**, 16(2), 4. <https://doi.org/10.3390/polym16020249>
3. Estevinho, B. N., & López-Rubio, A. (2024). **Recent Advances in Encapsulation for Food Applications. Foods**, 13(4), 4. <https://doi.org/10.3390/foods13040579>
4. Kozielska, B., Ferdyn-Grygierek, J., Slezakova, K., Sowa, J., & Hassan, S. K. M. (2024). **Indoor environmental air quality in urban areas. Frontiers in Environmental Science**, 12. <https://doi.org/10.3389/fenvs.2024.1393997>
5. Nieto-Juárez, J. I., Torres-Palma, R. A., Vilar, V. J. P., & Fatta-Kassinos, D. (2024). **Advances, trends, and challenges on advanced oxidation/reduction technologies in Iberoamerican countries. Journal of Environmental Chemical Engineering**, 12(2). <https://doi.org/10.1016/j.jece.2024.112229>
6. Palusińska-Szys, M., & Simões, M. (2024). **Editorial: Legionella pneumophila-transmission, pathogenesis, host-pathogen interaction, prevention and treatment. Frontiers in Microbiology**, 15. <https://doi.org/10.3389/fmicb.2024.1364620>
7. Silva, C. G., Manrique, Y. A., & Santos, R. (2024). **Editorial. U.Porto Journal of Engineering**, 10(2), 1-2. https://doi.org/10.24840/2183-6493_0010-002_002615
8. Soares, E. V., Petropoulos, S. A., & Soares, H. M. V. M. (2024). **Editorial: Bio-based solutions for sustainable development of agriculture, volume II. Frontiers in Plant Science**, 15. <https://doi.org/10.3389/fpls.2024.1510226>

PATENTES CONCEDIDAS

GRANTED PATENTS

1. Cabezas Martin, M. G., Vega Rodriguez, E. J., Montanero Martinez, J. M., Rubio Gonzalez, A., Ganan Calvo, A. M., & Galindo Rosales, F. J. (2024). **Método y dispositivo para la focalización gaseosa de fluidos transónica de chorros débilmente viscoelásticos (ES2953864).**

2. Mergulhão, F. J. M., & Faria, S. I. S. (2024). **Azamacrociclos e suas composições com atividade anti-incrustante** (PT117638). INPI.
3. Pereira, A. S., Magalhães, F., & Almada Lobo, I. (2024). **Stiff and strong hydrogels, production method and uses thereof** (US12042578B2).
4. Serre, C., Nouar, F., Brântuas, P., Silva, J., & Rodrigues, A. E. (2024). **Use of porous 2,5-furandicarboxylate-based mofs for improved separation of branched alkanes** (US11958804B2).

PEDIDOS DE PATENTES

SUBMITTED PATENTS

1. Gomes, J. C. L., Castelo-Grande, T., Augusto, P. A., & Barbosa, D. (2024). **Portable Homemade Magnetic Hyperthermia Apparatus** (PT NPAT555, 2024; PCT/IB2024/062050, 2024).
2. Lopes, J. C. B., Vilar, V. J. P., Moreira, M. F. C., Dias, M. M. Q., N., S. R. J., & Maia, R. F. S. (2024). **Electrochemical device and respective uses** (PAT506/2023).
3. Mendes, A., Alves, L., Pereira, V., Dias, P., Gonzales, G., & Atashi, N. (2024). **Catalysts for intermediate temperature methane splitting and reactor thereof**.
4. Mendes, A., Alves, L., Pereira, V., Dias, P., Lagarteira, T., Gonzales, G., Atashi, N., & Ferrando, A. (2024). **Reactor for low-temperature methane splitting and solid catalyst to use therein**.
5. Mendes, A., Alves, L., Pereira, V., Dias, P., & Prieto, G. (2024). **Catalyst and Rector for intermediate temperature catalytic methane splitting and methods thereof** (PT NPAT555, 2024; PCT/IB2024/062050, 2024).
6. Mendes, A., Ivanou, D., Loureiro, E., & Emami, S. (2024). **Lead-based perovskite solar cell device with a functional element for lead immobilization** (PT119554).
7. Mendes, A., Silva, A., & Ribeirinha, P. (2024). **Method and reactor for obtaining methanol from Carbon Dioxide and Hydrogen** (WO2025062291).
8. Santinon, C., Vieira, M., Beppu, M., Borges, A., & Simões, M. (2024). **Processo para a obtenção de recobrimento polimérico de combate a patógenos resistentes, recobrimento polimérico e uso** (BR 10 2024 007921 3, 2024).

9. Sousa, M. E. S. P., Neves, A. R. C., Guerra, M. R. P. C. S. C., Silva, J. M. M. F., Durães, F. A. P. M., Costa, P. M. R. M., Pinto, M. E. R., Gerales, E. R. S., Mergulhão, F. J. M., Gomes, M. C. L., & Santos, R. D. T. (2024). **Composto de fórmula geral, método para obtenção do composto e composição** (BR 11 2024 011686 7 A2).
10. Vieira, R. M. M. V., Dinis, M. S. R., Moreira, A. C. G., & Martins, I. M. D. (2024). **Biobased microparticles for textile treatment** (2023713690).
11. Vilar, V. J. P., Monteiro, J. P., Saraiva, I. M. A., Lopes, D. M. P. P. C., & Brôco, N. (2024). **Method device and system for treatment of waste activated sludge** (20232005624053).

PALESTRAS COMO CONVIDADO

GUEST LECTURES

- Azevedo, N. (2024). Assessing the internalization and diffusion of nucleic acids in bacteria. In XVth Spanish-Portuguese Conference on Controlled Drug Delivery. Lisbon, Portugal. Invited speaker – Oral presentation
- Azevedo, N. (2024). Key aspects of spatial structure in the understanding of multispecies biofilms: concepts and methods. In Asia-Pacific Biofilms 2024. Guangzhou, China. Invited speaker – oral presentation.
- Borges, A. (2024). Unveiling the role of “social” microbial networking in infections. In 1st UPorto Research Summer School in Microbial Communities: Taste of PhD Experience. Porto, Portugal. Oral presentation – invited speaker.
- Dias, P. (2024). Solar redox flow cell: cutting-edge technology for the production of cost-competitive solar fuels. In VI Iberoamerican Conference on Advanced Oxidation Technologies (VI CIPOA). Florianópolis, Brazil
- Dias, P. (2024). A bright outlook on photoelectrochemical cells. In Instituto IMDEA Energy. Madrid, Spain
- Figueiredo, J. L. (2024). Catalysis: key to sustainability. Seminário no âmbito da disciplina de Química Verde e Desenvolvimento Sustentável, do Mestrado em Química, Faculdade de Ciências da Universidade do Porto. Porto, Portugal. 11 de abril de 2024
- Figueiredo, J. L. (2024). Functionalization of Carbon Materials: Applications in Catalysis. Seminário no âmbito da disciplina de Síntese Química, do Programa Doutoral em Química, Universidade de Coimbra. Coimbra, Portugal. 28 de novembro de 2024
- Goeres, D. (2024). Enhancing Industry / Academic Partnerships. In Asia-Pacific Biofilms 2024. Guangzhou, China. Invited speaker – oral presentation.

- Goeres, D. (2024). We can, but should we? A discussion on ethics & engineering. In XV Symposium on Bioengineering. Porto, Portugal. Invited speaker – Oral Presentation.
- Gomes, A. I. (2024). A Química e o Ambiente: Novas Tecnologias Rumo à Sustentabilidade – Tecnologias de Oxidação Avançada no Tratamento de Águas Residuais Urbanas. In Olimpíadas Júnior de Química (Junior Chemistry Olympics). Porto, Portugal.
- Graça, C. A. L. (2024). Inovações em tratamento de água: Aplicações práticas e perspectivas dos processos oxidativos avançados. In XIX Simpósio de Engenharia Ambiental da UNESP de Presidente Prudente. São Paulo, Brasil.
- Graça, C. A. L. (2024). Técnicas avançadas de tratamento de águas. In II workshop LCGRS. São Paulo, Brasil.
- Madeira, L. M. (2024). Cyclically-Integrated CO₂ Capture and Conversion into Synthetic Natural Gas. In ISCRE-28 | 28th International Symposia on Chemical Reaction Engineering. Turku, Finland. Keynote presentation.
- Madeira, L. M. (2024). Multifunctional Reactors in Chemical Engineering. In ICECEES-2024 | International Chemical Engineering Conference on Energy, Environment and Sustainability. Roorkee, India. Invited oral presentation.
- Martins, A. (2024). Life Cycle Assessment: Challenges and Extensions. In Erasmus Mundus program Suscat.
- Martins, A. (2024). Life Cycle and Sustainability Assessment: Applications, Relation with other tools/ methodologies/frameworks, future developments. In Erasmus Mundus program Suscat.
- Martins, I. M. (2024). Valorização de Produtos Naturais e Resíduos Agroalimentares. In Pint of Science - Global science festival. Porto, Portugal.
- Mendes, A. (2024). Baterias de escoamento: mais flexíveis e sustentáveis. In XXVI Congresso SIBAE. Lisboa, Portugal.
- Mendes, A. (2024). Carbon as a hydrogen carrier. In 112CO₂ Symposium on Sustainable Chemical Energy Vectors. Valencia, Spain.
- Mendes, A. (2024). Carbon as a hydrogen carrier. In 112CO₂ CECAM Webinar: Simulation assisted steps in research and technology in the hydrogen ecosystem. Online.
- Mendes, A. (2024). Carbon Molecular Sieve Membranes from Science to Technology and Beyond. In Reunião do Grupo do Carbono (IIIRGC). Porto, Portugal.
- Mendes, A. (2024). Dar um Norte à Descarbonização da Energia em Portugal. In Ciência 2024. Porto, Portugal.
- Mendes, A. (2024). Decarbonised hydrogen production - different strategies. In 1st HYDEA webinar. Online.
- Mendes, A. (2024). Given a North to the Energy Decarbonization. In CO₂ for Sustainability Workshop. Lisboa, Portugal.
- Mendes, A. (2024). Given a North to the Energy Decarbonization. In HyTack - Summer School at the University of Stavanger. Stavanger, Norway.
- Mendes, A. (2024). Giving a North to the Energy Decarbonization. In XXIII Congresso Nacional da Ordem dos Engenheiros. Porto, Portugal.
- Mendes, A. (2024). Green Methanol: From Dream to the Realization. In Port Innovation Days 2024. Porto, Portugal.
- Mendes, A. (2024). Potencial da recuperação de CO₂ e minerais dissolvidos na água do mar. In Mare Nostrum. Porto, Portugal.
- Mendes, A. (2024). PV-cells Glass Encapsulation and Methane Splitting - two Inspiring Stories. In EPFL. Lausanne, Switzerland.
- Moreira, F. (2024). Cutting-edge electrochemical technologies for the production of value-added substances. In VI CIPOA – 6th Iberoamerican Conference on Advanced Oxidation Technologies. Florianópolis, Brazil.
- Ribeiro, A. R. (2024). Analytical Interferences on Chromatography applied to Removal Studies. In CIPOA School, VI CIPOA. Florianópolis, Brazil.
- Ribeiro, A. R. (2024). Are we aware of the role of enantioselectivity in the environment? In 24th European Meeting on Environmental Chemistry (EMEC24). Alicante, Spain.
- Ribeiro, A. R. L. (2024). Environmental enantioselectivity of chiral drugs. In Seminars of Doctoral Program in Environmental Engineering, FEUP. Porto, Portugal.
- Ribeiro, A. R. L. (2024). Na intersecção da saúde e do ambiente: um percurso com um denominador comum, os fármacos. In Químicas - Ciclo de Conferências. Online.
- Ribeiro, L. S. (2024). Catalysing sustainability: Transforming lignocellulosic biomass residues into high-value products and fuels. In Workshop “Biomass Towards Sustainability: Innovations and Practices. Porto, Portugal. Invited speaker.

- Ribeiro, L. S. (2024). Empowering biomass wastes through catalysis: sustainable synthesis of high-value chemicals and fuels. In XII National Meeting on Catalysis and Porous Materials. Coimbra, Portugal. Keynote.
- Ribeiro, R. S. (2024). Empowering advanced water treatment by catalytic carbon-based membranes. In Meeting of the Physical Analytical Chemistry & Electrochemistry Group of University of Porto's Research Center in Chemistry. Matosinhos, Portugal.
- Torres-Pinto, A. (2024). Development of a carbon-based photoelectrocatalytic system for water and wastewater treatment. In Seminars of the Chemical and Biological Engineering Department. Porto, Portugal.
- Torres-Pinto, A. (2024). Optimised 2D carbon materials activated by artificial light and electrical current for catalytic water and wastewater treatment. In XII Encontro Nacional de Catálise e Materiais Porosos (XII ENCMP). Coimbra, Portugal.
- Torres-Pinto, A. (2024). Optimised 2D carbon materials activated by artificial light and electrical current for catalytic water and wastewater treatment. In III Reunião do Grupo do Carbono (IIIRGC). Porto, Portugal.
- Torres-Pinto, A., Dele, J. J. M., Chávez, A. M., & Silva, A. M. T. (2024). Self-immobilisation of functional activated carbon on alumina beads for mineral water treatment. In 7th International Congress on Water, Waste and Energy Management (WWEM-24). Lisbon, Portugal.
- Vilar, V. J. P. (2024). Advanced treatment technologies for wastewater resources recovery. In Workshop on the Project LIFE FiTTIng, Urban Wastewater Treatment: Ready for Zero Pollution? Porto, Portugal.
- Vilar, V. J. P. (2024). Advanced treatment technologies for wastewater/waste-streams resources recovery. In III Escuela Nacional en Procesos Ambientales 2024 (ENPA2024). Guanajuato, México.
- Vilas Boas, J. (2024). Microbial Fuel Cells: Powering a Sustainable Future. In XV Symposium on Bioengineering. Invited speaker – Workshop.

ANEXO VI: RECONHECIMENTO DE ATIVIDADE

ANNEX VI: SCIENTIFIC OUTPUTS AND RELEVANT ACTIVITIES

PRÉMIOS E MENÇÕES HONROSAS

AWARDS AND HONOURS

- Ribeiro, A.R.L., **Distinguished Researcher, The Prince Sultan Bin Abdulaziz International Prize for Water**, 24th European Meeting on Environmental Chemistry (EMEC24), Alicante, Espanha, 26–29 novembro 2024
- Morais, R.G., **IACS Young Awards – Young Researcher Support**, 18th International Congress on Catalysis (ICC2024), Lyon, França, 2024.

INVESTIGADOR MAIS CITADO

HIGHLY CITED RESEARCHER

- Manuel José Vieira Simões (Clarivate Analytics)

INVESTIGADORES MAIS CITADOS*

HIGHLY CITED RESEARCHERS *

Destacados na Carreira Career Highlights **

- José Luís Figueiredo
- Alírio Rodrigues
- Francisco Xavier Malcata
- Manuel Simões
- José Melo Órfão
- Luís Miguel Madeira
- Manuel Fernando Pereira
- Adrián Silva
- Maria Eugénia Macedo
- Adélio Mendes
- Vítor Vilar
- Manuel Alves
- Luís Melo
- Rui Boaventura
- Conceição Alvim-Ferraz
- Joaquim Faria
- Fernando Martins
- José Inácio Martins

Mais citados em 2023 Most cited in 2023 **

- Manuel Simões
- Alírio Rodrigues
- José Luís Figueiredo
- José Carlos Pires
- Francisco Xavier Malcata

- Adrián Silva
- Manuel Fernando Pereira
- José Melo Órfão
- Vítor Vilar
- Luís Miguel Madeira
- Ana Rita Lado Ribeiro
- Cláudia Gomes Silva
- Adélio Mendes
- Anabela Borges
- Olga Nunes
- Joana Loureiro
- Joaquim Faria
- Lúcia Santos
- Daniela Falcão
- Manuel Alves

* Stanford University.

** Pela ordem da listagem original In order of original listing

MELHORES CIENTISTAS POR ÁREA TEMÁTICA***

BEST SCIENTISTS BY SUBJECT AREA ***

	#World	#National
BIOLOGY AND BIOCHEMISTRY		
F. Xavier Malcata	1843	3
CHEMISTRY		
Alírio E. Rodrigues	686	4
José L. Figueiredo	1182	6
Manuel Fernando Pereira	1514	11
Joaquim L. Faria	2489	20
Rui A.R. Boaventura	2714	25
Adélio Mendes	2985	27
Adrián M.T. Silva	3337	33
José J.M. Órfão	4605	41
Vítor J.P. Vilar	5875	50
Eugénia A. Macedo	8519	74
Luis M. Madeira	9168	81
Arminda Alves	11784	106
Lúcia Santos	11982	107
Cláudia G. Silva	14531	133
Fernando Rocha	15968	149

	#World	#National
ENGINEERING AND TECHNOLOGY		
José M. Loureiro	3854	20
Manuel A. Alves	3856	21
Luís F. Melo	6047	36
ENVIRONMENTAL SCIENCES		
Maria C. Alvim-Ferraz	3820	18
Cidália Botelho	5962	32
MICROBIOLOGY		
Manuel Simões	2024	6

*** Research.com

PREMIO RECONHECIMENTO PEDAGÓGICO FEUP

PEDAGOGICAL RECOGNITION AWARD FEUP 2023

- Alexandre Filipe Porfírio Ferreira
- Cidália Maria de Sousa Botelho
- Cláudia Sofia Castro Gomes da Silva
- Fernando Gomes Martins
- Fernão Domingos de Montenegro Baptista Malheiro de Magalhães
- Francisco Galindo Rosales
- Francisco Xavier Delgado Domingos Antunes Malcata
- Inês Bezerra Gomes
- João Bernardo Lares Moreira de Campos
- Lúcia Maria da Silveira Santos
- Luciana Calheiros Ferreira Gomes
- Manuel Fernando Ribeiro Pereira
- Manuel José Vieira Simões
- Margarida Sarmento e Cunha Abrunhosa de Brito
- Olívia Salomé Gonçalves Pinto Soares

PRÉMIO DE RECONHECIMENTO CIENTÍFICO FEUP

SCIENTIFIC RECOGNITION AWARD FEUP

- Adélio Miguel Magalhães Mendes
- Adrián Manuel Tavares da Silva
- Alexandre Filipe Porfírio Ferreira
- Ana Mafalda Almeida Peixoto Ribeiro
- Cláudia Sofia Castro Gomes da Silva
- Filipe José Menezes Mergulhão
- Inês Bezerra Gomes
- Joaquim Luís Bernardes Martins de Faria
- Lúcia Maria da Silveira Santos
- Luís Miguel Palma Madeira
- Manuel Fernando Ribeiro Pereira
- Manuel José Vieira Simões

- Olga Cristina Pastor Nunes
- Olívia Salomé Gonçalves Pinto Soares
- Vítor Jorge Pais Vilar

TRABALHOS PREMIADOS

AWARDED WORKS

A. Torres-Pinto, "Optimised 2D Carbon Materials Activated by Artificial Light and Electrical Current for Catalytic Water and Wastewater Treatment":

- **Ramôa Ribeiro award** for the Best Doctoral Thesis in Catalysis of 2021-2023
- **Best Doctoral Thesis in Carbon award** of 2022-2023. Carbon Group of the Portuguese Chemical Societ
- **Best 2023 PhD Thesis on Environmental Applications of AOPs.** International School on Advanced Oxidation Processes

PRÉMIOS DE APRESENTAÇÃO ORAL

ORAL PRESENTATION AWARDS

- Ferreira, R., Carneiro, M., Tomasi, I., Soares, O.S., Pintor, A., Pereira, M.F., Botelho, C.
Best Online Oral Presentation, EMCEI – Euro-Mediterranean Conference for Environmental Integration (Online), 15–18 maio 2024.
Apresentado por Ricardo M. Ferreira
- Pereira, M., Martins, J., Ivanou, D., Emami, S., Mendes, A.
Best Online Oral Presentation, Carbon Club Conference 2024, 10–11 outubro 2024.
Apresentado por Marta Pereira
- Ribeiro, J.P., Rodrigues, C.S.D., Madeira, L.M.
Distinguished Oral Presentation in the Field of Engineering, IJUP2024 – Investigação Jovem na Universidade do Porto (17th Meeting of Young Researchers of U. Porto), Porto, Portugal, 8–10 maio 2024.
Apresentado por João Pedro Lemos
- Tomasi, I., Santos, S., Boaventura, R., Botelho, C.
Best Oral Presentation, EMCEI – Euro-Mediterranean Conference for Environmental Integration, 15–18 maio 2024.
Apresentado por Isabella T. Tomasi

PRÉMIOS DE APRESENTAÇÃO EM PÓSTER

POSTER PRESENTATION AWARDS

- Carmo, P., Ribeiro, A.M., Rodrigues, A.E., Ferreira, A.
Third Best Poster Communication, RIA 43 – 43rd Iberian Adsorption Meeting, Porto, Portugal, 1–4 setembro 2024. Apresentado por Paulo Carmo
- Dias, R.O.M., Regufe, M.J., Pereira, A.A., Ferreira, A.F.P., Rodrigues, A.E., Ribeiro, A.M.
Best Poster Communication, RIA 43 – 43rd Iberian Adsorption Meeting (acreditado pela Sociedad Española de Adsorción – SEAd), Porto, Portugal, 1–4 setembro 2024. Apresentado por Rafael Dias
- Santos, T., Moreira, R., Relvas, F., Ribeirinha, P., Mendes, A.
Second Best Poster Communication, RIA 43 – 43rd Iberian Adsorption Meeting, Porto, Portugal, 1–4 setembro 2024. Apresentado por Tiago Santos
- Pereira, M., Fernandes, J.P., Gorito, A.M., Cox, E., Ribeiro, A.R.L., Almeida, C.M.R., Mucha, A.P.
Best Poster Award, BTC – Blue Think Conference, Matosinhos, Portugal, 10–11 setembro 2024. Apresentado por Margarida Pereira
- Delgado, L., Merino-Garcia, I., Fernández-Caso, K., Moreira, F., Vilar, V.J.P., Albo, J.
Best Poster Presentation, CIPOA – VI Iberoamerican Conference on Advanced Oxidation Technologies, Florianópolis, Brasil, 7–11 outubro 2024. Apresentado por Leonardo Delgado
- Fernandes, A.R.T., Félix, P., Ribeiro, A.R.L., Madeira, L.M., Silva, A.M.T.
My Favorite Poster, Winter School on Contaminants of Emerging Concern (CECs) and Disinfection By-Products (DBPs), Vila Nova de Gaia, Portugal, 25–26 novembro 2024. Apresentado por Ana Rita Fernandes
- Barroca, L.R., Gorito, A.M., Silva, A.M.T., Ribeiro, A.R.L.
Best Poster Award, Winter School on CECs and DBPs, Vila Nova de Gaia, Portugal, 25–26 novembro 2024. Apresentado por Leonor Barroca
- Santos, C.S., Ribeirinho, S., Montes, R., Rodil, R., Quintana, J.B., Pastor, O., Gomes, A.I., Vilar, V.J.P.
Best Poster Communication Award, Winter School on CECs and DBPs, Vila Nova de Gaia, Portugal, 25–26 novembro 2024. Apresentado por Carla Santos
- Barroca, L.R., Cabral, A.L.R., Pedrosa, M.F., Silva, A.M.T., Ribeiro, A.R.L.
Best Poster Award (Prince Sultan Bin Abdulaziz International Prize for Water), EMEC24 – European Meeting on Environmental Chemistry, Alicante, Espanha, 26–29 novembro 2024. Apresentado por Leonor Barroca
- Rodrigues, I., Vilar, V.J.P., Ferreira, A.F.P.
Special Prize by Scientific Committee for Best Poster Presented by a Doctorate Student, EA3G2024 – Ozone and Advanced Oxidation: Science, Technologies and Applications for a Better World, Vila Nova de Gaia, Portugal, 27–29 novembro 2024. Apresentado por Inês Rodrigues

ANEXO VII: CARGOS NACIONAIS E INTERNACIONAIS DE RELEVO

ANNEX VII: RELEVANT NATIONAL AND INTERNATIONAL POSITIONS

CARGOS NACIONAIS E INTERNACIONAIS

NATIONAL AND INTERNATIONAL POSITIONS

Alves, M.A.

- Membro do Comité Científico da ALABE - Associação de Laboratórios de Enologia.

Andrade, L.M.

- Coordenadora da Mobilidade da Faculdade de Engenharia da Universidade do Porto.

Azevedo, N.F.

- Membro do International Biofilm Standards Task Group (IBSTG).

Azevedo, S. Feyo

- Presidente da Academia de Engenharia.

Branco, P.T.B.S.

- Science Communication Coordinator e Membro do Comité de Gestão da COST Action CA23139 – Network for Indoor Air Cleaning (Net4CleanAir).

Dias, M.M.

- Membro do Conselho Coordenador do CEMUP.
- Membro convidado do Working Party on Mixing da European Federation of Chemical Engineering (EFCE).

Faria, J.L.

- Presidente da Sociedade Portuguesa de Química. Representante no Comité Técnico de Normalização CTE 25 "Quantidades e Unidades" do Instituto Português da Qualidade.
- Representante nacional da IUPAC I Division – Physical Chemistry and Biophysics Division.
- Membro do Comité Científico Internacional da série de conferências SPEA – European meeting on Solar Chemistry and Photocatalysis: Environmental Applications.

Ferreira, A.F.P.

- Representante do LSRE-LCM no GNIP – Grupo Nacional para a Integração de Processos.

Figueiredo, J.L.

- Membro Efetivo da Academia das Ciências de Lisboa, 3.^a secção – Química.

Lopes, J.C.

- Delegado Português para o Working Party on Mixing da EFCE – European Federation of Chemical Engineering.

Macedo, E.A.

- Delegada Portuguesa para o Working Party Thermodynamics and Transport Properties (WP-TTP) da EFCE – European Federation of Chemical Engineering.

- Presidente da Comissão Executiva e Científica do Simpósio Europeu de Termodinâmica Aplicada – congresso oficial do Grupo de Trabalho de Termodinâmica e Propriedades de Transporte da EFCE.

- Membro do International Organizing Committee da International Conference of Properties and Phase Equilibria for Product and Process Design (PPEPPD).

- Membro do International Scientific Committee da Iberoamerican Conference on Phase Equilibria and Fluid Properties for Process Design (EQUIFASE).

Madeira, L.M.

- Delegado Português para o Working Party of Chemical Reaction Engineering (WPCRE) e Working Party of Education (WPE) da EFCE – European Federation of Chemical Engineering.

Magalhães, F.D.

- Presidente da Associação Portuguesa de Adesão e Adesivos.
- Diretor-Geral da Associação Rede de Competência em Polímeros (CoLAB).

Martins, F.G.

- Membro convidado da Secção de Energia da EFCE – European Federation of Chemical Engineering.
- Membro do Conselho Estratégico e do Conselho Indústria e Universidade da APQuímica – Associação Portuguesa da Química, Petroquímica e Refinação.
- Representante do LEPABE no GNIP – Grupo Nacional para a Integração de Processos.

Mendes, A.M.M.

- Membro do Conselho Nacional de Ciência, Tecnologia e Inovação.
- Membro da direção do Hylab – Green Hydrogen Collaborative Laboratory.
- Vice-presidente do VG CoLAB – Vasco da Gama CoLAB – Energy Storage.

- Membro do conselho técnico da ARCP CoLAB – CoLAB Associação Rede de Competência em Polímeros.

Nunes, O.C.

- Membro do Conselho de Peritos Regionais da Divisão da Environmental Biotechnology da European Federation of Biotechnology (EFB).

Pereira, M.C.

- Representante do LEPABE na ETPN – European Technology Platform for Nanomedicine.

Pereira, M.F.

- Presidente do Grupo de Carbono da Sociedade Portuguesa de Química.
- Representante Português na European Carbon Association. Representante Português na International Association of the Catalysis Communities (IACS) Council.

Pinto, A.M.F.R.

- Pró-Diretora para a Cooperação da Faculdade de Engenharia da Universidade do Porto.

Ratola, N.

- Presidente da ACE – Association of Chemistry and the Environment.

Ribeiro, A.R.L.

- Membro da Divisão de Biotecnologia Ambiental da Federação Europeia de Biotecnologia (EFB).
- Membro do EuChemS-DAC Sample Preparation Study Group and Network.
- Membro do SCIEX Innovation Advisory Board.
- Membro do Comité de Gestão da Ação COST CA23104 “Mainstreaming water reuse into the circular economy paradigm – Water4Reuse”.
- Membro substituto do Comité de Gestão da Ação COST Action CA18225 “Taste and Odor in early diagnosis of source and drinking Water Problems”.
- Membro do Comité Científico Nacional (NSC) português da conferência Iberoamerican Conference on Advanced Oxidation Technologies (CIPOA).

Rodrigues, A.E.

- Delegado Português para o Working Party of Chemical Reaction Engineering (WPCRE) da EFCE – European Federation of Chemical Engineering.
- Membro do Conselho Consultivo da VUB – Vrije Universiteit Brussel.

Rosales, F.G.

- Presidente da Sociedade Portuguesa de Reologia.

Sampaio, M.J.

- Secretária (Relatora) do Conselho Fiscal da Sociedade Portuguesa de Química.

Santos, R.J.

- Delegado Português para o Working Party on Mixing da EFCE – European Federation of Chemical Engineering.

Silva, A.M.T.

- Membro da Comissão Científica da EU Ph.D. School in Advanced Oxidation Processes.
- Membro do Comité Científico Internacional da série de

conferências European meeting on Solar Chemistry and Photocatalysis: Environmental Applications.

Silva, C.G.

- Vice-Presidente da Associação Ibérica de Fotocatálise. Presidente do Grupo de Química Industrial da Sociedade Portuguesa de Química.
- Presidente do Conselho Fiscal da Sociedade Portuguesa de Química.
- Vogal da Delegação do Porto da Sociedade Portuguesa de Química.
- Membro do Comité Científico Internacional da série de conferências SPEA – European meeting on Solar Chemistry and Photocatalysis: Environmental Applications.

Sousa, S.I.V.

- Chair da Ação COST CA23139 “Net4CleanAir – Network for Air Cleaning”.

Torres-Pinto, A.

- Membro da Direção da Sociedade Espanhola de Adsorção (SEAd).

Vilar, V.J.P.

- Membro da Divisão de Biotecnologia Ambiental da Federação Europeia de Biotecnologia (EFB).
- Membro da Comissão Científica da EU Ph.D. School in Advanced Oxidation Processes.
- Coordenador da conferência ibero-americana sobre tecnologias de oxidação avançada (CIPOA).
- Membro da Direção da IOA-EA3G, International Ozone Association – Grupo Europa, África, Ásia e Australásia. Membro do Comité de Gestão da Ação COST CA23104 “Mainstreaming water reuse into the circular economy paradigm – Water4Reuse”.

ORGANIZAÇÃO DE EVENTOS**EVENTS ORGANISATION**

- WaterTOP Virtual Conference – Water Taste & Odor (T&O): Challenges and Research Advances. 22 fevereiro 2024, online.
- III Meeting of the Carbon Group (III RGC) 26-27 março 2024, Porto, Portugal.
- e.Biofilm Seminar – Reproducibility of Microbiological Assays Over 30 Years: Variance Depends on Efficacy 26 março 2024, FEUP.
- e.Biofilm Seminar – Analysis and Designs of Imaging Experiments Over Space and Time 27 março 2024, FEUP.

- e.Biofilm Seminar – Considerations on Diversity of Thought When Thinking Science and Structuring Academic Teams
2 abril 2024, FEUP.
- e.Biofilm Training School – Fundamentals of Biofilm Engineering (12h)
9-24 abril 2024, FEUP.
- PhD School on Perovskite PVE
15-17 abril 2024, Freiburg, Alemanha.
- e.Biofilm Seminar – Biofilm Control for Water Recycling Systems in Space
17 abril 2024, FEUP.
- HEFC 2024 – Heat Exchanger Fouling Conference
21-26 abril 2024, Torres Vedras, Portugal.
- 4th Workshop – Towards Zero Pollution
3 junho 2024, Escola Superior de Tecnologia e Gestão de Viseu, Portugal.
- e.Biofilm Seminar – Microbial Communities and Microbial Interactions
4 junho 2024, FEUP.
- e.Biofilm Seminar – Biofilms and Beyond: MICRO- Meets MACRO-
6 junho 2024, FEUP.
- e.Biofilm Seminar – Moving Towards Mechanistic Ecology for Microorganisms: Four Case Studies
11 junho 2024, FEUP.
- 33rd European Symposium on Applied Thermodynamics
junho 2024, Edimburgo, Reino Unido.
- ISCRE-28 – 28th International Symposium on Chemical Reaction Engineering
16-19 junho 2024, Turku, Finlândia.
- III Jornadas Mentoria U.Porto – Caminhos da Mentoria U.Porto: 5 anos de liberdade, solidariedade e compromisso
25 junho 2024, FEUP, Porto, Portugal.
- Workshop on Valorization of By-products and Agri-food Waste (Chychest Project)
1 julho 2024, Departamento de Engenharia Química, FEUP.
- UPhDExperience 2024 – 1st U.Porto Research Summer School in Microbial Communities: Taste of PhD Experience
8-25 julho 2024, FEUP.
- XIII Iberoamerican Conference on Phase Equilibria and Fluid Properties for Process Design (EQUIFASE 2024)
setembro 2024, Évora, Portugal.
- 43th Iberian Adsorption Meeting (43RIA)
1-4 setembro 2024, Porto, Portugal.
- 9th Workshop ENMIX
12-13 setembro 2024, Porto, Portugal.
- e.Biofilm Seminar – Controlling Legionella and Other Pathogens Within Hospital Building Water Systems
23 setembro 2024, FEUP.
- Circular Economy – Make It Happen (Smart Waste Young Professionals)
10 outubro 2024, Porto, Portugal.
- Carbon Club 2024
10-11 outubro 2024, online.
- 112CO₂ – CECAM Webinar 1: Simulation Assisted Steps in Research and Technology in the Hydrogen Ecosystem
17 outubro 2024, online.
- 112CO₂ – CECAM Webinar 2: Methane Splitting in Europe: How to Promote Swift and Low-Cost Energy Decarbonization
24 outubro 2024, online.
- Symposium on Sustainable Chemical Energy Vectors
29-30 outubro 2024, Valência, Espanha.
- 2nd International Association for Biomonitoring of Environmental Pollution (IABEP 2024)
4-6 novembro 2024, Universidade de Lisboa, Lisboa, Portugal.
- CIPOA VI – VI Iberoamerican Conference on Advanced Oxidation Technologies
7-11 novembro 2024, Florianópolis, Brasil.
- Winter School on Contaminants of Emerging Concern (CECs) and Disinfection By-Products (DBPs): Occurrence, Impact and Elimination
25-26 novembro 2024, WOW, Porto, Portugal.
- InnovAntiBiofilm Workshop – “Plant-based Molecules for Biofilm Control”
9 dezembro 2024, FEUP, Porto, Portugal.

MEMBROS DE PAINÉIS DE AVALIAÇÃO I&D

MEMBERS OF R&D EVALUATION PANELS

A. Martins

- Evaluator of Marie Curie PF and DN proposal
- Evaluator of CINEA Innovation Fund Proposals

A. Mendes

- Evaluator of the HORIZON-ERC Advanced Grants
- Evaluator of EIC Pathfinder

T. Lopes

- Evaluator of national R&D&I programmes for ANI - Agência Nacional de Inovação S.A.

- Evaluator of national R&D&I programmes for Výskumná agentúra - Component 9 of the Recovery and Resilience Plan of the Slovak Republic

MEMBROS DE CORPOS EDITORIAIS

EDITORIAL BOARD MEMBERS

A. Borges

- Associate Editor of Frontiers in Microbiology – Microbial Physiology and Metabolism.
- Guest Editor of the Special Issue "Editorial Board Members' Collection Series: Antibiotic Resistance Mechanisms and Molecular Epidemiology of ESKAPEE", Antibiotics, MDPI.
- Guest Editor of the Special Issue "Biofilms and Urinary Tract Infections", Antibiotics, MDPI.

A.E. Rodrigues

- Editor of ChemEngineering, MDPI Publisher, Switzerland.
- Member of Editorial Board of the following scientific journals: Adsorption, ChemBioEng Reviews, The Chemical Engineering Journal, Separation Science and Technology, Separation and Purification Technology, International Journal of Chemical Reaction Engineering, Canadian Journal of Chemical Engineering.

A.M. Pintor

- Guest Editor, Frontiers in Environmental Science, Research Topic "Water and Wastewater Treatment and Management in the Textile Industry".
- Guest Editor of the Special Issue "Adsorbents for Water and Wastewater Treatment and Resource Recovery II", Water, MDPI.
- Guest Editor, MDPI – Separations, Special Issue "Removal of Metals or Other Toxic Substances from Wastewaters by Natural Sorbents"
- Review Editor in the Editorial Board of "Frontiers in Environmental Science", specialty section "Water and Wastewater Management".

A.M. Ribeiro

- Co-Guest editor of the Special Issue "Adsorption: fundamentals & processes", Fluid Phase Equilibria, Elsevier 2022-2023.
- Member of Editorial Board of Chemical Engineering Research and Design.

A.M.T. Silva

- Editor of Applied Catalysis B: Environmental (Elsevier).

A.S. Azevedo

- Associate Editor in Pharmaceuticals (Frontiers)
- Review Editor in Microbiotechnology (Frontiers)

- Member of Editorial Board of Antibiotics (MDPI)

A.R.L. Ribeiro

- Executive Editor Chemical Engineering Science (Elsevier).
- Associate Editor Chemical Engineering Journal Advances (Elsevier).
- Co-Guest Editor Special Issue of Chemical Engineering Journal Advances (Elsevier) on "Novel Technologies to Minimize Industrial Carbon Footprint".
- Co-Guest Editor Special Issue of Journal of Environmental Chemical Engineering (Elsevier) on "Novel Technologies to Minimize Industrial Carbon Footprint".
- Co-Guest Editor Special Issue of Frontiers in Engineering Science (Frontiers) on "Water and Wastewater Treatment and Management in the Textile Industry".
- Member of Editorial Board of Water (MDPI).

A. Torres-Pinto

- Guest Editor of Special Issue of Water (MDPI) on "Integrated Catalytic Oxidation Processes for Water and Wastewater Treatment".

B.N. Estevinho

- Guest Editor of the special issue 'Encapsulation Processes: Improvement and Innovation of Bio-Micro/Nanostructures with High-Value Compounds in Food', FOODS (MDPI), 2024-2025.
- Guest Editor of the special issue 'Microencapsulation of Food Antioxidants', Processes (ISSN 2227-9717), 2024-2025.
- Guest Editor of the special issue 'Encapsulation Processes: Valorization, Stabilization and Commercialization of Active and Natural Compounds', FOODS (MDPI), 2023-2024.
- Guest Editor of the special issue 'Microencapsulation of Active and Natural Compounds - Valorization of By-Products', Journal of Renewable Materials (Tech Science Press), 2023-2024.

C.A. Costa

- Guest Editor of the special issue 'Lignin from agri-food wastes: From chemistry/biochemistry towards its industrial applications', International Journal of Molecular Sciences (MDPI).

C.A.L. Graça

- Guest Editor of the special issue "Advanced Research on Micropollutants in Water", Environments (MDPI), 2024.
- Guest Editor of the special issue "Research on Micropollutants in Urban Water", Water (MDPI), 2022-2023.

C.G. Silva

- Associate Editor of Photochemical & Photobiological Sciences (Springer).

- Member of the Editorial Board (Review Editor) of 'Frontiers in Chemistry (Frontiers).
- Member of the Editorial Board (Associate Editor of Photocatalysis) of Frontiers in Catalysis (Frontier).
- Member of the Editorial Board of Catalysts (MDPI), Photochem (MDPI), Journal of Chemistry (Hindawi Publishers).
- Member of the Reviewer Panel of RSC Advances (Royal Society of Chemistry).

C.M.S. Botelho

- Member of Editorial Board of Water (MPDI).

E.A. Macedo

- Member of Editorial Board of Journal of Chemical & Engineering Data (ACS Publications).

F.C. Moreira

- Member of the Early Career Advisory Board, Journal of Environmental Chemical Engineering (Elsevier).

F.D. Magalhães

- Member of the Editorial Board of the following scientific journals: Polymers (MDPI), Materials (MDPI) and Education for Chemical Engineers (Elsevier).
- Guest editor of special issue Graphene-Polymer composites II, Polymers (MDPI).

H.M.V.M. Soares

- Associate Editor of Plant Symbiotic Interactions section in Frontiers in Plant Science (Frontiers).
- Member of the Editorial Board of Recycling and Sustainable Development Journal (Technical Faculty in Bor).
- Member of Editorial Board of Recycling (MDPI).

I. M. Martins

- Guest Editor (MDPI Journals) Topic Name - New Trends on Separation and Extraction of Bioactive Compounds and Respective Applications. Joint Journals - Analytica; Foods; Molecules; Processes; Separations

J.C. Pires

- Member of Editorial Board of 'Algal Research' (Elsevier), 'Applied Sciences' (MDPI), 'Energies' (MDPI), 'Sustainability' (MDPI) e 'The Open Microalgae Biotechnology' (Bentham) e Bioengineering and Biotechnology (Frontiers).

J.I. Martins

- Member of Editorial Board of the following scientific journals: Corrosão e Proteção de Materiais (LNEG), International Journal of Metals (Hindawi).
- Member of Editorial Board of Corrosion and Materials Degradation (MDPI).

J.L. Figueiredo

- Member of Editorial Board of the following scientific journals: CARBON (Elsevier), Fuel Processing Technology (Elsevier), Periodica Polytechnica – Chemical Engineering (Budapest University of Technology and Economics), Catalysts (MDPI).

J. Vilas Boas

- Review Editor in Microbiotechnology (Frontiers in Microbiology)

L. Andrade

- Co-Guest Editor of Special Issue: 'Advanced Technologies of Solar Cells', Energies (MDPI).
- Member of the Reviewer Board of Journal Nanomaterials (MDPI).

L.C. Cerqueira

- Topical Advisory Panel member of Micromachines (MDPI), Micromachines,
- Topic Editor 'Molecular diagnostic methods for bacteria and fungi detection', Frontiers in Cellular and Infection Microbiology (Frontiers).

- Desde 2023 Associate Editor for Microbiotechnology. Frontiers in Microbiology

L.F. Melo

- Member of Editorial Board of Microorganisms (MDPI).

L.M. Madeira

- Member of Advisory Editorial Board of Chemical Engineering and Technology (Wiley).
- Member of Editorial Board of Education for Chemical Engineers (Elsevier), official Journal of European Federation of Chemical Engineering: Part D, Institution of Chemical Engineers' (IChemE).

L.M. Santos

- Associate editor in Frontiers, Special Special Issue Strategies for the valorization of agricultural by-products for Food Packaging and Conservation. (Frontiers).

M. A. N. Coelho

- Associate Editor in Nanobiotechnology Frontiers in Bioengineering and Biotechnology (Frontiers).

M.M. Dias

- Guest Editor (MDPI Journals) Topic Name - New Trends on Separation and Extraction of Bioactive Compounds and Respective Applications. Joint Journals - Analytica; Foods; Molecules; Processes; Separations

M. V. Simões

- Assistant Editor of Biofouling: The Journal of Bioadhesion and Biofilm Research (Taylor and Francis).
- Associate Editor of Frontiers in Microbiology (Frontiers).

- Deputy Editor in Chief of Journal of Applied Microbiology (Oxford Press).
- Section Editor in Chief of Antibiotics (MDPI).

M.C. Pereira

- Member of Editorial Board of sections Nanobiotechnology in Frontiers in Bioengineering and Biotechnology (Frontiers), Frontiers in Materials (Frontiers) and Frontiers in Molecular Biosciences (Frontiers).

M.F.R. Pereira

- Member of Editorial Board of C - Journal of Carbon Research and Scientific Reports (MPDI), Scientific Reports.

M.J. Sampaio

- Early Career Editorial Board Member of Applied Catalysis B: Environmental (Elsevier) and Catalysis Communications (Elsevier).
- Co-Guest Editor of the special issue 'Gas/water purification by photoassisted catalytic processes', Catalysis Communications (Elsevier).

M. Peñas-Garzón

- Co-Guest Editor of the special issue " New catalytic approaches in advanced oxidation processes for the removal of refractory contaminants ", Catalysis Communications, Elsevier.

M.S.C. A. Brito

- Special Issue Editor 'Recent Development of Mixing in Chemical Processes', Processes (MDPI), 2023.

N. Ratola

- Member of Editorial Board of Environment International (Elsevier).

N.F. Azevedo

- Associate Editor of Frontiers in Cellular and Infection Microbiology (Frontiers).
- Member of Editorial Board of the following scientific journals: Open Life Sciences (De Gruyter), PloS One (PLOS), Biofilm (Elsevier), Frontiers in Bioengineering and Biotechnology (Frontiers), Frontiers in Molecular Biosciences (Frontiers), Antibiotics (MDPI), Frontiers in Public Health (Frontiers).

O.C. Nunes

- Member of Editorial Board (Academic editor) of PLOS ONE (PLOS).

O.S.G.P. Soares

- Guest editor of the Catalysts Special Issue Catalysts for Hydrogenation and Oxidation Reactions (MDPI).
- Guest editor of the Catalysts Special Issue Feature Papers in Environmental Catalysis (MDPI)
- Guest editor of the Catalysts Special Issue "Novel

Heterogeneous Catalysts for Advanced Oxidation Processes (AOPsII)"

- Guest editor of the Nanomaterials Special Issue " Current State-of-the-Art of SWCNT, MWCNT, and Mixed CNT"
- Guest editor of the Special Issue 'Current State-of-the-Art of SWCNT, MWCNT, and Mixed CNT', Nanomaterials (MDPI).
- Review Editor of Materials Process Engineering section of the open-access journal Frontiers in Chemical Engineering (Frontiers).
- Editorial Board Member of Catalysts (MDPI) and Processes (MDPI).

P.T.B.S. Branco

- Member of Editorial Board of 'Pollutants' (MDPI)

P. Velho

- Member of the Early Career Advisory Board, Journal of Chemical & Engineering Data (JCED), ACS.

R.J. Santos

- Special Issue Editor 'Recent Development of Mixing in Chemical Processes', Processes (MDPI), 2023.

R.P. Rocha

- Co-Guest editor of the Special Issue 'Novel Heterogeneous Catalysts for Advanced Oxidation Processes (AOPs) II', Catalysts (MDPI), 2022-2023.

S.I.V. Sousa

- Member of Editorial Board of BMC Public Health (Biomed Central), Atmosphere (MDPI).

T. C. Grande

- Editorial Team- The Journal of Engineering and Exact Sciences – JCEC
- Topical Advisory Panel -Separations-MDPI

V. Homem

- Associate Editor, Frontiers in Analytical Science, Environmental Analysis, (Frontiers).

V.B. Oliveira

- Member of the Editorial Board (Associate Editor for Fuel Cells, Electrolyzers and Membrane Reactors) of Frontiers in Energy Research (Frontiers).

V.J.P. Vilar

- Executive Editor of Journal of Environmental Chemical Engineering (Elsevier).
- Member of the Editorial Board of Environmental Science and Pollution Research (Springer) and Journal of Hazardous Materials Advances (Elsevier).

DIVULGAÇÃO CIENTÍFICA

SCIENCE COMMUNICATION

A. Mendes

Convidado no podcast “O Futuro do Futuro” do Expresso
 Episódio “Adélio Mendes: “A extração do lítio em Portugal é um engano, as reservas são pequenas e os custos de extração enormíssimos”” (<https://expresso.pt/podcasts/o-futuro-do-futuro/2024-02-27-Adelio-Mendes-A-extracao-de-litio-em-Portugal-e-um-engano-as-reservas-sao-pequenas-e-os-custos-de-extracao-enormissimos-c4f671e2>)
 Publicado a 27 de fevereiro de 2024

A. Torres-Pinto, Adrián M.T. Silva

Workshop on Advanced IT Technologies To Assist Students’ Digital Education.
 Target audience: teachers and MSc/PhD students
 Events Online format. December 2024

C. Azenha

Entrevista para “O Futuro do Futuro” do Expresso
 Artigo “O aspirador islandês” (<https://expresso.pt/semanario/primeiro/o-futuro-do-futuro/2024-05-16-o-aspirador-islandes-16951cfe>)
 Publicado a 16 de maio de 2024

C. Cruzeiro

Saúde no Solo (Exploratório de Coimbra)
 Target Audience: Children from 5 to 12 years old
 Events: Coimbra, Portugal, 27th of July and 3rd of August, 2024
 Link: <https://be-wise.pt/investigadoras-be-wise-lideram-atividade-sobre-saude-do-solo-no-exploratorio-de-coimbra/>

C. Cruzeiro

- Palestra Científica “Solos com Vida!”-Escola da Ciência Viva, Vila Nova Gaia
 Target Audience: Primary School
 Events: Viva Vila Nova Gaia, Portugal, 6th of December, 2024
 Link: <https://be-wise.pt/palestra-cientifica-solos-com-vida-escola-da-ciencia-viva-v-n-gaia/>

I. Martins

- Brings Science to Life in Children's Summer Activities
 Target Audience: Preschool and elementary students
 Events: Maia, July 2024

L.C. Gomes

Biomedical Young School - Summer School
 Target audience: High school students
 Events: FEUP and ICBAS, July 2024

P.T.B.S. Branco

Palestra “O ar é de todos: mas sabemos o que respiramos?”
 Target Audience: General public
 Events: “Um Brinde à Ciência”, Centro de Monitorização e Interpretação Ambiental, Viana do Castelo, 30th November, 2024

