



RELATÓRIO DE ATIVIDADES E CONTAS

2023

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 2023, coincidindo com o início do segundo mandato desta Comissão Executiva.

Começando pelos recursos humanos, foram contratados dois novos professores auxiliares, Diogo Rodrigues e Helena Passos, ambos provenientes de unidades de investigação externas à FEUP, trazendo um contributo relevante para áreas em que o DEQ estava deficitário. A investigadora Diana Paiva assinou um contrato de trabalho por tempo indeterminado, assumindo funções de investigação e gestão de ciência e tecnologia no 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.

Durante 2023, aposentaram-se a professora Maria Eugénia Macedo e o professor Mário Rui Costa. Deixamos aqui um enorme agradecimento pela dedicação e serviço prestado, contribuindo para o crescimento do DEQ e para a formação de várias gerações de engenheiros químicos. Neste período também se aposentou a técnica Maria José Mota, a quem agradecemos pela dedicação e empenho durante a sua carreira neste departamento.

Na vertente ensino, o professor Fernão Magalhães assumiu a direção da licenciatura e do mestrado em Engenharia Química, substituindo no cargo o professor Miguel Madeira; os professores Filipe Mergulhão e Adrián Silva assumiram a direção do Programa Doutoral de Engenharia Química e Biológica e do Programa Doutoral de Engenharia do Ambiente, respetivamente, substituindo as professoras Alexandra Pinto e Arminda Alves. A direção do DEQ agradece a significativa contribuição dos diretores cessantes e deseja um ótimo trabalho aos novos diretores.

Uma palavra de confiança e votos de sucesso pessoal e profissional para os 28 doutorados, envolvendo orientadores do DEQ, e para os 156 licenciados e 186 mestres dos cursos com intervenção do DEQ, que concluíram a sua formação na FEUP em 2023.

Em 2023, o DEQ prosseguiu o investimento em novos equipamentos para os laboratórios de ensino e para o apoio a atividades de investigação, destacando-se a aquisição de um Zetasizer Advance Ultra, de um liofilizador e a participação na

aquisição de um microscópio confocal. Importa também referir a intervenção na Sala de Atos do departamento, que envolveu a modernização dos equipamentos audiovisuais, com a aquisição de um monitor LED e um sistema de videoconferência BYOD e o restauro das cadeiras.

Nas atividades de Investigação e Desenvolvimento, 2023 ficará associado ao início dos contratos associados à bolsa do European Research Council (ERC) da investigadora Rita Lado e à ERA Chair do grupo do Professor Nuno Azevedo. Neste ano, destaca-se a publicação de cerca de 300 artigos em revistas científicas internacionais indexadas no JCR e/ou SCOPUS, o início de 30 novos projetos de ID&T com um orçamento para a FEUP de cerca de 8,1 milhões de euros 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, o Prémio de Excelência Científica da FEUP para o Prof. Francisco Xavier Malcata que acumulou com o Distinguished Career Award in honor of Carl R. Fellers atribuído pelo Institute of Food Technologists; a inclusão do Prof. Manuel Simões nos Highly Cited Researchers 2022 pela Clarivate Analytics (o único na FEUP); a atribuição do título de Doutor Honoris Causa pela Universidade Federal de Pernambuco ao Prof. Alírio Rodrigues; a Medalha de Excelência R+D+i CIBIQ 2023 atribuída ao Prof. José Luís Figueiredo; o prof. Luis Miguel Madeira vencedor do prémio Air Liquide Scientific Challenge 2023, no tópico “Energy storage using essential small molecules”; os 26 investigadores do DEQ incluídos nas listas dos mais influentes do mundo no estudo da Universidade de Stanford; e os 20 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 classificada no top 50 europeu e nas 200 primeiras a nível mundial nos diversos rankings internacionais.

A Comissão Executiva espera continuar a manter a colaboração e o empenho dos docentes, investigadores e técnicos do departamento e o apoio da direção da FEUP nas várias iniciativas do DEQ.

This document summarizes the main activities carried out in the Department of Chemical Engineering (DEQ) at FEUP in 2023, coinciding with the beginning of the second term of this Executive Committee.

Starting with human resources, two new assistant Professors, Diogo Rodrigues and Helena Passos, were hired, both coming from research units external to FEUP, bringing significant contributions to areas where DEQ was lacking. Researcher Diana Paiva signed a permanent employment contract, assuming research and science and technology management functions at ALiCE. We wish them all successful careers and hope they make significant contributions to the department's activities and the R&D units in which they are involved.

Professor Maria Eugénia Macedo and Professor Mário Rui Costa retired in 2023. We would like to thank them for their dedication and service, contributing to the growth of DEQ and the training of several generations of chemical engineers. During this period, technician Maria José Mota also retired, and we are grateful for her dedication and commitment throughout her career in this department.

In terms of teaching activities, Prof. Fernão Magalhães took over the leadership of the Bachelor's and Master's degrees in Chemical Engineering, replacing Prof. Miguel Madeira; Professors Filipe Mergulhão and Adrián Silva assumed leadership of the Doctoral Program in Chemical and Biological Engineering and the Doctoral Program in Environmental Engineering, respectively, replacing Professors Alexandra Pinto and Arminda Alves. The DEQ executive committee thanks the outgoing directors for their significant contributions and wishes the new directors great success.

A word of confidence and best wishes for personal and professional success to the 28 PhD holders, involving DEQ supervisors, and to the 156 graduates and 186 masters of the courses with DEQ's participation, who concluded their degrees at FEUP in 2023.

In 2023, DEQ continued investing in new equipment for teaching laboratories and supporting research activities, notably acquiring a Zetasizer Advance Ultra, a freeze-dryer, and contributing to the acquisition of a confocal microscope.

It is also important to mention the refurbishment of the department's Conference Room, which involved modernizing audiovisual equipment with the acquisition of an LED monitor and a BYOD videoconferencing system, and the restoration of the chairs.

In Research and Development activities, 2023 will be associated with the start of contracts linked to the European Research Council (ERC) grant of researcher Rita Lado and the ERA Chair of Professor Nuno Azevedo's group. This year saw the publication of around 300 articles in international scientific journals indexed in JCR and/or SCOPUS, the start of 30 new R&D projects with a budget for FEUP of around 8.1 million euros, and the granting/ submission of 15 patents.

To confirm the quality of the research carried out in DEQ's research units, several awards distinguished the department's faculty, researchers, and technicians. Among these, the FEUP Scientific Excellence Award to Prof. Francisco Xavier Malcata, who also received the Distinguished Career Award in honor of Carl R. Fellers from the Institute of Food Technologists; the inclusion of Prof. Manuel Simões in the Highly Cited Researchers 2022 by Clarivate Analytics (the only one at FEUP); the awarding of the title of Doctor Honoris Causa by the Federal University of Pernambuco to Prof. Alírio Rodrigues; the R+D+i Excellence Medal CIBIQ 2023 awarded to Prof. José Luís Figueiredo; Prof. Luis Miguel Madeira winning the Air Liquide Scientific Challenge 2023 award in the topic "Energy storage using essential small molecules"; the 26 DEQ researchers included in the lists of the world's most influential researchers in the Stanford University study; and the 20 researchers mentioned in the list of the best researchers by thematic area, elaborated by Research.com.

The Chemical Engineering area at U. Porto maintained its national leadership position and is one of the few areas of this university ranked in the top 50 in Europe and within the top 200 worldwide in various international rankings.

The Executive Committee hopes to maintain the collaboration and commitment of the department's faculty, researchers, and technicians, and the support of the FEUP management board in the various DEQ initiatives.

GESTÃO

MANAGEMENT

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



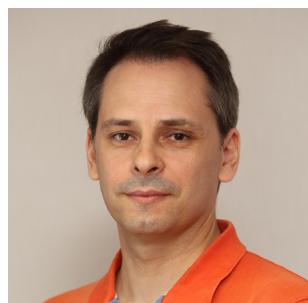
ADRIÁN SILVA

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

PROCURA DA VERDADE
SEARCH FOR TRUTH

CULTURA E SOLIDARIEDADE
CULTURE AND SOLIDARITY

PROMOÇÃO DA PESSOA PERSONAL DEVELOPMENT

**GARANTIA DA LIBERDADE
E INICIATIVA**
GUARANTEEING FREEDOM
AND INITIATIVE

SUMÁRIO EXECUTIVO

O Departamento de Engenharia Química (DEQ) agrupa 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 2023 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 é 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 colabora no Programa Doutoral em Química (em parceria com a FCUP).

No que diz respeito às atividades de investigação, essas desenvolvem-se num largo espetro 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, 3 das quais tendo a FEUP como instituição de acolhimento: CEFT, LSRE-LCM e LEPABE. 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 nas áreas de Engenharia Biológica e Engenharia do Ambiente. A quase totalidade dos docentes e investigadores do DEQ desenvolve a sua atividade 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's, 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 2023 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 is 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 collaborates 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, 3 of which have FEUP as host institution: CEFT, LSRE-LCM and LEPABE. These three research units gathered 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. Almost all DEQ professors and researchers carry out their activities in 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 11 reuniões em 2023 (1^a à 11^a reuniões do mandato 2023-2027), das quais se destacam as seguintes ações:

- Elaboração do Relatório de Atividades e de Contas do DEQ de 2022;
- Elaboração do Plano de Atividades e Orçamento do DEQ para 2023;
- Nomeação dos responsáveis pelas assessorias da Direção do DEQ;
- Atribuição de 3 Licenças Sabáticas semestrais para o ano letivo 2023/24;
- Aprovação da distribuição de serviço docente para 2023/2024;
- Aprovação da abertura de concursos de docente do DEQ para 1 lugar de professor Catedrático, 2 lugares de professor Associado e 1 lugar de professor Auxiliar;
- Aprovação de uma comparticipação, no valor de 100 000 €, para a aquisição de um microscópio confocal;
- Aquisição de equipamentos audiovisuais para modernização da Sala de Atos do DEQ;
- Realização da avaliação de desempenho do pessoal técnico para o biénio 2021/2022;
- Aprovação da proposta de funcionamento do regime de teletrabalho para os técnicos do DEQ;
- Elaboração, em conjunto com a Direção da FEUP, de um projeto de melhoria das instalações da ETAR;
- Comparticipação no arrendamento de espaço de investigação nas instalações da CAPWATT no âmbito de atividades de projetos financiados pelo PRR;
- Nomeação do professor Sebastião Feye de Azevedo e do professor José Luís Figueiredo para os prémios "Medalha de Ouro CIBIQ" e Medalha de Excelência em I+D+i", respetivamente;
- Nomeação de personalidades ligadas à Engenharia química para o "Prémio Carreira da FEUP 2023" e para o Prémio "Engenharia Distinta no Feminino";
- Nomeação da professora Cidália Botelho para o Conselho Consultivo do Museu.

DEQ management board held 11 meetings in 2023 (1st

to 11th meetings of the 2013-2027 term), from which the following decisions stand out:

- Elaboration of DEQ's Activities and Accounts Report for 2022;
- Elaboration of DEQ's Activity Plan and Budget for 2023;
- Appointment of the heads of DEQ management accessories;
- Attribution of 3 semester sabbatical leaves for the academic year 2023/24;
- Approval of the teaching service distribution for 2023/2024;
- Approval to Opening one Full Professor position, two Associate Professor positions and one Assistant Professor position;
- Approval of a €100,000 grant for the purchase of a confocal microscope;
- Acquisition of audiovisual equipment to modernise the DEQ Conference Room;
- Performance evaluation of technical staff for the 2021/2022 biennium;
- Approval of the proposal of remote work for DEQ technicians;
- A project to improve the WWTP's facilities was drawn up in conjunction with the FEUP Department;
- Co-payment for the rental of research space at CAPWATT's premises as part of the activities of projects funded by the PRR;
- Appointment of Professor Sebastião Feye de Azevedo and Professor José Luís Figueiredo for the 'CIBIQ Gold Medal' and 'Medal of Excellence in R&D&i' awards, respectively;
- Nomination of personalities linked to Chemical Engineering for the "FEUP Career Award 2023" and for the "Distinguished Female Engineer Award";
- Appointment of Professor Cidália Botelho to the Museum's Advisory Board.

ASSESSORIAS**MANAGEMENT ASSISTANCE****AMBIENTE E SEGURANÇA
ENVIRONMENT AND SAFETY**

Ambiente e Segurança
Environment and Safety

Alexandre Ferreira

**APOIO À GESTÃO
MANAGEMENT SUPPORT**

Relatório 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

**RELACIONES COM O EXTERIOR
EXTERNAL RELATIONS**

Relações com a Indústria
Relations with Industry

Adélio Mendes

Relações com Ex-Estudantes
Relations with Alumni

Alexandra Pinto

Mobilidade e Relações Internacionais
Mobility and International Relations

Diogo Rodrigues, Maria do Carmo Pereira,
Miguel Madeira, Luísa Andrade

Visitas 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 INFORMATION**

Biblioteca
Library

Fernão de Magalhães

Formação Contínua
Continuing Training

Manuel Alves

Informática
Informatics

Fernando Martins

INICIATIVAS FEUP FEUP INITIATIVES

Universidade Júnior
Junior University

Adélio Mendes, Maria do Carmo Pereira,
Margarida Bastos, Manuel Simões, Olga Nunes

Mostra 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 Nagalhães

Infraestruturas
Infrastructures

Manuel Alves

Internacionalização
Internationalisation

Luísa Andrade

Transformação Digital
Digital transformation

Diogo Rodrigues

CONSELHO DE DEPARTAMENTO FDEPARTMENT 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

A 31 de dezembro de 2023 as estruturas de gestão dos cursos de 1º, 2º e 3º ciclo (com participação de elementos do DEQ) eram as seguintes:

On 31 December 2023 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 <i>Bachelor in Chemical Engineering</i>	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) Afonso Madaleno (Estudante) Maria Serrenho (Estudante) Margarida Bastos (DEQ) <i>Coordenadora pedagógica 1º ano</i> <i>Pedagogical coordinator 1st year</i>
Licenciatura em Engenharia do Ambiente <i>Bachelor in Environmental Engineering</i>	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) Manuel Fernando Pereira (DEQ) Maria Cristina Vila (DEM)	Joana Dias (DEMM) Adrián Silva (DEQ) Gabriela Teixeira (Estudante) Inês Pôças (Estudante) Isabel Silva Magalhães (DEC) <i>Coordenadora pedagógica 1º ano</i> <i>Pedagogical coordinator 1st year</i>
Licenciatura em Bioengenharia * <i>Bachelor in Bioengineering *</i>	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>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 <i>Master in Chemical Engineering</i>	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 Pires (Estudante) Rita Cachada (Estudante)
Mestrado em Engenharia do Ambiente <i>Master in Environmental Engineering</i>	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) Manuel Fernando Pereira (DEQ) Maria Cristina Vila (DEM)	Joana Dias (DEMM) Adrián Silva (DEQ) Anselmo Cardoso(Estudante) Bárbara Mendes (Estudante) Isabel Silva Magalhães (DEC) <i>Coordenadora pedagógica 1º ano</i> <i>Pedagogical coordinator 1st year</i>
Mestrado em Bioengenharia * <i>Master in Bioengineering *</i>	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>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) Mariana Gandra (Estudante) 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) Maria Arminda Alves (DEQ)	Filipe Mergulhão (DEQ) Ana Mafalda Ribeiro (DEQ) Joana Almeida (Estudante) Mariana Bessa (estudante)
Programa Doutoral em Engenharia do Ambiente <i>Doctoral Program in Environmental Engineering</i>	Adrián Silva (DEQ) <i>Diretor</i> <i>Director</i> Maria Arminda Alves (DEQ) <i>Diretora Adjunta</i> <i>Assistant Director</i>	Adrián Silva (DEQ) Francisco Taveira Pinto (DEC) Joana Dias (DEMM) Maria Arminda Alves (DEQ) Maria de Lurdes Dinis (DEM)	Adrián Silva (DEQ) Maria Cristina Vila (DEM) Filipe Francisco (Estudante) Miguel Costa (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 2023 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 maio e setembro de 2023 iniciaram, respetivamente, as suas funções como Professores auxiliares o doutor Diogo Filipe Mateus Rodrigues e a doutora Helena Isabel Sousa Passos

LICENÇAS SABÁTICAS

No ano letivo 2022/23 foi concedida licença sabática no primeiro semestre aos Professores Manuel Alves e Olga Nunes, e no segundo semestre ao Professor Joaquim Faria.

APOSENTAÇÕES

Durante o ano de 2023 a Professora Maria Eugénia Macedo e o Professor Mário Rui Costa aposentaram-se após vários anos de serviço em que prestaram uma contribuição indelével para a formação de várias gerações de engenheiros químicos e para o desenvolvimento e qualidade dos serviços prestados pelo DEQ.

ACADEMIC STAFF

As of December 31, 2022, 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 May and September of 2023, Doctor Diogo Filipe Mateus Rodrigues and Doctor Helena Isabel Sousa Passos started their functions as Assistant Professors, respectively.

SABBATICAL LEAVE

In the academic year 2022/23, Professors Manuel Alves and Olga Nunes were granted sabbatical leave in the first semester and Professor Joaquim Faria in the second semester.

RETIREMENTS

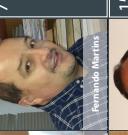
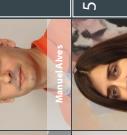
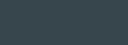
During 2023 Professor Maria Eugénia Macedo and Professor Mário Rui Costa retired after several years of service in which they made an indelible contribution to the training of several generations of chemical engineers and to the development and quality of the services provided by DEQ.



O DEQ agradece a dedicação e o contributo indelével da Professora Maria Eugénia Macedo e do Professor Mário Rui Costa na formação de várias gerações de Engenheiros Químicos e na transformação do DEQ num departamento de referência na área da Engenharia Química.

DEQ is thankful for the dedication and indelible contribution of Professor Maria Eugénia Macedo and Professor Mário Rui Costa in the training of several generations of Chemical Engineers and in the transformation of DEQ into a reference department in the field of Chemical Engineering.

DOCENTES E INVESTIGADORES PROFESSORS AND RESEARCHERS

PROFESSOR APOSENTADO COM VÍNCULO AO DEQ RETIRED PROFESSOR WITH LINK TO DEQ		PROFESSOR EMÉRITO EMERITUS PROFESSOR	
			
PROFESSOR ASSOCIADO ASSOCIATE PROFESSOR			
			
			
			
PROFESSOR CATEDRÁTICO FULL PROFESSOR			
			
			
			
INVESTIGADOR PRINCIPAL PRINCIPAL RESEARCHER			
			
			
			
INVESTIGADOR AUXILIAR ASSISTANT RESEARCHER			
			
			
			
PROFESSOR AUXILIAR ASSISTANT PROFESSOR			
			
			
			
INVESTIGADOR PRINCIPAL PRINCIPAL RESEARCHER			
			
			
INVESTIGADOR PRINCIPAL PRINCIPAL RESEARCHER			
			
PROFESSOR APOSENTADO COM VÍNCULO AO DEQ RETIRED PROFESSOR WITH LINK TO DEQ			

INVESTIGADORES

Em 2023, a investigadora Diana Patrícia Soares de Paiva, assinou um contrato de trabalho por tempo indeterminado. O DEQ passou assim a contar com 2 investigadores principais e 12 investigadores auxiliares com contrato de trabalho por tempo indeterminado.

Para além destes investigadores, decorrente de concursos extremamente competitivos, e do financiamento proveniente de projetos ou das unidades de investigação, a 31 de dezembro de 2023 o DEQ contava ainda com a colaboração de 1 investigador equiparado a investigador coordenador, 2 investigadores equiparados a investigador principal, 16 investigadores equiparados a investigador auxiliar, 55 investigadores doutorados de nível inicial, 7 assistentes de investigação e 2 estagiários de investigação.

RESEARCHERS

In 2023, researcher Diana Patrícia Soares de Paiva signed an indefinite employment contract. DEQ now has 2 principal investigators and 12 assistant investigators with indefinite employment contracts.

In addition to these researchers, as a result of extremely competitive tenders and funding from projects or research units, on 31 December 2023 the DEQ also had the collaboration of 1 researcher with the rank of coordinating researcher, 2 researchers with the rank of principal researcher, 16 researchers with the rank of assistant researcher, 55 entry-level PhD researchers, 7 research assistants and 2 research interns.

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)

Ana Ribeiro (LSRE-LCM)

Anabela Borges (LEPABE)

Andreia Azevedo (LEPABE)

Carlos Bernardo (LEPABE)

Célio Fernandes (CEFT)

Isabel Martins (LSRE-LCM)

Joana Loureiro (LEPABE)

João Miranda (CEFT)

Laura Cerqueira (LEPABE)

Maria José Sampaio (LSRE_LCM)

Soraia Neves (CEFT)

Teresa Augusto (LEPABE)

Vera Duarte (LEPABE)

Vera Homem (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)

Andreia Silva (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)

Cátila Graça (LSRE-LCM)

Cátila Azenha (LEPABE)

Cecília Rodrigues (LEPABE)

Claúdio Rocha (LEPABE)

Diogo Santos (CEFT)

Erica Costa (CEFT)

Fátima Santos (LEPABE)

Hanane Boumeriame (LSRE-LCM)

Inês Gomes (LEPABE)

Joana Pesqueira (LSRE-LCM)

Joana Vilas Boas (LEPABE)

Joana Barbosa (LEPABE)

Joao Carneiro (CEFT)

Jorge Malaquias (CEFT)

Katarzyna Eblagon (LSRE-LCM)

Klára Slezáková (LEPABE)

Krzysztof Biernacki (LSRE-LCM)

Liliana Martelo (REQUIMTE)

Lucília Ribeiro (LSRE-LCM)

Margarida Brito (LSRE-LCM)

Maria Francisca Moreira (LSRE-LCM)

Maria João Ramalho (LEPABE)

Maria João Regufe (LSRE-LCM)

Marta Pedrosa (LSRE-LCM)

Marta Barbosa (LSRE-LCM)

Miguel Zuniga (LEPABE)

Miguel Duarte (LEPABE)

Miguel Almeida (LEPABE)

Mónica Filgueiras (CEFT)

Nuno Graça (LSRE-LCM)

Nuno Guimarães (LEPABE)

Paula Dias (LEPABE)

Paulo Carmo (LSRE-LCM)

Pedro Branco (LEPABE)

Rafael Gomes Morais (LSRE-LCM)

Raquel Rocha (LSRE-LCM)

Rita Santos (LEPABE)

Rita Sobral Santos (LEPABE)

Rui Ferreira (CEFT)

Rui Ribeiro (LSRE-LCM)

Seyedali Emami (LEPABE)

Tânia Silva (LSRE-LCM)

Yuliya Ivanova (LEPABE)

ASSISTENTE DE INVESTIGAÇÃO

RESEARCH ASSISTANT

Ana Rita Moreira (LEPABE)

Diogo Silva (CEFT)

Inês Morais (LEPABE)

João Pedro Freitas (LEPABE)

José Francisco Marques (LEPABE)

Rúben Madureira (LEPABE)

Tiago Lagarteira (LEPABE)

ESTAGIÁRIO DE INVESTIGAÇÃO

RESEARCH TRAINEE

José Barbosa (LSRE-LCM)

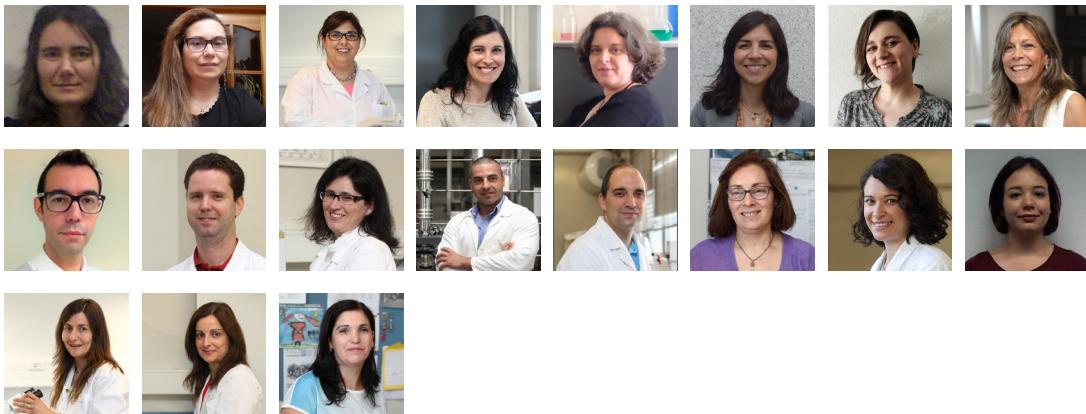
Ricardo Ferreira (LSRE-LCM)

PESSOAL TÉCNICO

A 31 de dezembro de 2023 o DEQ contava com a colaboração de 17 técnicos para apoio às atividades de ensino e investigação, e com 2 técnicos de investigação (José Avelino Silva 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 importa referir a aposentação da técnica Maria José Mota.

TECHNICAL STAFF

As of 31 December 2023, the DEQ had 17 technicians to support teaching and research activities, and 2 research technicians (José Avelino Silva and Maria Inês Romão), integrated into R&D units, who performed a wide range of relevant functions in support of various activities, including external services. Maria José Mota retired this year.



Ana Paula Ferreira :: Arminda Monteiro :: Carla Ferreira :: Célia Cerqueira :: Elisa Duarte :: Joana Gutierres
 Joana Rocha :: Joana Sottomayor :: José Avelino Silva :: José Luís Moreira :: Liliana Pereira
 Luís Carlos Matos :: Luís Martins :: Maria de Fátima Faustino :: Maria de Fátima Ferreira
 Maria Inês Romão :: Sílvia Faia :: Sónia Medeiros :: Susana Cruz

O DEQ agradece a dedicação e o empenho da técnica
 Maria José Mota durante a sua carreira ao serviço
 deste departamento.

**DEQ would like to thank Maria José Mota for her
 dedication and commitment during her career in this
 department.**



RECURSOS MATERIAIS

MATERIAL RESOURCES

Em 2023, a atividade de ensino e investigação do DEQ desenvolveu-se por vários espaços no Campus da FEUP, nomeadamente nos Edifícios E (4 195 m² de área útil, da qual cerca de 20 % é ocupada pelos laboratórios de ensino), Edifício F (50 m²), Edifício R (264 m² de área útil, repartidos pelo ensino e investigação) e no Edifício FEUP-INESC (447 m², dedicados exclusivamente a gabinetes e espaços de trabalho para os investigadores das unidades de I&D do DEQ).

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.

EQUIPAMENTOS E INFRAESTRUTURAS

Em 2023, o DEQ prosseguiu o investimento em novos equipamentos para os laboratórios de ensino e para o apoio a atividades de investigação, concretizando a aquisição de um Zetasizer Advance Ultra, de um liofilizador e comparticipando na aquisição de um microscópio confocal. No anexo I é apresentada a lista dos equipamentos de interesse transversal no departamento e que estão disponíveis nos laboratórios de ensino do DEQ.

Neste ano importa também referir a modernização dos equipamentos audiovisuais da Sala de Atos do DEQ, para a qual foi adquirido um monitor LED e um sistema de videoconferência BYOD, contando com a participação financeira do Programa Doutoral em Engenharia Química e Biológica e do Programa Doutoral em Engenharia da Refinação, Petroquímica e Química. Além disso, o Programa Doutoral em Engenharia do Ambiente disponibilizou uma verba para a reparação das cadeiras desta sala, melhorando-se assim o conforto e a funcionalidade do espaço. Estas melhorias refletem o compromisso do DEQ em proporcionar infraestruturas de alta qualidade para eventos académicos e de investigação.

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 iônica, 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.



GASES ESPECIAIS, REAGENTES E CONSUMÍVEIS LABORATÓRIO

Em 2023 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; iv) serviços de caracterização de materiais; dando assim continuidade à simplificação dos procedimentos de aquisição inerentes.

A nível interno o DEQ mantém uma rede de abastecimento, com 8 gases especiais, que servem quer os laboratórios de ensino, quer os laboratórios de investigação. Em 2023, os gastos totais (ensino e investigação) com os gases abastecidos centralmente totalizaram 22 170 €.

In 2023, DEQ's teaching and research activities took place in several locations within FEUP Campus, namely in Building E (4 195 m² of useful area with about 20 % occupied by teaching laboratories), Building F (50 m²), Building R (264 m² of useful area, split in teaching and research areas) and in the FEUP-INESC Building (447 m², dedicated exclusively to offices of researchers from DEQ R&D units).

Beyond the physical space, the Department of Chemical Engineering has a set of equipments and specialized technical staff to carry out physical, chemical and microbiological analyzes. These equipments, located at DEQ teaching laboratories, besides the support to services to the community, can be used by researchers, during periods outside of class hours, in order to maximize the instrumental resources and skills available at DEQ. The use of these equipments is assured by DEQ technical staff, in their areas of competence.

EQUIPMENTS

In 2023, DEQ continued to invest in new equipment for teaching laboratories and to support research activities, acquiring a Zetasizer Advance Ultra, a Lyophiliser and contributing to the purchase of a Confocal Microscope. Annex I provides a list of the equipment of transversal interest to the department which is available in the DEQ teaching laboratories.

This year, it is also important to mention the modernization of the audiovisual equipment in the DEQ Events Room, for which a LED monitor and a BYOD videoconferencing system were acquired, with financial participation from the Doctoral Program in Chemical and Biological Engineering and the Doctoral Program in Refining, Petrochemical, and Chemical Engineering. Additionally, the Doctoral Program in Environmental Engineering provided funds for the repair of the chairs in this room, thereby improving the comfort and functionality of the space. These improvements reflect DEQ commitment to providing high-quality infrastructure for academic and research events.

DEQ also has equipment for common use, namely an ultra-pure water production unit, an ion exchange resin purified water production unit, a distilled water production unit and an ice production machine. In addition to supporting DEQ teaching and research activities, the water and ice production units are also available to support the activity of other FEUP departments.

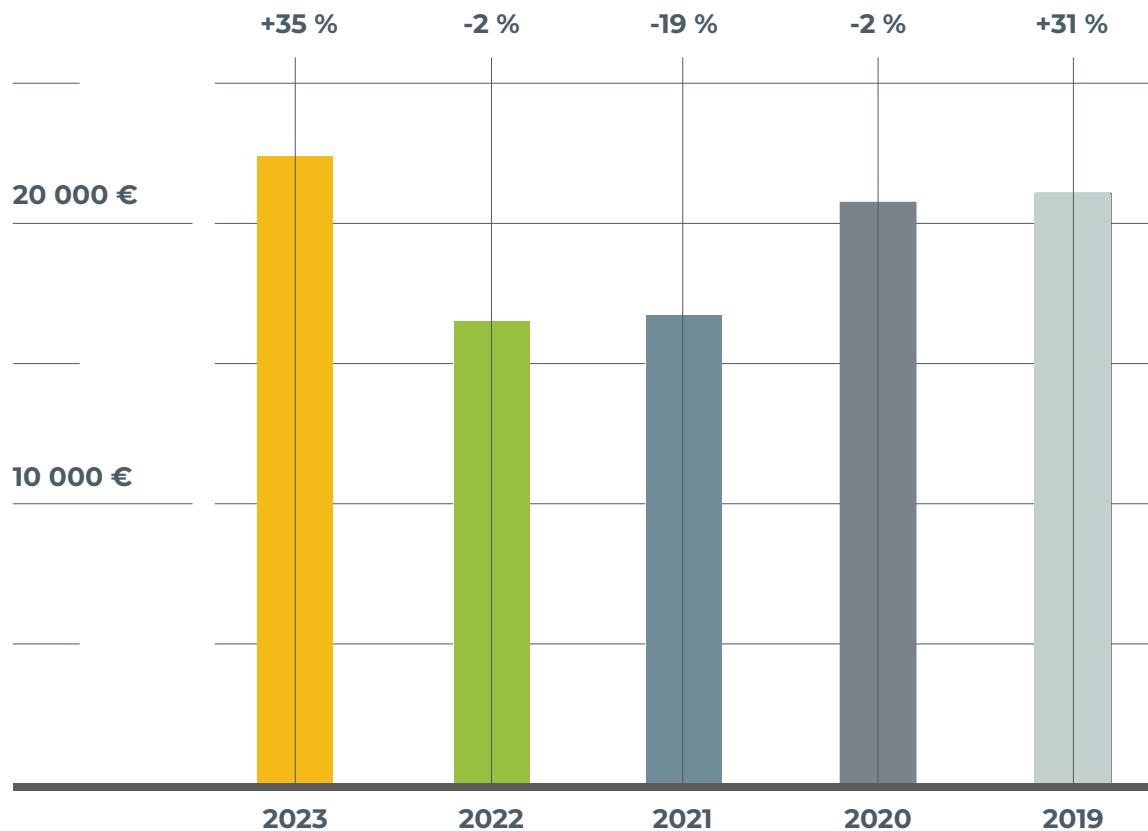


SPECIALITY GASES, REAGENTS AND LABORATORY CONSUMABLES

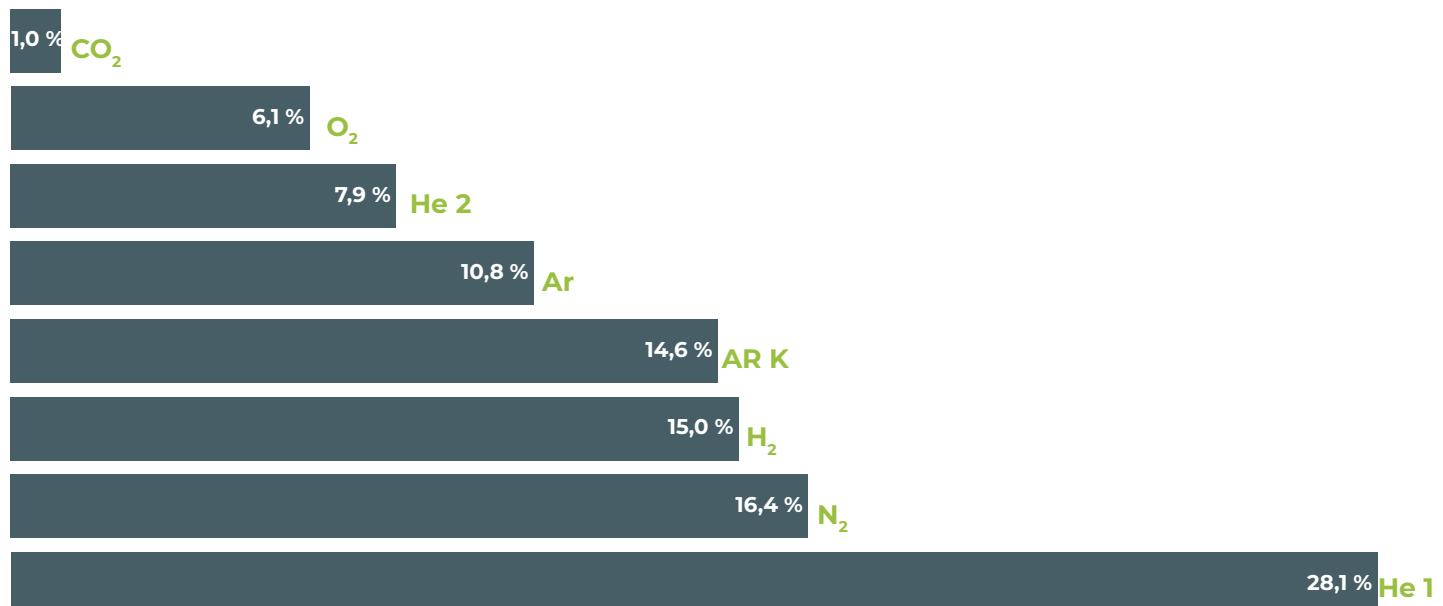
In 2023 the DEQ continued to manage, under public tenders for this purpose, the purchase for FEUP of: i) special gases; ii) reagents; iii) consumables and laboratory equipment; iv) material characterisation services; thus continuing to simplify the inherent procurement procedures.

Internally, DEQ maintains a supply network with 8 special gases that serve both teaching and research laboratories. In 2023, the total expenditure (teaching and research) with centrally supplied gases totalled 22 170 €.

EVOLUÇÃO DO CUSTO TOTAL (€) DE GASES E PERCENTUAL DE VARIAÇÃO RELATIVAMENTE AO ANO ANTERIOR
EVOLUTION OF THE TOTAL COST (€) OF GASES AND PERCENTAGE CHANGE COMPARED TO THE PREVIOUS YEAR



CONTRIBUTO (%) PARA A DESPESA TOTAL DE GASES ESPECIAIS EM 2023
CONTRIBUTION (%) TO THE TOTAL EXPENDITURE ON SPECIAL GASES IN 2023



AMBIENTE, SEGURANÇA E SUSTENTABILIDADE

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

Destacam-se algumas destas medidas durante o ano de 2023:

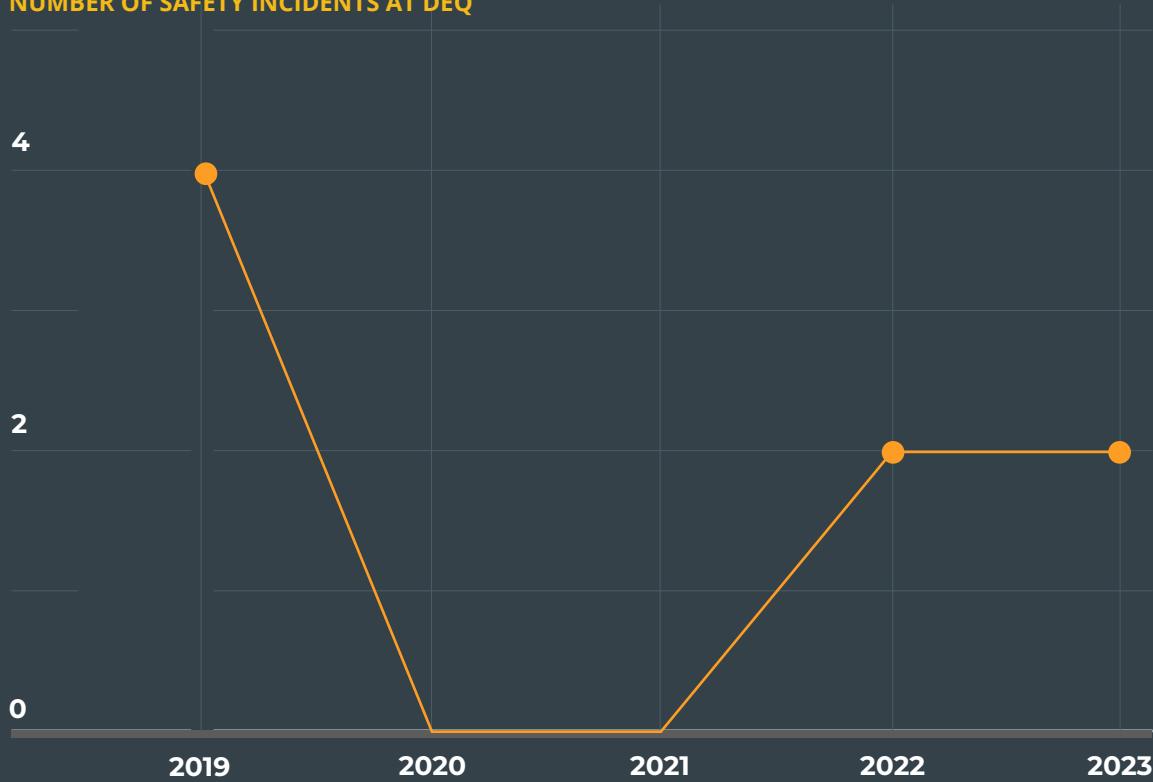
- calibração anual dos detetores de hidrogénio existentes nos laboratórios que consomem este tipo de gás, e nas respetivas "courettes".

- Promovida, como habitualmente, a recolha dos resíduos químicos dos laboratórios de ensino e investigação;

Em 2023 manteve-se o registo e acompanhamento de incidentes de ambiente e segurança, sendo o número das ocorrências indicados na figura abaixo.

NÚMERO DE OCORRÊNCIAS DE SEGURANÇA NO DEQ

NUMBER OF SAFETY INCIDENTS AT DEQ



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 2023:

- 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 2023, the recording and monitoring of environment and safety incidents continued, with the number of occurrences shown in the figure below.

ATIVIDADES DE ENSINO

TEACHING ACTIVITIES

No ano letivo de 2022/23 o DEQ foi responsável por 651 horas letivas semanais, sendo a maioria (93 %) lecionada nas Licenciaturas e Mestrados de Engenharia Química (389 h), Bioengenharia (119 h), Engenharia do Ambiente (95 h), no Programa Doutoral de Engenharia Química e Biológica (26 h) e no Programa Doutoral de Engenharia do Ambiente (3 h). Considerando apenas o primeiro e segundo ciclo de estudos, o DEQ serviu 563,5 estudantes em equivalentes a tempo integral (ETI), o que correspondeu em média a 310,5 horas por semana lecionadas em cada semestre. Adicionalmente, foram também lecionadas em média 15,1 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 27,8 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. Contou ainda com a colaboração de três especialistas na área de projeto, petróleos e emissões gasosas, respetivamente o Eng.^º Vítor Pinto, o Eng.^º Manuel Leão Tavares 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 7,99 docentes ETI.

In the 2022/23 academic year, DEQ was responsible for 651 teaching hours, most of which (93 %) were taught in the BSc and MSc degrees in Chemical Engineering (389 h), Bioengineering (119 h), Environmental Engineering (95 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 563,5 full-time equivalent (FTE) students, which corresponded on average to 310.5 hours per week taught in each semester. Additionally, an average of 15.1 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 27.8 FTE teachers.

In addition to the teachers integrated in the university career, DEQ also had the contribution of teaching service provided by researchers of the R&D units based at DEQ. It also had the collaboration of three specialists in the areas of design, petroleum and gaseous emissions, respectively Vítor Pinto, Manuel Leão Tavares and Júlio Paiva, as well as part-time fixed-term contract teachers, mainly PhD researchers and PhD students. This teaching service corresponded to 7.99 teaching FTE.

DOCENTES CONVIDADOS
INVITED PROFESSORS

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

Para além da participação nos cursos conferentes de grau o DEQ foi responsável em 2022/23 por 8 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;
- SAFE - Segurança química e microbiológica em laboratórios de investigação;
- Tecnologia de Tintas e Revestimentos;

Em 2023 , no âmbito do Plano de Recuperação e Resiliência, através do «Programa de Formação Multidisciplinar da U.Porto – Impulso Jovens STEAM & Impulso Adultos», o DEQ propôs a criação de 11 unidades de formação contínua: i) Armazenamento de energia; ii) Caraterização e processamento de materiais poliméricos; ii) Engenharia sustentável: conceitos e ferramentas; iv) Hidrogénio e combustíveis sintéticos; v) Hidrogénio Verde – produção, armazenamento, transporte e usos finais; vi) Higiene e Segurança Química e Biológica; vii) Nanoformulações na industria química; viii) Programação em Python: fundamentos e aplicações em Engenharia Química; ix) Reatores Químicos Catalíticos; x) Simulação e técnicas de análise de dados de processos; xi) Tecnologias de desinfeção.

In addition to the participation in degree conferring courses DEQ was responsible in 2022/23 for 8 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;
- SAFE - Chemical and microbiological safety in research laboratories;
- Technology of Paints and Coatings;

In 2023, as part of the Recovery and Resilience Plan, through the 'U.Porto Multidisciplinary Training Programme - Impulso Jovens STEAM & Impulso Adultos', DEQ proposed the creation of 11 continuing education units: i) Energy storage; ii) Characterization and processing of polymeric materials; iii) Sustainable engineering: concepts and tools; iv) Hydrogen and synthetic fuels; v) Green Hydrogen - production, storage, transport and end-uses; vi) Hygiene and Chemical and Biological Safety; vii) Nanoformulations in the chemical industry; viii) Python programming: fundamentals and applications in Chemical Engineering; ix) Catalytic Chemical Reactors; x) Process simulation and data analysis; xi) Disinfection Technologies.

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 189 vagas às quais concorreram 916 candidatos.

Para além dos estudantes que ingressaram pelo CNA, matricularam-se adicionalmente, provenientes de outros regimes especiais de acesso, 22 novos estudantes na Licenciatura de Engenharia Química, 23 novos estudantes na Licenciatura de Bioengenharia e 5 novos estudantes na Licenciatura de Engenharia do Ambiente.

Considerando apenas a 1^a fase do CNA, verificou-se que os três ciclos de estudo em que o DEQ participa mais ativamente têm uma razão entre procura e oferta superior a 3 e um índice de satisfação de procura (razão entre o número de candidatos em 1^a opção e as vagas disponibilizadas) superior a 1 para a L.EQ (1,22) e L.BIO (2,34) e de 0,91 no caso da L.EA. As classificações de ingresso do último candidato colocado na 1^a fase foram de 170,8 para a L.EQ, 141,5 para a L.EA e 186,5 para a L.BIO. É de destacar que, a nível nacional, a L.BIO foi o 7º curso com a nota de acesso mais elevada. A nível dos Mestrados de Continuidade foram fixadas 98 vagas adicionais às quais concorreram 96 candidatos que preencheram 24 das vagas disponíveis (52,0 %).

No quadro e figuras seguintes, apresentam-se os dados relativos aos ingressos, número de inscritos e diplomados em 2022/23. Os temas das dissertações de mestrado cujas provas públicas ocorreram em 2022/23 estão elencadas no anexo II.

INGRESSOS, POPULAÇÃO E DIPLOMADOS (1^a FASE)

ADMISSIONS, POPULATION AND GRADUATES (1ST STAGE)

CURSO PROGRAMME	VAGAS VACANCIES	CANDIDATOS APPLICANTS	COLOCADOS PLACED	INSCRITOS ENROLLED	DIPLOMADOS GRADUATES
L.EQ	63	353	63	294	60
L.BIO	92	503	93	292	71
L.EA	34	184	34	131	25
M.EQ	25	26	17	165	73
M.BIO	15	12	9	172	72
M.EA	15	23	16	95	41

ADMISSIONS, POPULATION AND GRADUATES

Every year, at national level, the National Access Competition (NAC) is organised by the Directorate-General of Higher Education. The competition is organised in three phases, the third of which is optional. For the three DEQ degree programmes 189 vacancies were set for this entrance system, to which 916 candidates applied.

In addition to the students who entered through the NAC, 22 new students from other special access regimes enrolled in the Chemical Engineering degree programme, 23 new students in the Bioengineering degree programme and 5 new students in the Environmental Engineering degree programme.

Considering only the 1st phase of the NAC, the three study cycles in which DEQ participates more actively have a demand-to-supply ratio higher than 3 and a demand satisfaction index (ratio between the number of applicants in the 1st option and the number of available places) higher than 1 for L.EQ (1.22) and L.BIO (2.34) and of 0.91 in the case of L.EA. The entry grades for the last candidate placed in the 1st phase were 170.8 for L.EQ, 141.5 for L.EA and 186.5 for L.BIO. It is worth noting that, at a national level, L.BIO was the 7th course with the highest admission mark.

As for the Continuity Masters, 98 additional vacancies were set, to which 96 candidates applied and filled 24 of the available vacancies (52,0 %).

The following table and figures present the data regarding admissions, number of enrolled students and graduates in 2022/23. The subjects of the Master's dissertations whose public examinations took place in 2022/23 are listed in Annex II.

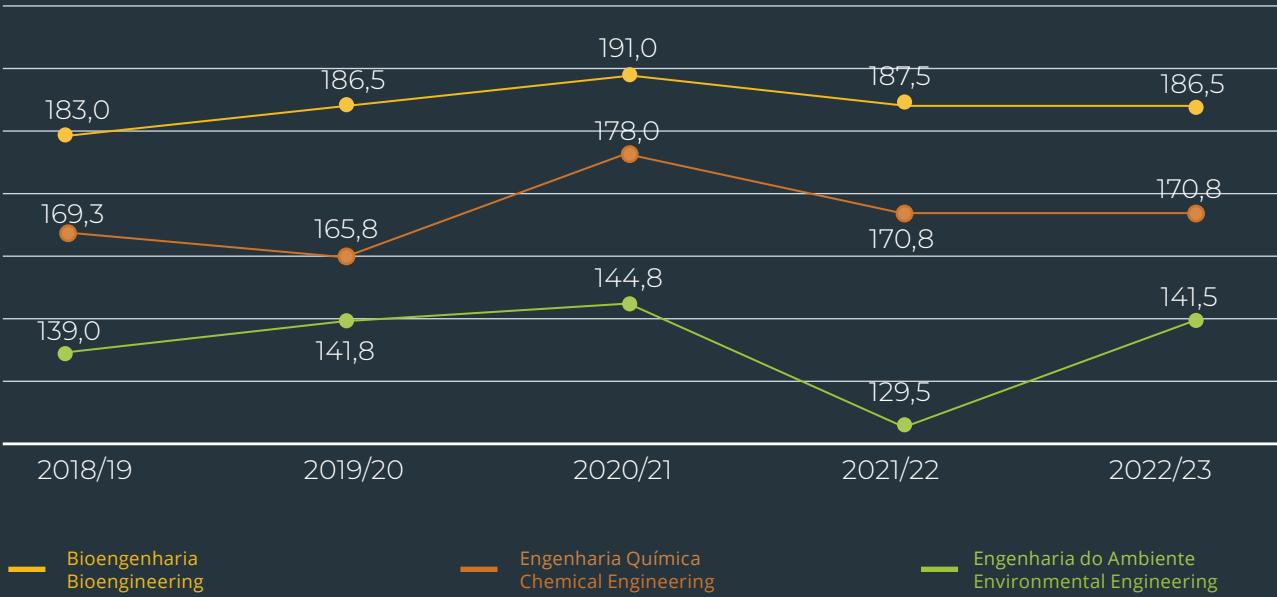
Foram atribuídos pela FEUP 11 diplomas de reconhecimento pedagógico a docentes do DEQ, correspondentes a 17 % dos diplomas atribuídos na FEUP. A atribuição destes diplomas tem como objetivo reconhecer o mérito pedagógico e incentivar a qualidade nas actividades de ensino/aprendizagem. A lista dos galardoados encontra-se elencada no anexo VI.

Eleven pedagogical recognition diplomas were awarded by FEUP to DEQ teachers, corresponding to 17 % of the diplomas awarded. The purpose of these diplomas is to recognise pedagogical merit and encourage quality in teaching/learning activities. The list of the winners can be found in Annex VI.



CLASSIFICAÇÕES MÍNIMAS DE INGRESSO (1^a 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/~mentorafeup/>

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 2023. 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.





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/~mentorafeup/>

As part of the mentoring program, a reception was held for new Chemical Engineering, Environmental Engineering and Bioengineering students between 11 and 13 September 2022. 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, e promovidas palestras com oradores convidados. No ano letivo de 2022/23 foram realizadas 14 visitas de estudo e 9 palestras por oradores convidados 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 2022/23 trinta e sete estudantes efetuaram os seus estágios em ambiente empresarial em 23 empresas, nomeadamente: AgroGrIN Tech, Amnispura, Amorim Cork, CeNTI, Formulab, Frulact, Gran Cruz, ILOF, INEGI, INL, ISQ, Licores Xarão, NGC, Novarroz, Superbock, Teprel, Barbot, Bondalti, Bosch Car Multimédia, Colep, Cork Supply, Hovione e Navigator.

VISITAS DE ESTUDO 2022/23

STUDY VISITS 2022/23

UNIDADE CURRICULAR CURRICULAR UNIT	EMPRESA COMPANY	ESTUDANTES STUDENTS
BIOENGENHARIA BIOENGINEERING		
Tecnologia Alimentar	Super Bock Casa da Cerveja	17
ENGENHARIA DO AMBIENTE ENVIRONMENTAL ENGINEERING		
Introdução à Engenharia do Ambiente	ETA de Lever	45
Laboratórios de Ciências do Ambiente II	ETAR do Freixo	33
Tecnologias e Sistemas de Tratamento de Resíduos Sólidos I	LIPOR II	37
	Suldouro	37
Tecnologias e Sistemas de Tratamento de Resíduos Sólidos II	Cimpor Souselas e Ecideal Coimbra	10
ENGENHARIA QUÍMICA CHEMICAL ENGINEERING		
Laboratórios de Engenharia Química I	Bondalti	
	Cires	
	Dow	23
	DS Smith	
Laboratórios de Engenharia Química II	Dow	25
	RAR	30
	SuperBock	34
Química Industrial para Engenharia Química	Tintas CIN	24

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, and lectures were promoted with guest speakers. In the 2022/23 academic year, which marked the return to these activities after the pandemic period, 14 study visits and 9 talks by guest speakers 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 2022/23 thirty-seven students carried out their internships in a business environment in 23 companies, namely: AgroGrIN Tech, Amnispura, Amorim Cork, CeNTI, Formulab, Frulact, Gran Cruz, ILOF, INEGI, INL, ISQ, Licores Xarão, NGC, Novarroz, Superbock, Teprel, Barbot, Bondalti, Bosch Car Multimédia, Colep, Cork Supply, Hovione, Navigator.

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 2022/23 são elencadas no anexo III.

Durante o ano letivo de 2022/23, 39 estudantes de Engenharia Química, 9 de Engenharia do Ambiente 54 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 70,8 estudantes ETI (30,6 em Engenharia Química, 22,4 em Engenharia do Ambiente e 17,8 em Bioengenharia) oriundos de outras Universidades, nacionais e internacionais.

Em 2022/23, a professora Maria do Carmo Pereira foi a responsável pelos programas de mobilidade em Bioengenharia, sendo, respetivamente, o professor Luís Miguel Madeira e a professora Luísa Andrade os coordenadores do programa Erasmus Estágios e do programa Erasmus Estudos, ambos em Engenharia Química.

Student Mobility Award, 2023

Alexandra Antunes (Chem Eng student), European Federation of Chemical Engineering.

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 2021/22 academic year are listed in Annex III.

In 2022/23, 39 students of Chemical Engineering, 9 of Environmental Engineering 54 of Bioengineering attended at least one semester at another university or a foreign company under the various mobility programmes. In this same period, 70.8 FTE students (30.6 in Chemical Engineering, 22.4 in Environmental Engineering and 17.8 in Bioengineering) from other national and international Universities attended these study cycles.

In 2022/23, Professor Maria do Carmo Pereira was responsible for the mobility programmes in Bioengineering and Professor Luís Miguel Madeira and Professor Luísa Andrade were the coordinators of the Erasmus Internships programme and the Erasmus Studies programme, both in Chemical Engineering.



- Olga Monago Maraña, "Excitation-emission matrices in combination with PARAFAC for analytical applications", 14/12/2023.
- Valérie Keller, "Heterogeneous Photocatalysis for Solar Fuels", 23/06/2023.
- M. Ali Haider, "Rational Design of a Double Perovskite Material for Solid Oxide Fuel Cell Electrodes", 23/05/2023.
- Jorge Moreno Delgado, "Urban Mobility and Sustainability", 02/05/2023.
- Oscar Rodríguez, "Phase equilibria for separation processes: Aqueous Two-Phase Systems for valorization of Cheese Whey", 28/03/2023.
- Paulo Aloísio Augusto, "Magnetism and Magnetic Particles in Environment Remediation, Chemical Engineering Processes and Biotechnology", 21/03/2023.
- Luísa Hora de Carvalho, "Wood-based composites for construction and furniture applications", 14/03/2023.
- José Mendes, "Science and Political Decisions", 28/02/2023.
- João Matos Fernandes, "Engineering for Sustainability", 14/02/2023.

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 doutoriais 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 2022/23 estavam inscritos 143 estudantes no PDEQB, 43 estudantes PDEA e 11 estudantes no PDERPQ. Desses, 18 correspondem a novas inscrições no PDEQB, 9 no PDEA e 5 no PDERPQ.

Sob a supervisão de docentes e/ou investigadores do DEQ, concluíram em 2023 o seu doutoramento 28 estudantes 24 dos quais no PDEQB, 3 no PDEA e 1 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.

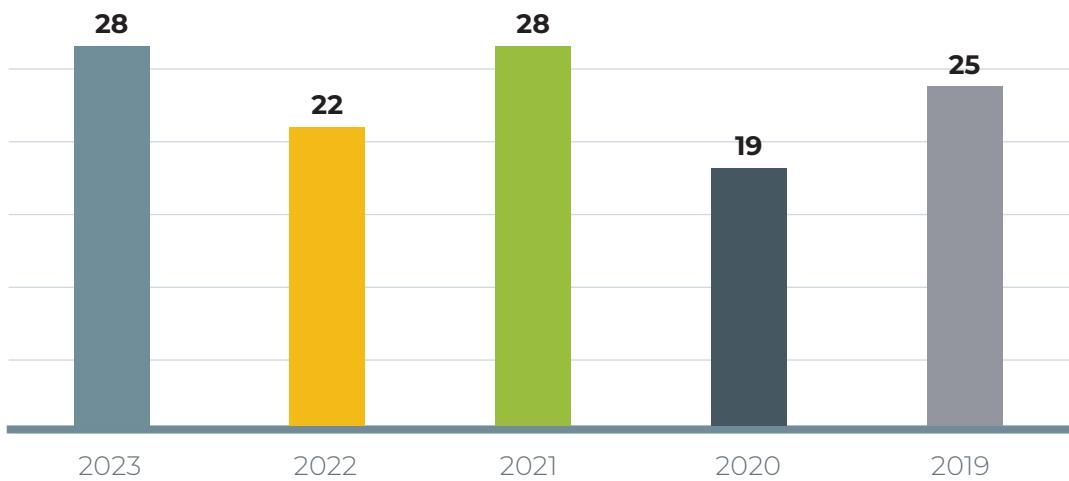
POSTGRADUATE STUDIES

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 2022/23 there were 143 students enrolled in the PDEQB, 43 students in the PDEA and 11 students in the PDERPQ. Of these, 18 correspond to new enrolments in PDEQB, 9 in PDEA and 5 in PDERPQ.

Under the supervision of DEQ faculty and/or researchers, 28 students completed their PhD in 2023, 24 of them in the PDEQB, 3 in PDEA and 1 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 IC&DT

SR&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 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 the 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 or closely related to chemical, environmental and biological engineering, and is organised 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 develops scientific activity within these units, while the rest develops their activity either 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.



Na procura de criação de sinergias e na promoção da colaboração interdepartamental realizou-se em 2023 o primeiro encontro entre investigadores do Departamento de Engenharia Química (DEQ) e do Departamento de Química e Bioquímica da Faculdade de Ciências da Universidade do Porto (DBQ-FCUP). Durante o encontro, foram realizadas apresentações de projetos em andamento, discutidas as principais áreas de interesse comum e identificadas oportunidades de investigação conjunta.

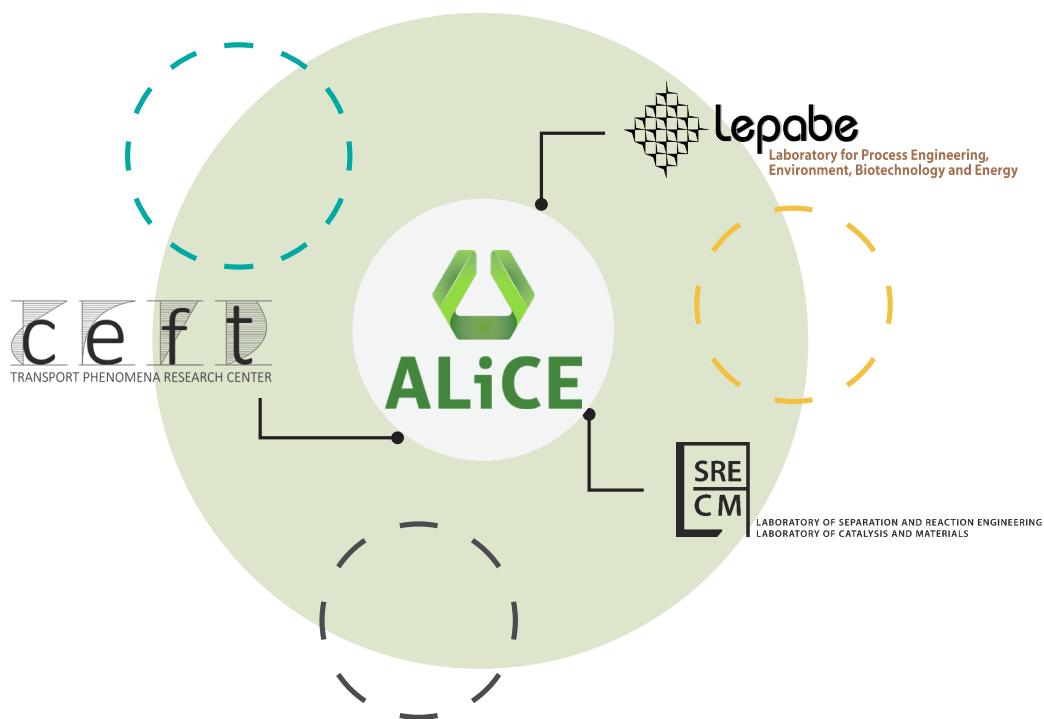
In a bid to create synergies and promote interdepartmental collaboration, the first meeting between researchers from the Department of Chemical Engineering (DEQ) and the Department of Chemistry and Biochemistry of the Faculty of Sciences of the University of Porto (DBQ-FCUP) was held in 2023. During the meeting, presentations were made of ongoing projects, the main areas of common interest were discussed and opportunities for joint research were identified.

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 2023 os docentes e investigadores do DEQ foram responsáveis pela autoria e edição de 1 livro, pela publicação de 13 trabalhos como capítulos de livros e um total de 300 artigos em revistas internacionais e nacionais, 292 dos quais publicados em revistas indexadas no WoS e/ou SCOPUS.

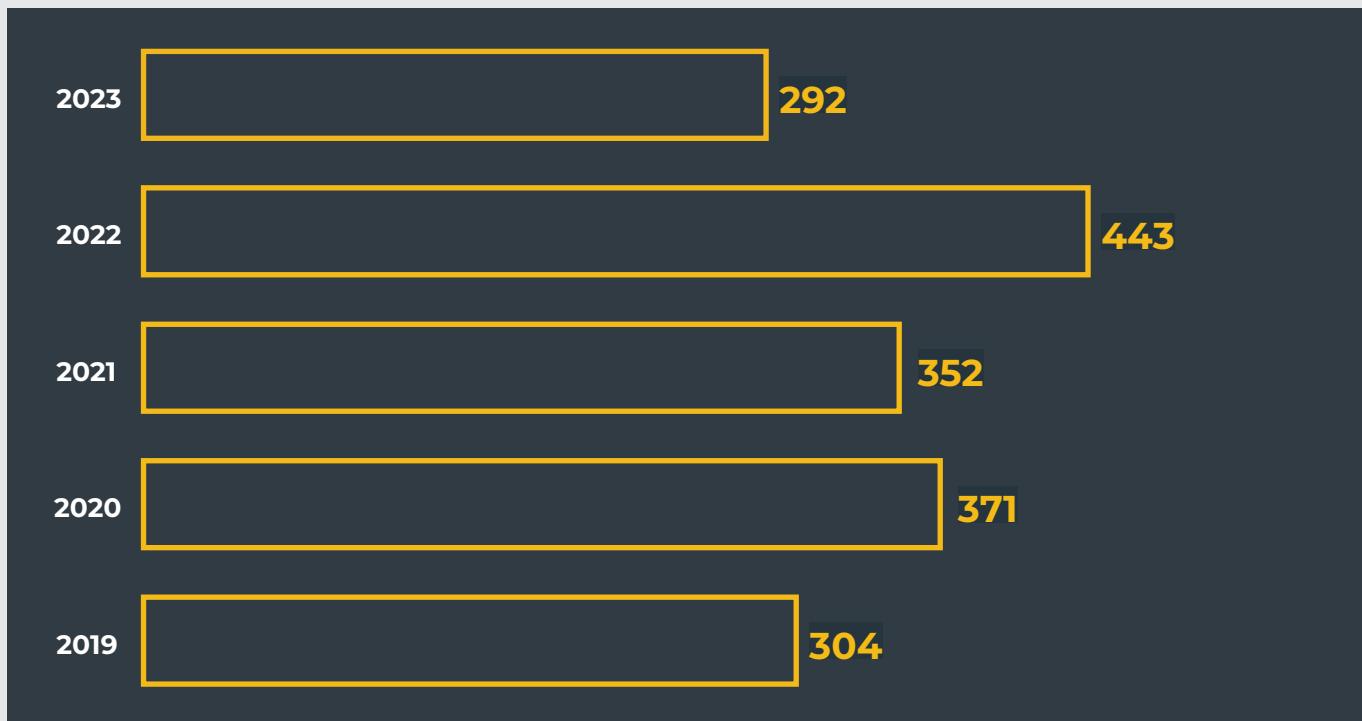
Neste mesmo período foram também iniciados 30 novos projetos de investigação que gerarão cerca de 8,1 milhões de euros de receita para a FEUP.

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 advices, industrial prototypes and technology transfer. In 2023 DEQ professors and researchers were responsible for the authorship and the edition of 1 book, for the publication of 13 works as book chapters and a total of 300 articles in international and national journals, 292 of which published in journals indexed in WoS and/or SCOPUS.

In the same period, 30 new research projects started, with a budget of about 8.1 million euros.

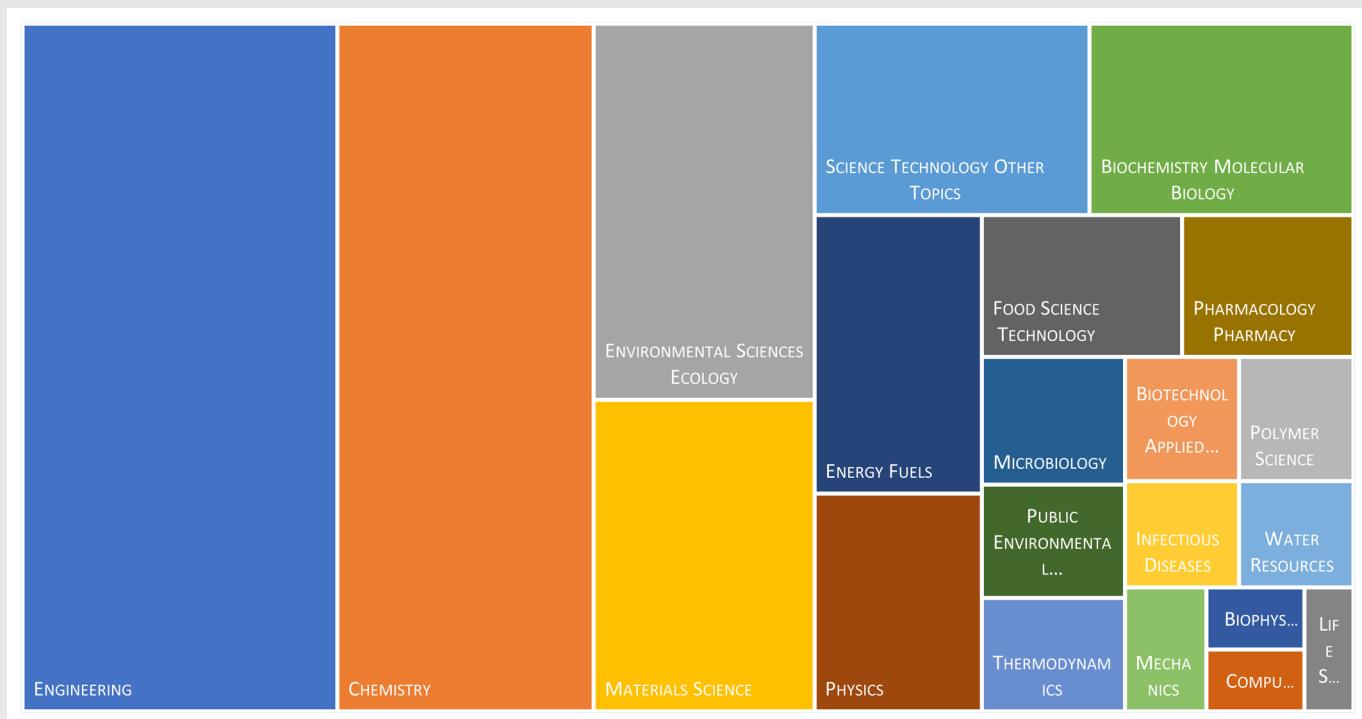


Nº DE ARTIGOS PUBLICADOS EM REVISTAS REFERENCIADAS NO JCR E/OU SCOPUS
NUMBER OF ARTICLES PUBLISHED IN JOURNALS INDEXED IN WOS AND/OR SCOPUS



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 2023. A análise devolveu resultados para 273 (215, no caso da análise dos Objectivos de Desenvolvimento Sustentável) de um total de 292 artigos em 2023. 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 registo.

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 2023. The analysis returned results for 273 (215 in the case of the Sustainable Development Goals analysis) out of a total of 292 articles in 2023. 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.

RESPONSÁVEL RESPONSIBLE	TÍTULO TITLE	FEUP FEUP	GLOBAL TOTAL
COMISSÃO EUROPEIA			
Adélio Mendes	SINNOGENES :: Storage Innovations for Green Energy Systems	344 909,00 €	7 964 445,00 €
Adrián Silva	RESURGENCE :: Industrial Water Circularity: reuse, resource recovery and energy efficiency for greener digitised eu processes	496 628,75 €	9 222 570,50 €
	DIGIGREENEDUCATION :: Gender, Digitalization, Green: Ensuring a Sustainable Future for all in Europe	48 000,00 €	250 000,00 €
Ana Rita Ribeiro	ERA-ARE :: A new ERA for Environmental Risk Assessment: Chirality as a tool towards environmentally safe pharmaceuticals	1 262 450,00 €	1 499 950,00 €
Darla Goeres Nuno Azevedo	e.Biofilm :: Creation of a group of Excellence on Engineered Biofilms	2 498 245,00 €	2 498 245,00 €
FUNDAÇÃO PARA A CIÊNCIA E A TECNOLOGIA			
Adélio Mendes	TanPT :: Célula solar multijunção de perovskita eficiente, estável e amiga da indústria	49 987,55 €	49 987,55 €
	IRONFLOW :: Baterias de escoamento neutras e solúveis à base de ferro, para armazenamento estacionário de energia	102 750,37 €	249 949,66 €
Adrián Silva	DRopH2O :: Qualidade da água de consumo: alerta precoce e remoção de microcontaminantes por materiais inovadores à base de carbono	187 049,60 €	249 758,20 €
Ana Pereira	LegioFilms :: Avaliar o papel da arquitetura dos biofilmes na colonização de Legionella e no risco de libertação em rede de águas hospitalares com recurso a monitorização integrada	204 427,42 €	229 427,42 €
Ana Rita Ribeiro	STAR :: Processos ambientais eSTereoseletivos em Antibióticos: contributo para a Resistência	163 361,75 €	249 912,05 €
Artur Pinto	PhotoRect :: Novas formulações farmacêuticas para fototerapia do cancro retal	50 000,00 €	50 000,00 €
Carla Fonseca	F-CAT :: Uma ferramenta catalítica para a transformação de PFAS em águas para consumo em compostos orgânicos degradáveis	49 962,00 €	49 962,00 €
Cláudia Silva	SuN2Fuel :: Produção foto-assistida de combustíveis verdes baseados em amoníaco	228 362,76 €	228 362,76 €
Filipe Mergulhão	NanoBioMitig :: Sistemas de nanoengenharia concebidos com fitoquímicos naturais para a mitigação da bioincrustação em superfícies industriais	41 696,29 €	249 979,89 €
João Mário Miranda	MultiBlood :: Análogo do sangue multidimensional para testes in vitro	49 949,25 €	49 949,25 €
Luciana Gomes	BacAllFree :: Controlo da contaminação por bactérias e alergénios na indústria alimentar usando superfícies biomiméticas	247 293,50 €	247 293,50 €
Luís Madeira	WASTENERGY :: Valorização de Resíduos de Destilarias em Energia Renovável	99 567,00 €	99 567,00 €
Manuel Fernando Pereira	CORKCap :: Elétrodos derivados de cortiça para supercondensadores eco-sustentáveis - uma nova solução para armazenamento de energia	73 035,60 €	249 218,70 €

RESPONSÁVEL RESPONSIBLE	TÍTULO TITLE	FEUP FEUP	GLOBAL TOTAL
Maria João Regufe	H2O-3DCapture :: Water harvesting – sustainable solution based on a gas-adsorption process using innovative 3D-printed hybrid materials	49 845,86 €	49 845,86 €
Nuno Azevedo	NAMSal :: Mímicos de ácidos nucleicos como uma nova ferramenta para o combate de salmonelose na indústria pecuária	180 938,34 €	249 473,82 €
Tânia Silva	CO2-to-CH4 :: Tecnologia de ponta solar-calor para promover a metanação foto-termocatalítica de CO2 rumo a uma economia com impacto neutro no clima	49 950,00 €	49 950,00 €
Tânia Tavares	SeaProPep :: SeaProPep - Algas marinhas como fonte sustentável de Proteínas e Péptidos bioativos	49 987,12 €	49 987,12 €
FUNDAÇÃO "LACAIXA"			
Isabel Martins	CyChest :: CyChest - Gestão integrada do ciclo do castanheiro no Parque Natural de Montesinho	149 442,82 €	249 773,52 €
IAPMEI			
Adélio Mendes	H2Enable :: H2Enable	1157 101,63 €	147814 482,00 €
POCTEP			
Adélio Mendes	HI_MOV :: Corredor Tecnológico Transfronterizo de Movilidad con Hidrógeno Renovable	112 347,16 €	2175 842,30 €
Alexandra Pinto	AIHRE :: Análisis e Impulso del H2 REnewable en la región POCTEP	55 160,55 €	1511 799,44 €
Vítor Vilar	BlueWWater :: Control, tratamiento y reducción de microplásticos y contaminantes emergentes en aguas residuales urbanas y en el medio costero transfronterizo.	104 763,23 €	1357 053,57 €
UNIVERSIDADE DO PORTO			
Adélio Mendes	IJUP-Galp-1-3 :: Captura e recuperação de dióxido de carbono diretamente do ar recorrendo a uma solução alcalina	5 000,00 €	5 000,00 €
Alexandra Pinto	SOS Hydro-Mar :: S.O.S. - HYDRO-MAR - Scale-up of an Off-grid system Sodium Borohydride - HYDROgen for MARtime applications: Design and experimental studies	5 000,00 €	5 000,00 €
Joana Loureiro	NanoAntiAge :: Nanotech supplementation natural compounds-based to improve the mental well-being of the elderly	5 000,00 €	5 000,00 €
TOTAL		8 122 212,55 €	177 211 786,11 €



O professor Francisco Xavier Malcata foi galardoado com o Prémio de Excelência Científica 2023 atribuído pela FEUP aos seus investigadores com o objetivo de reconhecer a excelência do corpo docente e dos investigadores nas suas atividades científicas.

Professor Francisco Xavier Malcata was awarded the 2023 Scientific Excellence prize, awarded by FEUP to its researchers with the aim of recognising the excellence of the faculty and researchers in their scientific activities.



24 docentes investigadores do DEQ receberam o diploma de reconhecimento Científico, correspondente a 46 % 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.



24 DEQ researchers received the Scientific Recognition Diploma from FEUP, corresponding to 46 % 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.



Manuel Simões

Highly cited

Departamento de Engenharia Química

PUBLICATIONS
181TOTAL TIMES CITEI
694

A J.L. Figueiredo, CIBIQ 2023 R+D+i Excellence Medal, Congresos Iberoamericanos de Ingeniería Química (CIBIQ), 2023

C Manuel Simões integrou pelo terceiro ano consecutivo o índice Highly Cited Researchers (Clarivate Analytics), que reconhece, anualmente, os cientistas mais influentes a nível mundial, com base no número de citações das respetivas publicações.

E F. X. Malcata, Distinguished Career Award in honor of Carl R. Fellers, Institute of Food Technologists (IFT), 2023

B Ana Rita Lado fez parte das homenageadas no livro "Mulheres na Ciência", Edição 2023.

D A.E. Rodrigues, Doutor Honoris Causa pela Universidade Federal de Pernambuco, Brasil, 2023.

F L. M. Madeira, vencedor do prémio Air Liquide Scientific Challenge 2023, no tópico "Energy storage using essential small molecules", com a ideia intitulada "CYCON - Cyclic device for continuous CO₂ capture and conversion into CH₄".



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 2023 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 2023, os principais cargos por eles ocupados em diversas organizações e os prémios e reconhecimentos pela sua atividade.

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 2023 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 2023 DEQ had active and relevant participation in 7 approved CoLABs NET4CO₂, VGCoLAB, ARCP, HyLab, BIOREF, MORE and WaterCore.

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 2023 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 2023, the main positions held by them in various organisations and the awards and recognition for their activity.



	SHANGAI RANKING	NTU RANKING	QS RANKING
WORLD	151-200	143	101-150
EUROPE	Top 30	Top 20	Top 50
PORTUGAL	1-2	1-2	1-2

LIGAÇÃO À SOCIEDADE

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 configuraram prestações de serviços de elevado valor acrescentado.

Em 2023 foram registados 38 contratos de prestação de serviços, com 16 instituições diferentes, que resultaram numa receita global de 423,7 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 2023, 38 service contracts were registered with 16 different institutions, resulting in a global revenue of 423.7 k€.

BLØM	 BONDALTI EVOLVING CHEMISTRY	 CENTI Centre for Nanotechnology and Smart Materials	DGRM
	 EDA Electricidade dos Açores	F.H.RECYCLING	
INSTITUTO DA CONSTRUÇÃO			SAI Segurança Alimentar Integrada
	 Smart Innovation® Together with Nanotechnology	 CHALMERS UNIVERSITY OF TECHNOLOGY	

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.

Em 2023, o DEQ esteve envolvido em atividades resultantes de dois protocolos de colaboração entre o DEQ/FEUP e:

i) 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 2023 foram acompanhados dois projetos:

- "Desenvolvimento de pastas à base de celulose para fabrico aditivo", supervisionado no DEQ pela professora Cláudia Silva e pelos investigadores Ricardo Santos e Yaidelin Manrique.
- "Extração de celulose de resíduos alimentares e sua utilização para produção de filmes biodegradáveis", supervisionado no DEQ pela professora Cláudia Silva, pelos investigadores Ricardo Santos e Isabel Martins.

ii) Projeto SEI – Sociedade, Escola e Investigação

Parceria entre a Câmara Municipal do Porto e estabelecimentos de ensino público da cidade com o objetivo de promover a literacia científica e alavancar o nível de conhecimento dos jovens. Integrado neste projeto decorreu em 2023 uma atividade envolvendo o DEQ, a Câmara Municipal do Porto e o Agrupamento de Escolas Alexandre Herculano:

- "Ciência e Tecnologia: Como contribuem para a sustentabilidade?", supervisionado no DEQ pela professora Margarida Bastos e pela investigadora Daniela Falcão.

Em 2023, o DEQ recebeu cerca de 666 visitantes, na grande maioria estudantes e alguns professores que os acompanharam nas visitas, provenientes de várias escolas do ensino secundário em Portugal mas também do estrangeiro, no âmbito de uma atividade do programa Erasmus+. Integrando o programa divulgação da FEUP junto da escolas, 'RoadShow às Escolas', o DEQ participou nas atividades desenvolvidas junto de 2 escolas da região.

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.

In 2023, DEQ was involved in activities resulting from two collaboration protocols between DEQ/FEUP and:

i) Agrupamento de Escolas da Maia

This partnership, coordinated by the DEQ, consists of consultancy, technological and laboratory support for small research initiation and extension activities. Two projects were monitored in 2023:

- "Development of cellulose-based pastes for additive manufacturing", supervised at DEQ by professor Cláudia Silva and researchers Ricardo Santos and Yaidelin Manrique.
- "Extraction of cellulose from food waste and its use in the production of biodegradable films", supervised at DEQ by professor Cláudia Silva and researchers Ricardo Santos and Isabel Martins.

ii) Projeto SEI – Sociedade, Escola e Investigação

A partnership between Porto City Council and the city's public schools with the aim of promoting scientific literacy and boosting young people's level of knowledge. As part of this project, an activity involving the DEQ, Porto City Council and the Alexandre Herculano School Group took place in 2023:

- 'Science and Technology: How do they contribute to sustainability?', supervised at DEQ by Professor Margarida Bastos and researcher Daniela Falcão

In 2023, DEQ welcomed around 666 visitors, the vast majority of whom were students and some teachers who accompanied them on visits, from various secondary schools in Portugal but also from abroad, as part of an Erasmus+ programme activity. As part of FEUP's outreach programme to schools, 'RoadShow to Schools', DEQ took part in activities at two schools in the region.

ESCOLA SCHOOL	DATA DATE	ÂMBITO SCOPE	PARTICIPANTES PARTICIPANTS
VISITANTES VISITORS			
Escola Secundária Diogo Macedo (V. N. Gaia)	25/01/2023	EQ	17
Colégio de Lamas (Santa Maria de Lamas)	12/05/2023	EQ	25
SPE 2022 (63 escolas)	28-30/03/2023	EQ EA BIO ALiCE	404
Escola Secundária de Marco de Canaveses (Marco de Canaveses)	12/05/2023	EQ	25
Escola Secundária Alexandre Herculano (Porto) - Project Erasmus+	31/05/2023	EQ EA BIO ALiCE	49
Grande Colégio Universal (Porto)	28/11/2023	EQ	36
Escola Secundária João Gonçalves Zarco (Matosinhos)	07/12/2023	EQ BIO	54
Escola Secundária de Monserrate (Viana do Castelo)	13/12/2023	EQ BIO	56
VISITADOS VISITED			
Escola Secundária de Monserrate (Viana do Castelo)	13/01/2023	EQ	-
Escola Secundária Santa Maria Maior (Viana do Castelo)	13/01/2023	EQ	-

EQ - Engenharia Química; BIO - Bioengenharia; EA - Engenharia do Ambiente

EQ - Chemical Engineering; BIO - Bioengineering; EA - Environmental engineering

Project Erasmus+
Learn from the past
to build a greener future
Visit to FEUP
+ 2:30 p.m.-5:30 p.m.
Target audience: 37 high school students and 12 teachers from several nationalities.

PROGRAM

02:30 PM @E107	LECTURE "Unveiling a sustainable pathway for fuel energy decarbonization", Prof. Adelio Mendes
03:15 PM @M102	Hydrogen: water electrolysis and fuel cells
04:00 PM @E105	New solar solutions to power our daily routines
04:45 PM @WWTP + E303	Biomass to synthetic fuels
05:30 PM @EQ entry	END

THE DIRECTOR OF THE CHEMICAL ENGINEERING DEPARTMENT, PROF. FERNANDO PEREIRA, WILL RECEIVE THE ERASMUS+ GROUP

FEUP Faculdade de Engenharia da Universidade do Porto | ERASMUS+ | ALiCE | CEFT | Lepabe | INESC TEC

No âmbito do programa Erasmus+, projeto "Learn From the Past to Build a Greener Future", o DEQ acolheu 37 estudantes e 12 professores de várias nacionalidades. O programa preparado inclui palestras e atividades realizadas nos laboratórios de ensino e investigação do DEQ.

As part of the Erasmus+ programme project 'Learn From the Past to Build a Greener Future', DEQ welcomed 37 students and 12 teachers from various nationalities. The programme included lectures and activities held in DEQ's teaching and research laboratories.

RELAÇÃO COM ANTIGOS ESTUDANTES

Em 2023 o DEQ recebeu com grande satisfação duas visitas de dois grupos de alumni no âmbito das suas comemorações, um dos grupos celebrou os 60 anos de entrada no curso de Engenharia Química e o outro celebrava os 50 anos de conclusão do mesmo curso. Os antigos estudantes foram recebidos pelo Sr. Diretor da FEUP, professor Rui Calçada e pela direção do DEQ, representada numa das visitas pelo professor Fernando Pereira, Diretor do DEQ, e noutra pelo professor Manuel Alves, que os acompanharam numa visita guiada ao departamento. O DEQ está sempre disponível para receber os seus alumni naquela que é também a sua casa, proporcionando um ambiente acolhedor e propício ao reencontro e à partilha de experiências.



À Faculdade de Engenharia da UP
Homenagem dos alunos do Curso de
Engenharia Química de 1963/1966
na Comemoração dos 60 anos da
entrada no Departamento de Engenharia Química
Porto, 28 de Abril de 2023

RELATIONSHIP WITH HIGH SCHOOLS

In 2023 the DEQ was delighted to receive two visits from two groups of alumni as part of its commemorations, one of the groups celebrating the 60th anniversary of entering the Chemical Engineering course and the other celebrating the 50th anniversary of completing the same course. The former students were welcomed by the Director of FEUP, Professor Rui Calçada, and by the DEQ executive board, represented on one of the visits by Professor Fernando Pereira, Director of Department, and on the other by Professor Manuel Alves, who accompanied them on a guided tour of the department. The DEQ is always available to welcome its alumni to what is also their home, providing a welcoming atmosphere that promotes the sharing of experiences.



Curso de Engenharia Química
DEQ-FEUP 1973
50º Aniversário
9 de Junho de 2023



28/04/2023

**60º Aniversário do início do curso
de Engenharia Química**
**60th anniversary of the start of the
Chemical Engineering**



09/06/2023

**50º Aniversário da conclusão do curso
de Engenharia Química**
**50th anniversary of graduation
Chemical Engineering**



EVENTOS



14/02/2023 :: Global Women's Breakfast: Como vem sendo hábito, o DEQ participou em 2023 em mais uma edição desta Iniciativa da International Union of Pure and Applied Chemistry (IUPAC). A edição do #GWB2023 teve como tema “Quebrar Barreiras na Ciência”.



17-19/03/2023 :: 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.



18/03/2023 :: Olimpíadas de Química Júnior: A FEUP acolheu uma das semifinais regionais das Olimpíadas de Química Júnior, um concurso de resolução de problemas teóricos e práticos de química, dirigidos aos estudantes do ensino básico e secundário português e organizados pela Sociedade Portuguesa de Química (SPQ) em colaboração com várias Universidades e Politécnicos. As provas práticas decorreram nos Laboratórios do DEQ e a prova teórica num anfiteatro da FEUP. Esta atividade foi organizada pelo professor Joaquim Faria e pela professora Cláudia Silva, contando também com a colaboração de investigadores, técnicos do DEQ e de estudantes do Núcleo de Estudantes de Engenharia Química.



28-30/03/2023 :: 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.

03/04/2023 :: Taça de Funcionários da UPorto 2023 em Futsal: A equipa da FEUPSal, constituída por docentes, investigadores e técnicos da FEUP, na qual se integram alguns elementos do DEQ, conquistou a Taça de Funcionários da UPorto 2023 em Futsal.



13/04/2023 :: Fórum do Ambiente: Organizado desde 2011 pelo Núcleo de Estudantes de Engenharia do Ambiente, da FEUP, pretende discutir temas de distintas áreas de intervenção da Engenharia do Ambiente. A XII edição deste evento teve como tema “Atualidade em Discussão”.



EVENTS

14/02/2023 :: Global Women's Breakfast: As usual, DEQ took part in another edition of this International Union of Pure and Applied Chemistry (IUPAC) initiative in 2023. The theme of #GWB2023 was 'Breaking Barriers in Science'.

17-19/03/2023 :: Simpósio de Bioengenharia: An annual event, organised by Bioengineering students, which aims to portray the current state of Bioengineering, encouraging communication and the sharing of knowledge between students, the academic world, industry and emerging companies in an event that encompasses Biological / Biomedical Engineering and Molecular Biotechnology.



18/03/2023 :: Olimpíadas de Química Júnior: In 2023, FEUP hosted one of the regional semi-finals of the Junior Chemistry Olympics, a competition to solve theoretical and practical chemistry problems, aimed at Portuguese primary and secondary school students and organised by the Portuguese Chemistry Society (SPQ) in collaboration with various universities and polytechnics. The practical tests took place in the DEQ laboratories and the theoretical test in the FEUP amphitheatre. This activity was organised by Professor Joaquim Faria and Professor Cláudia Silva, with the collaboration of researchers, DEQ technicians and students from the Chemical Engineering Student Group.



28-30/03/2023 :: Semana Profissão Engenheiro: Organised annually by FEUP, this event, aimed at secondary school students, once again saw the participation of DEQ in various activities spread across the teaching laboratories and the laboratories of the research units.



03/04/2023 :: Taça de Funcionários da UPorto 2023 em Futsal: The FEUPSal team, consisting of FEUP teachers, researchers and technicians, including some DEQ staff, won the UPorto Staff Cup 2023 in Futsal.



13/04/2023 :: Fórum do Ambiente: Organised since 2011 by FEUP's Environmental Engineering Student Group, the event aims to discuss topics from different areas of environmental engineering. The theme of the 12th edition of this event was 'Current Affairs in Discussion'.





20-23/04/2023 :: 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.

10-12/05/2023 :: 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 16ª 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.

07/11/2023 :: Concerto dos Investigadores: Como resultado de uma parceria entre a FEUP/Comissariado Cultural, as unidades de investigação CEFT, CITTA, CONSTRUCT, LEPABE, LSRE-LCM, os institutos de interface INESC TEC e IC – Instituto da Construção, realizou-se no Auditório da FEUP, a 5ª edição do Concerto dos Investigadores, pela Orquestra da Ópera na Academia e na Cidade (OAC). Para além da participação das unidades de investigação que lhe são afetas, o DEQ contribuiu para a divulgação do evento, recebendo um grupo de músicos da OAC, para uma curta performance, na antevéspera do evento.

16/11/2023 :: XXII 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 XXII jornadas de Engenharia Química foram subordinadas ao tema “Catalisa a Descoberta”.

20-26/11/2023 :: Semana da Ciência e Tecnologia: Durante uma semana as instituições científicas, universidades, escolas e museus abriram a suas portas proporcionando à população oportunidades de observação científica e de contacto pessoal com especialistas de diferentes áreas do conhecimento. Em 2022 as unidades de investigação sediadas no DEQ deram mais uma vez o seu contributo para esta iniciativa contribuindo com 15 atividades, pelas quais passaram 30 estudantes.

20-23/04/2023 :: Mostra da Universidade do Porto: This is an event to publicise the possibilities that the University of Porto has to offer, from academic and professional training to scientific research. The Chemical Engineering, Environmental Engineering and Bioengineering programmes and the R&D units based at the DEQ were represented at this event.



10-12/05/2023 :: IJUP: This is an annual event where U. Porto students have the opportunity to present and discuss the results of studies in which they have participated as part of research initiation projects. At the 16th edition of the IJUP, DEQ was represented on the Scientific Committee by Professor Manuel Simões and, as usual, this edition also included the participation of students linked to DEQ.



07/11/2023 :: Concerto dos Investigadores: As a result of a partnership between FEUP/Cultural Commission, the research units CEFT, CITTA, CONSTRUCT, LEPABE, LSRE-LCM, the interface institutes INESC TEC and IC - Instituto da Construção, the 5th edition of the Researchers' Concert was held in the FEUP Auditorium by the Opera in Academia and the City (OAC) Orchestra. In addition to the participation of its research units, DEQ helped publicise the event by hosting a group of OAC musicians for a short performance the day before the event.



16/11/2023 :: XXII Jornadas de Engenharia Química: As usual, the DEQ supported the organisation of a forum for the discussion of topics of interest to the training of future chemical engineers, including general topics of national interest. The theme of the XXII Chemical Engineering Days was 'Catalysing Discovery'.



20-26/11/2023 :: Semana da Ciência e Tecnologia: For a week, scientific institutions, universities, schools and museums opened their doors, providing the public with opportunities for scientific observation and personal contact with experts from different fields of knowledge. In 2023, the research units based at the DEQ once again contributed to this initiative with 15 activities, which were attended by 30 students.



RELATÓRIO DE CONTAS

FINANCIAL REPORT

Nesta secção apresentam-se as contas relativas ao exercício de 2023 (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 2023 reuniu as seguintes contribuições:

Saldo Transitado de 2022 (123 817,01 €): Este valor inclui os saldos disponíveis do Centro de Controlo Orçamental SDEQ02.

Overheads de Projetos e Prestação de Serviços ao Exterior (89 572,50 €): Esta verba 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. Este valor foi superior ao registado em 2022, o que se deve à sazonalidade associada ao encerramento dos projetos por parte das entidades financiadoras.

Overheads dos Programas Doutoriais (48 859,95 €): A dotação orçamental mais do que duplicou em comparação ao ano de 2022. Esta rubrica está dependente das transferências da FCT referentes ao pagamento das propinas associadas às bolsas de doutoramento, em que a periodicidade não está bem definida.

Orçamento atribuído pela FEUP (106 214,05 €): Este é o orçamento atribuído pela FEUP, correspondente à verba ODCl. Este valor é ligeiramente superior 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 (4 405,50 €): Esta verba refere-se a taxas pagas por utilização de recursos da FEUP pelos colaboradores externos do DEQ, tendo praticamente duplicado relativamente ao valor de 2022.

Receitas Internas (14 045,23 €): Este valor comprehende essencialmente o reembolso de despesas pagas pelo DEQ através do fundo de maneio, as despesas com gases especiais no mês de outubro (devido ao lançamento de novo concurso público) e o apoio por parte das Direções de Cursos na aquisição de licenças de software.

Receitas Externas (6,64 €): Esta verba diz respeito a regularizações de valores com fornecedores.

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 2023 (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 refer to DEQ's Budgetary Control Centres (BCC) for common funds (Current Expenses 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 income and expenses over the last 5 years.

The budget allocated to DEQ in 2023 gathered the following contributions:

Balance Carried Forward from 2022 (123 817.01 €): This value includes the available balances from Budget Control Centre SDEQ02.

Overheads from Projects and External Services (89 572.50 €): This amount comprises the percentage calculated for DEQ from the overheads of projects in which DEQ professors and researchers participate/coordinate, and 2.5 % of the invoicing related to external services rendered by the department. This value was higher than in recent years due to the seasonality associated with the closure of projects by funding entities.

Overheads from Doctoral Programmes (48 859.95 €):

The budget allocation has more than doubled compared to the year 2022. This item depends on transfers from the FCT relating to the payment of tuition fees associated with doctoral scholarships, the frequency of which is not well defined.

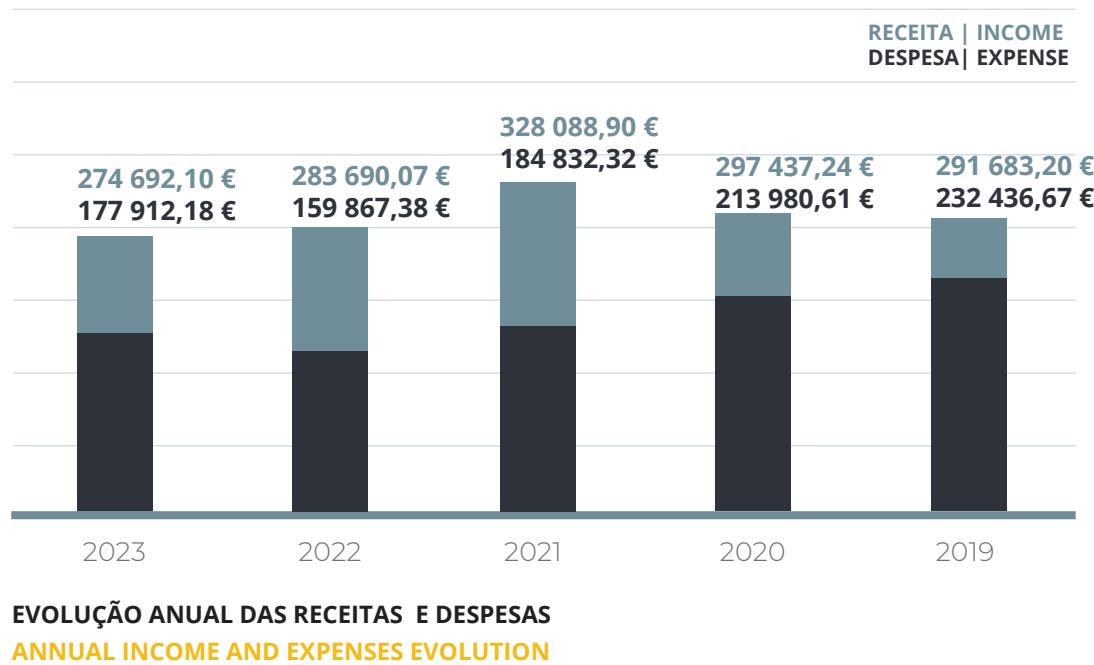
Budget allocated by FEUP (106 214.05 €): This is the budget allocated by FEUP, corresponding to the ODCI budget. This value is slightly higher than that allocated last year, and depends on the number of FTE students associated with the DEQ and the number of human resources active each year.

Fees for use of resources (4 405.50 €): This amount refers to fees paid for the use of FEUP resources by external DEQ researchers.

Internal Income (14 045.23 €): This amount essentially comprises the reimbursement of expenses paid by DEQ through the working capital, the costs of special gases in October (due the launch of a new public tender) and support from the Course Directories for the acquisition of software licences.

External income (6.64 €): This amount concerns adjustments with suppliers.

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



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	123 817,01 €
Transferência para Pagamento de Faturas de Anos Anteriores Transfer for Payment of Invoices from previous years	- €
Overheads de Projetos e Serviços ao Exterior Relativos a 2022 Project Overheads and External Services for 2022	89 572,50 €
Overheads de Programas Doutoriais Relativos a 2022 Doctoral Programme Overheads for 2022	48 859,95 €
Orçamento de Despesas Correntes e Investimentos (ODCI) Current Expenses and Investment Budget (CEIB)	106 214,05 €
Investimento Investment	- €
Distribuição de Taxas por Utilização de Recursos Relativas a 2022 Distribution of Taxes due to Resources Usage for 2022	4 405,50 €
Encargos com o Espaço Space Charges	-9 894,80 €
Receitas Internas Internal Revenues	14 045,23 €
Receitas Externas External Revenues	6,64 €
Acerto Account Settling	0,36 €
Transferências outros CCOS Transfers to other BCC	-102 334,34 €
DESPESA EXPENSE	
Internas Internal	34 101,05 €
Externa Registada e Liquida em 2023 External Registered and Settled in 2023	143 811,13 €
Recursos Humanos - Bolsas Human Resources - Grants	- €
RESULTADOS DOS CENTROS DE CUSTO ORÇAMENTAL RESULTS OF BUDGET COST CENTRES	
Total da Receita Total Revenue	274 692,10 €
Total da Despesa Total Expenditure	177 912,18 €
SALDO FINAL FINAL BALANCE	96 779,92 €

EXECUÇÃO ORÇAMENTAL EM 2023

A despesa executada pelo DEQ em 2023 foi de 177 912,18 €. No mapa de receitas e despesas por contas é elencada a distribuição das despesas em 2023 pelas diferentes contas, e no mapa de histórico de receitas/despesas consolidadas é apresentada uma análise comparativa para os últimos anos.

Regularizações internas: Imputação de despesa aos docentes e laboratórios de ensino suportada pelo DEQ no ano corrente e de anos anteriores.

Administração geral: A despesa de 24 307,15 € inclui despesas diversas de funcionamento do DEQ, nomeadamente, despesas com a central de gases, despesas dos laboratórios de ensino relativas ao ano anterior, consumíveis (*toners / tinteiros, papel de exame, envelopes, águas e material de escritório, entre outros*) e serviços (telefones fixos e móveis, correio, transportadoras e fotocópias).

Docentes e Investigadores: As despesas gerais realizadas pelos docentes, aposentados, investigadores permanentes e não permanentes e apoio à docência, totalizaram o valor de 19 830,75 €.

Laboratórios de Ensino: O apoio às atividades das aulas laboratoriais e à lecionação de unidades curriculares de opção com componente laboratorial totalizou o valor de 21 752,74 €. 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 gabinetes, e despesas gerais com as áreas de Ambiente e Segurança, tendo totalizado 5 133,46 €.

Equipamentos: A verba total despendida na aquisição de equipamento em 2023 totalizou 90 785,28 €, que inclui alguns equipamentos de maior dimensão de utilização geral, nomeadamente, Zetasizer, equipamento audiovisual e de videoconferência, e equipamentos de menor dimensão. Para além deste investimento o DEQ comparticipou com 100 000 € para a aquisição de um Microscópio Confocal.

Manutenção: As despesas com a manutenção totalizaram 9 902,05 €, das quais 6 325,24 € referem-se a contratos de manutenção.

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

Meios Informáticos: Manteve-se o investimento em meios informáticos, no valor de 5 950,82 €, que inclui as licenças de Adobe Creative Cloud for Teams, ANSYS Multifísica, AspenOne, ESRI e LabView Multisim.

Relações Externas / Informação e Comunicação: Nestas duas rúbricas incluem-se as despesas com representação, juríis e convidados; Mostra UP, Universidade Júnior, Jornadas da Engenharia Química, Fórum Ambiente, Simpósio de Bioengenharia, Profissão Engenheiro, BET, BEST-Porto, e outras atividades de divulgação do DEQ. Em 2023, esta verba totalizou 7 323,90 €.

Recursos Humanos: Não houve despesas diretamente suportadas pelo DEQ.

O saldo total a transitar para 2024 será de 119 993,37 €, do qual 96 779,92 € corresponde ao saldo do CCO DEQ Comuns (SDEQ02) e 23 213,45 € ao CCO de Prestação de Serviços Analíticos (VSQ001).

BUDGET EXECUTION IN 2023

The expenditure executed by DEQ in 2023 was 177 912.18 €. The income and expenses by account statement lists the distribution of expenses in 2023 across the different accounts, and the consolidated income/expenses history statement provides a comparative analysis for recent years.

Internal Regularisations: Imputation of expenses to teaching staff and laboratories supported by DEQ in the current and previous years.

General administration: The expenditure of 24 307.15 € includes miscellaneous expenses for DEQ's operation, namely, expenses for the speciality 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).

Professors and Researchers: The general expenses incurred by active and retired DEQ Professors, permanent and non permanent researchers and teaching support activities amounted to 19 830.75 €.

Teaching Laboratories: The support to the activities of laboratory classes and the teaching of optional curricular units with laboratory component amounted to 21 752.74 €. 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.

Infrastructures: This expenditure accounts for the necessary interventions in the building, teaching laboratories and offices, and general expenses with the Environment and Safety areas, totalizing 5 133.46 €.

Equipment: The total amount spent on the acquisition of equipment in 2023 amounted to 90 785.28 €, which includes some larger equipment for general use, namely, Zetasizer, audiovisual and videoconferencing equipment, and smaller equipments. In addition to this investment, the DEQ contributed 100 000.00 € towards the purchase of a Confocal Microscope.

Maintenance: Expenditure on maintenance amounted to 9 902.05 €, of which 6 325.24 € relates to maintenance contracts.

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 5 950.82 €, which includes licenses for Adobe Creative Cloud for Teams, ANSYS Multifisica, AspenOne, ESRI and LabView Multisim.

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, BET, BEST-Porto, and other DEQ dissemination activities. In 2023, this amount totaled 7 323.90 €.

Human Resources: There were no expenses directly supported by DEQ.

The total balance to be carried over to 2024 will be 119 993.37 €, of which 96 779.92 € corresponds to the balance of DEQ Common CCO (SDEQ02) and 23 213.45 € to the Analytical Services Provision CCO (VSQ001).

HISTÓRICO DE RECEITAS POR CCO
HISTORIC OF REVENUES PER BCC

CENTROS DE CONTROLO ORÇAMENTAL BUDGET CONTROL NTRES	DESCRIPÇÃO/CCO DESCRIPTION/BCC	2023		2022		2021		2020		2019	
		SDEQ.02	SDEQ.40								
Saldos Iniciais/Transição Anual de Saldos Initial Balances/Annual Balance Transition	123 817,01 €	- €	143 256,68 €	- €	83 456,63 €	- €	81 857,23 €	3 760,00 €	127 421,26 €	- €	- €
Transferência para Pagamento de Faturas do ano anterior Transfer for Payment of Invoices from previous year	- €	- €	- €	100 400,68 €	- €	21 054,22 €	- €	17 848,10 €	- €	- €	- €
Overheads de Projetos e Serviços ao Exterior relativos ao ano anterior Project Overheads and External Services for the previous year	89 572,50 €	- €	7 469,91 €	- €	39 128,32 €	- €	84 945,74 €	- €	56 633,93 €	- €	- €
Overheads de Programas Doutoriais relativos ao ano anterior Doctoral Programme Overheads for the previous year	48 859,95 €	- €	22 436,71 €	- €	20 177,17 €	- €	30 570,80 €	- €	20 319,80 €	- €	- €
Orçamento de Despesas Correntes e Investimentos (ODCI) Current Expenses and Investment Budget (CEIB)	106 214,05 €	- €	104 114,90 €	- €	65 096,71 €	- €	89 603,98 €	- €	91 411,00 €	- €	- €
Investimento Investment	- €	- €	- €	- €	40 637,55 €	- €	- €	- €	- €	- €	- €
Distribuição de Taxas por Utilização de Recursos relativos a 2022 Distribution of Taxes for Resources Usage for 2022	4 405,50 €	- €	2 607,00 €	- €	1 699,50 €	- €	3 465,00 €	- €	2 838,00 €	- €	- €
Receitas Internas - Outras Internal Revenues - Other	14 045,23 €	- €	3 625,46 €	- €	10 040,59 €	- €	8 121,25 €	- €	2 5508,54 €	- €	- €
Receitas Externas External Revenues	6,64 €	- €	180,00 €	- €	-	- €	-	- €	- €	- €	- €
Encargos com o Espaço Space Charges	-9 894,80 €	- €	- €	- €	-32 548,35 €	- €	-25 941,09 €	- €	-23 927,00 €	- €	- €
Acertos Account Settling	0,36 €	- €	-0,48 €	- €	0,11 €	- €	0,11 €	- €	0,27 €	- €	- €
TRFs Outros CCOs Transfers Other BCCs	-102 334,34 €	- €	- €	- €	-	- €	3 760,00 €	- 3 760,00 €	-6 700,00 €	-6 700,00 €	- €
SUBTOTAL	274 692,10 €	- €	283 690,07 €	- €	328 088,90 €	- €	297 437,24 €	- €	291 683,20 €	- €	291 683,20 €
TOTAL	274 692,10 €	- €	283 690,07 €	- €	328 088,90 €	- €	297 437,24	- €	291 683,20 €	- €	291 683,20 €

ORÇAMENTO EXECUTADO

BUDGET EXECUTION

CCO BCC	RÚBRICA ITEM	ANO YEAR				
		2023	2022	2021	2020	2019
SDEQ.40	RH - Bolsas HR - Grants	- €	- €	- €	- €	2 940,00 €
SDEQ.02	Regularização de Despesas do Ano Anterior <i>Regularisation of Previous Year's Expenditure</i>	- €	- €	100 400,68 €	21 054,22 €	17 848,10 €
	Regularizações Internas <i>Internal Regularizations</i>	-7 274,31 €	- €	- €	- €	- €
	Administração Geral/ Orçamento <i>General Administration</i>	24 307,15 €	15 177,92 €	19 774,23 €	10 838,97 €	16 603,29 €
	Docentes e Investigadores <i>Professors and Researchers</i>	19 830,75 €	16 909,42 €	17 599,47 €	10 563,40 €	17 962,66 €
	Laboratórios Ensino - Engenharia Química <i>Teaching Labs - Chemical Engineering</i>	14 019,21 €	12 710,18 €	9 243,41 €	9 381,31 €	9 083,15 €
	Laboratórios Ensino - Engenharia do Ambiente <i>Teaching Labs - Environmental Engineering</i>	3 496,67 €	3 807,07 €	3 092,44 €	1 541,02 €	2 700,62 €
	Laboratórios Ensino - Bioengenharia <i>Teaching Labs - Bioengineering</i>	3 695,39 €	3 573,03 €	4 545,52 €	1 855,18 €	3 235,85 €
	Competências Transversais <i>Transferable skills</i>	541,47 €	2 758,72 €	- €	- €	- €
	Infraestruturas <i>Infrastructures</i>	5 133,46 €	5 717,48 €	5 260,87 €	15 437,48 €	116 778,29 €
	Equipamentos Equipment	90 785,28 €	56 890,84 €	288,62 €	108 969,60 €	12 210,51 €
	Manutenção Geral <i>General Maintenance</i>	9 902,05 €	18 548,62 €	13 875,88 €	20 645,97 €	15 122,39 €
	Biblioteca <i>Library</i>	200,34 €	3,60 €	- €	111,47 €	118,72 €
	Informática <i>IT</i>	5 950,82 €	3 465,40 €	8 100,84 €	6 953,57 €	4 344,21 €
	Relações Externas <i>External Relations</i>	1 767,55 €	6 774,63 €	182,63 €	253,51 €	522,98 €
	Formação <i>Formation</i>	- €	- €	- €	- €	- €
	Informação e Comunicação <i>Information and Communication</i>	5 556,35 €	13 530,47 €	2 467,73 €	6 374,91 €	12 965,90 €
TOTAL		177 912,18 €	184 832,32 €	213 980,61 €	232 436,67 €	255 128,92 €

ANEXOS

ANNEXES

ANEXO I: EQUIPAMENTOS ANNEX I: EQUIPMENTS

EQUIPAMENTO EQUIPMENT	MARCA BRAND	ANO YEAR	RESPONSÁVEL RESPONSIBLE
[E-101] :: LABORATÓRIO DE PROJETOS TRANSVERSAIS DE BIOENGENHARIA			
Arca a -80 °C	Sanyo	2004	Olga Nunes
Câmara de Fluxo Laminar	Baker	2010	Manuel Simões
Incubadora	Lovibond	2017	Manuel Simões
[E-102] :: SALA DAS AUTOCLAVES			
Arca a -30 °C	Sanyo	1996	Olga Nunes
Autoclave	Uniclave	2010	Manuel simões
Liofilizador	VirTis	1996	Arminda Alves
[E-103] :: LABORATÓRIO DE BIOTECNOLOGIAS			
Agitador Orbital	ika	2015	
Centrífuga de bancada	Eppendorf	2009	
Espetrofotómetro	VWR	2010	Manuel Simões
Medidor portátil de oxigénio	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	Filipe Mergulhão
Incubadora (2)	Velp	2007 2008	
Incubadora orbital	Aralab	2007	
[E-104] :: LABORATÓRIO DE BIOLOGIA CELULAR E MOLECULAR			
Espetrofotómetro UV/VIS	Thermo	2008	
Incubadora orbital (2)	New Brunswick	2012	Filipe Mergulhão
Leitor de microplacas	Bioteck	2012	
[E-105] :: LABORATÓRIO DE MICROBIOLOGIA			
Centrífuga de alta velocidade	Beckman	1996	
Microscópio óptico	Leica	1996	
Microscópio fluorescência com aquisição de imagem	Nikon	2015	Olga Nunes
Termociclador	Bio-rad	2007	
Transiluminador	Cleaver	2006	
[E001] :: LABORATÓRIO DE QUÍMICA GERAL E INORGÂNICA			
Espetrofotómetro	Unicam	1999	
Medidor de ângulos de contacto (2)	Biolin Scientific	2015	
Tensiômetro	Kruss	2012	Maria do Carmo Pereira
Zetasizer	Malvern	2023	

EQUIPAMENTO EQUIPMENT	MARCA BRAND	ANO YEAR	RESPONSÁVEL RESPONSIBLE
[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	
Espectrofotómetro/Fotómetro	Hach	2017	
Espetrofotómetro UV-VIS de feixe duplo	VWR	2021	Fernando Pereira
	PG Instruments	2005	
Fotómetro	Merck	1999	
Jar test	Velp	2006	
Medidor de pH (4 equipamentos)	Crison	1999	
Mufla	Nabertherm	1999	
Turbidímetro	Hanna	2014	
[E004] :: LABORATÓRIO DE OPERAÇÕES DE TRANSFERÊNCIA			
Refratômetro	Ivymen	2000	Manuel Alves
[E005] :: LABORATÓRIO DE PROJETOS TRANSVERSAIS EM ENGENHARIA QUÍMICA			
Granulometria laser	Coulter	1999	
Micro Raman	Witec	2020	Fernão de Magalhães
Porosimetria a mercúrio	Quantachrome	2001	
Microscópio invertido	DM IL LED	2000	
Reómetro	Anton Paar	2018	Manuel Alves
[E006] :: LABORATÓRIO DE ENGENHARIA DAS REAÇÕES E PROCESSOS DE SEPARAÇÃO			
Picnometria a hélio	-	2001	Fernão de Magalhães
[E105] :: 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	Arminda Alves
Digestor de microondas	Milestone	2017	
Espectrofotómetro UV-VIS de feixe duplo	Jasco	1997	
Espectrometria de Emissão Atómica por Plasma Acoplado Indutivamente (ICP-OES)	Thermo	2017	
Espetrofotómetro de Absorção Atómica de Chama	UNICAM	1992	
Espetrofotómetro FTIR	Perkin Elmer	2022	Margarida Bastos
[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	Fernando Pereira

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 Luísa Monteiro Walgode	Unraveling the Influence of Lipid Coating and Pluronic F68 on Monodisperse Microbubble Production at room temperature: Implications for Microbubble Coalescence, Stability and Acoustic Behavior	University Rotterdam	Maria do Carmo da Silva Pereira
2	Andreia Rodrigues Tomé	Use of probiotics to control biofilm formation in the food industry	FEUP	Luciana Calheiros Ferreira Gomes
3	Filipa Celeste Ribeiro da Silva	3D-printing of magnetic particles containing hydrogels for smart drug release combined with cancer phototherapy	FEUP	Artur Daniel Moreira Pinto Fernão D. M. B. M. Magalhães
4	Joana Filipa Ferreira de Sousa	Microalgae-based tertiary treatments for the nutrient removal and disinfection of wastewater	FEUP	José Carlos Magalhães Pires
5	João Guilherme Ribeirinho Nunes	Anaerobic production of lipopeptide biosurfactants using <i>Bacillus licheniformis</i> strains	FEUP	Manuel José Vieira Simões
6	João Miguel da Costa Sousa Correia	Bioprospection of antibiotics and biofilm inhibitors from under-exploited filamentous fungi	FEUP	Manuel José Vieira Simões
7	Marta Moreira Ferreira	Horizontal gene transfer in bacterial biofilms: time-dependent interplay between surface material and hydrodynamics	FEUP	Luciana Calheiros Ferreira Gomes
8	Miguel José Ferreira de Oliveira	Extraction of phytochemicals from two invasive plant species and characterization of their bioactivity	FEUP	Manuel José Vieira Simões
9	Miguel Maria de Sousa Cardoso de Faria Macedo	Enzymatic activity in a high-throughput fluorimetric dengue virus protease assay for dengue virus serotypes	FEUP	Maria do Carmo da Silva Pereira
10	Raquel Moreira da Silva	NAMs' Membrane Permeabilization and Partition into Membrane Models	FEUP	Rita Sobral Fernandes M. Santos
11	Sara Maria Teixeira Basto Soares	Light-activated plant-based compounds for the treatment of chronic wound infections	FEUP	Anabela Portela Borges
12	Teresa Olga Liberal da Cunha Ferreira	Incorporation of <i>Moringa oleifera</i> leaf powder and extract in cereal-based foods	FEUP	Lúcia Maria da Silveira Santos
MESTRADO EM ENGENHARIA BIOMÉDICA MASTER OF BIOMEDICAL ENGINEERING				
1	Bruna da Silva Alves	Tumor-Targeting Engineered Nanoparticles for Antioxidant Therapy	FEUP	Maria do Carmo da Silva Pereira Maria João Alves Ramalho
2	Catarina Isabel Sousa Araújo	Development of Carbon Dots as Fluorescence Probes for Bioimaging	FEUP	Rui Sérgio da Silva Ribeiro Adrián Manuel Tavares da Silva
3	Érica Alexandra Araújo Serra	Smart Nanoparticles: an Approach to Fight Brain Cancer	FEUP	Maria do Carmo da Silva Pereira Maria João Alves Ramalho
4	Miguel Trindade Campos	Pharmaceutical Formulations based on 2D-nanomaterials for Phototherapy	FEUP	Artur Daniel Moreira Pinto
MESTRADO EM ENGENHARIA DO AMBIENTE MASTER IN ENVIRONMENTAL ENGINEERING				
1	Beatriz Rocha da Mota	Monitoring of Micropollutants in Douro River	FEUP	Ana Rita Lado Teixeira Ribeiro Adrián Manuel Tavares da Silva Ana Margarida Gorito Gonçalves
2	Diogo Lourenço Santos Moura	Valorização de Resíduos de Cortiça pela Produção de Biocarvões Fertilizantes	FEUP	Ariana Maciel Abranches Pintor Cidália Maria de Sousa Botelho Olívia Salomé G. Pinto Soares

#	NOME NAME	TEMA TITLE	INSTITUIÇÃO INSTITUTION	SUPERVISORES SUPERVISORS
3	Filipe Manuel Figueiredo Costa	Catalytic Hydrolysis of Sodium borohydride for Hydrogen Production: study of the Recyclability of By- Product Reaction	FEUP	Alexandra Maria P. S. F. R. Pinto
4	Francisco Nunes Pereira	Establishment of a Laboratory Scale Test Rig for Electrochemical Lignin Conversion	SINTEF	Manuel Fernando Ribeiro Pereira
5	Iara da Mota Lameira	Metodologia de Análise de Microplásticos em Águas: Redução das Interferências Causadas pela Matéria Particulada	FEUP	Adrián Manuel Tavares da Silva Manuel Fernando Ribeiro Pereira
6	Inês Sousa Ruge	Avaliação da Pegada de Carbono de uma Empresa Têxtil	Impetus	António Augusto Areosa Martins Teresa Margarida Correia P. Mata Vítor Jorge Pais Vilar
7	Joana Mafalda Araújo Bermudes	Diagnóstico Ambiental para a Implementação da ISO 14001:2015 num Hospital	Hospital Pedro Hispano	Vera Maria Ferreira da Cruz Homem
8	Joana Silva Peixoto	Purificação De Água Através Da Utilização De Nano-materiais	FEUP	Olívia Salomé G. Pinto Soares Olga Cristina Pastor Nunes
9	Luís Miguel Gomes Silva	Healthy Buildings for Children Population: Relevant Parameters for Suitable Indoor Air Quality in Primary Schools	INSA	Klára Slezáková Maria do Carmo da Silva Pereira
10	Maria Luísa Ferreira Nobre	Integration of microalgal cultures in urban wastewater treatment plant and sustainability assessment	FEUP	José Carlos Magalhães Pires
11	Maria Manuel Celestino da Fonseca	Oxidação Catalítica de Compostos Orgânicos Voláteis	FEUP	Olívia Salomé G. Pinto Soares Raquel Pinto Rocha
12	Marta Alexandra Pacheco Azevedo	Reciclagem de Resíduos de Placas de Circuito Impresso (PCIS) em Reações de Tratamento Avançado de Águas	FEUP	Cátia Alexandra Leça Graça Adrián Manuel Tavares da Silva
13	Pedro Luiz Dias Barroso	Electrical Boosting: Assessment of the Electric Energy Transfer in Glass Furnaces	BA Glass	José Carlos Magalhães Pires
14	Raquel Luckow Ferreira	Improve Energy Efficiency and Sustainability of the Thermal Reconditioning System - Annealing Process	BA Glass	José Carlos Magalhães Pires
15	Rúben Azevedo Martins	The role of microalgae in the development of sustainable and closed-loop business models for the textile industry sector: from wastewaters bioremediation to value generation	FEUP	José Carlos Magalhães Pires Ana Luísa da Cunha Gonçalves
16	Sara Alexandra Santos Sousa	Microalgal growth in urban wastewater: biomass production with nutrients removal	FEUP	José Carlos Magalhães Pires
17	Sara Isabel Cardoso Dinis de Mesquita	Caracterização ambiental dos processos de enobre-cimento têxtil Dissertação	CITEVE	Manuel Fernando Ribeiro Pereira

MESTRADO EM ENGENHARIA ELETROTÉCNICA E DE COMPUTADORES MASTER IN ELECTRICAL AND COMPUTER ENGINEERING

1	Antero Samuel da Palma Carvalho	Sintonia robusta de controladores por faixa (split-range) com avaliação da incerteza	FEUP	Ana Mafalda Almeida Peixoto Ribeiro Fernando Arménio C. Castro e Fontes
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MESTRADO EM ENGENHARIA INFORMÁTICA E COMPUTAÇÃO MASTER IN INFORMATICS AND COMPUTING ENGINEERING

1	Miguel Carreira Neves	Application of Novel Techniques in Super Resolution GANs for Fluid Dynamics	FEUP	Luís Paulo Gonçalves dos Reis Mónica Cristina F. Silva Filgueiras
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MESTRADO EM ENGENHARIA QUÍMICA MASTER IN CHEMICAL ENGINEERING

1	Alexandra Antunes	Evaluating the potential of ultrashort self-assembling peptides scaffolds as suitable 3D matrices for organoid fabrication	King Abdullah University of Science and Technology	Maria do Carmo da Silva Pereira
2	Álvaro António Martins Pereira	Study of a PEM fuel cell for application in un-manned aerial vehicles - Evaluation of different polymeric membranes	FEUP	Rui Carlos Barata Ferreira Diogo Filipe Moreira dos Santos

#	NOME NAME	TEMA TITLE	INSTITUIÇÃO INSTITUTION	SUPERVISORES SUPERVISORS
3	Ana Beatriz de Carvalho Marques	Study of different dipping process characteristics in foam formation	Continental - ITA	Margarida Maria S. Monteiro Bastos Maria Joana M. Carvalho Peres
4	Ana Catarina Santos Rebelo	Extraction of Antioxidants for Food Supplementation using Aqueous Two-Phase Systems with Low Environmental Impact	FEUP	Maria Eugénia R. Almeida Macedo
5	Ana Luísa Gonçalves Coelho	System Integration and Techno-economic Analysis of an Electrochemical H2 Extraction Platform	HyET Hydrogen B.V.	Adélio Miguel Magalhães Mendes
6	Ana Margarida Fernandes Ferreira	Development of sustainable formulations for fragrance controlled release in textiles	Heiq Iberia	Isabel Maria Duque Martins Alírio Egídio Rodrigues
7	Ana Marta Dias Rocha	Development of NAM-FISH method for the detection of Citrobacter spp	FEUP	Andreia Sofia Mateus Azevedo Nuno Filipe R. Oliveira Azevedo
8	Ana Paula Salgado Costa Teixeira	Synthetic fuels or valued chemicals production from biogas	FEUP	Miguel Angel Soria Luís Miguel Palma Madeira
9	Ana Paula Santos Silva	Study of Mechanical and Thermal Properties of Rubberised and Dipped Tire Cords	Continental	Fernão D. M. B. M. Magalhães
10	Ana Pereira da Silva Barros	A comprehensive study on hydrogen supply and recirculation within an automotive hydrogen fuel cell system	BMW (Alemanha)	Alexandra Maria P. Silva F. R. Pinto
11	Ana Rita Bastos Moreira	Study of an Industrial Hydrogen Drying Unit	Amnis Pura	Adélio Miguel Magalhães Mendes
12	Anabela Coelho Figueiredo	Preparation and Characterization of Materials for Low- to Intermediate-Temperature CO2 Adsorption	FEUP	Cláudio da Silva Rocha Luís Miguel Palma Madeira Miguel Angel Soria
13	André Filipe Melo Pacheco	Characterization of Cheap Components for Proton Exchange Membrane Water Electrolyzers	German Aerospace Center	Adélio Miguel Magalhães Mendes
14	Ângela Inês Pinheiro Guimarães	Particle engineering to improve physicochemical properties of an active pharmaceutical ingredient	German Aerospace Center	Maria do Carmo da Silva Pereira
15	Beatriz Barbosa Sá Sousa	Mini Passive Direct Methanol Fuel Cells for Portable Applications	FEUP	Vânia Sofia Brochado de Oliveira Alexandra Maria P. Silva F. R. Pinto Olívia Salomé G. Pinto Soares
16	Bruna Daniela Maia Ferreira	Substrate optimization of a fungal fermentation process	Mycorena	Filipe José Menezes Mergulhão
17	Bruna Filipa Miranda Coutinho	Chitosan ability on the formation of conditioning deposits	Universidad Complutense de Madrid	Luísa Manuela M. Andrade Silva
18	Bruno César Rodrigues	Methane and CO2 recovery from the purge stream to design a closed-loop for the Biogas upgrading plant	DMT Environmental Technologies	Alexandre Filipe Porfírio Ferreira
19	Carolina Seabra Oliveira Andrade	Caracterização e implementação de agentes de estabilização de Cálcio em vinhos do Porto.	Symington	Manuel José Vieira Simões
20	Catarina Isabel da Silva Monteiro	Reporte Corporativo de Sustentabilidade	CIN	Adrián Manuel Tavares da Silva Joana Filipa de Jesus R. Pesqueira
21	Catarina Soares Milhomens	Valorização de Efluente Industrial por Ozonólise	Bondalit	Manuel Fernando Ribeiro Pereira Olívia Salomé G. Pinto Soares
22	Daniela Filipa Coelho Oliveira	Nature-based polymer composites with wood particles from industrial waste	ARCP	Fernão D. M. B. M. Magalhães Luísa Maria Hora de Carvalho
23	David Faria Aguillar	Emerging catalytic systems for the sustainable production of synthetic fuels	FEUP	Joaquim Luís B. Martins de Faria Bruno Alexandre F. Ribeiro Machado
24	Diana Catarina Costa Sousa	Caracterização de tintas em pó com matérias-primas de origem biológica e/ou renovável	CIN	Carlos Gabriel P. Morgado Bernardo Adélio Miguel Magalhães Mendes
25	Diana Gonçalves Campinho	Scheduling of a multi-product batch process in the chemical industry with deteriorating effects.	FEUP	Dalila Benedita M. Martins Fontes Alexandre Filipe Porfírio Ferreira

#	NOME NAME	TEMA TITLE	INSTITUIÇÃO INSTITUTION	SUPERVISORES SUPERVISORS
26	Filipa Daniela Ribeiro de Carvalho	Formulation development of fibrillated cellulose based pastes for additive manufacturing	FEUP/U. Comp. Madrid	Margarida Sarmento C. A. Brito María Ángeles Blanco Suárez Yaidelin Josefina Alves Manrique
27	Francisca de Sá Madeira Massano	Natural products as resistance-modifying agents to recycle old antibiotics	FEUP	Manuel José Vieira Simões Anabela Portela Borges
28	Francisca Maria da Silva Duarte	Synthesis of Zeolite ZSM-5 using NETmix	FEUP	Yaidelin Josefina Alves Manrique Madalena M. Gomes de Queiroz Dias
29	Gabriela Rodrigues da Costa	Medidas de Eficiência Energética e Implementação de Energias Renováveis em Contexto da M.A. Silva	M. A. Silva Cortiças	Fernando Gomes Martins
30	Gonçalo José Alves Ferreira Pereira	Experimental proof-of-concept, process simulation, and economic analysis, via Aspen Simulation, of hydrate-based desalination	Associação NET4CO2	Ricardo Jorge Nogueira dos Santos
31	Guilherme da Costa Amaral	Model topology identification and global parameters estimation for purification of BSA and myoglobin	FEUP	Alexandre Filipe Porfírio Ferreira Ana Mafalda Almeida Peixoto Ribeiro Idelfonso Bessa dos Reis Nogueira
32	Guilherme Gil Gonçalves Cardoso da Silva	Investigation of anion exchange membrane urea electrolysis: Effect of membrane and catalyst on performance and ammonia production	German Aerospace Cen-ter	Adélio Miguel Magalhães Mendes
33	Inês Abilheira Costa	Valorização de resíduos têxteis na produção de fibras e fios reciclados	CITEVE	Manuel Fernando Ribeiro Pereira
34	Inês Dengacho Freitas	Aproveitamento de Biogás na ETAR do Freixo: Estudo de Alternativas	AEdP	Tânia Sofia Teixeira Lopes Adélio Miguel Magalhães Mendes
35	Inês Marante Mesquita	Oxygen-Enriched Combustion in a Glass Melting Furnace: a CFD Study	BA Glass	Manuel António Moreira Alves Adélio Miguel Magalhães Mendes
36	Inês Nunes Rodrigues	Energy and economic analysis of a hydrogen purification system from water electrolysis	Amnis Pura	Paulo António Alves Ribeirinha Adélio Miguel Magalhães Mendes
37	Inês Tavares Brito	DEVELOPMENT OF A VALUE-ADDED NATURAL SHAM-POO BAR FORMULATION INCORPORATING EXTRACTS FROM AGROINDUSTRIAL BY-PRODUCTS	FEUP	Lúcia Maria da Silveira Santos
38	Joana Correia Cancela	GREENammonia; Development of photo-assisted systems for green ammonia production	FEUP	Cláudia Sofia Castro Gomes da Silva Joaquim Luís B. Martins de Faria Ricardo Jorge Nogueira dos Santos
39	João Gabriel Gouveia Diaz	Development of catalytic substrates for methane decomposition reactors	Pixel Voltaic	Paula Manuela M. Pereira Costa Dias Adélio Miguel Magalhães Mendes
40	João Paulo Ribeiro Monteiro Morais	Tingimento e funcionalização têxtil utilizando extractos de algas	CITEVE	Manuel Fernando Ribeiro Pereira José Carlos Magalhães Pires
41	José Francisco Fontes Marques	Study of the technical and economic viability of an innovative process for the capture of biogenic CO ₂	CAPWATT	Tânia Sofia Teixeira Lopes Adélio Miguel Magalhães Mendes
42	Juliana Carvalho Magalhães	Otimização de fluxos logísticos internos da unidade de produção de tintas em pó	CIN	Diana Patrícia Soares de Paiva
43	Laura Alves Pereira	Purification of Green Fuels by Innovative Membrane Separation Processes	CAPWATT	Carlos Gabriel P. Morgado Bernardo Adélio Miguel Magalhães Mendes
44	Laura Carvalho Pedreiras	Melhoria do processo de redução de off-flavours das rolhas de cortiça natural	M. A. Silva Cortiças	Margarida Maria S. Monteiro Bastos
45	Laura Joana Ribeiro Cullen	NETmix crystallizer for nutrients recovery from side-stream digestate	FEUP	Vítor Jorge Pais Vilar Ricardo Jorge Nogueira dos Santos
46	Leonor Cardielos dos Reis Barroca	Partitioning of pharmaceutical pollutants using Aqueous Two-Phase Systems based on choline	FEUP	Maria Eugénia R. Almeida Macedo
47	Manuel Maria Martins Sampaio Lino	A study on the pyrolysis; primary reactions of Polyethylene Terephthalate and Polyethylene Terephthalate/Polyethylene mixtures using a Screen Heater Reactor	Twente University	Alexandra M. P. S. F. Rodrigues Pinto

#	NOME NAME	TEMA TITLE	INSTITUIÇÃO INSTITUTION	SUPERVISORES SUPERVISORS
48	Márcia Verónica Nunes Barros	Valorização de resíduos de melaço de açúcar em biocombustível e precursor bioplástico	RAR	Katarzyna Anna Morawa Eblagon Manuel Fernando Ribeiro Pereira
49	Margarida da Luz Razão Peixoto	Design of a novel raceway pond reactor for waste activated sludge advanced pre-treatment to foster biogas production	FEUP	Vítor Jorge Pais Vilar Ricardo Jorge Nogueira dos Santos Margarida Sarmento C. A. Brito
50	Margarida Gomes da Silva Jorge	DAFC - Células de combustível diretas de amoníaco como novo vetor energético	FEUP	Cláudia Sofia Castro Gomes da Silva Daniela Sofia de Castro Falcão Rui Carlos Barata Ferreira
51	Maria Benedita Cabral Magalhães Ataíde Amaral	Development of advanced photovoltaic power add-ons on Dye-Sensitized solar cells for emerging IoTs applications	Pixel Voltaic	Dzmitry Ivanou Adélio Miguel Magalhães Mendes
52	Maria Catarina da Silva Cortez	Emerging materials for thin-film solar cells	INL	Adélio Miguel Magalhães Mendes
53	Maria Inês dos Santos Soares	Estudo da Operação de um eletrolisador de mem-brana permutadora de aníões	FEUP	Daniela Sofia de Castro Falcão Alexandra Maria Pinheiro da Silva Ferreira Rodrigues Pinto Rui Carlos Barata Ferreira
54	Maria Teresa Pimenta de Freitas Matos de Oliveira	CFD process design for photo-assisted production of green ammonia-based fuels	FEUP	Ricardo Jorge Nogueira dos Santos Cláudia Sofia Castro Gomes da Silva Margarida Sarmento C. A. Brito
55	Mariana Aranha Messias	Incorporation of Onion Peel extracts as an alterna-tive to synthetic UV filters to develop a value-added sunscreen	FEUP	Lúcia Maria da Silveira Santos Loleny Tavares
56	Mariana Levi Ribeiro Chibante	Self-Healing Techniques on Vanadium Redox Flow Batteries	Vasco da Gama CoLAB	Miguel Araújo Duarte Adélio Miguel Magalhães Mendes
57	Mariana Trindade Guedes dos Santos Gomes	Polymeric Nanoparticles for the delivery of Non-Alkylating Agent for Glioblastoma Therapy	FEUP	Maria do Carmo da Silva Pereira Maria João Alves Ramalho
58	Marta Raquel Fernandes Alves Sousa	Computational Fluid Dynamics and Additive Manu-facturing: Parametric Optimization of Process Units	FEUP	José Daniel Pacheco Araújo Luís Miguel Palma Madeira
59	Marta Raquel Ribeiro Régo	Otimização de Formulações de Revestimentos Industriais: Estudo e desenvolvimento experimental com base nos Parâmetros de Solubilidade de Hansen	CIN	Carlos Gabriel P. Morgado Bernardo
60	Matilde Maria Carvalho Lopes	Determination of thermal death kinetic parameters of neosartorya fischeri in Frulact preparations based on temperature and water activity variation	Frulact	Manuel José Vieira Simões
61	Moisés Cardoso Couto	A study of Soluble Gas Stabilization cooling of heat processed fish products to investigate solubility of CO ₂	NTNU	Filipe José Menezes Mergulhão
62	Mónica Isabel Amorim Marques	Evaluation of the Printability and Functional Proper-ties of Prosopis laevigata Seeds	INL	Cláudia Sofia Castro Gomes da Silva
63	Renata Miguel Correia de Oliveira	Development of an hernia-on-a-chip	FEUP	João Mário Rodrigues Miranda
64	Rita Gonçalves Vieira	Development of nitrogen-functionalized gra-phene/polydimethylsiloxane composites for appli-cation in urinary catheters	FEUP	Rita Daniela Teixeira dos Santos Filipe José Menezes Mergulhão
65	Rita Sousa Branco	Scale-up study from Laboratory to Industrial Pro-cessing of Textile Reinforcements	Continental - ITA	Margarida M. S.Monteiro Bastos Maria Joana Monteiro de Carvalho Peres
66	Rodrigo Castro Machado Vaz	Extrusão e reologia de compostos rígidos de PVC	Cires	Ricardo Jorge Nogueira dos Santos
67	Rui Daniel Gonçalves Matias	Photo-thermocatalytic hydrogenation of CO ₂ into methane driven by sunlight	FEUP	Tânia Filomena Castro Valente Silva Alexandre Filipe Porfírio Ferreira Vítor Jorge Pais Vilar
68	Sara Raquel Domingues Figueiredo	Utilização de baterias convencionais e híbridas em bicicletas elétricas	Simoldes Plásticos	Miguel Araújo Duarte Jorge Miguel dos Santos Pinto

#	NOME NAME	TEMA TITLE	INSTITUIÇÃO INSTITUTION	SUPERVISORES SUPERVISORS
69	Sofia Alçada Fernandinho	Gestão integrada da rede de hidrogénio	Bondalti	Fernando Gomes Martins
70	Sofia Bizarro Rodrigues Pinto	Processo de extração de contaminantes voláteis da cortiça por desssecção térmica	Amorim Cork	Lúcia Maria da Silveira Santos
71	Sofia Rocha da Cruz	Development of NAM-FISH for the study of biofilms formed in an advanced 3D substrate	FEUP	Andreia Sofia Mateus Azevedo Daniela Patrícia Peneda Pacheco Nuno Filipe R. P. Oliveira Azevedo
72	Sofia Telinhos Teixeira Rodrigues de Carvalho	Desenvolvimento de Rolhas de cortiça para a gama NO/LOW ALCOHOL SPIRITS	Amorim Cork	Manuel José Vieira Simões
73	Vanessa Cerqueira Posada	Impact of Preparation Procedure on Lab Results for Rubberized Reinforcement Materials	Continental	Fernão D. M. B. M. Magalhães
74	Vasco Filipe Moreira Ribeiro	Methanation of CO ₂ in a Sorption-Enhanced Reactor	FEUP	Luís Miguel Palma Madeira Miguel Angel Soria
75	Yara Beatriz Guedes Y Bastos	Microencapsulação de extractos de plantas, ricos em compostos polifenólicos, com benefícios para à saúde, por uma técnica de spray drying, para aplicações alimentares, farmacêuticas e cosméticas	FEUP	Berta Maria A. Nogueiro Estevinho Fernando Alberto Nogueira da Rocha

ANEXO I: INSTITUIÇÕES PARCEIRAS DE MOBILIDADE

ANNEX I: MOBILITY PARTNER INSTITUTIONS

ALEMANHA GERMANY

BMW Research and Innovation Center
 Continental Tires
 Georg Simon Ohm Fachochschule Nürnberg
 German Aerospace Center (DLR)
 German Cancer Research Center
 Karlsruher Institut für Technologie
 Rheinisch-Westfälische Technische Hochschule Aachen
 Ruprecht-Karls-Universität Heidelberg
 Technische Universität Berlin
 Technische Universität Dresden
 Technische Universität München
 Universität Bremen
 Universität Stuttgart

ARÁBIA SAUDITA SAUDI ARABIA

King Abdullah University of Science and Technology

ARGENTINA ARGENTINA

Instituto Tecnológico de Buenos Aires

ÁUSTRIA AUSTRIA

Medizinische Universität Wien
 Technische Universität Wien

BÉLGICA BELGIUM

Haute École ICHEC-ECAM-ISFSC
 IMEC LEUVEN
 Katholieke Universiteit Leuven
 Universiteit Gent

BRASIL BRAZIL

Centro Federal de Educação Tecnológica de Minas Gerais
 Universidade de Brasília
 Universidade de São Paulo - Escola Politécnica
 Universidade de São Paulo - POLI
 Universidade do Estado de Santa Catarina
 Universidade do Extremo Sul Catarinense
 Universidade do Vale do Rio dos Sinos
 Universidade Federal de Itajubá
 Universidade Federal de Mato Grosso
 Universidade Federal de Ouro Preto
 Universidade Federal do ABC
 Universidade Federal do Rio de Janeiro - POLI
 Universidade Federal do Rio Grande do Sul
 Universidade Federal Fluminense
 Universidade Franciscana
 Universidade Tecnológica Federal do Paraná

CHILE CHILE

Pontifícia Universidad Católica de Chile
 Pontifícia Universidad Católica de Valparaíso
 Universidad Técnica Federico Santa María

COLÔMBIA COLOMBIA

Universidad de Los Andes

COREIA DO SUL SOUTH KOREA

Kyung Hee University

DINAMARCA DENMARK

Aarhus Universitet
 Danmarks Tekniske Universitet

ESLOVÁQUIA SLOVAKIA

Slovenská Technická Univerzita V Bratislave
 Zilinska univerzita v Ziline

ESPAÑA SPAIN

Bellvitge Biomedical Research Institute - IDIBELL
 Universidad Autónoma de Madrid
 Universidad Complutense de Madrid
 Universidad de Almería
 Universidad de La Laguna
 Universidad de Murcia
 Universidad De Oviedo
 Universidad de Sevilla
 Universidad Politécnica de Madrid
 Universidad Rey Juan Carlos
 Universitat de València
 Universitat Politècnica de Catalunya
 Universitat Politècnica de València

FINLÂNDIA FINLAND

Aalto University
 Helsingin Yliopisto
 Oulun Yliopisto

FRANÇA FRANCE

Centre National de la Recherche Scientifique
 Ecole Centrale d'Electronique
 IMT Atlantique
 L'Institut Curie
 Paris Brain Institute
 Université de Lorraine
 Université Paris Cité

GRÉCIA GREECE

Aristoteleio Panepistimio Thessalonikis
 Panepistimio Dytikis Makedonias

HONG KONG HONG KONG

The Hong Kong University of Science and Technology

HUNGRIA HUNGARY

Szegedi Tudományegyetem

IRLANDA IRELAND

National University of Ireland, Galway

ITÁLIA ITALY

Politecnico di Milano
 Politecnico di Torino
 Sapienza Università di Roma
 Università degli Studi di Padova
 Università Degli Studi di Palermo
 Università Degli Studi di Perugia
 Università Degli Studi di Salerno
 Università degli Studi G.D Annunzio Chieti-Pescara

MÉXICO MEXICO

Instituto Politécnico Nacional
 Instituto Tecnológico y de Estudios Superiores de Monterrey
 Universidad Autónoma del Estado de México

NORUEGA NORWAY

NORGES TEKNISK-NATURVITENSKAPELIGE UNIVERSITET
 SINTEF Materials and Chemistry

PAÍSES BAIXOS NETHERLANDS

DMT - Environmental Technology
 Erasmus MC
 HyET Hydrogen
 Netherlands Cancer Institute
 Rijksuniversiteit Groningen
 Technische Universiteit Delft
 Technische Universiteit Eindhoven
 Universiteit Twente
 Universiteit Utrecht
 Universiteit van Amsterdam
 University Medical Center Utrecht
 WAGENINGEN UNIVERSITEIT

POLÓNIA POLAND

Akademia Górniczo-Hutnicza
 Politechnika Gdanska
 Politechnika Krakowska
 Politechnika Poznanska
 Politechnika Śląska
 Politechnika Wroclawska

REPÚBLICA CHECA CZECH REPUBLIC

Center for Translational Medicine
 Czech University of Life Sciences Prague
 Univerzita Jana Evangelisty Purkyne V Ústí Nad Labem
 Vysoká Skola Chemicko-Technologicka v Praze

SUÉCIA SWEDEN

CHALMERS TEKNIKA HÖGSKOLA
 Karolinska Institutet Stockholm
 Lunds Universitet
 Mycorena

TURQUIA TURKEY

EGE ÜNİVERSİTESİ

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	Joana Filipa de Jesus Rodrigues Pesqueira	Catalytic Water Treatment Life Cycle Assessment	Adrián Manuel Tavares da Silva Manuel Fernando Ribeiro Pereira
2	Larissa Oliveira Paulista	Solar-driven thermo-photocatalytic CO ₂ valorisation into value-added fuels	Vítor Jorge Pais Vilar Ramiro José Espinheira Martins Tânia Filomena Castro Valente Silva
3	Pedro Henrique Presumido	Membranes Processes for Tertiary Treatment of Urban Wastewaters: Photocatalytic Membrane Reactor and Ozone Membrane Reactor	Vítor Jorge Pais Vilar Ana Isabel de Emílio Gomes
PROGRAMA DOUTORAL EM ENGENHARIA QUÍMICA E BIOLÓGICA DOCTORAL PROGRAM IN CHEMICAL AND BIOLOGICAL ENGINEERING			
1	Albertina Gonçalves Rios	Protein Separation and Purification by Cyclic Adsorption Processes	Alexandre Filipe Porfírio Ferreira Alírio Egídio Rodrigues Ana Mafalda Almeida Peixoto Ribeiro
2	Alexandra Sabrina Antunes Soares	Optimizing Recombinant Protein Production in <i>Escherichia coli</i> biofilms	Filipe José Menezes Mergulhão Luciana Calheiros Ferreira Gomes
3	Amadeu Gomes Rocha	Development of PEM Technology for Renewable Energy Systems: Electrolyzers and Regenerative Fuel Cells	Alexandra M. P. S. F. Rodrigues Pinto Daniela Sofia de Castro Falcão Rui Carlos Barata Ferreira
4	Ana Catarina Oliveira Pinto Faria	Multifunctional reactors for CO ₂ methanation: Power-to-Gas concept	Luís Miguel Palma Madeira Alírio Egídio Rodrigues Carlos Eduardo G. V. Miguel
5	Ana Cristina Ornelas Teixeira	From Lab to Fab: Optimization of a Cost-Effective and Scalable Fabrication Process for Perovskite Solar Cells	Luísa Manuela M. Andrade Silva Adélio Miguel Magalhães Mendes
6	André Tiago Torres Pinto	Optimised 2D Carbon Materials activated by Artificial Light and Electrical Current for Catalytic Water and Wastewater Treatment	Adrián Manuel Tavares da Silva Cláudia Sofia Castro Gomes da Silva Joaquim Luís B. Martins de Faria
7	Carolina Sofia Hora Oliveira	Development of Dye-sensitized solar cells for synergistically hosting sensing devices	Adélio Miguel Magalhães Mendes Dzmitry Ivanou
8	Diogo Luís Almeida Silva	Hydrolysis of sodium borohydride for hydrogen generation: Study of the by-product and its recycling	Alexandra Maria P. Silva F. R. Pinto
9	Filipa Manuela Alves Calvo Casimiro	Lignin from Pulp Mill Sulfite Liquors: Production of Vanillin and Syringaldehyde by an Integrated Process within the Biorefinery Concept	Alírio Egídio Rodrigues Carina Andreia Esteves da Costa
10	Hélder Xavier Teixeira Nunes	On-demand hydrogen generation through sodium borohydride for fuel cell applications	Alexandra Maria P. Silva F. R. Pinto
11	Isabel Maria Pereira de Oliveira	Development of effective disinfection strategies to control drinking water biofilms	Manuel José Vieira Simões Lúcia da Conceição D. Chaves Simões
12	Isabel Sousa Fernandes	Multiphase Flow in NETmix: mixing studies and applications	Ricardo Jorge Nogueira dos Santos José Carlos Brito Lopes
13	Joana Marta Leonardo de Assunção	Improved technologies for production of biomass and bioactive compounds by marine microalgae	Francisco Xavier D.D. A. Malcata
14	Maria João Leal Romeu	Characterization of marine biofilms formed by filamentous cyanobacteria	Filipe José Menezes Mergulhão
15	Mariana Nogueira Miranda	Behavior and attenuation of microplastics in environmental compartments	Manuel Fernando Ribeiro Pereira Adrián Manuel Tavares da Silva
16	Mohsen Karimi	Process Development for Carbon Dioxide Capture Using Novel Adsorbents: Applications for Clean Energy and Environmental Protection	Alírio Egídio Rodrigues
17	Nádia da Silva Ferreira	Autonomous biosensor for screening cancer biomarkers using passive Fuel Cells	Maria Goreti Ferreira Sales Alexandra M. P. S. F. Rodrigues Pinto
18	Pedro Jorge da Silva Carneiro	Electrochemical immunosensors for detection of neurodegenerative diseases biomarkers	Maria do Carmo da Silva Pereira
19	Rafael Gomes Morais	Noble-metal free carbon-based materials for energy conversion	Manuel Fernando Ribeiro Pereira Natalia Rey Raap
20	Rami Arafah	Multicomponent Chiral Separation by Preparative and Simulated Moving Bed Chromatography	Alírio Egídio Rodrigues António Manuel Esteves Ribeiro Luís Manuel Santos Pais
21	Ricardo Bruno da Costa Oliveira	Application of nucleic acid mimics (NAM) in the selection of aptamers against staphylococcal enterotoxins	Carina Manuela Fernandes Almeida Nuno Filipe R. P. Oliveira Azevedo

#	NOME NAME	TEMA TITLE	SUPERVISORES SUPERVISORS
22	Rute Agostinha Gomes Seabra	Separation of light hydrocarbons by Simulated Moving Bed	Alexandre Filipe Porfírio Ferreira Alírio Egídio Rodrigues Ana Mafalda Almeida Peixoto Ribeiro
23	Tatiana La Banca Schreiner	Saponin and Saponin-rich Extracts as Innovative Solutions for Nanoemulsions Production	Maria Filomena Filipe Barreiro Madalena Maria G. Queiroz Dias Simão Pedro de Almeida Pinho
24	Tiago Jorge Torres Bessa Menezes Araújo	High Performance Cellulose-based Carbon Molecular Sieve Membranes for Gas Separation: Processing, Structure and Performance Evaluation	Adélio Miguel Magalhães Mendes Carlos Gabriel P. Morgado Bernardo
PROGRAMA DOUTORAL EM ENGENHARIA MECÂNICA DOCTORAL PROGRAM IN MECHANICAL ENGINEERING			
1	Paulo Reinier Teixeira Gonçalves	End-to-end simulation of composite structures: linking composites manufacturing and structural performance in cryogenic tanks	Joaquim Luís B. Martins de Faria Lifeng Liu (INL)

ANEXO V: PRODUÇÃO CIENTÍFICA E ATIVIDADES DE RELEVO

ANNEX V: SCIENTIFIC OUTPUTS AND RELEVANT ACTIVITIES

LIVROS (AUTOR)

BOOKS (AUTHOR)

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LIVROS (EDITOR)

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CAPÍTULOS /ARTIGOS EM LIVRO

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PERÍCIAS PARA TRIBUNAL

COURTROOM EXPERTISE

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PALESTRAS COMO CONVIDADO

GUEST LECTURES

- A.R.L. Ribeiro, Environmental enantioselectivity of chiral drugs, 13º Encontro Nacional de Cromatografia (13ENC), Lisboa, Portugal, 17-19th December 2023
- A.R.L. Ribeiro, Environmental enantioselectivity of chiral pharmaceuticals, 18th International Conference on Chemistry and the Environment (ICCE 2023) Venice, Italy, 11-15th June 2023
- A.R.L. Ribeiro, A successful ERC application: writing process and interview preparation, 7th ECCOMAS Young Investigators Conference (YIC2023) FEUP, Porto Portugal, 19-21st June 2023.
- J. L. Figueiredo, O alvorecer da Indústria Química em Portugal, Academia das Ciências de Lisboa, Sessão da Classe de Ciências, 21 de Setembro, 2023.
- L.F. Melo, Biofilms: Overview, Workshop on Legionella, Biofilms and Legionellosis Prevention, FEUP, 26th September 2023.
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- V.J.P. Vilar, Integration of nanofiltration and advanced oxidation processes for municipal wastewater resources recovery, Webinar "New Opportunities in Wastewater Science and Engineering: Reuse, Recovery, Valorization, Surveillance", Water Emerging Contaminants & Nanoplastics, 08th March 2023
- V.J.P. Vilar, Novel reactors for ozonation, photochemical, photocatalytic and photoelectrocatalytic processes: towards process intensification, Ghent University, Belgium, 03rd March, 2023.
- V.J.P. Vilar, Advanced treatment technologies for wastewater resources recovery, 24º Congresso Brasileiro de Engenharia Química (24º COBEQ), Salvador da Bahia, Brazil, 01-04th October, 2023., Novel reactors for ozonation, photochemical, photocatalytic and photoelectrocatalytic processes: towards process intensification, Khalifa University, Abu Dhabi, United Arab Emirates, Brazil, 10th January, 2023

ANEXO VI: RECONHECIMENTO DE ATIVIDADE ANNEX VI: SCIENTIFIC OUTPUTS AND RELEVANT ACTIVITIES

PRÉMIOS E MENÇÕES HONROSAS

AWARDS AND HONOURS

- A.E. Rodrigues, **Doutor Honoris Causa**, Universidade Federal de Pernambuco, Brasil, 2023.
- Alexandra Antunes, **Student Mobility Award**, European Federation of Chemical Engineering, 2023.
- F. X. Malcata, Distinguished Career Award in honor of Carl R. Fellers, Institute of Food Technologists (IFT), 2023
- J.L. Figueiredo, **CIBIQ 2023 R+D+i Excellence Medal**, Congresos Iberoamericanos de Ingeniería Química (CIBIQ), 2023.
- L. M. Madeira, **winner of Air Liquide Scientific Challenge 2023**, in topic "Energy storage using essential small molecules", with the idea "CYCON - Cyclic device for continuous CO₂ capture and conversion into CH₄";
- M.S.C.A. Brito, **Young Researcher Award in Mixing**, Trienal Award of the European Federation of Chemical Engineering, 2023.

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
- Maria Eugénia Macedo
- Adrián Silva
- Adélio Mendes
- Vítor Vilar
- Luís Melo
- Rui Boaventura
- Manuel Alves

- Conceição Alvim-Ferraz
- Joaquim Faria
- Fernando Martins
- José Inácio Martins

Mais citados em 2022 Most cited in 2022 **

- José Luís Figueiredo
- Alírio Rodrigues
- Manuel Simões
- José Carlos Pires
- Francisco Xavier Malcata
- Adrián Silva
- Vítor Vilar
- Manuel Fernando Pereira
- José Melo Órfão
- Luís Miguel Madeira
- Ana Rita Lado Ribeiro
- Cláudia Gomes Silva
- Anabela Borges
- Adélio Mendes
- Olga Nunes
- Berta Estevinho
- Lúcia Santos
- Manuel Alves
- Joana Loureiro

* 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	2283	4
CHEMISTRY		
Alírio E. Rodrigues	841	4
José L. Figueiredo	1182	5
Manuel Fernando Pereira	1765	10
Joaquim L. Faria	3108	22
Rui A.R. Boaventura	3253	23
Adrián M.T. Silva	3894	28
Adélio Mendes	4323	33
José J.M. Órfão	4559	35

	#World	#National
Vítor J.P. Vilar	7032	56
Eugénia A. Macedo	8890	71
Luis M. Madeira	10100	83
José M. Loureiro	11974	101
Lúcia Santos	12494	105
Arminda Alves	13436	111
ENGINEERING AND TECHNOLOGY		
Manuel A. Alves	3640	19
Luís F. Melo	5603	35
ENVIRONMENTAL SCIENCES		
Maria C. Alvim-Ferraz	3673	14
Cidália Botelho	7292	43
MICROBIOLOGY		
Manuel Simões	1673	2

*** Research.com

PRÉMIO DE EXCELÊNCIA CIENTÍFICA FEUP

SCIENTIFIC EXCELLENCE AWARD FEUP

- Francisco Xavier Delgado D. Antunes Malcata

PREMIO RECONHECIMENTO PEDAGÓGICO FEUP

PEDAGOGICAL RECOGNITION AWARD FEUP 2023

- Alexandre Filipe Porfírio Ferreira
- Fernando Gomes Martins
- Fernão Domingos de M. B. Malheiro de Magalhães
- Filipe José Menezes Mergulhão
- Francisco Galindo Rosales
- Francisco Xavier Delgado D. Antunes Malcata
- Inês Bezerra Gomes
- João Bernardo Lares Moreira de Campos
- Luísa Manuela Madureira Andrade Silva
- Manuel Fernando Ribeiro Pereira
- Maria Joana Monteiro de Carvalho Peres

PRÉMIO DE RECONHECIMENTO CIENTÍFICO FEUP

SCIENTIFIC RECOGNITION AWARD FEUP

- Adrián Manuel Tavares da Silva
- Alexandra Maria P. Silva Ferreira Rodrigues Pinto
- Ana Mafalda Almeida Peixoto Ribeiro
- António Manuel Azevedo Ferreira
- Berta Maria Abreu Nogueiro Estevinho
- Cláudia Sofia Castro Gomes da Silva
- Fernando Gomes Martins
- Fernão Domingos de M. B. Malheiro de Magalhães
- Filipa Juliana Fernandes Castro

- Filipe José Menezes Mergulhão
- Francisco Xavier Delgado D. Antunes Malcata
- Joana Angélica de Sousa Loureiro
- Joaquim Luís Bernardes Martins de Faria
- José Carlos Magalhães Pires
- Lúcia Maria da Silveira Santos
- Luciana Calheiros Ferreira Gomes
- Luís Miguel Palma Madeira
- Manuel Fernando Ribeiro Pereira
- Manuel José Vieira Simões
- Maria do Carmo da Silva Pereira
- Nuno Filipe Ribeiro Pinto de Oliveira Azevedo
- Olívia Salomé Gonçalves Pinto Soares
- Sofia Isabel Vieira de Sousa
- Vítor Jorge Pais Vilar

TRABALHOS PREMIADOS

AWARDED WORKS

- A. Mendes e C. Azenha, IJUP Empresas 2023, com o projeto 'Capture and recovery of CO₂ directly from the air'.
- Cláudio Rocha, Luís M. Madeira, M. A. Soria e P. Cerqueira, BIP Proof 2023/2024 com o projeto 'HydroAzeite: valorizar águas residuais dos lagares de azeite'.
- E.M. Salgado, C.M. Oliveira, A.F. Esteves, A.L. Gonçalves, N. Ratola, J.C.M. Pires, "Microalgal bioremediation of primary urban wastewaters in an innovative pilot-scale photobioreactor". In: Book of Abstracts of The International Conference on Algal Biomass, Biofuels & Bioproducts 2023, Waikoloa Beach, Hawaii – USA, 12-14 June 2023. Best Poster Award
- Filipe Moisés, Best poster presentation at Artificial Photosynthesis and Green Catalysis Conference.
- J. A. Loureiro e M. C. Pereira, IJUP Empresas 2023, com o projeto 'Nanotech supplementation natural compounds-based to improve the well-being of elderly pets'.
- J. A. Martins, distinguida com o prémio 'Young Scientist Flash Presentation Award' na CHEMPOR 2023.
- M. C. S. Pereira, J. A. Loureiro, M. J. Ramalho, S. Andrade e D. Nunes, segundo lugar na 9.^a edição do iUP25k – Concurso de ideias da Universidade do Porto com o Projeto NEVADA.

- S. M. Ferreira, L. Santos, Molecules 2022 Best Paper Award para o artigo intitulado a potential valorization strategy of wine industry by-products and their application in cosmetics—case study: grape pomace and grapeseed, <https://doi.org/10.3390/molecules27030969>.
- Sofia Gonçalves, distinguida com 'Harry memorial award' na IPPS 2023 - International Panel Product Symposium com o trabalho VOC emissions from fast-curing particleboards made with lignosulphonate and pMDI binders".
- Stefanie Teixeira, Katarzyna Morawa Eblagon, Filipa Miranda, M. Fernando R. Pereira and José Luis Figueiredo, C—Journal of Carbon Research 2023 Best Paper Award para o artigo intitulado "Towards controlled degradation of poly(lactic) acid in technical applications" (<https://doi.org/10.3390/c7020042>).

OUTROS PRÉMIOS E RECONHECIMENTOS

OTHER AWARDS AND RECOGNITIONS

- A. R. Lado, Homenageada na 4^a edição do livro 'Mulheres na Ciência', 2023
- E. A. Macedo, homenageada em edição especial do Journal of Chemical & Engineering Data da American Chemical Society.

ANEXO VII: CARGOS NACIONAIS E INTERNACIONAIS DE RELEVO

ANNEX VII: RELEVANT NATIONAL AND INTERNATIONAL POSITIONS

CARGOS NACIONAIS E INTERNACIONAIS

NATIONAL AND INTERNATIONAL POSITIONS

A.A. Martins

- Member of 'ETIP Bioenergy - European Biofuels Technology Platform'.
- Member of the Batteries Europe platform.
- Member of 'SETAC Working group - New Technologies in Uncertainty Modelling and Evaluation in LCA'.

A.E. Rodrigues

- Portuguese delegate to 'Working Party of Chemical Reaction Engineering (WPCRE)' of EFCE - European Federation of Chemical Engineering.
- Member of the Advisory Board of VUB - Vrije Universiteit Brussel.
- Member of the Project Panel of WT6: Chemical Engineering, Materials Sciences of the Research Foundation Flanders (FWO).

A.F.P. Ferreira

- LSRE-LCM representative on GNIP - National Group for Process Integration).

A.M.F.R. Pinto

- Pro-Director for Co-operation at the Faculty of Engineering of the University of Porto

A.M.T. Silva

- Member of the Scientific Committee, 'EU Ph.D. School in Advanced Oxidation Processes'. Port

A.R.L. Ribeiro

- Member of the Environmental Biotechnology Division of the European Federation of Biotechnology (EFB)
- Membro do 'EuChemS-DAC Sample Preparation Study Group and Network'.
- Member of 'SCIEX Innovation Advisory Board'.

C.G. Silva

- Member of the Environmental Biotechnology Division of the European Federation of Biotechnology (EFB).
- Member of 'EuChemS-DAC Sample Preparation Study Group and Network'.
- Member of 'SCIEX Innovation Advisory Board'.

E.A. Macedo

- Portuguese delegate to 'Working Party Thermodynamics and Transport Properties (WP-TTP)' of EFCE - European Federation of Chemical Engineering.

- President of the Executive and Scientific Committee of the European Symposium on Applied Thermodynamics - official congress of the Thermodynamics and Transport Properties Working Group of EFCE - European Federation of Chemical Engineering

F.D. Magalhães

- President of the Portuguese Adhesion and Adhesives Association.
- Executive Director of the Polymer Competence Network Association (CoLAB).

F.G. Martins

- Invited member of the Energy Section of EFCE - European Federation of Chemical Engineering.
- Member of the Strategic Council and the Industry and University Council of APQuímica - Portuguese Chemical, Petrochemical and Refining Association.
- LEPABE representative on GNIP - National Group for Process Integration.

F.G. Rosales

- President of the Portuguese Society of Rheology.

J.C. Lopes

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

J.L. Faria

- President of the Portuguese Chemical Society.
- Representative on the Standardisation Technical Committee CTE 25 'Quantities and Units' of the Portuguese Quality Institute.
- National representative of 'IUPAC I Division - Physical Chemistry and Biophysics Division'.

J.L. Figueiredo

- Effective Member of the Lisbon Academy of Sciences, 3rd section - Chemistry.

L. M. Madeira

- Portuguese delegate to 'Working Party of Chemical Reaction Engineering (WPCRE)' and 'Working Party of Education (WPE)' of EFCE - European Federation of Chemical Engineering.

M.A. Alves

- Member of the Scientific Committee of ALABE - Association of Oenology Laboratories.

M.A.N. Coelho

- LEPABE representative on GNIP - National Group for Process Integration.

M.C. Pereira

- Representante do LEPABE na 'ETPN - European Technology Platform for Nanomedicine'

M.F. Pereira

- President of the Carbon Group of the Portuguese Chemical Society.
- Portuguese representative at the European Carbon Association.
- Portuguese representative at 'International Association of the Catalysis Communities (IACS) Council'.

N. Ratola

- President of 'ACE – Association of Chemistry and the Environment'.

N. Azevedo

- Member of International Biofilm Standards Task Group (IBSTG).

O.C. Nunes

- Member of the Regional Expert Board of the 'Environmental Biotechnology of European Federation of Biotechnology (EFB)' Division.

R.J. Santos

- Invited member of the Working Party on Mixing Working Party on Mixing of the EFCE - European Federation of Chemical Engineering.

S. Feyo de Azevedo

- President of the Academy of Engineering.

V.J.P. Vilar

- Member of the Environmental Biotechnology Division of the European Federation of Biotechnology (EFB).
- Member of the Scientific Committee, 'EU Ph.D. School in Advanced Oxidation Processes'

ORGANIZAÇÃO DE EVENTOS**EVENTS ORGANISATION****A.F.P. Ferreira**

- Member of the Scientific Committee of 'Symposium on Chemical Engineering- 5th Doctoral Congress in Engineering (DCE23)', Porto, Portugal, 15-16 June 2023.

A.M. Ferreira

- Member of the Scientific Committee of 'Symposium

on Chemical Engineering- 5th Doctoral Congress in Engineering (DCE23)', Porto, Portugal, 15-16 June 2023.

A.M.F.R Pinto

- Chairman of the Organising Committee of the 'Symposium on Chemical Engineering- 5th Doctoral Congress in Engineering (DCE23)', Porto, Portugal, 15-16 June 2023.

A.M. Ribeiro

- Member of the Scientific Committee of the 'Symposium on Chemical Engineering- 5th Doctoral Congress in Engineering (DCE23)', Porto, Portugal, 15-16 June 2023.

A.M.T. Silva

- Co-chair of the Organising Committee and Member of the Scientific Committee of the 'Symposium on Environmental Engineering- 5th Doctoral Congress in Engineering (DCE23)', Porto, Portugal, 15-16 June 2023.

- Member of the Management Committee of the 'EU Ph.D. School in Advanced Oxidation Processes'

- Member of the International Scientific Committee of the 'SPEA - European meeting on Solar Chemistry and Photocatalysis: Environmental Applications'.

A.R.L. Ribeiro

- Member of the National Scientific Committee, 'Iberoamerican Conference on Advanced Oxidation Technologies (CIPOA)'.

- Member of the Organising Committee of the 'International Meeting on New Strategies in Bioremediation/Bioremediation Processes (BioRemid2023)', Muttenz, Switzerland, 29-30 June 2023.

- Co-organiser and Member of the Scientific Committee of the 'Global Symposium on Emerging Contaminants: Recent Advances on Removal Treatments of Emerging Contaminants from Wastewater' at the 'WCCE11 - 11th World Congress of Chemical Engineering / IACCHE - XXX Interamerican Congress of Chemical Engineering / CAIQ2023 - XI Argentinian Congress of Chemical Engineering / CIBIQ2023 - II Iberoamerican Congress of Chemical Engineering', Buenos Aires, Argentina, 4-8 June 2023.

- Member of the Scientific Committee of the 'Symposium on Environmental Engineering- 5th Doctoral Congress in Engineering (DCE23)', Porto, Portugal, 15-16 June 2023.

C.M. Botelho

- Member of the Scientific Committee of the 'Symposium on Environmental Engineering- 5th Doctoral Congress in Engineering (DCE23)', Porto, Portugal, 15-16 June 2023.

C.G. Silva

- Local member of the Organising Committee of the 'XXVII Encontro Luso-Galego de Química', Porto,

Portugal, 7 November 2023.

- President of the Organising Committee of the 'II Iberian Conference on Photocatalysis', Porto (Portugal) 7 November 2023.
- Member of the International Scientific Committee of the 'SPEA - European meeting on Solar Chemistry and Photocatalysis: Environmental Applications'.
- Member of the Scientific Committee of the 'Symposium on Chemical Engineering- 5th Doctoral Congress in Engineering (DCE23)', Porto, Portugal, 15-16 June 2023.
- Member of the International Scientific Committee of the '4th International Workshop Advances on Photocatalysis including Environmental and Energy Applications (AdvPhotoCat-EE2023)', 25-28 July 2023

D. Falcão

- Member of the Scientific Committee of the 'Symposium on Chemical Engineering- 5th Doctoral Congress in Engineering (DCE23)', Porto, Portugal, 15-16 June 2023.
- Member of the Organising Committee of the 'H2FC - International Summer School in Hydrogen & Fuel Cells Technology, 2nd Edition', June 2023, Porto, Portugal.

D. Santos

- Member of the Organising Committee of the 'H2FC - International Summer School in Hydrogen & Fuel Cells Technology, 2nd Edition', June 2023, Porto, Portugal.

D. Silva

- Member of the Organising Committee of the 'H2FC - International Summer School in Hydrogen & Fuel Cells Technology, 2nd Edition', June 2023, Porto, Portugal.

E.A. Macedo

- Chairman of the Executive Committee and the Scientific Committee of the European Symposium of the Working Party on Thermodynamics and Transport Properties (EFCE).
- Chairman of the International Steering Committee of the European Symposium on Applied Thermodynamics (ESAT).
- Member of the International Organising Committee of the 'International Conference on Properties and Phase Equilibria for Product and Process Design (PPEPPD)'.
- Member of the International Scientific Committee of the IberoAmerican Conference on Phase Equilibria and Fluid Properties for Process Design (EQUIFASE).

F.G. Martins

- Chairman of the Organising Committee of the 'CAPE Forum 2023', September 2023, Porto, Portugal.CEY'.

F.G. Rosales

- Member of the Scientific Committee of the 'Symposium on Chemical Engineering- 5th Doctoral Congress in

Engineering (DCE23)', Porto, Portugal, 15-16 June 2023.

J.C. Lopes

- Chairman of the Organising Committee of the '17th European Mixing Conference, Mixing17 - EFCE/WPE'.

J.C. Pires

- Member of the Scientific Committee of the 'Symposium on Chemical Engineering- 5th Doctoral Congress in Engineering (DCE23)', Porto, Portugal, 15-16 June 2023.

J.D. Araújo

- Member of the Scientific Committee of the 'Symposium on Chemical Engineering- 5th Doctoral Congress in Engineering (DCE23)', Porto, Portugal, 15-16 June 2023..

J.L. Faria

- Member of the International Scientific Committee of the 'SPEA - European meeting on Solar Chemistry and Photocatalysis: Environmental Applications'.

J.L. Figueiredo

- Member of the Advisory Board of the '9th International Conference on Carbon for Energy Storage and Environmental Protection (CESEP 2023)', Budapest, Hungary, 24-28 September 2023.
- Member of the Honorary Committee of the '14th International Chemical and Biological Engineering Conference (CHEMPOR-2023)', Bragança, Portugal, 12-15 September 2023.
- Member of the Scientific Committee of 'The World Conference on Carbon 2023 (Carbon 2023)', Cancún, Riviera Maya, Mexico, 16-21 July, 2023.

J. Vila Boas

- Member of the Organising Committee of 'H2FC - International Summer School in Hydrogen & Fuel Cells Technology, 2nd Edition', June 2023, Porto, Portugal.

L.C. Gomes

- Member of the Scientific Committee of the 'Symposium on Chemical Engineering- 5th Doctoral Congress in Engineering (DCE23)', Porto, Portugal, 15-16 June 2023.

L.M. Santos

- Member of the Scientific Committee of the 1st Workshop: Towards Zero Pollution, at ESTGV, Viseu, Portugal, 5 June 2023.

M.A. Alves

- Member of the Scientific and Organising Committee of the 'Symposium on Environmental Engineering- 5th Doctoral Congress in Engineering (DCE23)', Porto, Portugal, 15-16 June 2023.

M.S.C.A. Brito

- Member of the Organising Committee of the '17th European Mixing Conference, Mixing17 - EFCE/WPE'.

- Member of the Organising Committee of the 'Young Programme, Mixing 17 - EFCE/WPE'.
- Member of the Scientific Committee of the 'Global on Waste Valorisation, Circular Economy and Industrial Symbiosis, WCCE11 - 11th World Congress of Chemical Engineering' - 4-8 June 2023, Buenos Aires, Argentina.

M.M. Dias

- Member of the Organising Committee of the '17th European Mixing Conference, Mixing17 - EFCE/WPE'.

M. V. Simões

- Presidente, 'The 2nd International Electronic Conference on Antibiotics - Drugs for Superbugs: Antibiotic Discovery, Modes of Action and Mechanisms of Resistance Conference', 15-30 junho 2022.
- Membro do Comité Científico, IJUP2023, 10-12 maio 2022.

O.S.G.P. Soares

- Member of the National Scientific Committee, 'Iberoamerican Conference on Advanced Oxidation Technologies (CIPOA)'.
- Member of the Scientific Committee of the 'Symposium on Chemical Engineering- 5th Doctoral Congress in Engineering (DCE23)', Porto, Portugal, 15-16 June 2023.

R.C. Ferreira

- Member of the Organising Committee of 'H2FC - International Summer School in Hydrogen & Fuel Cells Technology, 2nd Edition', June 2023, Porto, Portugal.

R.J. Santos

- Chairman of the Organising Committee of the '17th European Mixing Conference, Mixing17 - EFCE/WPE'.
- Member of the Scientific Committee of the 'Symposium on Chemical Engineering- 5th Doctoral Congress in Engineering (DCE23)', Porto, Portugal, 15-16 June 2023.

R.O. Cristóvão

- Member of the Scientific Committee of the 'Symposium on Chemical Engineering- 5th Doctoral Congress in Engineering (DCE23)', Porto, Portugal, 15-16 June 2023.

T. Lopes

- Member of the Scientific Committee of the 'Symposium on Environmental Engineering- 5th Doctoral Congress in Engineering (DCE23)', Porto, Portugal, 15-16 June 2023.

S.I.V. Sousa

- Co-chair of the Organising Committee and member of the Scientific Committee of the 'Symposium on Environmental Engineering- 5th Doctoral Congress in Engineering (DCE23)', Porto, Portugal, 15-16 June 2023.

V. Homem

- Member of the Scientific Committee of the '5th

International Environmental Chemistry Congress (EnviroChem)', Antalya, Turkey, 30 October - 2 November 2023.

- Member of the Scientific Committee of the 'Symposium on Environmental Engineering- 5th Doctoral Congress in Engineering (DCE23)', Porto, Portugal, 15-16 June 2023.
- Member of the Scientific Committee of the '3rd Workshop - Towards Zero Pollution, EU Green Week', Viseu, Portugal, 5 June 2023.

V. Oliveira

- Coordinator and member of the International Scientific Committee, '5th Iberoamerican Congress on Advanced Oxidation Technologies (V CIPOA)', Cusco, Peru, 7-11 November 2022.

Member of the National Scientific Committee, '5th Iberoamerican Conference on Advanced Oxidation Technologies (V CIPOA)', Cusco, Peru, November 2022.

V.J.P. Vilar

- Coordinator and member of the International Scientific Committee of the Ibero-American Congress of Advanced Oxidation Technologies (CIPOA).
- Member of the Scientific Committee of the 'Symposium on Environmental Engineering- 5th Doctoral Congress in Engineering (DCE23)', Porto, Portugal, 15-16 June 2023.

MEMBROS DE PAINÉIS DE AVALIAÇÃO I&D

MEMBERS OF R&D EVALUATION PANELS

A.A. Martins

- Programme evaluator for Horizon2020 Marie Curie Postdoctoral Fellowships (PF) scholarships
- Evaluator of the Horizon 2020 Marie Curie Doctoral Networks (DN) programme.
- Evaluator of the Horizon 2020 CINEA InnovFund-LSC-2022 programme - GHG - EII - H2 - PRODUCTION A.

L.M. Madeira

- Scientific project evaluator for ANR - Agence Nationale de Recherche (France), call AAPG 2023, panel CE07 - Molecular chemistry (May 2023).

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 of Special Issue of *Water* (MDPI) on 'Occurrence of Pharmaceuticals in Water and Their Removal Technologies', 2023.
- Co-Guest Editor Special Issue 'Water and Wastewater Treatment and Management in the Textile Industry' of *Frontiers in Engineering Science* (Frontiers), 2023.
- Member of Editorial Board of *Water* (MDPI).

B.N. Estevinho

- Guest Editor of the special issue 'Encapsulation Processes: Valorization, Stabilization and Commercialization of Active and Natural Compounds', *FOODS* (MDPI), 2023.
- Guest Editor of the special issue 'Microencapsulation of Active and Natural Compounds - Valorization of By-Products', *Journal of Renewable Materials* (Tech Science Press), 2023.

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), 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).
- Guest Editor of the Special Issue 'ESAT-2022 Conference', *Fluid Phase Equilibria* (Elsevier).

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 '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).

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), Micromachins,

- Topic Editor 'Molecular diagnostic methods for bacteria and fungi detection', Frontiers in Cellular and Infection Microbiology (Frontiers).

L.F. Melo

- Member of Editorial Board of Microorganisms (MPDI).

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).

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).

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

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).

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).
- Guest editor of the special issue entitled 'Advances, Persistent and Mobile Chemicals: advances and outlook in analytical determination, remediation, environmental fate, human exposure and management towards a safe chemical space', Science of the Total Environment (Elsevier), 2023.