



Fostering Excellence,  
Empowering Society through Chemistry

**utad** UNIVERSIDADE DE TRÁS-OS-MONTES E ALTO DOURO

## Annual Report 2023



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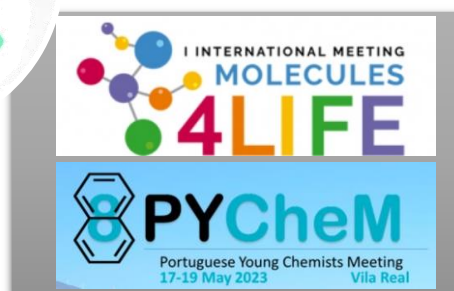
IV.7. Participation in National and International Organizations

## 1. Overview

86 Articles  
47% Q1, 39%Q2

32 Full Membres  
5 Post-Doc  
28 PhD Students

37 Projects  
3 New Project  
9 International



Visit CQ-VR at:



<https://cqvr.purpleprofile.pt/>



<https://www.facebook.com/Centro-de-Qu%C3%ADmica-Vila-Real322276015378416>



<https://www.facebook.com/appliedorganicchemistry.cqvr>



<https://www.facebook.com/profile.php?id=100076127761863>



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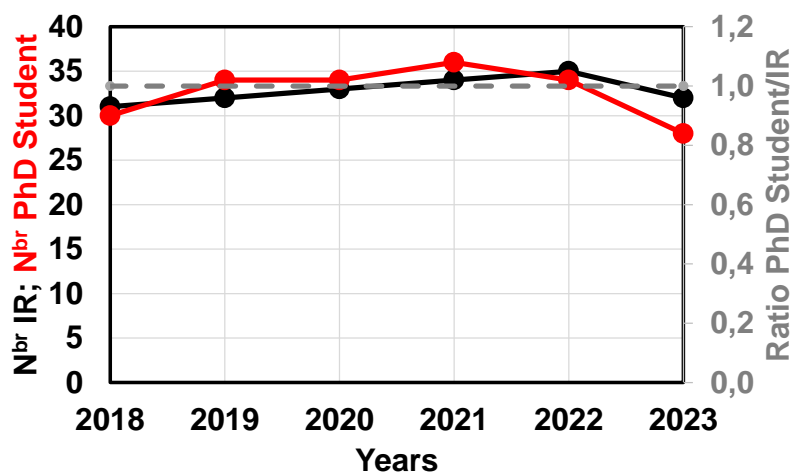
<https://www.facebook.com/search/top?q=food%20and%20wine%20chemis%20try%20lab.%20-%20cq-vr>



<https://www.facebook.com/AliceMCVilela>

## 1.1. This past year

In this year the CQ-VR was composed of 32 integrated researchers, 28 PhD students, 5 Post-Doc students. The ratio between PhD students and integrated members was in 2023 of 0.88 (Figure 1)

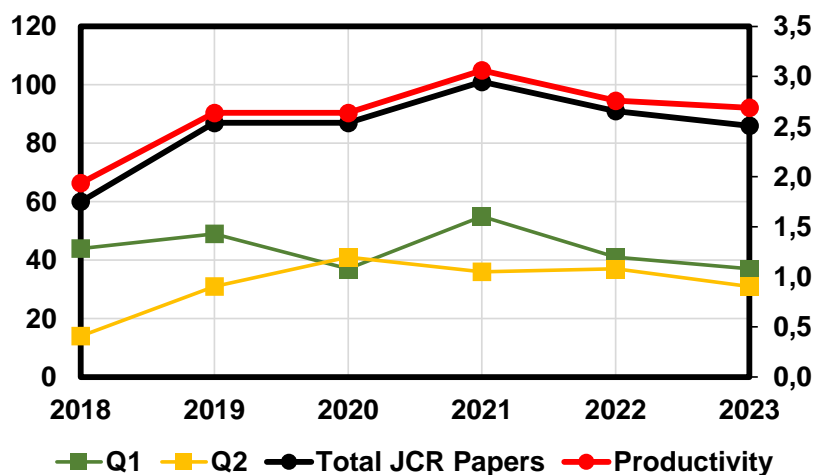


**Figure 1** – Number of integrated members and PhD students between 2018 and 2023

This year was also very productive concerning the number of published papers. The total number of published papers in journals indexed in the Journal Citation Reports (JCR) was 86 (Figure 2). According to the Web of Science database, 37 research papers were published in Q1 journals, 31 in Q2 journals and 11 papers were published in Q3 journals. Seven papers were published in newly released journals which are therefore waiting for impact factor. In 2023 the productivity of the CQ-VR members was 2.7 papers per integrated member, a good result, although further increase in papers published in top journals is needed (Table 1).

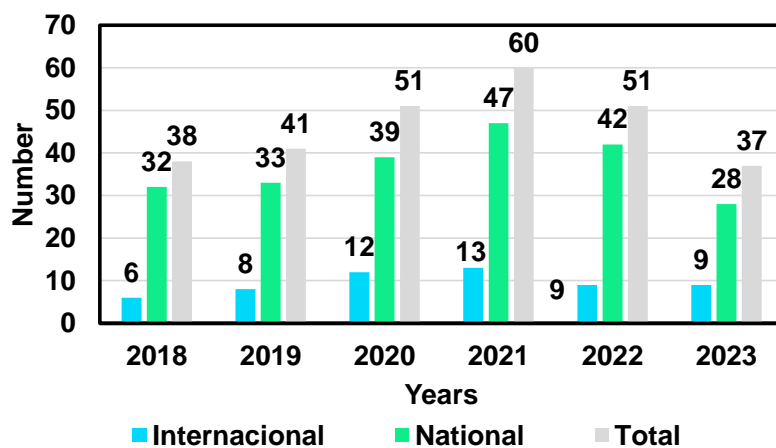
**Table 1** – Top 4 journals used by the CQ-VR researchers for publishing their work in the 2023 period. Also shown the scientific areas and ranks of the journals according to the Web of Science Journal Citation Reports (JCR).

Rank	Journal	N <sup>br</sup>	IF	
1 <sup>st</sup>	Foods	6	4.7	38/173 Food Science & Technology (Q1)
2 <sup>nd</sup>	Science of the Total Environment	4	8.2	31/358 Environmental Sciences ( <b>Top 10%</b> )
3 <sup>rd</sup>	Molecules	3	4.2	76/230 Chemistry Multidisciplinary (Q2)
4 <sup>th</sup>	Applied Sciences	2	2.5	114/230 Chemistry Multidisciplinary (Q2)
4 <sup>th</sup>	Construction and Building Materials	2	7.4	82/438 Material Sciences, Multidisciplinary (Q1)
4 <sup>th</sup>	Dyes and Pigments	2	4.1	20/74 Chemistry, Applied (Q2)
4 <sup>th</sup>	Food Chemistry	2	8.5	8/173 Food Science & Technology ( <b>Top10%</b> )
4 <sup>th</sup>	International Journal of Molecular Sciences	2	4.9	67/230 Chemistry Multidisciplinary (Q2)
4 <sup>th</sup>	Land Degradation and Development	2	3.6	140/358 Environmental Sciences (Q2)
4 <sup>th</sup>	MethodsX	2	1.6	61/134 Multidisciplinary Sciences (Q2)
4 <sup>th</sup>	Water	2	3.0	40/127 Water Resources (Q2)

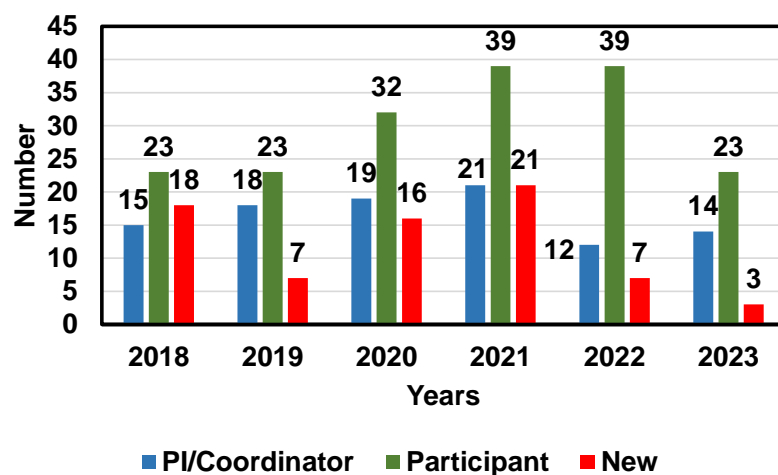


**Figure 2** – Total number of papers, papers published in Q1 and Q2 journals, and productivity over the period from 2018 to 2023 (published papers in international refereed journals indexed to the Web of Science database).

This year 3 new projects were approved, one international and 2 national projects that add up to the 35 projects that were running or concluded this year. This was the last year of the funding framework, and no national project calls were open since 2022. During this period there were a total of 91 projects running, 33 projects coordinated by CQ-VR members and 15 of them being international projects, making a total of 2.8 projects by researcher and 1 project leader by researcher.



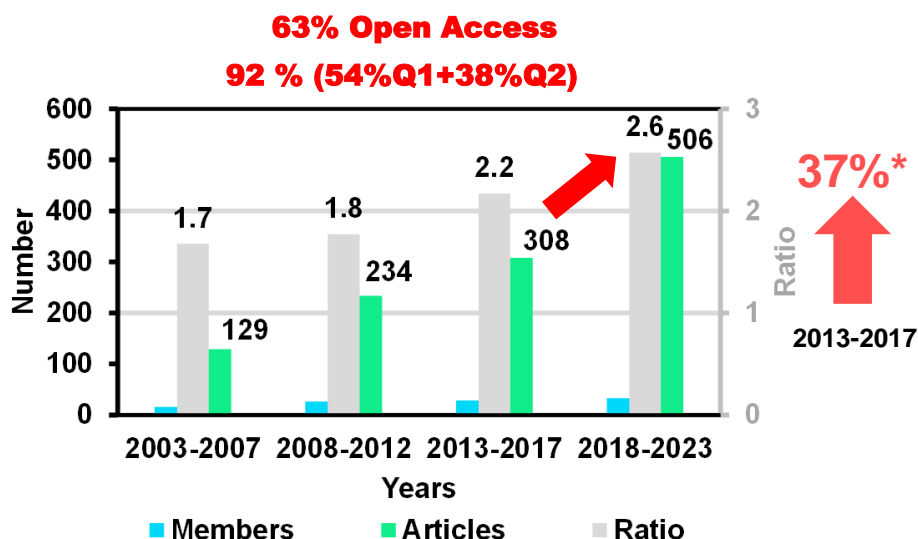
**Figure 3** – Number of international and national projects running each year from 2018 to 2023.



**Figure 4** – New projects and type of intervention of the CQ-VR members since 2018 until 2023

This is the last year of the four-year funding period of the Centre by the FCT (UIDB/00616/2020 and UIDP/00616/2020) that encompassed the years from 2020 to 2023 (although the next evaluation period will encompass the 2018 – 2023 period). In this period, it was observed a 37% increase in the number of published papers by the integrated members, corresponding also to an increase in productivity of 18% from 2.2 to 2.6 (Figure 5). Ninety two percent of the papers published in this period were published in Q1 (54%) and Q2 (38%) journals. Sixty three percent were made open access available, mainly through the FCT program for supporting the open access publication. Also noteworthy is the fact that 38% of the papers published were made with collaboration with international research groups.

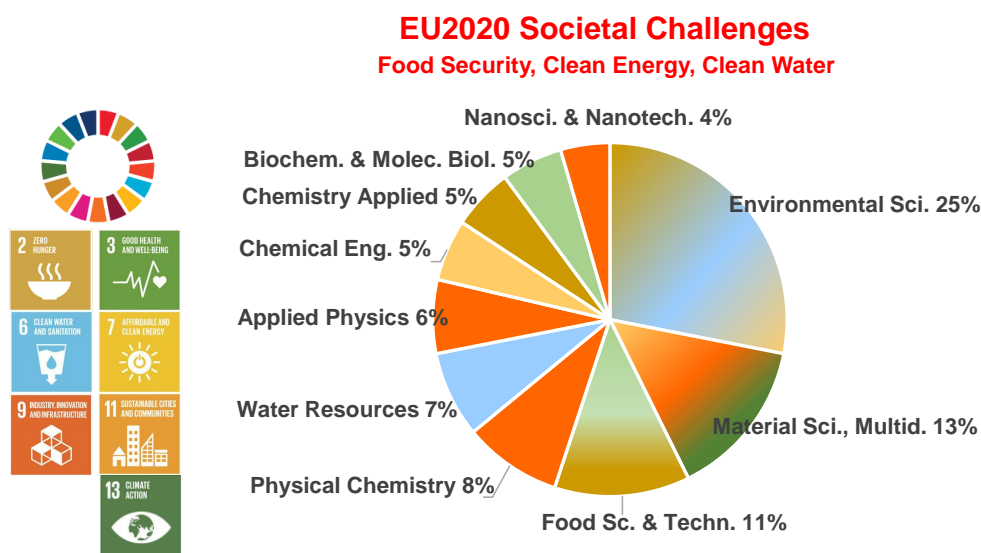




\*Corrected for number of years

**Figure 5** – Evolution of the productivity of the CQVR since its foundation in 2002 and comparison between this evaluation period with the previous one.

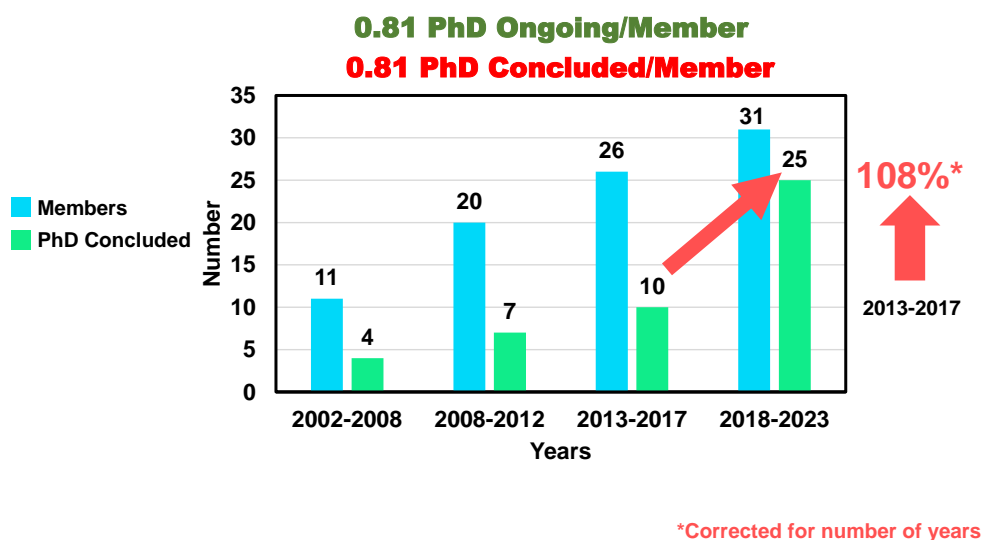
Of the works published, the main subjects were in the field of environmental sciences, material science, food science and technology, physical chemistry and water resources, aligned with the EU2020 Societal Challenges, Food Security, Clean Energy and Clean water (Figure 6)



**Figure 6** – Main subjects published in the 2018-2023 period

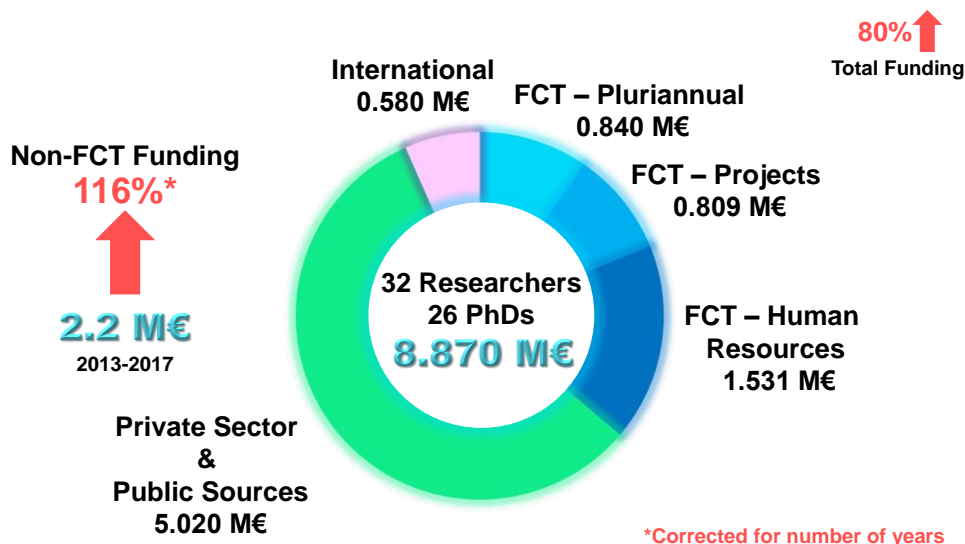
Concerning the increase in young researches, in this last period there was a significant increase in the number of concluded PhD thesis in comparison to the previous period, being observed an impressive increase of 108%. This increased totalled almost one

PhD thesis by integrated member (Figure 7). Currently the same number of thesis are being performed in the unit



**Figure 7** – Evolution of the number of concluded PhD thesis since 2002 to 2023

One of the most impressive goals attained was the increase of the total funding of the CQVR that increase in this last period by 80%, this increase being mainly due to the increase in non-FCT funding that attained an impressive three digit increase of 116%, this being mainly due to the increase in the number of projects in this last period.



**Figure 8** – Total and sources of funding of the CQ-VR in 2018 to 2023 and comparison to the 2013-2017 period.

Concerning the external visibility, the CQ-VR is very proud of the organization and the final result of the First International Meeting of Molecules4Life (<https://molecules4life-2023.events.chemistry.pt/>), the flagship conference of the CQVR (Figure 9)



**Figure 9** – Group photograph and some of the invited speakers of the I International Meeting Molecules4Life, held in Vila Real from 20 to 22 September 2023.

Time	20 <sup>th</sup> September	Time	21 <sup>st</sup> September	Time	22 <sup>nd</sup> September
		9.00-10.00	<b>PL3</b> - Sensing and Diagnostic <i>Dr. Maria Gamella Carballo</i>	9.00-10.00	<b>PL7</b> - Therapeutic Applications <i>Prof. Matilde Marques</i>
		10.00-11.00	<b>PL4</b> - Drug Delivery <i>Dr. Bruno Silva</i>	10.00-11.00	<b>PL8</b> - Drug Delivery <i>Prof. Maria J. Blanco-Prieto</i>
		11.00-11.30	<i>Coffee Break</i>	11.00-11.30	<i>Coffee Break</i>
		11.30-11.45	OC1-SD / OC1-DD	11.30-11.45	OC6-TA / OC5-DD
		11.45-12.00	OC2-SD / OC2-DD	11.45-12.00	OC7-TA / OC6-DD
		12.00-12.15	OC3-SD / OC3-DD	12.00-12.15	OC8-TA / OC7-DD
		12.15-12.30	OC4-SD / OC4-DD	12.15-12.30	OC9-TA / OC6-HF
12.00-14.00	<b>Registration</b>	12.30-14.00	<i>Lunch</i>	12.30-14.00	<i>Lunch</i>
14.00-14.30	<b>Opening Ceremony</b>	14.00-15.00	<b>PL5</b> - Therapeutic Applications <i>Prof. Tiago Fleming Outeiro</i>	14.00-15.00	<b>PL9</b> - Therapeutic Applications <i>Prof. Belen Vaz</i>
14.30-15.30	<b>PL1</b> - Therapeutic Applications <i>Prof. Richard C. Hartley</i>	15.00-16.00	<b>PL6</b> - Healthy Food <i>Prof. Justin B. Siegel</i>	15.00-16.00	<b>PL10</b> - Sensing and Diagnostic <i>Dr. Rui Campos</i>
15.30-16.30	<b>PL2</b> - Healthy Food <i>Prof. Pierre-Louis Teissedre</i>	16.00-17.00	Poster Session 2 & <i>Coffee Break</i>	16.00-16.30	<i>Coffee Break</i>
16.30-17.00	<i>Coffee Break</i>	17.00-19.30	Winery Tour / City Tour	16.30-16.45	OC10-TA / OC5-SD
17.00-17.15	OC1-TA / OC1-HF	19.30	<b>Congress Dinner</b>	16.45-17.00	OC11-TA / OC6-SD
17.15-17.30	OC2-TA / OC2-HF			17.00-17.15	OC12-TA / OC7-SD
17.30-17.45	OC3-TA / OC3-HF			17.15-17.30	OC13-TA / OC8-SD
17.45-18.00	OC4-TA / OC4-HF			17.30-17.45	OC14-TA
18.00-18.15	OC5-TA / OC5-HF			17.45	<b>Closing Ceremony</b>
18.30	Poster Session 1 & Welcome drink				
<b>PL</b> – Plenary lecture; <b>OC</b> – Oral Communication; <b>TA</b> – Therapeutic Applications; <b>HF</b> – Healthy Food; <b>SD</b> – Sensing & Diagnostic; <b>DD</b> – Drug Delivery.					

Another important conference organized by the CQ-VR young researchers and PhD students was the 8<sup>th</sup> PYChem, the Portuguese Young Chemists Meeting (<https://8pychem.events.chemistry.pt/#:~:text=Taking%20on%20the%20role%20of,kingdom%E2%80%9D%2C%20from%20May%2017th%20to>), held in Vila Real from 17 to 19 May 2023 (Figure 10).



**Figure 10** – Organizing Committee of the 8<sup>th</sup> PYChem held in Vila Real in 2023.

Both conferences allowed bringing to the Vila Real internationally renowned researchers



Hours 17th May (Wednesday) Hours 18th May (Thursday) Hours 19th May (Friday)

8:30	Registration	9:00	PL3 Charis M. Galanakis	9:00	PL5 Maria Helena Braga
9:30	Opening Ceremony	9:50	IL3 Carla Vitorino	9:50	O16 Daniela Pinheiro
10:00	PL 1 Christian Griesinger	10:10	O8 Leonilde Marchão	10:05	O17 Pedro Matias
10:50	Coffee break	10:25	O9 Artur Bento	10:20	O18 Tiago Duarte
11:05	KN 1 Xavier Cattoen	10:40	Coffee break	10:35	Coffee break
11:35	O1 Renata Amaral	10:55	KN3 Lillian Barros	10:50	KN5 Maria José Tapia
11:50	O2 Alexandre Alves	11:25	IL4 Mafalda Sarraguça	11:20	IL5 Leonor Caldeira
12:05	O3 Luís Filipe	11:45	O10 Joana Madureira	11:40	O19 Sérgio Silva
12:20	O4 Mafalda Penetra	12:00	O11 Maria Leichtweis	11:55	O20 Ana Silva
12:35	F1 Filipa Teixeira	12:15	F6 Edgar Silva-Santos	12:10	IL6 Tânia Albuquerque
12:40	F2 Carlos Shiraishi	12:20	F7 Filipa Mandim	12:30	O21 Alexis Pereira
12:45	F3 Karina Silvério	12:25	F8 Thauane Silva	12:45	O22 Sandra Marcelino
12:50	F4 Ana Queljo	12:30	F9 Zoé Arnaut	13:00	Lunch
12:55	F5 Nuno Jorge	12:35	F10 Daniela Ferreira	14:15	O23 Filipe Santos
13:05	Lunch	12:45	Lunch	14:30	O24 Artur Farinha
14:20	PL2 António Candeias	14:00	PL4 João Paulo André	14:45	2nd National Retrosynthesis Competition 2023 Award
15:10	IL1 Isabel Soares	14:50	O12 Fátima Gonçalves		
15:30	O5 Rui Sousa	15:05	O13 Samuel Mugo	15:45	EYCN – Joana Madureira
15:45	O6 Mariana Monteiro	15:20	O14 José Ferraz-Caetano	16:00	IYCN – João Borges
16:00	Coffee break/Poster session	15:35	O15 Luís Viegas	16:15	PYCA Award
16:45	KN2 Sérgio Sousa	15:50	Coffee break/Poster session	16:30	Best Oral, flash and Poster Awards
17:15	IL2 João Rodrigues	16:40	KN4 João Salvador	16:45	Next conference
17:35	O7 Joana Ferreira	17:10	Workshop Pedro Mendes	17:00	Closing Ceremony
18:00	Port of Honor	18:40	GQJ Assembly		
		20:30	Conference dinner		

PL – Plenary

KN – Keynote

O – Oral communication

F – Flash communication

IL – Invited lecture

GQJ – Grupo de Químicos Jovens

EYCN – European Young Chemists Network

IYCN – International Younger Chemists Network

PYCA – Portuguese Young Chemists Award

## 1.2. Who we are

### Management Structure

Director                      Fernando Hermínio Ferreira Milheiro Nunes



Fernando Nunes  
Food Chemistry

Paulo Jorge dos Santos Coelho



Paulo Coelho  
Photochromism

Vice-Directors

José Ramiro Afonso Fernandes



Ramiro Fernandes  
Materials

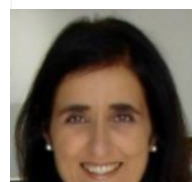
Principal Investigators

Applied                      Organic  
Chemistry                      Paulo Jorge dos Santos Coelho



Paulo Coelho  
Photochromism

Materials Chemistry                      Verónica Cortés de Zea Bermudez



Verónica Bermudez  
Hybrid Materials

Environmental  
Chemistry                      José Alcides Silvestre Peres



José A. Peres  
Water Treatment

Food Chemistry and  
Biochemistry                      Maria Fernanda Gil Cosme Martins



Fernanda Cosme  
Food Technology / Oenology

## PhD members

Alexandra Isabel Martins Paulo da Costa	Luís Filipe da Mota Ribeiro
Alice Maria Correia Vilela	Maria Cristina Fialho Oliveira
Amadeu Duarte da Silva Borges	Maria Manuel Silva Oliveira
Ana Cristina Briga de Sá	Maria do Céu Mendes de Sousa
António Francisco Henrique Inês	Maria Cristina Álvares Pereira Gonçalves
António José Duque Pirra	Maria Fernanda Gil Cosme Martins
Fernando Hermínio Ferreira Milheiro Nunes	Mariana Sofia Peixoto Fernandes
Fernando António Leal Pacheco	Marco Paulo Gomes de Sousa Lucas
Francisco Manuel Pereira Peixoto	Nuno Miguel Cordeiro Cristelo
João Claro Almeida Ribeiro Claro	Patrícia Alexandra Miranda David Barata
João Filipe Coutinho Mendes	Paulo Fernando da Conceição Santos
José Alcides Silvestre Peres	Paulo Jorge dos Santos Coelho
José Miguel Ribeiro	Pedro Manuel de Melo Bandeira Tavares
José Ramiro Afonso Fernandes	Rosa Magalhães Rego
José Virgílio de Sousa Coelho Prata	Sérgio Silva
Lucinda Vaz dos Reis	Verónica Cortés de Zea Bermudez

## Postdoctoral students

Teresa Cristina Tarlé Pissarra. Supervisor: Fernando António Leal Pacheco.  
Vânia Graça. Supervisor: P. Coelho  
Daniela Maria da Silva Correia. FCT Grant Holder. Supervisor: V. de Zea Bermudez  
Silvia Petronilho FCT Grant Holder. Supervisor: Fernando M. Nunes

## Technical and administrative staff

José Eduardo Borges  
Carlos da Costa Matos  
Maria Natália Campos Teixeira



## Collaborators

Bruno Rocha, Engineering Department, UTAD

Diogo Faria, Engineering Department, UTAD

Fernando Glenadel Braga, Chemistry Dep., UTAD

Lisete Sofia Gomes Fernandes, Microscopy Unit, UTAD

Maria Cristina Guiomar Antunes, Chemistry Dep., UTAD

Maria João Santos, Environmental and Biology Dep., UTAD

Paula Lopes

Romeu Antonio Videira, Pharmacy College, UP

Rui Campos, INL, Braga

### 1.3. Research Units – What we do

#### Applied Organic Chemistry

- Design and synthesis of new functional organic molecules.
- Cyanine dyes photosensitizers for photodynamic therapy of cancer, fluorescent NIR probes for biomolecules and dye-sensitized solar cells.
- Calixarene-based architectures and carbon nanomaterials for sensory applications, (photo)catalysis, optoelectronic devices, bioimaging and nanomedicine.
- Heterocyclic photochromic compounds for application in ophthalmic lens coatings.

#### Materials Chemistry

- Development of new functional materials.
- Oxide materials for electronics, biosensing and catalysis.
- Hydrophilic carbon nanomaterials for sensors, fuel cells and medical therapies.
- Nanocatalysts and membrane electrode assemblies for (micro)fuel cells.
- Modified carbon-based electrodes for health applications.
- Organic/inorganic (bio)hybrid materials for smart windows, solar concentrators, batteries, fuel cells, optics, biomedicine, and (super)hydrophobic paintings/coatings.
- Alkali-activated composites for the construction industry

#### Environmental Chemistry

- Application of advanced oxidation processes for water and wastewater treatment: removal of contaminants of emerging concern and microorganism inactivation.
- Development of new eco-efficient solutions for the management of agro-industrial by-products and the environmental modeling of multiple-use watersheds focused on the interplay between anthropogenic pressures and stream water contamination, as well as of catchments affected by natural or man-induced disasters, are also major goals.
- Study of the microbial and biochemistry activity of the soil related to global warming, nutrient cycling and energy effort for nutrient acquisition.

#### Food Chemistry & Biochemistry

- New food formulations, innovative technologies and processes to improve the production, safety and quality of wine and foods.
- Improvement and development of new analytical methods for wine and food safety and quality control.
- Chemical and toxicological characterization of food bioactive compounds.
- Biochemical, chemical and sensory modifications during production, processing and conservation to contribute to a healthier diet.
- Development of functional foods with innovative properties devoid of allergenicity.
- Evaluation of the bioactive compounds impact on diseases and aging.

## Part I - Environmental Chemistry

### I.1. Advanced Education

#### I.1.1. Junior Researchers

**Name** Bruno Miguel Freitas da Silva  
**Supervisor** Fernando António Leal Pacheco and Luís Filipe Sanches Fernandes

**Name** Victor Hugo Sarrazin Lima  
**Supervisor** Fernando António Leal Pacheco and Luís Filipe Sanches Fernandes

#### I.1.2. Postdoctoral students

**Name** Daniela Patrícia Salgado Terêncio  
**Supervisor** Fernando António Leal Pacheco and Luís Filipe Sanches Fernandes

**Name** Renata Cristina Araújo Costa  
**Supervisor** Fernando António Leal Pacheco and Luís Filipe Sanches Fernandes

#### I.1.3. PhD students

**Name** Ana Rita Moura Teixeira  
**Supervisors** José Alcides Peres, Marco Lucas  
**PhD programme** Doutoramento em Ciências Químicas e Biológicas  
**Starting date** January 2021

**Name** Leonilde Marchão

<b>Supervisors</b>	Marco Lucas; Pedro Tavares
<b>PhD</b>	Agrichains
<b>Starting date</b>	Setembro 2019
<b>Name</b>	<b>Rui Bajouco Lopes</b>
<b>Supervisors</b>	João Coutinho
<b>PhD</b>	Ciências Químicas e Biológicas (UTAD)
<b>Starting date</b>	Junho 2022
<b>Name</b>	<b>Vanessa Almeida</b>
<b>Supervisors</b>	João Coutinho
<b>PhD</b>	Ciências Químicas e Biológicas (UTAD)
<b>Starting date</b>	Novembro 2021
<b>Name</b>	<b>Claudia Sebadelhe</b>
<b>Supervisors</b>	Fernando A.L. Pacheco
<b>PhD</b>	Ciências Agronómicas e Florestais (UTAD)
<b>Starting date</b>	
<b>Name</b>	<b>Miguel Oliveira</b>
<b>Supervisors</b>	Amadeu Borges
<b>PhD</b>	Ciências Químicas e Biológicas (UTAD)
<b>Starting date</b>	
<b>Name</b>	<b>Ana Paula Ferreira da Silva</b>
<b>Supervisors</b>	José Alcides Peres, Helder Gomes, Jose Luis Díaz de Tuesta
<b>PhD programme</b>	Doutoramento em Ciências Químicas e Biológicas

**Starting date** September 2022

#### I.1.4. PhD thesis concluded

**Name** Nuno Filipe Alves Jorge

**Supervisors** José Alcides Peres, Marco Lucas

**PhD programme** Programa de doutoramento Água, Sustentabilidade e Desenvolvimento, Universidade de Vigo

**Starting date** 21 July 2023

**Name** Regina Maria Bessa Santos

**Supervisors** Fernando A.L. Pacheco e Luís F.S. Fernandes

**PhD** Ciências Químicas e Biológicas (UTAD)

**Starting date** 1 maio de 2019 (36 meses)

## I.2. Projects

### I.2.1. European/International

#### 1. HEI-ETEIA – Energy Transition Entrepreneurs in Action - developing a supportive academic environment for the young talents

Reference: Project Number 10036

Starting date: 2021-07-01. Ending date: 2023-07-31.

Funding by: EU (UTAD fund: 390.000,00€; Total fund: 1.200.000,00€)

Main contractor. N/A Host institution: N/A

CQVR members role: Ana Briga Sá (participant); Rosa Rego (participant), Mariana Fernandes (participant), Verónica Bermudez (participant), Maria Antunes (participant), Maria Cristina Oliveira (participant), Pedro Tavares (participant), José Ramiro Fernandes (participant).

Status: **Concluded**

- 2. Innovative concepts and technologies for ECOlogically sustainable NUTRIent management in agriculture aiming to prevent, mitigate and eliminate pollution in soils, water and air/ECONUTRI**, Project number 101081858, HORIZON Innovation Actions. João Coutinho  
Status: **Ongoing project**

## I.2.2. National

### I.2.2.1. CQVR Leadership

- 1. AgriFood XXI – Desenvolvimento e consolidação da investigação do setor agroalimentar no Norte de Portugal**

Reference: NORTE-01-0145-FEDER-000041

Starting date: September 2020. Ending date: August 2023.

Funding by: Fundo Europeu de Desenvolvimento Regional (FEDER) através do NORTE 2020 (Programa Operacional Regional do Norte 2014/2020);

Funding by: Total: 2.352.869,65 € / UTAD: 941.207,94€.

Main contractor. UTAD Host institution: UTAD

CQVR members role: Fernando Nunes (coordinator). José Alcides Peres (participant)

Status: **Concluded project**

- 2. ENTIRE - Emergence Analysis of Tailings Impacts for a Restored Aquatic Environment.**

Starting date: 2021-01-01. Ending date: 2023-12-31.

Funding by: Vale, S.A. (UTAD fund: 546.875,94 €; Total fund: 752.735,94 €)

Main contractor. UTAD Host institution: UTAD

CQVR members role: Fernando A.L. Pacheco (coordinator).

Status: **Concluded project**

- 3. OBTain- Objective Building Sustainability**

Reference: NORTE-01-0145-FEDER-000084

Starting date: 2021-07-01. Ending date: 2023-06-30.

Funding by: FEDER (UTAD fund: 588.235,28 €; Total fund: 588.235,28 €)

CQVR members role: Verónica de Zea Bermudez (coordinator), Ana Briga Sá , Pedro Tavares, Fernando Pacheco; José Ramiro Fernandes, Marlo Lucas, Maria Cristina Gonçalves, Maria Cristina Oliveira, Maria Antunes, Mariana Fernandes, Nuno Cristelo, Rosa Rego.

Status: **Concluded project**

#### 4. **SMARTAGEING - Sistema de Apoio à Decisão para o Envelhecimento de Vinho do Porto Branco**

Reference: Nº: 47021

Starting date: 2020 Ending date: 2023

Funding by: PRODER:492.411,37€

CQVR members role: Fernando M. Nunes (principal investigator), Fernanda Cosme (participant), Amadeu Borges (participant)

Status: **Concluded project**

### I.2.2.2. CQVR Partnership

#### 1. **Advanced adsorption-oxidation technologies for the removal of emerging contaminants from wastewater by 3D-structured carbon-materials (CATAD3.0).**

Starting date: june 2021. Ending date: June 2024.

Funding by: Ministerio de Ciencia e Innovación (Espanha). Proyectos I+D+i 2020. (Total: 230.200€ / Verba UTAD: 15.600€)

CQVR members role: J. Alcides Peres

Status: **Ongoing project**

#### 2. **GREENValue - Valorização da Geração de Recursos Em Espaço Natural. AVISO Nº 13/REACT-EU/2021**

Starting date: September 2022. Ending date: December 2023.

Funding by: Programa Operacional Regional do Norte (UTAD fund: 300.000,00€) Main contractor. UTAD Host institution: UTAD

CQVR members role: José Alcides Peres, Marco S. Lucas.

Status: **Concluded project**

#### 3. **TEST^3\_Upscaling SARS-CoV-2: Testar, Testar, Testar: “upscaling” do diagnóstico laboratorial do SARS-CoV-2 no Centro de Testagem COVID-19 da UTAD.**

Starting date: December 2020. Ending date: September 2023.

Funding by: Programa Operacional Regional do Norte (UTAD fund: 288.342,41€) Main contractor. UTAD Host institution: UTAD

CQVR members role: Raquel Chaves (coordinator), Amadeu Borges, Paula Lopes, Filomena Adegas

Status: **Concluded project**

#### **4. Vine & Wine Portugal – Driving Sustainable Growth Through Smart Innovation**

Starting date: September 2022. Ending date: September 2025.

Funding by: PRR – Plano de Recuperação e Resiliência e pelos Fundos Europeus NextGeneration EU, no âmbito das Agendas Mobilizadoras para a Reindustrialização. Global fund: 41.427.004,64€. UTAD fund: 7.875.653,67€. Host institution: UTAD

CQVR members role: Marco S. Lucas, José A. Peres, Fernando Nunes, João Coutinho.

Status: **Ongoing project**

### **I.2.3. Industrial collaborative protocols and technology transfer**

- 1. Desenvolvimento e Industrialização de um Novo Pellet para Consumo nas Caldeiras da Amorim Cork**, Protocolo de colaboração com a Amorim Cork, S.A., Referência UTAD: 116-e-CIDE-2022. Valor UTAD: 36.897,42€. Coordenador UTAD: Amadeu Borges.
- 2. Soil and Plant Laboratory for Chemical, Physical and Biochemical Analysis** for research activities and service activities for stockholders in the agri-environmental business. João Coutinho.

### **I.5. Outputs**

#### **I.5.1 Patents**

1. Pedido Patente Portuguesa nº 118649. Título: Dispositivo de Aquecimento de um Fluido e Sistema Relacionado – Tecnologia AmbiVap. Inventor: João Claro. UTAD 12/05/2023

#### **I.5.2. Book chapters**

1. Hodaifa, G.; Zuorro, A.; Dominguez, J.R.; Rodríguez, J.G.; Peres, J.A.; Frontistis, Z.; Albqmi, M., (Eds.). Advanced Oxidation Process: Applications and Prospects, MDPI Books Editorial Office, Basel (Switzerland), 2023, 450 p. (ISBN 978-3-0365-9279-4) (PDF). doi.org/10.3390/books978-3-0365-9279-4.
2. Jorge, N.; Chilaule, S.M.; Lucas, M.S.; Peres, J.A., “Caracterização dos subprodutos valorizáveis - as ApR”, Cap. 8, pp.158-182. Livro “Utilização de lamas e águas



tratadas de ETAR no restauro de zonas florestais no concelho de Alfândega da Fé”, José Gomes Laranjo, Paula Vale Fernandes (Eds.). Universidade de Trás-os-Montes e Alto Douro e Águas do Norte, dezembro 2023. ISBN: 978-989-33-5918-1 (240 p.).

## I.5.2. Publications in journals of Journal Citation Reports

### I.5.2.1. Q1 and Q2 Journals

1. Jorge N., Teixeira A.R., Lucas M.S., Peres J.A. Combined organic coagulants and photocatalytic processes for winery wastewater treatment. (2023) *Journal of Environmental Management*, 326, 116819 **Q1**
2. Hodaifa G., Zuurro A., Dominguez J.R., Rodríguez J.G., Peres J.A., Frontistis Z., Albqmi M. Advanced Oxidation Process: Applications and Prospects. (2023) *Water (Switzerland)*, 15 (19), 3444 **Q2**
3. Jorge N., Teixeira A.R., Lucas M.S., Peres J.A. Enhancement of EDDS-photo-Fenton process with plant-based coagulants for winery wastewater management. (2023) *Environmental Research*, 229, 116021 **Q1**
4. Gomes A., Borges A., Peres J.A., Lucas M.S. Bioenergy Production from Agro-Industrial Wastewater Using Advanced Oxidation Processes as Pre-Treatment. (2023) *Catalysts*, 13 (8), art. no. 1186 **Q2**
5. de Oliveira A.R., Pacheco F.A.L., Fernandes L.F.S., da Costa A.M. Trends of potentially illegal deforestation over protected areas of Rio das Velhas basin, Brazil. (2023) *Land Degradation and Development*, 34 (15), pp. 4649 – 4666 **Q2**
6. Mota P.K., da Costa A.M., Prado R.B., Fernandes L.F.S., Pissarra T.C.T., Pacheco F.A.L. Payment for Environmental Services: A critical review of schemes, concepts, and practice in Brazil. (2023) *Science of the Total Environment*, 899, art. no. 165639 **Q1**
7. Salgado Terêncio D.P., Leal Pacheco F.A., Farias do Valle Junior R., Abreu Pires de Melo Silva M.M., Tarlé Pissarra T.C., Carvalho de Melo M., Valera C.A., Sanches Fernandes L.F. The Igarapé Weir decelerated transport of contaminated sediment in the Paraopeba River after the failure of the B1 tailings dam (Brumadinho). (2023) *International Journal of Sediment Research*, 38 (5), pp. 673 – 697 **Q2**
8. Santos R.M.B., Boavida I., Cortes R.M.V., Pacheco F.A.L., Sanches Fernandes L.F., Monteiro S.M., Jesus J.B. Effect of river restoration on spawning activity of Iberian barbel (*Luciobarbus bocagei*). (2023) *Journal for Nature Conservation*, 76, art. no. 126488 **Q2**

9. de Moraes Fernandes G.H., do Valle Junior R.F., de Melo Silva M.M.A.P., Mendes R.G., Fernandes L.F.S., Fernandes A.C.P., Pacheco F.A.L., Pissarra T.C.T., de Melo M.C., Valera C.A. A structural equation model of land capability and related drivers: Implications for land degradation forecasting in a tropical river basin. (2023) *Land Degradation and Development*, 34 (6), pp. 1778 – 1794 **Q2**
10. Pacheco F.A.L., Pissarra T.C.T. Groundwater security indicators and their drivers: An assessment made in a region of tropical climate (Paraopeba River basin, Brazil). (2023) *Science of the Total Environment*, 901, art. no. 165919 **Q1**
11. Mendes R.G., do Valle Junior R.F., de Melo Silva M.M.A.P., de Moraes Fernandes G.H., Fernandes L.F.S., Pissarra T.C.T., de Melo M.C., Valera C.A., Pacheco F.A.L. Scenarios of environmental deterioration in the Paraopeba River, in the three years after the breach of B1 tailings dam in Brumadinho (Minas Gerais, Brazil). (2023) *Science of the Total Environment*, 891, 164426 **Q1**
12. Pacheco F.A.L., do Valle Junior R.F., de Melo Silva M.M.A.P., Tarlé Pissarra T.C., de Souza Rolim G., de Melo M.C., Valera C.A., Moura J.P., Sanches Fernandes L.F. Geochemistry and contamination of sediments and water in rivers affected by the rupture of tailings dams (Brumadinho, Brazil). (2023) *Applied Geochemistry*, 152, 105644 **Q1**
13. Costa R.C.A., Santos R.M.B., Fernandes L.F.S., Carvalho de Melo M., Valera C.A., Valle Junior R.F.D., Silva M.M.A.P.D.M., Pacheco F.A.L., Pissarra T.C.T. Hydrologic Response to Land Use and Land Cover Change Scenarios: An Example from the Paraopeba River Basin Based on the SWAT Model. (2023) *Water (Switzerland)*, 15 (8), art. no. 1451 **Q2**
14. de Mendonça G.C., da Costa L.M., Abdo M.T.V.N., Costa R.C.A., Parras R., de Oliveira L.C.M., Pissarra T.C.T., Pacheco F.A.L. Multicriteria spatial model to prioritize degraded areas for landscape restoration through agroforestry. (2023) *MethodsX*, 10, 102052 **Q2**
15. P Fernandes A.C., R Fonseca A., Pacheco F.A.L., Sanches Fernandes L.F. Water quality predictions through linear regression - A brute force algorithm approach (2023) *MethodsX*, 10, art. no. 102153 **Q2**
16. Marianno de Olivera L.C., de Mendonça G.C., Araújo Costa R.C., Leite de Camargo R.A., Fernandes L.F.S., Pacheco F.A.L., Pissarra T.C.T. Impacts of urban sprawl in the Administrative Region of Ribeirão Preto (Brazil) and measures to restore improved landscapes. (2023) *Land Use Policy*, 124, 106439 **Q1**
17. de Melo M.C., Fernandes L.F.S., Pissarra T.C.T., Valera C.A., da Costa A.M., Pacheco F.A.L. The COP27 screened through the lens of global water security. (2023) *Science of the Total Environment*, 873, 162303 **Q1**

### **I.5.2.2. Q3 and Q4 Journals**

18. Filho C.R.M., do Valle Junior R.F., de Melo Silva M.M.A.P., Mendes R.G., de Souza Rolim G., Pissarra T.C.T., de Melo M.C., Valera C.A., Pacheco F.A.L., Fernandes L.F.S. The Accuracy of Land Use and Cover Mapping across Time in Environmental Disaster Zones: The Case of the B1 Tailings Dam Rupture in Brumadinho, Brazil. (2023) Sustainability (Switzerland), 15 (8), art. no. 6949 **Q3**
19. Rivas-Fandiño P., Acuña-Alonso C., Novo A., Pacheco F.A.L., Álvarez X. Assessment of high spatial resolution satellite imagery for monitoring riparian vegetation: riverine management in the smallholding. (2023) Environmental Monitoring and Assessment, 195 (1), 81 **Q3**

### **I.5.2.3. New Journals (Impact factor pending)**

1. Jorge N., Teixeira A.R., Fernandes L., Afonso S., Oliveira I., Gonçalves B., Lucas M.S., Peres J.A. Treatment of Winery Wastewater by Combined Almond Skin Coagulant and Sulfate Radicals: Assessment of HSO<sub>5</sub><sup>-</sup> Activators. (2023) International Journal of Environmental Research and Public Health, 20 (3), 2486
2. Jorge N., Teixeira A.R., Fernandes J.R., Oliveira I., Lucas M.S., Peres J.A. Degradation of Agro-Industrial Wastewater Model Compound by UV-A-Fenton Process: Batch vs. Continuous Mode. (2023) International Journal of Environmental Research and Public Health, 20 (2), 1276
3. Sequeira T., Gonçalves H., Francisco B.S., Pirra A., Joukes V. WELL-BEING AND QUALITY OF LIFE: DIFFERENT PERSPECTIVES IN RURAL AND PERI-URBAN AREAS IN THE NORTH OF PORTUGAL (2023) Regional Science Inquiry, 15 (1), pp. 13 – 28

### **I.5.3. Publications in proceedings**

1. Marchão L., Teixeira O., Peres J.A., Tavares P.B., Lucas M.S. Evaluation of the Potential of Microalgae as Bioremediation Agents for Olive Mill Wastewater † (2023) Engineering Proceedings, 56 (1), 211
2. Jorge N., Teixeira A.R., Gomes A., Lucas M.S., Peres J.A. Sulfate Radical Advanced Oxidation Processes: Activation Methods and Application to Industrial Wastewater Treatment †. (2023) Engineering Proceedings, 56 (1), 162
3. Gomes A., Jorge N., Teixeira A., Peres J.A., Lucas M.S. Cattle Wastewater Treatment Using Almond Hull and Cherry Pit as Coagulants–Flocculants †. (2023) Engineering Proceedings, 56 (1), 222

4. Jorge N., Teixeira A.R., Lucas M.S., Peres J.A. Heterogeneous Photo-Fenton Oxidation of Methylene Blue Solution Using Fe(II)-Montmorillonite Calcinated Clay Catalyst † (2023) Engineering Proceedings, 31 (1), 67
5. Ferreira L.C., Fernandes J.R., Peres J.A., Tavares P.B., Lucas M.S. Heterogeneous Photocatalysis with Wireless UV-A LEDs †. (2023) Engineering Proceedings, 56 (1), 175
6. Jorge N., Teixeira A.R., Gomes A., Lucas M.S., Peres J.A. Removal of Azo Dye Acid Red 88 by Fenton-Based Processes Optimized by Response Surface Methodology Box-Behnken Design †. (2023) Engineering Proceedings, 56 (1), 164
7. Teixeira A.R., Jorge N., Fernandes J.R., Lucas M.S., Peres J.A. Olive Washing Wastewater Treatment by Coagulation/Flocculation/Decantation and UV-A LEDs/Fenton †. (2023) Engineering Proceedings, 56 (1), art. no. 317
8. Gomes A., Jorge N., Peres J.A., Lucas M.S. Treatment of Swine Wastewater Using Almond and Cherry By-Products as Coagulants. (2023) Engineering Proceedings, 56 (1), art. no. 221
9. Gomes A., Sampaio A., Silva S., Fernandes J.R., Peres J.A., Lucas M.S. Inactivation of *Candida albicans* in Water Using Advanced Oxidation Processes. (2023) Engineering Proceedings, 56 (1), 82
10. Jorge, N.; Teixeira, A.R.; Fernandes, J.R.; Lucas, M.S.; Peres, J.A., "Decolorization of the azo dye Reactive Violet 5 by UV-A-Fenton and Ultrasound-Fenton Processes", Engineering Proceedings, 2023, 31, 68. <https://doi.org/10.3390/ASEC2022-13848>, 6 pp.
11. Jorge, N.; Teixeira, A.R.; Silva, S.; Pirra, A.; Peres, J.A.; Lucas, M.S., "Homogeneous vs. heterogeneous photo-Fenton processes in the treatment of winery wastewater", Engineering Proceedings, 2023, 56, 288. <https://doi.org/10.3390/ASEC2023-15405>, 6 pp.
12. Silva, S.; Pirra, A.; Jorge, N.; Peres, J.A.; Lucas, M.S., "Enhancing sustainability in wine production: evaluating winery wastewater treatment using Sequencing Batch Reactors", Engineering Proceedings, 2023, 56, 163. <https://doi.org/10.3390/ASEC2023-15522>, 6 pp.
13. Jorge, N.; Teixeira, A.R.; Gomes, A.; Lucas, M.S.; Peres, J.A., "Winery wastewater: challenges and perspectives", Engineering Proceedings, 2023, 56, 267. <https://doi.org/10.3390/ASEC2023-15968>, 7 pp.

#### **I.5.4. Oral presentations at national and international meetings**

1. Jorge, N.; Teixeira, A.R.; Gomes, A.; Lucas, M.S.; Peres, J.A., "Treatment of agro-industrial wastewater: batch vs continuous system", 8th Portuguese Young Chemists Meeting (8PYChem), UTAD, Vila Real, 17-19 May 2023.
2. Jorge, N.; Teixeira, A.R.; Lucas, M.S.; Peres, J.A., "Hospital wastewater remediation by continuous ferrioxalate/UV-C/H<sub>2</sub>O<sub>2</sub> process", XXVII Encontro Luso-Galego de Química, Porto, 22-24 novembro 2023.
3. Chilaule, S.; Jorge, N.; Peres, J.A.; Lucas, M.S., "Water reuse: study of solar photocatalytic oxidation processes", XXVII Encontro Luso-Galego de Química, Porto, 22-24 novembro 2023.
4. Teixeira, A.R.; Afonso, S.; Jorge, N.; Gonçalves, B.; Lucas, M.S.; Peres, J.A., "Treatment of an agro-industrial wastewater by coagulation and adsorption processes", I Seminar - PhD in Chemical & Biological Sciences, UTAD, Vila Real, 11 December 2023.
5. Jorge, N.; Chilaule, S.; Lucas, M.S.; Peres, J.A.; "Caracterização e utilização potencial de águas residuais em silvicultura e agricultura", Jornada Técnica "Utilização de lamas e águas tratadas de ETAR's no restauro de zonas florestais em riscos de desertificação, Auditório Manuel Faria - Casa da Cultura, Alfandega da Fé, 18 dezembro 2023.

#### **I.5.5. Poster presentations at national and international meetings**

##### **I.5.5.1. International meetings**

1. da Silva, A.P.F.; Natal, A.P.S.; de Tuesta, J.L.D.; Peres, J.A.; Gomes, H.T., "Application of powder fly-ash geopolymers as adsorbents of phenolic compounds present in model wastewater", 1st Mediterranean Conference on Porous Materials (MEDPore 23), Crete, Greece, 17-19 May 2023.
2. Huacalco-Aguilar, Y.; Álvarez-Torrellas, S.; Peres, J.A.; García, J., "Efficient integration sequential of advanced oxidation and biological processes: removal of toxicity from pharmaceutical wastewater", 11th World Congress of Chemical Engineering (WCCE11), GS06-Global Symposium on Emerging Contaminants: recent advances on removal treatments of emerging contaminants from water and wastewater, Buenos Aires, Argentina, 4-8 June 2023.
3. Teixeira, A.R.; Jorge, N.; Peres, J.A.; Lucas, M.S., "Long term aerated storage and photo-Fenton process applied to winery wastewater treatment", BioRemid2023 - 3rd

International Meeting on New Strategies in Bioremediation/Restoration Processes, FHNW Campus Muttentz, Switzerland, 29-30 June 2023.

4. Teixeira, A.R.; Afonso, S.; Jorge, N.; Gonçalves, B.; Lucas, M.S.; Peres, J.A., "Treatment of olive mill wastewater by coagulation-flocculation-decantation with cherry by-products", XXVII Encontro Luso-Galego de Química, Porto, 22-24 novembro 2023.
5. Ferreira, A.P.; Narcizo, A.; Diaz de Tuesta, J.L.; Hernández, Z.; Peres, J.A.; Gomes, H.T., "Development of CO<sub>2</sub>-activated carbons from exhausted olive pomace and their application in the treatment of olive mill wastewater by continuous adsorption process", XXVII Encontro Luso-Galego de Química, Porto, 22-24 novembro 2023.

#### **I.5.5.2. National meetings**

1. Teixeira, A.R.; Jorge, N.; Lucas, M.S.; Peres, J.A., "Treatment of olive washing water by coagulation-flocculation-decantation and UV-A/Fenton", 8th Portuguese Young Chemists Meeting (8PYChem), UTAD, Vila Real, 17-19 May 2023.
2. Gomes, A.; Sampaio, A.; Peres, J.A.; Lucas, M.S., "Inactivation of *Aspergillus Brasiliensis* spores in water using Advanced Oxidation Processes", 8th Portuguese Young Chemists Meeting (8PYChem), UTAD, Vila Real, 17-19 May 2023.
3. da Silva, A.P.F.; de Tuesta, J.L.D.; Peres, J.A.; Gomes, H.T., "Transforming municipal solid waste into geopolymers: a sustainable solution", MIT Portugal 2023 Annual Conference - Research that impacts society, Altice Forum, Braga, 22 September 2023.

### **I.6. Participation in National and International Organizations**

#### **I.6.1. Participation in Committees**

1. Peres, J.A.; Membro da Comissão Científica. 11th World Congress of Chemical Engineering (WCCE11), GS06 - Global Symposium on Emerging Contaminants: recent advances on removal treatments of emerging contaminants from water and wastewater. Buenos Aires, Argentina, 4-8 June 2023.
2. Peres, J.A.; Membro da Comissão Científica. 6th International Conference – Wastes: Solutions, Treatments, Opportunities. University of Coimbra. 6-8 September 2023.
3. Peres, J.A.; Membro da Comissão Organizadora Nacional, XXVII Encontro Luso-Galego de Química, Fundação Dr. António Cupertino de Miranda, Porto, 22-24 novembro 2023.

## **I.6.2. Participation in editorial and special issues of international scientific journals**

### **I.6.2.1. Associate Editor**

1. Arabian Journal of Geosciences, Springer Nature Switzerland AG, Associate Editor: Fernando A.L. Pacheco
2. EAgrri: Journal of the Brazilian Association of Agricultural Engineering. Associate Editor: Fernando A.L. Pacheco
3. Frontiers in Environmental Chemistry, Associate Editor – Chemical Treatments. Marco S. Lucas,
4. Heliyon, Elsevier B.V. / Cell Press, Radarweg 29, Amsterdam 1043 NX, The Netherlands, Associate Editor: Fernando A.L. Pacheco
5. Science of the Total Environment, Elsevier B.V., Radarweg 29, Amsterdam 1043 NX, The Netherlands, Associate Editor: Fernando A.L. Pacheco

### **I.6.2.2. Editorial Board Member**

1. International Journal of Environmental Research and Public Health, MDPI, St. Alban-Anlage 66. 4052 Basel, Switzerland. Section Board Member: Fernando A.L. Pacheco
2. Membro do Editorial Board da revista “International Journal of Environmental Research and Public Health” (IJERPH), MDPI. José Alcides Peres
3. Membro do Editorial Board da revista “Processes”, MDPI. José Alcides Peres
4. Membro do Editorial Board da revista “Processes”, MDPI. Marco S. Lucas
5. Scientific Reports, Springer Nature Switzerland AG, Editorial Board Member: Fernando A.L. Pacheco
6. Sustainability, MDPI, St. Alban-Anlage 66. 4052 Basel, Switzerland. Section Board Member: Fernando A.L. Pacheco
7. Membro do Editorial Board da revista “Water”, MDPI. Marco S. Lucas

### **I.6.2.3. Advisory Board Member**

1. Water: MDPI, St. Alban-Anlage 66. 4052 Basel, Switzerland. Advisory Board Member: Fernando A.L. Pacheco
2. SCI: MDPI, St. Alban-Anlage 66. 4052 Basel, Switzerland. Advisory Board Member: Fernando A.L. Pacheco

#### I.6.2.4. Special Issue Guest Editor

1. International Journal of Environmental Research and Public Health: “Sediments, Metals and Freshwater: Interfaces That Can Impact Riverine Environments”. Section: Sustainable Water Management. Guest Editor: Fernando A.L. Pacheco. Period: July 2019 to January 2024. IJERPH | Special Issue: Sediments, Metals and Freshwater: Interfaces That Can Impact Riverine Environments (mdpi.com)
2. Methods X: Ecosystem services: mapping and pricing. Special Issue on Ecosystem services: mapping and pricing - Forthcoming Special Issues - MethodsX - Journal - Elsevier
3. Sustainability: “Land and Water Degradation in Catchments: The Role of Remote Sensing for Assessment and Management”, Section: Sustainable Water Management. Guest Editor: Fernando A.L. Pacheco. Period: November 2019 to January 2023
4. Topic editor do Special Issue “Advanced Oxidation Process: Applications and Prospects”. Cinco revistas do grupo MDPI: “International Journal of Environmental Research and Public Health”, “Catalysts”, “Processes”, “Sci”, “Water”. José Alcides Peres
5. Topic Editor: Water Reclamation and Reuse, (MDPI Journals: Water; ChemEngineering; Membranes; Applied Sciences) Marco S. Lucas
6. Water: “Water Security and Governance in Catchments II”, Section: Water Resources Management, Policy and Governance. Guest Editor: Fernando A.L. Pacheco. Period: March 2022 to June 2023
7. Water: “Impacts of Anthropogenic Activities on Watersheds in a Changing Climate II”, Section: Water and Climate Change. Guest Editor: Fernando A.L. Pacheco. Period: November 2020 to January 2023
8. Peres, J.A.; Editorial Board Member of Special Issue: “Water, Waste, Green Chemistry and Engineering, Renewable Energies and Environmental Technologies”, Environmental Research (Elsevier), 2023.



## Part II - Food Chemistry and Biochemistry

### II.1. Advanced Education

#### II.1.1. Postdoctoral students

#### II.1.2. PhD students

**Name** Larissa Marques Wirgues

**Supervisors** António Manuel Jordão

**PhD** Engenharia Agronómica

**Starting date** 2022

**Name** Catarina Isabel Patrício Sá Marques Gomes

**Supervisors** Alice Vilela, Elisete Correia, Lia-Tânia Dinis

**PhD** Agrichains, UTAD

**Starting date** October 2020

**Name** João Rafael Rodrigues Siopa

**Supervisors** Fernando Hermínio Nunes, Fernanda Cosme e Miguel Ribeiro

**PhD** Chemical and Biological Sciences, UTAD

**Starting date** December 2020

**Name** Elisa Costa

**Supervisors** Fernando Hermínio Nunes, Fernanda Cosme

**PhD** Chemical and Biological Sciences, UTAD

**Starting date** December 2020

**Name** Carlos Martins Gomes

**Supervisors** Amélia Maria Lopes da Silva, Fernando M. Nunes

**PhD** Chemical and Biological Sciences, UTAD

**Starting date** December 2019

**Name** Tatiane Otto De França

**Supervisors** António M. Jordão  
**PhD** Agronomy - State University of the Central West, Paraná, Brasil  
**Starting date** October 2021

**Name** **Tiago José Monteiro Durães**  
**Supervisors** Fernando Hermínio Nunes, Maria Fernanda Gil Cosme Martins  
**PhD** Chemical and Biological Sciences, UTAD  
**Starting date** October 2021

**Name** **Rafael Santos Vilamarim**  
**Supervisors** Miguel Ribeiro, Fernando Hermínio Nunes  
**PhD** Chemical and Biological Sciences, UTAD  
**Starting date** September 2023

**Name** **Mónica Isabel Garcia Silva**  
**Supervisors** Francisco Peixoto, Maria Manuel Oliveira  
**PhD** Chemical and Biological Sciences, UTAD  
**Starting date** September 2021

**Name** **Mário Joaquim Oliveira Bezerra**  
**Supervisors** Fernando M. Nunes, Fernanda Cosme, Miguel Robeiro  
**PhD** Chemical and Biological Sciences, UTAD  
**Starting date** September 2023

#### II.1.4. PhD thesis concluded

**Name** Juliana Nair Milheiro Ferreira  
**Supervisors** Fernando Hermínio Nunes, Maria Fernanda Gil Cosme Martins  
**PhD** AgriChains, UTAD  
**Starting date** December 2017

**Name** Sandra Cristina Pinto Martins  
**Supervisors** Carlos Correia, Fernando Hermínio Nunes, Alexandre Gonçalves  
**PhD** Agrichains, UTAD

**Starting date** December 2017

#### II.1.5. Master thesis concluded

**Name** **Ana Maria Páris Coixão**

**Title** Impacto de alguns estabilizantes tartáricos na estabilidade do cálcio em vinhos

**Master** Mestrado em Enologia e Viticultura

**Date** Janeiro 2023

**Supervisor** Luís Filipe-Ribeiro

**Co-Supervisor** Fernanda Cosme e Fernando Nunes

**Name** **Luís Miguel Dias Pires**

**Title** Reusing brewing industry by-products for the development of food products

**Master** Mestrado em Engenharia Alimentar

**Date** Fevereiro 2023

**Supervisor** Luís Patarata

**Co-Supervisor** Fernanda Cosme

**Name** **Joana Inês Pereira Moreira**

**Title** Estabilização da Cor em Filete Afiambrado com Redução de Nitrito com Extratos de Beterraba. Implicações no Comportamento de *Listeria Monocytogenes* e Microbiota Deteriorativa

**Master** Mestrado em Engenharia Alimentar

**Date** Fevereiro 2023

**Supervisor** Luís Patarata

<b>Co-Supervisor</b>	Fernanda Cosme
<b>Name</b>	<b>Ana Isabel Santos Sousa</b>
<b>Title</b>	Efeito antimicrobiano de compostos fenólicos do vinho sobre microrganismos patogénicos com importância na indústria de produtos cárneos curados
<b>Master</b>	Mestrado em Engenharia Alimentar
<b>Date</b>	Março 2023
<b>Supervisor</b>	Luís Patarata
<b>Co-Supervisor</b>	Fernanda Cosme, Fernando Nunes
<b>Name</b>	<b>Maria Inmaculada Arenas Ricon</b>
<b>Title</b>	Effect of Pre-Fermentative Maceration and Fining Agents on Protein Stability, Macromolecular, and Phenolic Composition of Albariño White Wines: Comparative Efficiency of Chitosan, k-Carrageenan and Bentonite as Heat Stabilisers
<b>Master</b>	<b>Mestrado em Enologia e Viticultura</b>
<b>Date</b>	2023
<b>Supervisor</b>	Fernanda Cosme,
<b>Co-Supervisor</b>	Fernando Nunes
<b>Name</b>	Manuel Maria Neves Pinto
<b>Title</b>	Ferramentas para controlo de resultados em análise sensorial e a sua importância no recrutamento, seleção e qualificação de produtores
<b>Master</b>	Mestrado em Enologia e Viticultura
<b>Date</b>	2023
<b>Supervisor</b>	Alice Vilela

<b>Co-Supervisor</b>	Elisete Correia
<b>Name</b>	Pedro Emanuel Sobral
<b>Title</b>	Perfil Químico E Sensorial De Vinhos Produzidos Em Lagares Rupestres: Da Tradição À Inovação
<b>Master</b>	Mestrado em Enologia e Viticultura
<b>Date</b>	2023
<b>Supervisor</b>	Alice Vilela
<b>Co-Supervisor</b>	Lia Tânia-Dinis
<b>Name</b>	<b>José Miguel Morais Teixeira</b>
<b>Title</b>	Impact of ingesting microplastics on reproductive function: relationship with mitochondrial function and oxidative stress
<b>Master</b>	Biochemistry
<b>Date</b>	September
<b>Supervisor</b>	Maria Manuel Oliveira, Francisco Peixoto
<b>Co-Supervisor</b>	

### II.3. Outreach activities

1. Participação na mesa redonda do SEMINÁRIO “Desafios e Oportunidades”, Museu do Douro, Régua, Organizado pelo Observatório do Vinho do Porto a 28 setembro 2023.
2. Participação na Mesa Redonda com o tema “Conversa com as Padeiras/Padeiros do Concelho – Histórias de vida e preocupações do futuro, organizada no âmbito Programa do Dia Mundial do Pão, promovido pelo Município de Alijó através do Núcleo Museológico de Favaios - Pão e Vinho e da UTAD, no dia 13 de outubro de 2023.
3. Workshop de 2 horas “Prova Sensorial do Pão de Favaios” inserido no Programa do Dia Mundial do Pão, promovido pelo Município de Alijó através do Núcleo Museológico de Favaios - Pão e Vinho e da UTAD, no dia 13 de outubro de 2023.
4. Moderadora no Molecules4Life • I International Meeting 2023, Vila Real, UTAD

5. Workshop sobre o tema “Defeitos sensoriais nos vinhos”, de 3 horas, realizado na CVRVV em parceria com a EHTP, Porto, a 17 de novembro de 2023.
6. Oradora convidada, com a comunicação “Enogastronomia”, nas Jornadas de Viticultura e Enologia realizadas pela Escola do Rodo, Godim, Peso da Régua, a 16 de maio de 2023.
7. Participação nas PAP dos alunos do Curso Técnico Vitivinícola da Escola Do Rdo, Godim, Régua, nos dias 2 e 5 de maio de 2023
8. Workshop “Enogastronomia”, de 2 h, realizado no âmbito das Jornadas de Viticultura e Enologia, Escola do Rodo, Godim, Peso da Régua, a 16 de maio de 2023.
9. Workshop "Harmonização de Vinho com Chocolate", realizado no âmbito das XV Jornadas de Bioquímica, 16 e 17 de maio de 2023, na Universidade de Trás-os-Montes e Alto Douro.
10. ERASMUS+ Teaching scholarship at the Universität für Bodenkultur Wien, from April 24th, 2023, to April 29th, 2023. During her stay, Professor Alice Vilela taught at least eight hours on “Production technology and sensory evaluation of different Port Wine styles.” She also participated in meetings with other teachers and researchers at the university to broaden educational and scientific research connections. Professor Astrid Forneck accompanied her during these meetings. Additionally, Professor Alice Vilela visited the Höhere Bundeslehranstalt und Bundesamt für Wein- und Obstbau Klosterneuburg, accompanied by Cristian Philipp and Carlos Herrera. She also visited the Steep Slopes of Wachau and the Weinbauschule Kerms, accompanied by Professor Astrid Forneck and Rudi.
11. Organization of I International Meeting Molecules 4 Life, Vila Real, Portugal <https://molecules4life-2023.events.chemistry.pt/>

## II.4. Projects

### II.4.1. European/International

#### II.4.1.1. CQVR Partnership

1. **MERGO – Mooc in Enology aimed at Reinforcing competences applying Game-based approach and Olfactive learning for the wine tasting.** Reference: N<sup>o</sup>: 2020-1-IT02-KA203-080040

Starting date: 2020. Ending date: 2023

Funding by: ERASMUS+ - 47.687,00 €

CQVR members role: Fernando M. Nunes (participant), Fernanda Cosme (UTAD coordinator), Luis Filipe-Ribeiro (participant)

Status: **Concluded project**

**2. Improving Mediterranean supply chain through innovative agro-food business to strengthen small-scale farmers competitiveness, using prickly pear and fig as case study.**

Reference: InovFarmer.MED - PRIMA Project (Section 2 Call multi-topics 2021) Starting date: 2021 Ending date: 2024

Funding by: IPViseu (total fund: 130.000€)

Main contractor: IPViseu

CQVR member role: António M. Jordão (participant)

Status: **Ongoing project**

**3. Reducing acrylamide exposure of consumers by a cereals supply-chain approach targeting asparagine**

Reference: Cost action CA21149 - ACRYRED Starting date: 2022 Ending date: 2026

Funding by: European Union's Framework Programme for Research and Innovation

Main contractor: Rothamsted Research

CQVR member role: Fernando M. Nunes (participant), Fernanda Cosme (UTAD coordinator), Miguel Ribeiro (participant)

Status: **Ongoing project**

## **II.4.2. National**

### **II.4.2.1. CQVR Leadership**

**1. AgriFood XXI – Desenvolvimento e consolidação da investigação do setor agroalimentar no Norte de Portugal**

Reference: NORTE-01-0145-FEDER-000041

Starting date: September 2020. Ending date: August 2023.

Funding by: Fundo Europeu de Desenvolvimento Regional (FEDER) através do NORTE 2020 (Programa Operacional Regional do Norte 2014/2020);

Funding by: Total: 2.352.869,65 € / UTAD: 941.207,94€.

Main contractor. UTAD Host institution: UTAD

CQVR members role: Fernando Nunes (coordinator).

Status: **Concluded project**

## **2. BlueEnology – Desenvolvimento de um adjuvante proteico de microalgas para uso enológico**

Reference: NORTE-01-0247-FEDER-047005

Starting date: 2021 Ending date: 2023

Funding: 164.947,72€

CQVR members role: Fernando M. Nunes (principal investigator), Fernanda Cosme (participant), António Inês (participant).

Status: **Concluded project**

## **3. e-Flavor.**

Reference: POCI-01-0247-FEDER-049337

Starting date: 2021 Ending date: 2023.

Funding by: FEDER, through the Competitiveness and Internationalization Operational Program (total fund: 499.632,82€).

Main contractor: UTAD.

CQVR member role: Alice Vilela (ordinator).

Status: **Concluded project**

## **4. SMARTAGEING - Sistema de Apoio à Decisão para o Envelhecimento de Vinho do Porto Branco**

Reference: Nº: 47021

Starting date: 2020 Ending date: 2023

Funding by: PRODER:492.411,37€

CQVR members role: Fernando M. Nunes (principal investigator), Fernanda Cosme (participant), Amadeu Borges (participant)

Status: **Concluded project**

### **II.4.2.2. CQVR Partnership**

#### **1. IntegraValor – Estratégia Integrada de valorização de subprodutos agroalimentares.**

Reference: POCI-01-0247-FEDER-072241.

Starting date: 2021 Ending date: 2023.

Funding: 172.541,70€.

CQVR members role: Fernando M. Nunes (UTAD coordinator), Fernanda Cosme (participant), António Inês (participant), Alice Vilela (participant).



Status: **Concluded project**

**2. InovC+: Ecosistema de Inovação Inteligente da Região Centro - Valorização económica e transferência do conhecimento científico e tecnológico.**

Reference: CENTRO-01-0246-FEDER-000044

Starting date: 2021 Ending date: 2023

Funding by: IPViseu (total fund: 131.050,00 €)

Main contractor: University of Coimbra

CQVR member role: António M. Jordão (participant)

Status: **Concluded project**

**3. oneHcancer - One health approach in animal cancer.**

Reference: NORTE-01-0145-FEDER-000078.

Starting date: 2021 Ending date: 2023 Funding: 588.235,28€.

CQVR members role: Fernando M. Nunes (participant).

Status: **Concluded project**

**4. UTAD FOOD ALLIANZ: Infraestrutura de Investigação em Nutrição e Alimentação. A ligação com a Ciência Animal.**

Reference: NORTE-01-0145-FEDER-072687.

Starting date: 2021 Ending date: 2023.

Funding: 2.588.234,87€.

CQVR members role: Fernando M. Nunes (participant), Fernanda Cosme (participant).

Status: **Concluded project**

**5. cLabel+: Alimentos inovadores “clean label” naturais, nutritivos e orientados para o consumidor.**

Reference: Nº: POCI-01-0247-FEDER-046080

Starting date: 2020 Ending date: 2023.

Funding: PRODER - 232.082,27€

CQVR members role: Fernando M. Nunes (participant), Fernanda Cosme (participant).

Status: **Concluded project**

**6. Forest4Future - Projeto piloto para a constituição de uma rede regional para a valorização da fileira da floresta da região centro.**

Reference: CENTRO-08-5864-FSE-000031.

Starting date: 2021 Ending date: 2023.

Funding by: IPViseu (total fund: 120.015,91€).

Main contractor: CIM Viseu/Dão/Lafões.

CQVR member role: António M. Jordão (participant).

Status: **Concluded project**

## **7. Vine & Wine Portugal – Driving Sustainable Growth Through Smart Innovation**

Starting date: September 2022. Ending date: September 2025.

Funding by: PRR – Plano de Recuperação e Resiliência e pelos Fundos Europeus NextGeneration EU, no âmbito das Agendas Mobilizadoras para a Reindustrialização. Global fund: 41.427.004,64€. UTAD fund: 7.875.653,67€. Host institution: UTAD

CQVR members role: Marco S. Lucas, José A. Peres, Fernando Nunes, João Coutinho.

Status: **Ongoing project.**

### **II.5. Awards, Prizes and Medals**

1. Best Oral communication “Chemical characterization of biscuits melanoidins using shotgun proteomics” J. Siopa, M. Ribeiro, F. Cosme, F. M. Nunes XXII EuroFoodChem Congress, 14-16 June 2023, Belgrade, Serbia
2. Best Oral communication “Shotgun Proteomics: A Powerful Tool for Investigating the Chemical Complexity of Biscuit Melanoidins” J. Siopa, M. Ribeiro, F. Cosme, F. M. Nunes I International Meeting Molecules4Life, 20-22 September 2023, UTAD, Vila Real, Portugal

### **II.6. Outputs**

#### **II.6.1 Patents**

1. “PROCESSO PARA PREPARAR UMA FARINHA DE CEREAIS MODIFICADA, UMA FARINHA DE CEREAIS MODIFICADA E UM ALIMENTO PROCESSADO À BASE DE FARINHA DE CEREAIS”, Miguel Ribeiro; Fernando M. Nunes, National Patent Application in September 2023, PT 118944.
2. “PROCESS FOR PREPARING A MODIFIED CEREAL FLOUR, A MODIFIED CEREAL FLOUR, AND A CEREAL FLOUR BASED PROCESSED FOOD”, Miguel Ribeiro; Fernando M. Nunes, European Patent Application based on Portuguese priority application 118944 in September 2023, EP23200976.1.

## II.6.2 Book chapters

1. Cosme, F., Filipe-Ribeiro, L., Nunes, F.M. (2023) Chapter 2. Alcohol content: traditional and advanced methods. Basic Protocols in Enology and Winemaking. Editor: Maurício Bonatto Machado de Castilhos. Series Title Methods and Protocols in Food Science. Springer Protocols Humana New York, NY ISBN 978-1-0716-3087-7 ISBN 978-1-0716-3088-4 (eBook) [https://doi.org/10.1007/978-1-0716-3088-4\\_2](https://doi.org/10.1007/978-1-0716-3088-4_2)
2. Cosme, F., Milheiro, J., Ferreira, L.C., Filipe-Ribeiro, L., Nunes, F.M. (2023). Chapter 14. Methods to determine biogenic amines in wine by RP-HPLC. Basic Protocols in Enology and Winemaking. Editor: Maurício Bonatto Machado de Castilhos. Series Title Methods and Protocols in Food Science. Humana New York, NY Springer Protocols ISBN 978-1-0716-3087-7 ISBN 978-1-0716-3088-4 (eBook) [https://doi.org/10.1007/978-1-0716-3088-4\\_14](https://doi.org/10.1007/978-1-0716-3088-4_14)
3. Cosme, F., Inês, A., Vilela, A. (2023). Incorporating Microbial and Commercial Enzymes into Beverage Manufacturing Procedures. In: Advances in Food Science. Hyderabad, India: Vide Leaf. <https://videleaf.com/incorporating-microbial-and-commercial-enzymes-into-beverage-manufacturing-procedures/>
4. Vilela, A., Cosme, F., Inês, A. (2023). Wine and Non-Dairy Fermented Drinks: An Innovative Source of Probiotics and Prebiotics. In: Phan Phuoc Hien, editor. Advances in Food Science. Hyderabad, India: Vide Leaf. <https://videleaf.com/wine-and-non-dairy-fermented-drinks-an-innovative-source-of-probiotics-and-prebiotics/>
5. Vilela, A. 2023. Microbial Dynamics in Sour–Sweet Wine Vinegar: Impacts on Chemical and Sensory Quality. In: Prime Archives in Applied Sciences: 2nd Edition. Hyderabad, India: Vide Leaf. ISBN: 978-93-92117-10-7. <https://videleaf.com/microbial-dynamics-in-sour-sweet-wine-vinegar-impacts-on-chemical-and-sensory-quality/>
6. Pinto, T.; Vilela, A.; Cosme, F. 2023. Fruit Juices and Fruit Fermented Beverages: Consumer Acceptance, Chemical and Sensory Characteristics. In: Seongwoo Woo, Fernanda Cosme, editors. Prime Archives in Applied Sciences: 2nd Edition. Hyderabad, India: Vide Leaf.. ISBN: 978-93-92117-10-7, <https://videleaf.com/product/prime-archives-in-applied-sciences-2nd-edition/>.
7. M.G. Silva, D. Mendes, M. M. Oliveira, P.B. Andrade, R.A. Videira, F. Peixoto, 2023. “Mitochondria as a toxicological target for fungicides”, in: M.R. de Oliveira (Ed.),

Mitochondrial Intoxication, Academic Press, Elsevier, London, United Kingdom. ISBN: 978-0-323-88462-4. Chapter 23; pp. 493–526.

## II.6.3 Publications in journals of Journal Citation Reports

### II.6.3.1. Q1 and Q2 Journals

1. Milheiro J., Filipe-Ribeiro L., Cosme F., Nunes F.M. Development and validation of a multiple headspace solid-phase microextraction method for accurate and precise analysis of the aroma of Tawny and White Port wines. (2023) *Food Chemistry*, 421, 136154 **Q1**
2. Martins-Gomes C., Nunes F.M., Silva A.M. Modulation of Cell Death Pathways for Cellular Protection and Anti-Tumoral Activity: The Role of Thymus spp. Extracts and Their Bioactive Molecules. (2023) *International Journal of Molecular Sciences*, 24 (2), 1691 **Q2**
3. Petronilho S., Navega J., Pereira C., Almeida A., Siopa J., Nunes F.M., Coimbra M.A., Passos C.P. Bioactive Properties of Instant Chicory Melanoidins and Their Relevance as Health Promoting Food Ingredients. (2023) *Foods*, 12 (1), 134 **Q1**
4. Gonçalves C., Saraiva S., Nunes F., Saraiva C. Food Waste in Public Food Service Sector—Surplus and Leftovers. (2023) *Resources*, 12 (10), 120 **Q2**
5. Martins S., Silva E., Brito C., Pinto L., Martins-Gomes C., Gonçalves A., Arrobas M., Rodrigues M.Â., Correia C.M., Nunes F.M. Combining Zeolites with Early-Maturing Annual Legume Cover Crops in Rainfed Orchards: Effects on Yield, Fatty Acid Composition and Polyphenolic Profile of Olives and Olive Oil. (2023) *Molecules*, 28 (6), 2545 **Q2**
6. Martins S., Brito C., Silva E., Gonçalves A., Arrobas M., Pereira E., Rodrigues M.Â., Nunes F.M., Correia C.M. Synergy between Zeolites and Leguminous Cover Crops Improved Olive Tree Performance and Soil Properties in a Rainfed Olive Orchard. (2023) *Agronomy*, 13 (11), 2674 **Q1**
7. Milheiro J., Filipe-Ribeiro L., Cosme F., Nunes F.M. Discrimination of Port wines by style and age using chromatic characteristics, phenolic, and pigment composition. (2023) *Food Research International*, 172, 113181 **Q1**
8. Ferreira S.S., Silva P., Silva A.M., Nunes F.M. Effect of cultivar, maturation stage, and year on sugar and phenolic composition of elderberries. (2023) *Journal of the Science of Food and Agriculture*, 103 (4), pp. 2023 – 2036 **Q2**
9. Milheiro J., Cosme F., Filipe-Ribeiro L., Nunes F.M. Reductive amination of aldehyde 2,4-dinitrophenylhydrazones using cyanoborohydride for determination of selected carbonyl compounds in Port wines, table wines, and wine spirits. (2023) *Food Chemistry*, 405, 134897 **Q1**

10. Dias L., Milheiro J., Ribeiro M., Fernandes C., Neves N., Filipe-Ribeiro L., Cosme F., Nunes F.M. Fast and Simple UPLC–Q-TOF MS Method for Determination of Bitter Flavan-3-ols and Oligomeric Proanthocyanidins: Impact of Vegetable Protein Fining Agents on Red Wine Composition. (2023) *Foods*, 12 (17), 3313 **Q1**
11. Martins-Gomes C., Steck J., Keller J., Bunzel M., Santos J.A., Nunes F.M., Silva A.M. Phytochemical Composition and Antioxidant, Anti-Acetylcholinesterase, and Anti- $\alpha$ -Glucosidase Activity of *Thymus carnosus* Extracts: A Three-Year Study on the Impact of Annual Variation and Geographic Location. (2023) *Antioxidants*, 12 (3), 668 **Q1**
12. Peixoto A.M., Petronilho S., Domingues M.R., Nunes F.M., Lopes J., Pettersen M.K., Grøvlen M.S., Wetterhus E.M., Gonçalves I., Coimbra M.A. Potato Chips Byproducts as Feedstocks for Developing Active Starch-Based Films with Potential for Cheese Packaging. (2023) *Foods*, 12 (6), 1167 **Q1**
13. Portugal-Nunes C., Nunes F.M., Saraiva C., Gonçalves C. Public interest in food sustainability: an infodemiology study of Google trends data in Europe from 2010–2021. (2023) *International Journal of Food Sciences and Nutrition*, 74 (1), pp. 95 – 106 **Q2**
14. Cosme F., Inês A., Vilela A. Microbial and Commercial Enzymes Applied in the Beverage Production Process. (2023) *Fermentation*, 9 (4), 385 **Q2**
15. Gonçalves B., Pinto T., Aires A., Morais M.C., Bacelar E., Anjos R., Ferreira-Cardoso J., Oliveira I., Vilela A., Cosme F. Composition of Nuts and Their Potential Health Benefits—An Overview. (2023) *Foods*, 12 (5), 942 **Q1**
16. Santos M.J., Pinto T., Mota J., Correia E., Vilela A. Influence of the cooking system, chemical composition, and  $\alpha$ -amylase activity on the sensory profile of chestnut cultivars - longal and judia - and their consequence on consumer's acceptability. (2023) *International Journal of Gastronomy and Food Science*, 34, 100799 **Q2**
17. Vilela A. Microbial Dynamics in Sour–Sweet Wine Vinegar: Impacts on Chemical and Sensory Composition. (2023) *Applied Sciences (Switzerland)*, 13 (13), art. no. 7366 **Q2**
18. Marques C., Dinis L.-T., Santos M.J., Mota J., Vilela A. Beyond the Bottle: Exploring Health-Promoting Compounds in Wine and Wine-Related Products—Extraction, Detection, Quantification, Aroma Properties, and Terroir Effects. (2023) *Foods*, 12 (23), 4277 **Q1**
19. Santos M.J., Correia E., Vilela A. Exploring the Impact of  $\alpha$ -Amylase Enzyme Activity and pH on Flavor Perception of Alcoholic Drinks. (2023) *Foods*, 12 (5), 1018 **Q1**

20. Afonso S., Oliveira I., Ribeiro C., Vilela A., Meyer A.S., Gonçalves B. Innovative edible coatings for postharvest storage of sweet cherries. (2023) *Scientia Horticulturae*, 310, 111738 **Q1**
21. Oliveira I., Marinho B., Szymanowska U., Karas M., Vilela A. Chemical and Sensory Properties of Waffles Supplemented with Almond Skins. (2023) *Molecules*, 28 (15), 5674 **Q2**
22. Pinto T., Pinto A., Vilela A. Edible Coatings and Films for Preparation of Grapevine By-Product Infusions and in Freshly Processed Products. (2023) *Coatings*, 13 (8), 1350 **Q2**
23. Mendes D., Peixoto F., Oliveira M.M., Andrade P.B., Videira R.A. Mitochondrial Dysfunction in Skeletal Muscle of Rotenone-Induced Rat Model of Parkinson's Disease: SC-Nanophytosomes as Therapeutic Approach. (2023) *International Journal of Molecular Sciences*, 24 (23), 16787 **Q1**
24. Félix L., Carreira P., Peixoto F. Effects of chronic exposure of naturally weathered microplastics on oxidative stress level, behaviour, and mitochondrial function of adult zebrafish (*Danio rerio*). (2023) *Chemosphere*, 310, 136895 **Q1**
25. Silva M.G., Oliveira M.M., Peixoto F. Assessing micro and nanoplastics toxicity using rodent models: Investigating potential mitochondrial implications. (2023) *Toxicology*, 499, 153656 **Q1**
26. Mendes D., Silva A.M., Oliveira M.M., Andrade P.B., Videira R.A. An Experimental Approach to Address the Functional Relationship between Antioxidant Enzymes and Mitochondrial Respiratory Complexes. (2023) *Methods and Protocols*, 6 (2), 32 **Q2**

#### **II.6.3.1. Q3 and Q4 Journals**

#### **II.6.3.2. New Journals (Impact factor pending)**

27. Medeiros C., Silva A.R., Ferreira T., Barros L., Neuparth M.J., Peixoto F., Bastos M.M.S.M., Medeiros R., Gil da Costa R.M., Pires M.J., Faustino-Rocha A.I., Gama A., Oliveira P.A. *Cytinus hypocistis* (L.) L. extract effects in an animal model of papillomavirus-induced neoplasia [Učinci ekstrakta *Cytinus hypocistis* (L.) L. u životinjskom modelu neoplazije inducirane papiloma virusom] (2023) *Veterinarska Stanica*, 54 (6), pp. 637 - 653

#### **II.6.5. Publications in proceedings**

1. Cosme, F., Inês, A., Filipe-Ribeiro, L., Nunes, F. M. Overview of vine, grape, and wine microbiota and technological solutions to mitigate microbial defects/contaminants in wine. 12th Symposium of the OENOVI International Network. Disruptive effects of including natural capital in wine business management 11- 13th May 2023, Japan. 1-9 pag
2. Costa, E.; Ribeiro, M.; Filipe-Ribeiro, L.; Cosme, F.; Nunes, F.M. Protein Extraction from *Arthrospira platensis* for use in Food Processing. *Med. Sci. Forum* 2023, 23, 8. <https://doi.org/10.3390/msf2023023008>. The 1st International Meeting Molecules 4 Life, 20-22 stembro 2023, Vila Real, Portugal.
3. Siopa, J.; Ribeiro, M.; Cosme, F.; Nunes, F.M. Shotgun Proteomics: A Powerful Tool for Investigating the Chemical Complexity of Biscuit Melanoidins. *Med. Sci. Forum* 2023, 23, 6. <https://doi.org/10.3390/msf2023023006>. The 1st International Meeting Molecules 4 Life, 20-22 stembro 2023, Vila Real, Portugal.
4. Durães, T.; Azevedo, M.; Cosme, F.; Nunes, F.M. Enzymatic Reduction of Sugar Content in Sucrose-Rich Fruit Products The 1st International Meeting Molecules 4 Life, 20-22 stembro 2023, Vila Real, Portugal.
5. Ribeiro M, Cosme F, Reis LV, Lopes P, Campos R, Vilela A. Preface and Statement of Peer Review. *Medical Sciences Forum.* 2023; 23(1):5. <https://doi.org/10.3390/msf2023023005>
6. Sá I, Ribeiro M, Nunes FM, Marques G, Chaves R, Ferreira D. MUSHROOMS4LIFE: Decoding the Molecular Basis of a Cancer-Fighting Small RNA Extracted from Edible Mushrooms. *Medical Sciences Forum.* 2023; 23(1):9. <https://doi.org/10.3390/msf2023023009>

## II.6.6. Oral presentations

### II.6.6.1 International meetings

1. Sá, I.; Ribeiro, M.; Nunes, F.; Marques, G.; Chaves, R.; Ferreira, D.. "Antitumor Potential of Small RNAs from Mushrooms". XV Jornadas de Genética e Biotecnologia e V Jornadas Ibéricas de Genética y Biotecnología, 2023 (March 22 - 23 at the University of Trás-os-Montes and Alto Douro, at Vila Real, Portugal and March 24 - 25 at the University of León, León, Spain).
2. Cosme, F., Inês, A., Filipe-Ribeiro, L., Nunes, F. M. Overview of vine, grape, and wine microbiota and technological solutions to mitigate microbial defects/contaminants in



wine. 12th Symposium of the OENOVITI International Network. Disruptive effects of including natural capital in wine business management 11- 13th May 2023, Japan.

3. Cosme, F., Arenas, I., Ribeiro, M., Filipe-Ribeiro, L., Vilamarim, R., Costa, E., Siopa, J., Nunes, F. M. Comparison of K-carrageenan, bentonite, and chitosan in albariño white wine protein stabilization obtained with and without pre-fermentative skin maceration. page 233 Section 2. Session oenology: new technologies applied in oenology oral & short 2023-3127. 44th OIV World Congress of Vine and Wine, Cádiz/Jerez 2023, June 5 - 9, Cádiz/Jerez, Spain.
4. Siopa, J., Ribeiro, M., Cosme, F., Nunes, F. M. Chemical characterisation of biscuits melanoidins using shotgun proteomics. OP58 page 126 XXII EuroFoodChem Congress 14-16 Jun 2023, Belgrado, Serbia.
5. Gonçalves, A.C., Minute, F., Giotto, F., Filipe-Ribeiro, L., Cosme, F., Nunes, F. M. Pinking phenomena on white wines: relation between pinking susceptibility index (PSI) and wine anthocyanins content. Wine chemistry, wine components with physiological effects. III.SC.10 page 123 CENOMacrowine 2023 - 12th International Symposium of Oenology, Bordeaux- 9th edition In Macrowine 10-13 July 2023.
6. Costa, E.; Ribeiro, M.; Filipe-Ribeiro, L.; Cosme, F.; Nunes, F.M. Protein Extraction from *Arthrospira platensis* for use in Food Processing. Med. Sci. Forum 2023, 23, 8. <https://doi.org/10.3390/msf2023023008>. The 1st International Meeting Molecules 4 Life, 20-22 September 2023, Vila Real, Portugal.
7. Siopa, J.; Ribeiro, M.; Cosme, F.; Nunes, F.M. Shotgun Proteomics: A Powerful Tool for Investigating the Chemical Complexity of Biscuit Melanoidins. Med. Sci. Forum 2023, 23, 6. <https://doi.org/10.3390/msf2023023006>. The 1st International Meeting Molecules 4 Life, 20-22 September 2023, Vila Real, Portugal.
8. Cosme, F., Inês, A., Ferreira, B., Silva, D., Filipe-Ribeiro, L., Abrunhosa, L., Nunes, F. M. Impact of fining agents on aflatoxins removal and wine quality. 3rd Food Chemistry Conference Shaping a Healthy and Sustainable Food Chain Through Knowledge. 10-12 October 2023, Dresden, Germany.
9. Costa, E., Ribeiro, M., Filipe-Ribeiro, L., Cosme, F., Nunes, F. M. Micro- and macroalgae proteins: Extraction method optimization and protein characterization by SDS-PAGE and LC-MS/MS, XXVII Encontro Luso Galego de Química, 22-24 November 2023, Porto.

10. Costa, E., Sousa, A., Filipe-Ribeiro, L., Cosme, F., Nunes, F. M. Non-animal and allergen-free protein solutions from micro- and macroalgae as protein fining agents to be used in white wine, XXVII Encontro Luso Galego de Química, 22-24 novembro 2023, Porto.

#### **II.6.6.2. National meetings**

1. João Siopa, Miguel Ribeiro, Fernanda Cosme, Fernando M. Nunes (2023). Formation mechanism of melanoidins from heat treated wheat base products. EliteSci 2023, Vila Real, Portugal, 3 de Março de 2023.
2. João Siopa, Miguel Ribeiro, Fernanda Cosme, Fernando M. Nunes (2023). Insights into the chemical composition and formation mechanism of Biscuit Melanoidins. XV Jornadas de Bioquímica, Vila Real, Portugal, 16-18 de Maio de 2023
3. Costa, E., Sousa, A., Filipe-Ribeiro, L., Cosme, F., Nunes, F. M. Comprehensive analysis of protein fining agents on Portuguese red wine, 13<sup>o</sup> Encontro Nacional de Cromatografia 17-19 dezembro 2023, Lisboa.
4. Milheiro J,1 Filipe-Ribeiro L, Cosme F, Nunes F.M. Comprehensive analysis of the aroma profile of Tawny and White Port wines with different indications of age using a multiple headspace solid-phase microextraction method. 13<sup>o</sup> Encontro Nacional de Cromatografia 17-19 dezembro 2023, Lisboa. (resumo - flash communications).
5. Cepêda, R., Brito, D., Nunes F.M., Cosme F., Filipe-Ribeiro L, Inês, A. Caracterização de microrganismos do vinho produtores de fenóis voláteis e pesquisa de bio-estratégias para o seu controlo. IV Jornadas de Enologia - Wine to Business 8 e 9 de novembro de 2023, Vila Real

#### **II.6.7. Poster presentations at national and international meetings**

##### **II.6.7.1. International meetings**

1. Vilela, A., Santos, M.J.; Correia, E., Pinto, T., Nunes, F., Cosme, F., Rocha, T., Barroso, J., Rijo, G. Perception of alcoholic beverages flavor quality: a preliminary study for the development of an e-flavor. page 617 Section 2. Session oenology: new technologies applied in oenology, Posters 2023-2969, P02038. 44th OIV World Congress of Vine and Wine, Cádiz/Jerez 2023, June 5 - 9, Cádiz/Jerez, Spain

2. Filipe-Ribeiro, L., Milheiro, J., Guise, R., Vilamarim, R., Fraga, J., Martins-Gomes, C., Nunes, F. M., Cosme, F. Red wine tartaric stabilisation with CMC: impact on wine phenolic composition and colouring matter stability. page 688 Section 2. Session oenology: new technologies applied in oenology Poster 2023-3131. PC-2080 44th OIV World Congress of Vine and Wine, Cádiz/Jerez 2023, june 5 - 9, Cádiz/Jerez, Spain
3. Cosme, F., Arenas, I., Ribeiro, M., Filipe-Ribeiro, L., Vilamarim, R., Costa, E., Siopa, J., Nunes, F. M Effect of Fining with Chitosan and k-Carrageenan on Protein Stability, Macromolecular, and Phenolic Composition of White Wines. PP 31 page 234 XXII EuroFoodChem Congress 14-16 june 2023, Belgrado, Serbia .
4. Sousa, A., Patarata, L., Nunes, F., Cosme, F. Antimicrobial activity of red wine phenolic and non-phenolic fractions. PP 40 page 227 XXII EuroFoodChem Congress 14-16 june 2023, Belgrado, Serbia
5. Cosme, F., Arenas, I., Ribeiro, M., Filipe-Ribeiro, L., Vilamarim, R., Costa, E., Siopa, J., Nunes, F. M impact of fining with k-carrageenan, bentonite, and chitosan on protein stability and macromolecular compounds of albariño white wine produced with and without pre-fermentative skin maceration. IV.P.5 page 274 CENOMacrowine 2023 - 12th International Symposium of CEnology, Bordeaux- 9th edition In Macrowine 10-13 july 2023.
6. Durães, T.; Azevedo, M.; Cosme, F.; Nunes, F.M. Enzymatic Reduction of Sugar Content in Sucrose-Rich Fruit Products The 1st International Meeting Molecules 4 Life, 20-22 stembro 2023, Vila Real, Portugal.
7. Siopa, J., Ribeiro, M., Cosme, F., Nunes, F. M. (2023). Insight into the chemical composition and formation of biscuit melanoidins using a shotgun proteomics method. 3rd Food Chemistry Conference, Dresden, Alemanha, 10-12 de outubro 2023.
8. Costa, E.C., Cosme, F., Nunes, F.M., Optimisation of protein extraction from algae for use in the food industry, 3rd Food Chemistry Conference, 10-12 October 2023, Dresden, Germany
9. Pires, L., Cosme, F., Silva, A., Patarata, L. Sensory implications of adding brewers spent-grain to frankfurters with or without added phosphates. 37th EFFoST International Conference 2023, 6-8 November 2023 Valencia, Spain.
10. João Mota, Maria João Santos, António Inês, Elisete Correia, Catarina Marques and Alice Vilela (2023). Degradation of vinegar: Influence of chemical and microbiological

parameters on the quality of wine vinegar. Oral communication (OC5-HF) given at the I International Meeting Molecules 4 Life, which took place from September 20th to 22nd, 2023, at the University of Trás-os-Montes e Alto Douro (Vila Real), Portugal. P. 57

11. Alice Vilela, Maria Gabriela Santos, Gonçalo Rijo, Elisete Correia (2023). The Temporality of Port Wines Sensations when Tasting Ports And Chocolates Together. Comunicação oral apresentado no 3rd Science and Wine Congress, Vila Nova de Gaia, Portugal. 14 a 16 de junho, p 28.
12. Alice Vilela, Maria João Santos, João Mota, Elisete Correia (2023). The science behind beverage flavors: the role of pH and amylase enzyme in the human mouth. Comunicação oral 2023-2971 presented at the 44th World Congress of Vine and Wine, Cadiz-Jerez, Espanha de 05/06/2023 a 09/06/2023 (SCIENTIFIC PROGRAMME, p. 13)
13. Marques C, Dinis L-T, Correia E, Mota J, Vilela A, Ferreira A, Bronze MR (2023). Emo-sensory and Volatile Profile of Iberian Wine Vinegar. Poster P12, presented at the 13<sup>o</sup> Encontro Nacional de Cromatografia, 17th – 19th December 2023, Faculdade de Farmácia Universidade de Lisboa, in Lisboa, Portugal. Book of abstracts p. 83.
14. Ana Pinto, Alice Vilela, Teresa Pinto (2023) Edible coatings on grape-vine by-products infusions. Poster PC1-HF presented at the I International Meeting Molecules 4 Life, from September 20th to 22nd, 2023, at the University of Trás-os-Montes e Alto Douro (Vila Real), Portugal. p.88
15. Beatriz Marinho, Urszula Szymanowska, Monika Karas, Alice Vilela, Ivo Oliveira (2023) Study of the sensorial and chemical properties of cookies supplemented with almond skin. Poster PC2-HF presented at the I International Meeting Molecules 4 Life, from September 20th to 22nd, 2023, at the University of Trás-os-Montes e Alto Douro (Vila Real), Portugal. p.89
16. Maria João Santos, Teresa Pinto, Elisete Correia, João Mota, Alice Vilela (2023). Influence of Process and Chemical Composition of Chestnut on Sensory Profile and their Effect on Consumer Acceptability and Health. Poster PC18-HF presented at the I International Meeting Molecules 4 Life, from September 20th to 22nd, 2023, at the University of Trás-os-Montes e Alto Douro (Vila Real), Portugal. p. 105
17. C. Marques, L-T. Dinis, E. Correia, A. Aires, J. Mota, A. Vilela (2023). Characterization of Iberian Wine Vinegar: From flavour to health promoting compounds. Poster PC4-HF presented at the I International Meeting Molecules 4 Life, from September 20th to 22nd, 2023, at the University of Trás-os-Montes e Alto Douro (Vila Real), Portugal. p. 91

18. Santos, G., Vilela, A. Correia, E. (2023). The use of statistical techniques to evaluate the impact that different chocolates have on the sensory perception of three different categories of Port wine. Poster presented at the XXVI Congresso da Sociedade Portuguesa de Estatística, 11 a 14 de outubro de 2023.
19. Maria João Santos, Alice Vilela, Elisete Correia, Gonçalo Rijo, Teresa Pinto (2023)  $\alpha$ -Amilase activity and flavour experience elicited by *Castanea sativa* cultivars with different cooking processes. Comunicação em painel apresentado no 3rd Science and Wine Congress, Vila Nova de Gaia, Portugal. 14 a 16 de junho, p 59
20. Alice Vilela, Catarina Marques, Elisete Correia, Lia-Tânia Dinis (2023) Methodologies of emo-sensory analysis and chemical characterization of Portuguese DOC Douro wines – From traditional to innovative technologies. poster PO-2039, apresentado no 44th World Congress of Vine and Wine, realizado em Cadiz-Jerez, Espanha de 05/06/2023 a 09/06/2023 (SCIENTIFIC POSTERS program, pag. 11)
21. Alice Vilela, Maria João Santos, Elisete Correia, Teresa Pinto, Fernando Nunes, Fernanda Cosme, Tânia Rocha, João Barroso, Gonçalo Rijo (2023) Perception of alcoholic beverages flavor quality: A preliminary study for the development of an e-flavor, poster PO-2038, apresentado no 44th World Congress of Vine and Wine, realizado em Cadiz-Jerez, Espanha de 05/06/2023 a 09/06/2023 (SCIENTIFIC POSTERS program, pag. 11)
22. Afonso, S., Oliveira, I., Vilela, A., Meyer, A.S., Gonçalves, B. (2023). Análise sensorial de cerejas após aplicação foliar de biostimulantes: painel treinado versus consumidores. 5º Simpósio Nacional de Fruticultura, 9 a 10 de fevereiro, Alcobça.
23. Sá, I.; Ribeiro, M.; Nunes, F.; Marques, G.; Chaves, R.; Ferreira, D. "MUSHROOMS4LIFE: Decoding the Molecular Basis of a Cancer-Fighting Small RNA Extracted from Edible Mushrooms". 1st International Meeting Molecules 4 Life, 2023 (20 to 22 September 2023 at the University of Trás-os-Montes and Alto Douro, at Vila Real, Portugal).
24. Silva M.G., Batista R., Oliveira M. M., F. Peixoto. "Unpacking the impact of high-fat diet on liver antioxidant response and mitochondrial bioenergetics to microplastic-induced toxicity". I International Meeting Molecules 4 Life, Vila Real, Portugal. 20th to 22nd September 2023
25. Silva M.G., Oliveira M. M., F. Peixoto. "Antioxidant and mitochondrial bioenergetic responses to microplastics toxicity: the influence of diet". Portuguese Young Chemistry Meeting, Vila Real, Portugal. 17th to 19th May 2023.

## **II.7. Participation in National and International Organizations**

### **II.7.1. Participation in Committees**

1. Membro da comissão organizadora e científica 1st International Meeting Molecules4Life. 20/09/2023 a 22/09/2023 Vila Real, UTAD
2. Membro da Comissão científica das IV Jornadas de Enologia - Wine to Business Novembro, **2023**, UTAD, Vila Real.

### **II.7.2. Participation in decision-making bodies**

1. Membro do Comité Científico de Avaliação ENOFORUM WEB Award 2023. Janeiro de 2023.

### **II.7.3. Participation in editorial and special issues of international scientific journals**

#### **II.7.3.1. Associate Editor**

1. Frontiers in Nutrition Journal - Nutrition and Food Science Technology. António M. Jordão
2. Frontiers in Nutrition – Section Food Chemistry, EPFL Science Park, Lausanne, Switzerland, Frontriers Associate Editor for Food Chemistry: Fernanda Cosme
3. Frontiers in Nutrition – Section Food Chemistry, EPFL Science Park, Lausanne, Switzerland, Frontriers Associate Editor for Food Chemistry: Fernanda Nunes
4. Frontiers in Nutrition – Section Food Chemistry, EPFL Science Park, Lausanne, Switzerland, Frontiers Associate Editor for Food Chemistry: Miguel Ribeiro

#### **II.7.3.2. Editorial Board Member**

1. António M. Jordão, Beverages, MDPI, Basel (Switzerland), Editorial Board Member.
2. António M. Jordão, Journal of Polyphenols, Instituto Nacional de Investigação Agrária (Portugal) e Shenyang Pharmaceutical University (China), Editorial Board Member,.
3. António M. Jordão, Ciência e Técnica Vitivinícola, Instituto Nacional de Investigação Agrária (Portugal), Editorial Board Member.
4. Fernanda Cosme. Membro do Comité Editorial da Beverages (ISSN 2306-5710) da editora MDPI Basel (Switzerland). Indexada ao Scopus (Elsevier) e Web of Science (Clarivate Analytics).

5. Fernanda Cosme. Membro do Comité Editorial da Foods da editora MDPI Basel (Switzerland). Indexada ao Scopus (Elsevier) e Web of Science (Clarivate Analytics).
6. Fernanda Cosme. Membro do Comité Editorial do Journal of Polyphenols, Instituto Nacional de Investigação Agrária (Portugal) e Shenyang Pharmaceutical University (China).

### II.7.3.3. Section Board Member

1. Fernanda Cosme. Section board member da Beverages (ISSN 2306-5710) da editora MDPI Basel (Switzerland). "Section Board for 'Wine, Spirits and Oenological Products'" Indexada ao Scopus (Elsevier) e Web of Science (Clarivate Analytics)
2. Fernanda Cosme. Section board member da Fermentation (ISSN 2306-5710) da editora MDPI Basel (Switzerland). Indexada ao Scopus (Elsevier) e Web of Science (Clarivate Analytics).
3. Fernanda Cosme. Section board member da Foods (ISSN 2306-5710) da editora MDPI Basel (Switzerland). Indexada ao Scopus (Elsevier) e Web of Science (Clarivate Analytics).
4. Fernando Nunes. Section board member da Foods (ISSN 2306-5710) da editora MDPI Basel (Switzerland). Indexada ao Scopus (Elsevier) e Web of Science (Clarivate Analytics).
5. Fernanda Nunes. Section board member da Molecules (ISSN 1420-3049) da editora MDPI Basel (Switzerland). Indexada ao Scopus (Elsevier) e Web of Science (Clarivate Analytics).
6. Alice Vilela - International Journal of Environment and Climate Change.  
<http://www.journalijecc.com/index.php/IJECC/about/editorialTeam>
7. Alice Vilela - Insights in Organic & Inorganic Chemistry Journal.  
<https://irispublishers.com/ioic/editorialboard.php>
8. Alice Vilela - Fermentations (MDPI)  
<https://www.mdpi.com/journal/fermentation/editors>
9. Miguel Ribeiro. Topic editor da Foods (ISSN 2306-5710) da editora MDPI Basel (Switzerland). Indexada ao Scopus (Elsevier) e Web of Science (Clarivate Analytics).

#### II.7.3.4. Colection Editor

1. António M. Jordão, Fernanda Cosme. Topical Collection "Wine and Beverage: Fermentation and Conservation Technologies" of Beverages Journal.
2. Alice Vilela - Fermented Food: Health and Benefit, Topical collection, including the journals Applied Microbiology; Fermentation, Foods, Microbiology Research, Microorganisms (MDPI), <https://www.mdpi.com/topics/50569QBK0F>
3. Alice Vilela - Innovative Sensory, Chemosensory, and Chemical Techniques in Beverages Quality, Topical Collection, Foods (MDPI), [https://www.mdpi.com/journal/foods/topical\\_collections/Sensory\\_Chemosensory\\_Chemical\\_Beverages](https://www.mdpi.com/journal/foods/topical_collections/Sensory_Chemosensory_Chemical_Beverages)
4. Alice Vilela - New Aspect on Wine Fermentation - Topical Collection, Fermentation (MDPI), [https://www.mdpi.com/journal/fermentation/topical\\_collections/DD9B7W9VV0](https://www.mdpi.com/journal/fermentation/topical_collections/DD9B7W9VV0)

#### II.7.3.5. Special Issue Guest Editor

1. Molecules, MDPI AG, Basel (Switzerland), Special Issue "Molecules4Life - First International Meeting", 2023, Guest Editor: Miguel Ribeiro, Fernanda Cosme, Lucinda V. Reis, Alice Vilela, Rui Campos, Paula Lopes
2. Molecules MDPI AG, Basel (Switzerland), Special Issue Wine Sensory Faults: Origin, Prevention and Removal, 2nd Edition 2023, Guest Editor Dr. Fernando M. NunesDr. Fernanda CosmeDr. Luís Filipe-Ribeiro
3. Fermentation Wine Fermentation and Aging - Evolution of Chemical and Sensory Profile. 2023 Guest Editor Dr. Fernanda Cosme Dr. Fernando M. Nunes Dr. Luís Filipe-Ribeiro
4. Medical Sciences Forum MDPI AG, Basel (Switzerland), Special Issue "Molecules4Life - First International Meeting", 2023, Guest Editor: Miguel Ribeiro, Fernanda Cosme, Lucinda V. Reis, Alice Vilela, Rui Campos, Paula Lopes
5. Foods Winemaking: Advanced Technology and Flavor Research 2023 Guest Editor Dr. Fernanda Cosme Dr. Fernando M. Nunes Dr. Luís Filipe-Ribeiro
6. Microbial Modulation to Mitigate the Impact of Climate Change on Wine Production, Frontiers in Microbiology - Food Microbiology (<https://www.frontiersin.org/research->



topics/53969/microbial-modulation-to-mitigate-the-impact-of-climate-change-on-wine-production) – Alice Vilela

7. Bioactive and (Poly)Phenolic Compounds: Characterization & Properties into Food and Health Benefits, Foods (MDPI), [https://www.mdpi.com/journal/foods/special\\_issues/Bioactive\\_PolyPhenolic\\_Compounds](https://www.mdpi.com/journal/foods/special_issues/Bioactive_PolyPhenolic_Compounds) - Alice Vilela
8. Molecules4Life—First International Meeting, Molecules (MDPI), [https://www.mdpi.com/journal/molecules/special\\_issues/5YJ514B6IV](https://www.mdpi.com/journal/molecules/special_issues/5YJ514B6IV) - Alice Vilela

#### II.7.4. Book Editor

#### II.7.5. Technical Articles

1. Minute, M., Giotto, F., Filipe-Ribeiro, L., **Cosme, F.**, Nunes, F. M. (2023). Métodos analíticos alternativos para medir a suscetibilidade de vinhos brancos ao Pinking. Revista Enologia, Associação Portuguesa de Enologia e Viticultura, N.º 71 Janeiro/Dezembro de 2023. pp. 47-58
2. Afonso, S.; Oliveira, I.; Serapicos, M.; Guedes, F.; Vilela, A.; Meyer, A.; Gonçalves B. 2023 APLICAÇÃO DE BIOESTIMULANTES EM CEREJEIRA: INCREMENTO SUSTENTÁVEL DA QUALIDADE DO FRUTO. AGROTEC 46, Dossier resíduos zero, março 2023, 1-5. <http://www.agrotec.pt/noticias/aplicacao-de-bioestimulantes-em-cerejeira-incremento-sustentavel-da-qualidade-do-fruto-bibliografia/>

## Part III – Material chemistry

### III.1. Advanced Education

#### III.1.1. Postdoctoral students

**Name** Daniela Maria da Silva Correia

**Supervisor** Verónica de Zea Bermudez

**Co-Supervisor** Senentxu Lanceros Méndez

**Name** João Filipe Figueiredo Rocha

**Supervisor** Verónica de Zea Bermudez

**Name** Alexandre José Alves Jerónimo

**Supervisor** Mariana Sofia Peixoto Fernandes

**Co-Supervisor** Ana Cristina Briga de Sá

#### III.1.2. PhD students

**Name** Abderrazzak Ait Bassou

**Supervisors** Pedro Manuel Bandeira Tavares (UTAD); José Ramiro Fernandes (UTAD); Fábio Figueiras (IFIMUP/FCUP).

**PhD** Doutoramento em Ciências Físicas Aplicadas

**Starting date** 2019

**Name** Andreia Daniela Rosa Veloso

**Supervisors** Maria Cristina Fialho Oliveira

**PhD** Chemical and Biological Sciences, UTAD

**Starting date** October 2018

<b>Name</b>	<b>Francisco Toscano Pessoa Kendall Ramos Pinheiro</b>
<b>Supervisors</b>	Rosa Maria Magalhães Rego
<b>PhD</b>	Chemical and Biological Sciences, UTAD
<b>Starting date</b>	February 2021-January 2022 (end)
<b>Name</b>	<b>João Carlos Pacheco Barbosa</b>
<b>Supervisor</b>	Verónica de Zea Bermudez
<b>Co-Supervisor</b>	Senentxu Lanceros Méndez and Carlos M. Costa
<b>Name</b>	<b>Paulo Joaquim Ribeiro Nunes</b>
<b>Supervisors</b>	Mariana Sofia Peixoto Fernandes/Verónica de Zea Bermudez
<b>PhD</b>	Chemical and Biological Sciences, UTAD
<b>Starting date</b>	March 2021
<b>Name:</b>	<b>Lisete Sofia Gomes Fernandes</b>
<b>Supervisors</b>	Pedro B. Tavares; Fernando Nunes
<b>PhD</b>	Chemical and Biological Sciences
<b>Starting date</b>	Out 2021
<b>Name</b>	<b>Sara Barrias</b>
<b>Supervisors</b>	Paula Martins Lopes (UTAD); Javier Ibañez (ICVV); José Ramiro Fernandes (UTAD).
<b>PhD</b>	Doutoramento em Genética Molecular Comparativa
<b>Starting date</b>	2021

### III.1.3. Collaborators

<b>Name</b>	<b>Ana Rita Vitorino Queijo</b>
<b>Institution/Department</b>	CQ-VR (degree in Biochemistry), grant of Obtain Project
<b>Research area</b>	Sensors
<b>Name</b>	<b>Paula Lopes</b>
<b>Institution/Department</b>	N/A
<b>Research area</b>	Biosensors
<b>Name</b>	<b>Romeu António Videira</b>
<b>Institution/Department</b>	N/A
<b>Research area</b>	Biochemistry
<b>Name</b>	<b>Rui Campos</b>
<b>Institution/Department</b>	N/A
<b>Research area</b>	Biosensors

### III.1.4. Mater thesis concluded

<b>Name</b>	<b>Jaime Rafael da Silva Oliveira</b>
<b>Title</b>	Avaliação do potencial das envolventes e dos sistemas de energia renovável para otimização dos consumos energéticos de uma unidade industrial
<b>Master</b>	Curso de Mestrado de Engenharia Civil, Faculdade de Engenharia da Universidade do Minho
<b>Date</b>	4/12/2023
<b>Supervisor</b>	Dinis Miguel Campos Leitão (orientadora principal UM)
<b>Co-Supervisor</b>	Ana Briga Sá (UTAD)

<b>Name</b>	<b>Luís Miguel da Silva Ferreira</b>
<b>Title</b>	Desafios da Economia Circular: Incorporação de resíduos em diferentes soluções construtivas
<b>Master</b>	Mestrado em Engenharia do Ambiente, Universidade de Trás-os-Montes e Alto Douro
<b>Date</b>	11/09/2023
<b>Supervisor</b>	Carlos Afonso Teixeira
<b>Co-Supervisor</b>	Ana Briga Sá

<b>Name</b>	<b>João Luís Fernandes Jesus</b>
<b>Title</b>	Aplicação do carolo de espiga de milho no fabrico de placas de revestimento
<b>Master</b>	Mestrado em Engenharia Civil, Universidade de Trás-os-Montes e Alto Douro
<b>Date</b>	31/03/2023
<b>Supervisor</b>	Ana Briga Sá
<b>Co-Supervisor</b>	Jorge Tiago Pinto

### III.2. Short Training and Updating courses

### III.3. Outreach activities

1. Mariana Fernandes, Paulo Nunes, Noite Europeia dos Investigadores, Armamar, Portugal, 29th september 2023
2. Dia Aberto em Penafiel, VI dia das Ciências e da Tecnologia, Penafiel, Portugal, 28th march de 2023

3. Mariana Fernandes, Daniela Pinheiro, Dia Internacional das Mulheres e Raparigas na Ciência, Associação de apoio social “O nosso pilar”, Vila Real, Portugal, 11th february 2023
4. Workshop “Síntese e caracterização de materiais” M. Fernandes and V. de Zea Bermudez. XV Jornadas de Bioquímica, Universidade de Trás-os-Montes e Alto Douro, 16 May 2023.
5. Workshop “Silk, a biopolymer as material for flexible sensors” Guilherme G.J. Sousa, T. Duarte, V. de Zea Bermudez, XV Jornadas de Genética y Biotecnología / V Jornadas Ibéricas de Genética y Biotecnología, 22-23 march 2023
6. 8th International Sol-Gel Society (ISGS) Workshop "Sustainable Sol-Gel Energy Materials" (SUSGEM 2023), Castelló de la Plana, Spain, 01-04 outubro 2023, Organizadoras: Verónica de Zea Bermudez and Beatriz Julián-López

### III.4. Projects

#### III.4.1. European/International

##### III.4.1.2. CQVR Partnership

1. **ECO-GT Project - Engineers Communicating and Collaborating Internationally for the Green Transition**, Projeto financiado pelo Programa de Parcerias de Cooperação Erasmus+ da União Europeia. Para além da UTAD, o consórcio inclui Gdansk University of Technology, Technikum Vienna, Technical University of Dublin, Lapland University of Applied Sciences, Transylvanian University of Brasov, Istanbul Technical University e o IEEE European Public Policy Office. Dotação orçamental global: 400.000,00€, elegível para a UTAD 70.775,88€. Referência do projeto: 2023-1-PL01-KA220-HED-000165199. Data de início: 01/09/2023; Data de fim: 31/08/2026. Membro do CQ-VR: **Ana Briga-Sá**

2. **Programme: Key Action 1 - Mobility for Learners and Staff (Higher Education Student and Staff Mobility)**

Period: 2022/2023 - 2028/2029

Subject: Engineering and engineering trades, Physical Sciences, Chemistry

Foreign Institution: AGH University of Science and Technology ([www.agh.edu.pl](http://www.agh.edu.pl))

Erasmus+ AGH University Coordinator: Doctor Katarzyna Styszko, Faculty of Energy and Fuels

Portuguese Institution: University of Trás-os-Montes e Alto Douro

Erasmus+ Portuguese Coordinator: Rosa Rego

Status: **Ongoing project**

**3. Programme: Key Action 1 - Mobility for Learners and Staff (Higher Education Student and Staff Mobility)**

Period: 2019/2020-2020-2021

Subject areas: Biology/Biochemistry/Chemistry/Interdisciplinary Natural Science

Foreign Institution: Saint Petersburg National Research University of Information Technologies, Mechanics and Optics (ITMO University), Saint Petersburg, Russia

**4. HEI-ETEIA – Energy Transition Entrepreneurs in Action - developing a supportive academic environment for the young talents**

Reference: Project Number 10036

Starting date: 2021-07-01. Ending date: 2023-07-31.

Funding by: EU (UTAD fund: 390.000,00€; Total fund: 1.200.000,00€)

CQVR members role: Ana Briga Sá (participant); Rosa Rego (participant), Mariana Fernandes (participant), Verónica Bermudez (participant), Maria Antunes (participant), Maria Cristina Oliveira (participant), Pedro Tavares (participant), José Ramiro Fernandes (participant).

Status: **Concluded project**

**5. CIRCULAR 2B- EEA Grants Portugal: Construção circular em edifícios modulares e energeticamente eficientes/ Circular construction in modular and energy efficient buildings.**

Reference: Project n.º37.

Starting date: 2020-10-01. Ending date: 2022-09-30.

Funding by: EEA Grants (UTAD fund: 98.995,24 €; Total fund: 540.593,76 €).

CQVR members role: Nuno Cristelo (UTAD coordinator), Ana Briga Sá (participant), Pedro Tavares (participant), José Ramiro Fernandes (participant).

Status: **Concluded project**

**6. DATI – Digital Agriculture Technologies for Irrigation efficiency.**

Reference: PRIMA/0007/2020.

Starting date: 2021-06-01. Ending date: 2023-05-31.

Funding by: PRIMA (UTAD fund: 97.500,00€; Total fund: 1.020.180,00€).

CQVR members role: Ana Briga Sá (participant).

Status: **Concluded project**

**7. MINECO - New Eco-Innovative Materials for Mining Infra.**

Reference: ERA-MIN Joint Call 2018 – ID16.

Starting date: 2020. Ending date: 2023.

Funding by: EU (Total fund: 1.285.861 € / CQVR fund: 75.125€).

Main contractor. N/A Host institution: Tapoarvi, UTAD, UMinho.

CQVR members role: Nuno Cristelo, Pedro Tavares, Ramiro Fernandes.

Status: **Concluded project**

### III.4.2. National

#### III.4.2.1. CQVR Leadership

##### 1. **Agenda Mobilizadora para o Desenvolvimento de Produtos e Sistemas Inteligentes de Mobilidade Verde (A-MoVer)**

**Referência:**

**Period:** 01 December 2023- 30 November 2025

**Funding:** Next Generation European Union

**Framework:** Recovery and Resilience Plan

**Participantes:** Continental Advanced Antenna, Lda. (CAA (Leading Promoter) (Large enterprise), Arquiconsult - Sistemas de Informação, S.A. (SME), UP Motion, Lda.(SME), Neoception, Unipessoal, Lda. (Large enterprise), University of Trás-os-Montes e Alto Douro (UTAD, **Verónica de Zea Bermudez, Rosa Rego, Mariana Fernandes**) e INESC TEC - Instituto de Engenharia de Sistemas e Computadores, Tecnologia e Ciência.

Budget: 16.28 M€; Budget UTAD: 9.59 M€

##### 2. **OBTAin- Objective Building Sustainability**

Reference: NORTE-01-0145-FEDER-000084

Starting date: 2021-07-01. Ending date: 2023-06-30.

Funding by: FEDER (UTAD fund: 588.235,28 €; Total fund: 588.235,28 €)

CQVR members role: Verónica de Zea Bermudez (coordinator), Ana Briga Sá , Pedro Tavares, Fernando Pacheco; José Ramiro Fernandes, Marlo Lucas, Maria Cristina Gonçalves, Maria Cristina Oliveira, Maria Antunes, Mariana Fernandes, Nuno Cristelo, Rosa Rego.

Status: **Concluded project**

##### 3. **ADAPTIVE- Advanced Production System for Sustainable and Productive Roofing Retrofit.**

Reference: POCI-01-0247-FEDER-050191.



Starting date: 2020-10-01. Ending date: 2023-03-31.

Funding by: FEDER (UTAD fund: 131.145,27€; Total fund: 421.932,30€).

CQVR members role: Nuno Cristelo (UTAD coordinator), Ana Briga Sá (participant),  
Pedro Tavares (participant).

Status: **Concluded project**

### III.4.2.2. CQVR Partnership

- 1. Vine&Wine Portugal - Driving Sustainable Growth Through Smart Innovation. PRR – Plano de Recuperação e Resiliência e pelos Fundos Europeus NextGeneration EU, no âmbito das Agendas Mobilizadoras para a Reindustrialização.** Promotor: Gran Cruz Porto – Sociedade Comercial de Vinhos, Lda, sendo um consorcio constituído por 47 entidades, distribuídas por 22 empresas do setor, 16 empresas tecnológicas, 9 ENESII (3 Associações). Total de investimento: 77.575.052,73 EUR, cabendo a UTAD um incentivo total de 7.875.653,67 EUR. Data de início: 01/11/2021. Data de fim: 31/12/2025. Membro do CQ-VR: Ana Briga-Sá: Membro da equipa de Investigação/ Investigadora Responsável do Subprojeto B122 WEE4WINE (montante afeto ao subprojecto 200.718€)
- 2. ROCKinBIO- A biodeterioration model to predict biological impact on exposed rock surfaces and open-air rock-art.** Entidades Envolvidas: Associação Biopolis (c/ financiamento) , Laboratório Hercules (c/ financiamento), Associação Viver Ciência (c/ financiamento), Fundação Côa Parque (acolhimento de membro de equipa), Univ Oxford (acolhimento de membro de equipa), UTAD (acolhimento de membro de equipa). Entidade financiadora: FCT- Fundação para a Ciência e a Tecnologia. Referência do Projeto: 2022.04830.PTDC. Data de início: 01/02/2023. Data de fim: 31/01/2026. Membro do CQ-VR: Ana Briga-Sá Membro da equipa de investigação.(Inclusão na equipa do projeto em 23/03/2023.)
- 3. E-FiELD - Distorções estruturais controladas por campo elétrico para dispositivos optoelectrónicos.**  
Reference: PTDC/NAN-MAT/0098/2020.  
Starting date: 2021-03-29. Ending date: 2024-03-28.  
Funding by: FCT (UTAD fund: 28 485.00€; Total fund: 249 967.50€).  
Main contractor. IFIMUP Host institution: FCUP.  
CQVR members role: Pedro B. Tavares, José Ramiro Fernandes, Lisete Fernandes.  
Status: **Ongoing project.**

#### 4. **Plataformas de Diagnóstico aplicadas às Doenças do Lenho em Videira.**

Reference: PTDC/BAA-DIG/1079/2020.

Starting date: 29/03/2021.

Funding by: FCT: 249.996,78€ / UTAD: 144.499,80€.

CQVR members role: Paula Lopes (UTAD). Investigador Participante: José Ramiro Fernandes (CQVR/UTAD).

Status: **Ongoing project.**

#### 5. **Solar-Powered Smart Windows for Sustainable Buildings (SOLPOWINS).**

Reference: PTDC/CTM/4304/2020.

Starting date: 29 march 2021. Ending date: 28 march 2024.

Funding by FCT (Global: € 249.285,88; UTAD: € 66.875,00).

CQVR members role: M. C. Gonçalves (participant), M. Fernandes (participant), Verónica de Zea Bermudez (coordinator).

Status: **Ongoing project.**

#### 6. **Continental FoF – Continental AA's Factory of the Future.**

Reference: POCI-01-0247-FEDER-047512.

Starting date: 2020-10-01. Ending date: 2023-03-30.

Funding by: FEDER (UTAD fund: 1.084.304,44€; Total fund: 5.585.644,57€).

CQVR members role: Ana Briga Sá (participant).

Status: **Concluded project**

### III.5. Awards, Prizes and Medals

1. Cristina M. Monteiro (ESB-UCP), Cristina Santos (CIIMAR/FEUP), Cristina Matos (CIIMAR/ UTAD) and Ana Briga-Sá (CQ-VR/UTAD) won 3rd place in the PhD & Doctorates Category with the presented project “Resilience” at H2O & Sustainability summit, 20th October 2023 Faro, Portugal. (<https://www.h2o-sustainability-hub.com/h2o-sustainability-summit>).
2. Ana Briga Sá, Ana Pessoa, Caroline Dominguez. 2023. Projeto “3R Phone ATM”, 2º lugar na competição “INNOVSTAFF - Boost your Idea!” inserido no Projeto Europeu ETEIA- Energy Transition Entrepreneurs in Action, Training for Teachers and other Staff, Ciclo de Capacitação, 16 de dezembro de 2022, UTAD, PCI- Creative Science Park. Projeto relacionado com a recolha e encaminhamento para valorização de resíduos eletrónicos.

## III.6. Outputs

### III.6.1. Book chapters

1. Nelson Bento Pereira, Nuno Ferreira, Patrícia Fernandes Rocha, Fernando Pimenta, Ana Briga Sá, Nuno Cristelo, Luísa Hora de Carvalho, Jorge Martins. 2023. “Caderno Técnico de Inovação e Construção: Projeto ADAPTIVE”. Pag. 37-44, ISBN 978-989-35231-1-7, Editor: CICON – Center for Innovation in Construction. (Livro)
2. Branco Teixeira, M., Briga-Sá, A. et al (2023) “Manual de Inovação e Sustentabilidade: Os desafios e as soluções na reabilitação urbana 4.0”. pp. ISBN: 9789897689949, AICCOPN- Associação dos Industriais da Construção Civil e Obras Públicas. Editora: Vida Económica. Este livro tem como autores, para além da candidata, vários colegas de outras instituições (Universidade Fernando Pessoa, Universidade do Minho, Faculdade de Engenharia da Universidade do Porto, Universidade de Aveiro e Instituto Politécnico de Viana do Castelo). (Livro)

### III.6.1. Patents

1. “Building Element for a Building or a Section of a Building and Method for Producing Thereof”; A. Jerónimo; A. Briga-Sá, T. A. G. Duarte; R. F.P. Pereira; V. de Zea Bermudez, International Patent Application to PCT – The International Patent System - WIPO in July 2023, PTC/IB2023/057185.
  - a) “Building Element for a Building or a Section of a Building and Method for Producing Thereof”, A. Jerónimo; A. Briga-Sá, T. A. G. Duarte; Rui F.P. Pereira; V. de Zea Bermudez, Provisional Patent Application to INPI (Instituto Nacional de Propriedade Intelectual) in June 2023, N° 20232005094746.
2. “Methods for Producing a Cement Paste, a Mortar, and a Concrete Construction Material by Utilising an Aqueous Sericin Solution, Respective Construction Materials and Uses”, A. Briga-Sá; A. Jerónimo; T. A. G. Duarte; Bruna F. M. Loureiro; Rui F.P. Pereira; V. de Zea Bermudez, International Patent Application to PCT – The International Patent System - WIPO in June 2023, PTC/IB2023/056265.
  - a) “Methods for Producing a Cement Paste, a Mortar, and a Concrete Construction Material by Utilising an Aqueous Sericin Solution, Respective Construction Materials and Uses”, A. Briga-Sá; A. Jerónimo; T. A. G. Duarte; Bruna F. M. Loureiro; Rui F.P.

Pereira; V. de Zea Bermudez, Provisional Patent Application to INPI ((Instituto Nacional de Propriedade Intelectual) in March 2023, N°20232004796221.

### III.6.2. Publications in journals of Journal Citation Reports



#### III.6.2.1. Q1 and Q2 Journals

1. Cruz B.D.D., Correia D.M., Polícia R., Pereira N., Nunes P., Fernandes M., Tubio C.R., Botelho G., Lanceros-Méndez S., de Zea-Bermudez V. Photoluminescent alginate-based composite inks for anti-counterfeiting security and soft actuator applications. (2023) Chemical Engineering Journal, 472, 144813 **Q1**
2. Barbosa J.C., Correia D.M., Fidalgo-Marijuan A., Gonçalves R., Ferdov S., De Zea Bermudez V., Costa C.M., Lanceros-Mendez S. Influence of Solvent Evaporation Temperature on the Performance of Ternary Solid Polymer Electrolytes Based on Poly(vinylidene fluoride- co-hexafluoropropylene) Combining an Ionic Liquid and a Zeolite. (2023) ACS Applied Energy Materials, 6 (10), pp. 5239 – 5248 **Q2**
3. Correia S.F.H., Fu L., Dias L.M.S., Pereira R.F.P., de Zea Bermudez V., André P.S., Ferreira R.A.S. An autonomous power temperature sensor based on window-integrated transparent PV using sustainable luminescent carbon dots. (2023) Nanoscale Advances, 5 (13), pp. 3428 – 3438 **Q2**
4. Nunes P., Nunes S.C., Pereira R.F.P., Cruz R., Rocha J., Ravishankar A.P., Fernandes L., Bacelar E., Casal S., Anand S., Crespí A.L., Fernandes M., de Zea Bermudez V. The leaf of Agapanthus africanus (L.) Hoffm.: A physical-chemical perspective of terrestrialization in the cuticle. (2023) Environmental and Experimental Botany, 208, 105240 **Q1**
5. Barbosa J.C., Correia D.M., Nunes P., Fernandes M., Fidalgo-Marijuan A., Gonçalves R., Ferdov S., de Zea Bermudez V., Lanceros-Mendez S., Costa C.M. Influence of ionic liquid characteristics on the performance of ternary solid polymer electrolytes with poly(vinylidene fluoride-co-hexafluoropropylene) and zeolite. (2023) Journal of Power Sources, 572, 233095 **Q1**
6. Barbosa J.C., Correia D.M., Salado M., Gonçalves R., Ferdov S., de Zea Bermudez V., Costa C.M., Lanceros-Mendez S. Three-Component Solid Polymer Electrolytes Based on Li-Ion Exchanged Microporous Silicates and an Ionic Liquid for Solid-State Batteries. (2023) Advanced Engineering Materials, 25 (2), 2200849 **Q2**
7. Barbosa J.C., Correia D.M., Fidalgo-Marijuan A., Gonçalves R., Ferdov S., de Zea Bermudez V., Lanceros-Mendez S., Costa C.M. High Performance Ternary Solid Polymer Electrolytes Based on High Dielectric Poly(vinylidene fluoride) Copolymers

- for Solid State Lithium-Ion Batteries. (2023) *ACS Applied Materials and Interfaces*, 15 (27), pp. 32301 – 32312 **Q1**
8. Barbosa J.C., Correia D.M., Gonçalves R., de Zea Bermudez V., Lanceros-Mendez S., Costa C.M. Ionic liquids in the scope of lithium-ion batteries: from current separator membranes to next generation sustainable solid polymer electrolytes. (2023) *Materials Chemistry Frontiers*, 7 (21), pp. 5046 – 5062 **Q1**
  9. Matos C., Monteiro C.M., Santos C., Briga-Sá A., Imteaz M.A. Editorial: Urban nature-based solutions and green infrastructure as strategies for climate change adaptation. (2023) *Frontiers in Environmental Science*, 11, 1256044 **Q2**
  10. Briga-Sá A., Ferreira L., Paulo B., Bentes I., Teixeira C.A. Energy and environmental performance assessment of reused PET bottles panels for building thermal insulation solutions. (2023) *Energy and Buildings*, 298, 113529 **Q1**
  11. Moreira D., Lopes-Nunes J., Santos F.M., Campello M.P.C., Oliveira M.C., Paulo A., Tomaz C., Cruz C. Assessment of Aptamer as a Potential Drug Targeted Delivery for Retinal Angiogenesis Inhibition. (2023) *Pharmaceuticals*, 16 (5), art. no. 751 **Q1**
  12. Cristelo N., Coelho J., Rivera J., Garcia-Lodeiro I., Miranda T., Fernández-Jiménez A. Application of electric arc furnace slag as an alternative precursor to blast furnace slag in alkaline cements. (2023) *Journal of Sustainable Cement-Based Materials*, 12 (9), pp. 1081 – 1093 **Q1**
  13. Manaviparast H.R., Pinheiro J., Najafi E.K., Abreu C., Araújo N., Cristelo N., Miranda T. Mechanical Behavior of a Mine Tailing Stabilized with a Sustainable Binder. (2023) *Applied Sciences (Switzerland)*, 13 (7), 4103 **Q2**
  14. Khaksar Najafi E., Tavares P., Miranda T., Reza Manaviparast H., Cristelo N. Ophthalmic glass lens waste as an alternative soluble silica source for alkali-activation reactions. (2023) *Construction and Building Materials*, 392, 131854 **Q1**
  15. Gaibor N., Mateus R., Leitão D., Cristelo N., Miranda T., Pereira E.N.B., Cunha V.M.C.F. Sustainability assessment of half-sandwich panels based on alkali-activated ceramic/slag wastes cement versus conventional building solutions. (2023) *Journal of Cleaner Production*, 389, 136108 **Q1**
  16. Cristelo N., Maia J., Ramos N.M.M., Rivera J., Ventura J., Veloso R.C., Fernández-Jiménez A. Development of highly porous alkaline cements from industrial waste for thermal insulation of building envelopes. (2023) *Construction and Building Materials*, 409, 134068 **Q1**
  17. Gaibor N., Leitão D., Miranda T., Cristelo N., Fernandes L., Pereira E.N.B., Cunha V.M.C.F. Fiber-Reinforced Alkali-Activated Cements from Ceramic Waste and

- Ladle Furnace Slag without Thermal Curing. (2023) *Journal of Materials in Civil Engineering*, 35 (9), 04023271 **Q2**
18. Romaguera-Barcelay Y., Figueiras F.G., Govea-Alcaide E., Brito W.R., Filho H.D.D.F., Gandarilla A.M.D., Țălu Ș., Tavares P.B., de la Cruz J.P. Effects of Substitution and Substrate Strain on the Structure and Properties of Orthorhombic  $\text{Eu}_{1-x}\text{Y}_x\text{MnO}_3$  ( $0 \leq x \leq 0.5$ ) Thin Films. (2023) *Materials*, 16 (13), art. no. 4553 **Q2**
  19. Fonseca R.G., Kuster A., Fernandes P.P., Tavakoli M., Pereira P., Fernandes J.R., De Bon F., Serra A.C., Fonseca A.C., Coelho J.F.J. Facile Synthesis of Highly Stretchable, Tough, and Photodegradable Hydrogels. (2023) *Advanced Healthcare Materials*, 12 (22), 2300918 **Q1**
  20. Sousa C.M., Fernandes J.R., Coelho P.J. Naphthopyrans as efficient dual color photoinitiators for volumetric 3D printing. (2023) *European Polymer Journal*, 196, 112312 **Q1**
  21. Lima E., Barroso A.G., Ferreira O., Boto R.E., Fernandes J.R., Almeida P., Silvestre S.M., Santos A.O., Reis L.V. Benz[e]indole-bearing aminosquaraine dyes: Which of the amines introduced into the squaric ring will be able to induce the best in vitro photodynamic effect? (2023) *Dyes and Pigments*, 215, 111239 **Q2**
  22. Lino C., Barrias S., Chaves R., Adegas F., Fernandes J.R., Martins-Lopes P. Development of a QCM-based biosensor for the detection of non-small cell lung cancer biomarkers in liquid biopsies. (2023) *Talanta*, 260, 124624 **Q1**

### III.6.3.2. Q3 and Q4 Journals

23. Nunes P.J., Pereira R.F.P., Pereira S., Silva M.M., Fortunato E., Bermudez V.D.Z., Fernandes M. Sol-Gel Derived Di-Ureasil Based Ormolytes for Electrochromic Devices. (2023) *Energies*, 16 (1), art. no. 426 **Q3**
24. Gomes V.S.D., Ferreira J.C.C., Boto R.E., Almeida P., Fernandes J.R., Sousa M.J., Reis L.V., Gonçalves M.S.T. Evaluation of Antifungal Activity and Potential Application as Fluorescent Probes of Indolenine and Benzo[e]Indole-Based Squarylium Dyes. (2023) *Photochemistry and Photobiology*, 99 (5), pp. 1282 – 1292 **Q3**

### III.6.3.3. New Journals (Impact factor pending)

25. Vieira C.S., Pereira P.M., Cristelo N. Changes Over Time in Geotechnical and Geoenvironmental Properties of a Recycled Construction and Demolition (C&D) Waste. (2023) *Lecture Notes in Civil Engineering*, 370 LNCE, pp. 435 - 442

26. Jorge N., Teixeira A.R., Fernandes J.R., Oliveira I., Lucas M.S., Peres J.A. Degradation of Agro-Industrial Wastewater Model Compound by UV-A-Fenton Process: Batch vs. Continuous Mode (2023) International Journal of Environmental Research and Public Health, 20 (2), 1276

#### III.6.4. Publications in proceedings

1. Teixeira A.R., Jorge N., Fernandes J.R., Lucas M.S., Peres J.A. Olive Washing Wastewater Treatment by Coagulation/Flocculation/Decantation and UV-A LEDs/Fenton †. (2023) Engineering Proceedings, 56 (1), 317
2. Ferreira L.C., Fernandes J.R., Peres J.A., Tavares P.B., Lucas M.S. Heterogeneous Photocatalysis with Wireless UV-A LEDs †. (2023) Engineering Proceedings, 56 (1), art. no. 175
3. Gomes A., Sampaio A., Silva S., Fernandes J.R., Peres J.A., Lucas M.S. Inactivation of *Candida albicans* in Water Using Advanced Oxidation Processes. (2023) Engineering Proceedings, 56 (1), art. no. 82

#### III.6.5. Oral presentations at national and international meetings

1. D. Pinheiro, Rui F. P. Pereira, E. Fortunato, Rute A. S. Ferreira, V. de Zea Bermudez, M. C. Gonçalves, “Electrochromic Windows based on luminescent acrylate/ionosilicas”, 8th Portuguese Young Chemists Meeting (8thPYCHEM), 17-19 May 2023, Vila Real, Portugal
2. **T. Duarte**, J. P.S. Silva, Rui F.P. Pereira, **V. de Zea Bermudez**,” Silk Fibroin-Based Thermotropic Device”, 8th PyCheM - Portuguese Young Chemists Meeting, 17-19 May 2023, Universidade Trás-os-Montes e Alto Douro, Vila Real.
3. **Filipe**, J. P.S. Silva, Rui F.P. Pereira, **V. de Zea Bermudez**,” Silk Fibroin-Based Thermotropic Device”, 8th PyCheM - Portuguese Young Chemists Meeting, 17-19 May 2023, Universidade Trás-os-Montes e Alto Douro, Vila Real.
4. **D. Pinheiro**, **M. Fernandes**, R. F. P. Pereira, S. Pereira, M. M. Silva, E. Fortunato, R. A. S. Ferreira, **V. de Zea Bermudez**, **M. C. Gonçalves**, “How to recover and improve an electrochromic device”, 15th National Physical Chemistry Meeting, online, April 4-5, 2023
5. **T. Duarte**, Elizaveta S. Maltseva, Rui F.P. Pereira, Bruno Medronho, Elena F. Krivoshapkina, Rute A. S. Ferreira, **V. de Zea Bermudez**, “Novel Ionanofluids Based



- on Silk-Derived Carbon Dots” 15th National Physical Chemistry Meeting, online, April 4-5, 2023
6. M. Costa, A. Pinto, P. J. Nunes, R. Rua, **M. Fernandes**, A. L. Crespí, **V. de Zea Bermudez**, “Physical Chemical characterization of the surface of *Camellia sasanqua*, *Camellia reticulata* and *Rhododendro ponticum*'s leaves”, 15th National Physical Chemistry Meeting, online, April 4-5, 2023
  7. **D. Pinheiro**, **M. Fernandes**, R. F. P. Pereira, S. Pereira, M. M. Silva, E. Fortunato, R. A. S. Ferreira, **V. de Zea Bermudez**, **M. C. Gonçalves**, “How to recover and improve an electrochromic device”, 15th National Physical Chemistry Meeting, online, April 4-5, 2023
  8. P.J. Nunes, R.F.P. Pereira, R.A.S. Ferreira, A.L.Crespí, **M. Fernandes**, **V. de Zea Bermudez**, Fluorescent carbon dots produced from *Agapanthus Africanus* (L.) Hoffm. Leaves, Materiais 2023, Sustainability for a Future, XXI Congresso da Sociedade Portuguesa de Materiais, Universidade do Minho, Guimarães, April 3-6 2023
  9. Monteiro, Cristina M.; Briga-Sá, A., Matos, Cristina; Santos, Cristina. 2023. “Green Infrastructures Driven to Tackle Sustainable Development Goals into European Urban Areas”, 6th International Congress on Recovery, Maintenance, and Rehabilitation of Buildings, CIRMARE 2023, 5-7 dezembro de 2023, Covilhã.
  10. Briga-Sá, A. 2023, “Trombe Wall Solutions to Improve Energy Efficiency of Buildings”, Doctoral Consortium Scientia et Populum, Electrical and Computer Engineering, Quinta do Crasto, Douro, Portugal, 13 de julho de 2023.
  11. Monteiro, Cristina Maria; Pimentel-Rodrigues, Carla; Ana Briga-Sá; Cristina Santos; Cristina Matos; Armando Silva-Afonso. 2023. "Contribution of urban green infrastructure to stormwater management and a more efficient urban water use." EFFICIENT 2023 - Water and City - 11th IWA International Conference on Efficient Urban Water Use, Bordeaux, France, 13-15 September 2023.
  12. Briga-Sá, A. Fernandes, M., Jerónimo, A. 2023. “Eco-friendly solid masonry blocks incorporating olive bagasse waste”, FEMS EUROMAT 2023, 3-7 de setembro de 2023, Frankfurt, Alemanha (Online Presentation)
  13. Jerónimo, A., Loureiro, M., Fernandes, M., Briga-Sá, A. 2023. “Application of nanotechnology techniques to improve antifungal properties of mortars incorporating bio-wastes, ANM - Advanced Nanomaterials, University of Aveiro, Aveiro, Portugal, 26-28 July 2023. (Online Presentation)
  14. Briga-Sá, A., Fernandes, M., Jerónimo, A. 2023 “A feasibility study on the utilization of olive oil production wastes and by-products as building materials”, CEES23 – 2nd International Conference on Construction, Energy, Environment and Sustainability, Funchal, Madeira, Portugal, 27-30 junho 2023.



15. Cristina Santos; Cristina Maria Monteiro; Cristina Matos; Ana Briga-Sá; Armando Silva-Afonso; Pimentel-Rodrigues, Carla. "The impact of Green Roofs (GR) runoff in storm water quality and quantity". 2023, CEES23 – 2nd International Conference on Construction, Energy, Environment and Sustainability, Funchal, Madeira, Portugal, 27-30 junho 2023.
16. Monteiro, C. M., Santos, C., Matos, C., Briga-Sá, A. 2023, October. "Resilient – Green Roofs in Urban Areas to Assist Climate Change Mitigation". Oral communication on PhD & Doctorates Category at H2O & Sustainability summit, 19th-20th October 2023, Faro, Portugal. <https://www.h2o-sustainability-hub.com/h2o-sustainability-summit>
17. Ribeiro, P., Briga-Sá, A., Jerónimo, A. 2023. "Normative requirements for hospital building materials and related constructive pathologies.", JobShop 2023, Universidade de Trás-os-Montes e Alto Douro, Vila Real, Portugal, 11 e 12 de julho de 2023.
18. Ribeiro, J., Briga-Sá, A., Jerónimo, A. 2023. "Antifungal behavior of composite surfacing materials: application in hospital Buildings.", JobShop 2023, Universidade de Trás-os-Montes e Alto Douro, Vila Real, Portugal, 11 e 12 de julho de 2023.
19. Isabelle Cristina Bessa, Alexandre Jerónimo, Ana Briga-Sá. 2023. "Estudo experimental de argamassas de cal com incorporação de cinza de caroço de azeitona." SEC-2º Simpósio de Engenharia Civil, 3 de maio de 2023. (apresentação online)
20. Danyele Gonçalves, Alexandre Jerónimo, Ana Briga-Sá. 2023. "Avaliação do potencial de incorporação do resíduo de casca de amêndoa em argamassas de cal: resultados preliminares.", SEC-2º Simpósio de Engenharia Civil, 3 de maio de 2023. (apresentação online)

### **III.6.6. Poster presentations at national and international meetings**

#### **III.6.6.1. International meetings**

1. M. Fernandes, M. Magalhães, P. Nunes, S. Nunes, M. M. Silva, V. de Zea Bermudez. "Prospective use of urea cross-linked tripodal siloxane-based hybrids doped with ionic liquids" 8th International Sol-Gel Society Workshop, October 1st-4th 2023 , Castelló de la Plana, Spain
2. P.J. Nunes, R.F.P. Pereira, M. M. Silva, V. de Zea Bermudez, M. Fernandes. "Exploring the potential of Sol-Gel co-condensation for d-U(600)/d-U(2000) hybrid materials doped with lithium salt and ionic liquid", 8th International Sol-Gel Society Workshop, October 1st-4th 2023, Local: Castelló de la Plana, Spain

3. P.J. Nunes, R.F.P. Pereira, R.A.S. Ferreira, A.L.Crespí, M. Fernandes, V. de Zea Bermudez. "Fluorescent carbon dots produced from *Agapanthus Africanus* (L.) Hoffm. Leaves" Evento: Materiais 2023, Sustainability for a Future, XXI Congresso da Sociedade Portuguesa de Materiais, 3-6 Abril 2023, Universidade do Minho, Guimarães,
4. D. Pinheiro, M. Fernandes, R. F. P. Pereira, S. Pereira, M. M. Silva, E. Fortunato, R. A. S. Ferreira, V. de Zea Bermudez, M. C. Gonçalves "How to recover and improve an electrochromic device", 15th National Physical Chemistry Meeting, online, April 4-5, 2023
5. M. Costa, A. Pinto, P. J. Nunes, R. Rua, M. Fernandes, A. L. Crespí, V. de Zea Bermudez. "Physical Chemical characterization of the surface of *Camellia sasanqua*, *Camellia reticulata* and *Rhododendro ponticum*'s leaves. 15th National Physical Chemistry Meeting, online, April 4-5, 2023

### III.6.6.2. National meetings

1. P. J. Nunes, S. Pereira, E. Fortunato, V. de Zea Bermudez, M. Fernandes, "Evaluation of the electrochromic performance of a device comprising a d-U(2000)5[Emim]Cl as electrolyte". 2nd Materials for Energy Transition Summer, September 2023 Ordem dos Engenheiros Região Norte, Porto.
2. M. Costa, P. Nunes, A. L. Crespí, V. de Zea Bermudez, M. Fernandes, "Synthesis of Carbon Dots From Natural Sources: *Camellia reticulata* and *Camellia sasanqua*" XV Jornadas de Bioquímica, 16 - 17 May 2023, Universidade de Trás-os-Montes e Alto Douro
3. M. Magalhães, P. Nunes, V. de Zea Bermudez, M. Fernandes, Filmes híbridos orgânicos-inorgânicos dopados com líquidos iónicos comerciais, Evento: XV Jornadas de Bioquímica, 16 - 17 May 2023, Universidade de Trás-os-Montes e Alto Douro. Best poster
4. A. Pinto, P. Nunes, E. Bacelar, V. de Zea Bermudez, A. L. Crespí, M. Fernandes, "Physical-chemical characterization of the plants from the Asiatic region: contributions to an ecological approach". XV Jornadas de Bioquímica, 16 - 17 May 2023, Universidade de Trás-os-Montes e Alto Douro
5. A. Pinto, P. Nunes, V. de Zea Bermudez, A. L. Crespí, M. Fernandes, "Comparative study of the physical-chemical characteristics of plants from the Atlantic region" 15th National Physical Chemistry Meeting, online, April 4-5, 2023

6. P. Nunes, S. Nunes, R. F. P. Pereira, R. Cruz, J. Rocha, A. P. Ravishankar, L. Fernandes, E. Bacelar, S. Casal, S. Anand, A. L. Crespí, M. Fernandes, V. de Zea Bermudez, Understanding the leaves of *Agapanthus africanus* (L.) Hoffm.: A physical-chemical perspective, 15th National Physical Chemistry Meeting, online, April 4-5, 2023
7. Ribeiro, P., Briga-Sá, A., Jerónimo, A. 2023. "Normative requirements for hospital building materials and related constructive pathologies.", JobShop 2023, Universidade de Trás-os-Montes e Alto Douro, Vila Real, Portugal, 11 e 12 de julho de 2023.
8. Ribeiro, J., Briga-Sá, A., Jerónimo, A. 2023. "Antifungal behavior of composite surfacing materials: application in hospital Buildings.", JobShop 2023, Universidade de Trás-os-Montes e Alto Douro, Vila Real, Portugal, 11 e 12 de julho de 2023.

### **III.7. Participation in National and International Organizations**

#### **III.7.1. Participation in Committees**

1. Membro da comissão do congresso 8th Portuguese Young Chemistry Meeting <https://8pychem.events.chemistry.pt/>, Universidade de Trás-os-Montes e Alto Douro; a realizar entre 17-19 de maio de 2023
2. Membro da comissão organizadora e científica do congresso, I International Meeting Molecules4LIFE, 20-22 September 2023, Vila Real, Portugal
3. Membro Comissão Científica (2023): 6th International Congress on Recovery, Maintenance, and Rehabilitation of Buildings, CIRMARE 2023, 5-7 dezembro de 2023, Universidade da Beira Interior, Covilhã, Portugal.
4. Membro Comissão Científica (2023): CEES23 – 2nd International Conference on Construction, Energy, Environment and Sustainability, 27-30 de junho 2023, Funchal, Madeira, Portugal.

#### **III.7.2. Participation in decision-making bodies**

##### ***Evaluation of International Projects:***

1. V. de Zea Bermudez. Expert evaluator do OPUS + LAP Panel ST5 - Materials (materials synthesis, structure-properties relations, advanced and functional materials with designed properties, (macro)molecular architecture, material

engineering), da National Science Centre, Polónia, (NCN), 27 Fevereiro a 01 de março 2023, Kraków, Polónia, e de 20 a 21 de abril de 2023 online, 14 projects.

2. V. de Zea Bermudez. Expert evaluator da European Research Council (ERC) Synergy 2023 call - Physical Sciences and Engineering Synergy panel, 25-30 junho e 10-16 setembro de 2023, Bruxelles, Bélgica, e várias fases remotas online

#### ***Assessment of undergraduate, master's and doctoral courses (A3ES):***

1. V. de Zea Bermudez. Fundação para a Ciência e Tecnologia, Evaluation of PTDC 2017 Projects Final Reports of the Panels of Exact Sciences and Engineering & Technologies (11).

### **III.7.3. Participation in editorial and special issues of international scientific journals**

#### **III.7.3.1. Associate Editor**

1. Associate Editor da revista Soils & Rocks [indexada na base Scopus], publicada pela SPG Sociedade Portuguesa de Geotecnia e pela ABMS – Associação Brasileira de Mecânica dos Solos, desde 2020.
2. Catalyst, Academic Editor, Pedro B. Tavares
3. Frontiers in Environmental Science - Section Land Use Dynamics: Urban Nature-Based Solutions and Green Infrastructure as Strategies for Climate Change Adaptation, Topic Editor: Ana Briga Sá

#### **III.7.3.2. Review Editor**

1. Frontiers in Environmental Chemistry, Review Editor for the Chemical Treatments section of Frontiers in Environmental Chemistry. Pedro B. Tavares

#### **III.7.3.3. Editorial Board Member**

1. Eclética Química, Fundação Editora da Universidade Estadual Paulista Júlio de Mesquita Filho – UNESP (Brazil). Member of the Editorial Board: V. de Zea Bermudez.

2. Frontiers in Materials – Section Energy Materials, EPFL Science Park, Lausanne, Switzerland, Associate Editor: V. de Zea Bermudez
3. Frontiers in Chemistry – Section Inorganic Chemistry, EPFL Science Park, Lausanne, Switzerland. Review Editor: V. de Zea Bermudez.
4. Frontiers in Energy Research – Section Electrochemical Energy Conversion and Storage, EPFL Science Park, Lausanne, Switzerland. Review Editor: V. de Zea Bermudez
5. Membro do Editorial Board da revista Journal of Materials in Civil Engineering [Journal Citation Report Q2], publicada pela ASCE – American Society of Civil Engineers, desde 2019.
6. Membro do Editorial Board da revista Journal of Composites Science [Scopus e Emerging Sources Citation Index], publicada pela MDPI, desde 2020.
7. Molecules, MDPI AG, Basel (Switzerland). Member of the Editorial Board: V. de Zea Bermudez.
8. Journal of Sol-Gel Science and Technology, Springer. Member of the Editorial Board: V. de Zea Bermudez.

#### **III.7.3.4. Special Issue Guest Editor**

1. "Emerging Topics in Future Energy Materials", Special Issue; Rosa Rego
2. Frontiers in Materials – Section Smart Materials, EPFL Science Park, Lausanne, Switzerland, Guest Associate Editor: V. de Zea Bermudez
3. Frontiers in Materials – Section Ceramics and Glass, EPFL Science Park, Lausanne, Switzerland, Guest Associate Editor: V. de Zea Bermudez
4. Materials, MDPI AG, Basel (Switzerland), Special Issue " Special Issue " Recent Progress of Materials for Smart windows", Guest Editor M. Fernandes, V. de Zea Bermudez
5. Recent Progress of Materials for Smart windows; Materials, MDPI, Special Issue; Mariana Fernandes, Verónica de Zea Bermudez
6. Sustainability, MDPI AG, Basel (Switzerland), Special Issue "For Sustainable Development: The Differences in Water and Energy Consumptions in Urban and Rural Environments", Guest-Editor: Ana Briga-Sá
7. New Trends in Construction Energy Efficiency and Sustainability in Buildings”, Energies (ISSN 1996-1073), Section G: Energy and Buildings. Guest Editor, [https://www.mdpi.com/journal/energies/special\\_issues/C622GTWBOF](https://www.mdpi.com/journal/energies/special_issues/C622GTWBOF)

8. Monteiro, C.M., Briga-Sá, A., Briga-Sá, A., Santos, C., Matos, C. (2023). "Urban green spaces – new perspectives to urban resilience", IntechOpen, This book is part of the "Sustainable Development" Book Series edited by Series Editor Dr. Usha Iyer Raniga. (not published yet). Academic Editor/Book Edition

#### **III.7.3.5. Participation in juries of habilitation**

1. Mahmoud Tavakoli, UC, 23 and 24 março 2023; Arguente do Curriculum Vitae: Verónica de Zea Bermudez

#### **III.7.3.6. Participation in doctoral juries**

1. José Tiago Macedo de Carvalho, "Sustainable fiber-based structures for application in electronic and electrochemical systems", UNOVA, 22 dezembro 2023. Arguente principal: Verónica de Zea Bermudez
2. Rui Pedro Carvalho Lima de Sousa, "Sol-gel based optical sensors for monitoring of biocides and other analytes", UM, 19 dezembro 2023. Arguente principal: Verónica de Zea Bermudez
3. Elodie Marques Melro, "Development of efficient and selective separation methods for agroforestry biomass fractionation: from intermolecular interactions to new lignin-based materials of value-added", UC, 23 junho 2023, Arguente principal: Verónica de Zea Bermudez
4. Talita Jordanna de Souza Ramos, "Emissão discreta e contínua de luz por conversão ascendente de energia em óxidos dopados com íons lantanídeos", Universidade Federal de Pernambuco, Rio Brasil, 21 julho 2023. Arguente principal: Verónica de Zea Bermudez

#### **III.7.3.7. Juries of documentary evidence (extra UTAD)**

1. Concurso Professor Catedrático, Química ou Bioquímica, FCUP, 14 dezembro 2023, 6 candidatos, Membro do júri: Verónica de Zea Bermudez
2. Concurso Professor Catedrático, Bioengenharia e Biotecnologia, ICBAS, 15 novembro 2023, 3 candidatos, Membro do júri: Verónica de Zea Bermudez
3. Concurso Professor Catedrático, Ciência dos Materiais - Materiais Poliméricos e Mesomorfos e Aplicações Biomédicas, FCTNOVA, 10 março 2023, 3 candidatos, Membro do júri: Verónica de Zea Bermudez

4. Concurso de Investigador Coordenador, Ciências Químicas e Radiofarmacêuticas, Department of Engineering and Nuclear Sciences of IST, 06 junho 2023, 4 candidatos, Membro do júri: Verónica de Zea Bermudez
5. Concurso de Investigador Principal, Física Tecnológica, LNEC, 19 de Dezembro 2023, 4 candidatos, Membro do júri: Verónica de Zea Bermudez
6. Concurso de Investigador Principal, Ciências Químicas e Radiofarmacêuticas, Department of Engineering and Nuclear Sciences of IST, 2023, 31 maio 2023
7. Concurso de Investigador Principal, Ciências dos Materiais-Nanomateriais e Nanotecnologias, FCTNOVA, 05 janeiro 2023, 4 candidatos, Membro do júri: Verónica de Zea Bermudez
8. Concurso de Professor Associado, Engenharia Química, UC, 24 novembro 2023, 5 candidatos, Audição Pública, Membro do júri: Verónica de Zea Bermudez
9. Concurso de Professor Associado, Química-Física e Química Analítica, UM, 09 novembro 2023, 1 candidato, Membro do júri: Verónica de Zea Bermudez
10. Concurso de Professor Associado, Engenharia Química, UC, 01 novembro 2023, 5 candidatos, Membro do júri: Verónica de Zea Bermudez
11. Concurso de Professor Associado, Física, UA, 05 maio 2023, 7 candidatos, Membro do júri: Verónica de Zea Bermudez
12. Concurso de Professor Associado, Ciência e Engenharia dos Materiais, UA, 17 março 2023, 4 candidatos, Membro do júri: Verónica de Zea Bermudez
13. Concurso de Professor Associado, Bioquímica, Biotecnologia, Engenharia Química ou Química, UA, 07 março 2023, 9 candidatos, Membro do júri: Verónica de Zea Bermudez
14. Concurso de Professor Associado, Ciências dos Materiais-Materiais Funcionais e Sustentabilidade, FCTNOVA, 17 janeiro 2023, 3 candidatos, Membro do júri: Verónica de Zea Bermudez
15. Concurso de Professor Auxiliar, Engenharia Química-Bioengenharia, Biotecnologia ou Engenharia Biológica, 19 junho 2023, 4 candidatos, Audição Pública, Membro do júri: Verónica de Zea Bermudez
16. Concurso de Professor Auxiliar, Química-Química Orgânica, Química Computacional, Espectroscopia Molecular, Química Biológica ou Química Medicinal, UC, 01 junho 2023, 5 candidatos, Audição Pública, Membro do júri: Verónica de Zea Bermudez
17. Concurso de Professor Auxiliar, Concurso de Professor Auxiliar, Engenharia Química-Bioengenharia, Biotecnologia ou Engenharia Biológica, 13 abril 2023, 17 candidatos, Membro do júri: Verónica de Zea Bermudez

18. Concurso de Professor Auxiliar, Química-Química Orgânica, Química Computacional, Espectroscopia Molecular, Química Biológica ou Química Medicinal, UC, 03 abril 2023, 27 candidatos, Membro do júri: Verónica de Zea Bermudez
19. Concurso de Professor Auxiliar, Ciências da Engenharia Química, IST, 2023 1candidato, Membro do júri: Verónica de Zea Bermudez

### III.7.3.8. Other juries

- 1) Concurso interno de promoção para provimento de dois lugares de professor associado para a área disciplinar/científica de Ciências Veterinárias, subáreas de Clínica de Animais de Companhia; Clínica de Animais de Produção e Equinos; Pré-Clínica, 04 september 2023, 3 candidates, Presidente de júri: Verónica de Zea Bermudez
- 2) Concurso interno de promoção para provimento de dois lugares de professor associado para a área disciplinar/científica de Ciências Veterinárias, subáreas de Clínica de Animais de Companhia; Clínica de Animais de Produção e Equinos; Pré-Clínica, 17 July 2023, 3 candidatos, Presidente de júri: Verónica de Zea Bermudez
- 3) Concurso interno de promoção para provimento de um lugar de professor associado para a área disciplinar/científica de Ciências Veterinárias, subáreas de Higiene e Sanidade; Histopatologia; Qualidade e Segurança Alimentar, 14 July 2023, 6 candidatos, Presidente de júri: Verónica de Zea Bermudez
- 4) Concurso interno de promoção para provimento de dois lugares de professor associado para a área disciplinar/científica de Ciências Veterinárias, subáreas de Clínica de Animais de Companhia; Clínica de Animais de Produção e Equinos; Pré-Clínica, 23 June 2023, 3 candidatos, Presidente de júri: Verónica de Zea Bermudez
- 5) Concurso interno de promoção para provimento de um lugar de professor associado para a área disciplinar/científica de Ciências Veterinárias, subáreas de Higiene e Sanidade; Histopatologia; Qualidade e Segurança Alimentar, 2023, 28 April 2023, 6 candidatos, Presidente de júri: Verónica de Zea Bermudez
- 6) Concurso interno de promoção para provimento de dois lugares de professor associado para a área disciplinar/científica de Ciências Veterinárias, subáreas de Clínica de Animais de Companhia; Clínica de Animais de Produção e Equinos; Pré-Clínica, 28 May 2023, 3 candidatos, Presidente de júri: Verónica de Zea Bermudez



## COVER PAGE



S. F. H. Correia, Lianshe Fu, L. M. S. Dias, R. F. P. Pereira, V. de Zea Bermudez, P. S. André, R. A. S. Ferreira

"Autonomous power temperature sensor based on window-integrated transparent PV using sustainable luminescent carbon dots"

*Nanoscale Advances*, 5 (2023) 3428-3438

<https://doi.org/10.1039/D3NA00136A>

**Best Poster Presentation** M. Magalhães, P. Nunes, **V. de Zea Bermudez, M. Fernandes**,  
Filmes híbridos orgânicos-inorgânicos dopados com líquidos iônicos comerciais, XV  
Jornadas de Bioquímica 16 - 17 May 2023 Universidade de Trás-os-Montes e Alto Douro

## Part IV - Organic chemistry

### IV.1. Advanced Education

#### IV.1.1. Postdoctoral students

<b>Name</b>	<b>Vânia Graça</b>
<b>Supervisor</b>	Paulo Coelho

#### IV.1.2. PhD students

<b>Name</b>	<b>Vanessa Sofia Dias Gomes</b>
<b>Supervisor</b>	Lucinda Vaz dos Reis
<b>Co-Supervisor</b>	Maria do Sameiro Torres Gonçalves, Miguel Correa-Duarte
<b>PhD</b>	Physical and Analytical Chemistry, Escola de Ciências da Universidade do Minho

#### Starting date

<b>Name</b>	<b>Diogo Alexandre Cartaxo Sousa</b>
<b>Supervisor</b>	José Virgílio de Sousa Coelho Prata (ISEL/IPL/CQ-VR)
<b>Co-Supervisor</b>	Mário Nuno de Matos Sequeira Berberan e Santos (IST/UL/IBB)
<b>PhD programme</b>	Chemistry - IST/UL
<b>Starting date</b>	October 2019

#### IV.1.3. Master thesis concluded

<b>Name:</b>	Maria Inês Chouzende
<b>Title:</b>	Nanopontos de Carbono Fluorescentes a partir de Biomassa de Microalgas: síntese, caracterização e actividade biológica
<b>Master:</b>	MSc

**Date:** 14 de Dezembro de 2023  
**Supervisor:** Alexandra I. Costa (ISEL/IPL)  
**Co-Supervisor:** Sónia Martins (ISEL/IPL)

**Name** Bruno Guerreiro Antunes  
**Title** Síntese Sustentável de Nanomateriais de Carbono Fluorescentes e Bioactivos a partir de Desperdícios da Indústria do Tomate

**Master** MSc

**Date** 13 de Dezembro de 2023

**Supervisor** Patrícia D. Barata (ISEL/IPL)

**Co-Supervisor** Sónia Martins (ISEL/IPL)

**Name** Bruno Guerreiro Antunes

**Title** Síntese Sustentável de Nanomateriais de Carbono Fluorescentes e Bioactivos a partir de Desperdícios da Indústria do Tomate

**Master** MSc

**Date** 13 de Dezembro de 2023

**Supervisor** Patrícia D. Barata (ISEL/IPL)

**Co-Supervisor** Sónia Martins (ISEL/IPL)

<b>Name</b>	Catarina Coelho Gabriel
<b>Title</b>	Avaliação e Caracterização de Bioprodutos de Valor Acrescentado Isolados de uma Microalga Produzida Industrialmente
<b>Master</b>	MSc
<b>Date</b>	20 de Dezembro de 2023
<b>Supervisor</b>	Magda C. Semedo (ISEL/IPL)
<b>Co-Supervisor</b>	Patrícia D. Barata (ISEL/IPL)

#### IV. 1.4. Degree internships

#### IV.2. Outreach activities

#### IV.3. Projects

##### IV.3.1. National

##### IV.3.1.1. CQVR Leadership

#### 1. LIGHT RESPONSIVE NAPHTHOPYRANS WITH FASTER SWITCHING SPEED.

Reference: FCT/PTDC/QUI - QOR/28532/2017.

Funding by: Total fund: 237.423€ / UTAD 229.923€.

CQVR members role: Ceu Sousa, Paulo Coelho.

Status: **Concluded project**

#### 2. Mic4BioDot - Valorização da Biomassa de Microalgas cultivadas em Resíduos Alimentares na Produção Sustentável de Pontos de Carbono com Atividade Biológica

Reference: Mic4BioDot /IPL/IDI&CA/2023

Starting date: September 4<sup>th</sup>, 2023

Ending date: September 3<sup>th</sup>, 2024

Funding by: IPL (Total fund: 5.000 €)

Main contractor: ISEL

Host institution: ISEL

CQVR members role: Patrícia D. Barata (coordinator), Alexandra I. Costa (participant), José V. Prata (participant).

Status (Starting/Ongoing/Finished): Ongoing

### **3. BioComCork - Produção de BioCompósitos a partir de resíduos das indústrias transformadoras da madeira**

Reference: BioComCork /IPL/IDI&CA/2023

Starting date: September 4<sup>th</sup>, 2023                      Ending date: September 3<sup>th</sup>, 2024

CQVR members role: Alexandra I. Costa (participant), Patrícia D. Barata (participant).

Status (Starting/Ongoing/Finished): Ongoing

### **4. TNT4UV - Exploring new hybrid titanate nanotubular materials as UV shields for sustainable applications**

Starting date: January 1<sup>st</sup>, 2023                      Ending date: June 30<sup>th</sup>, 2024

Funding by: Fundação para a Ciência e a Tecnologia (FCT)

Main contractor: FCUL                      Host institution: FCUL

CQVR members role: José V. Prata (participant).

Status (Starting/Ongoing/Finished): Ongoing

### **5. $\mu$ Algae2Dot - Utilização de Microalgas na Síntese de Pontos de Carbono Bioactivos**

Reference:  $\mu$ Algae2Dot/IPL/IDI&CA/2022

Starting date: September 5<sup>th</sup>, 2022                      Ending date: September 5<sup>th</sup>, 2023

Funding by: IPL (Total fund: 5.000 €)

Main contractor: ISEL                      Host institution: ISEL

CQVR members role: Alexandra I. Costa (coordinator), Patrícia D. Barata (participant), José V. Prata (participant).

Status (Starting/Ongoing/Finished): Finished

#### **IV.3.1.2. CQVR Partnership**

#### **IV.5. Awards, Prizes and Medals**

## IV.4. Outputs

### IV.4.1. Publications in journals of Journal Citation Reports



#### IV.4.1.1. Q1 and Q2 Journals

1. Graça V., Sousa C.M., Coelho P.J. Synthesis of Photochromic Heterocyclic-Fused Naphthopyrans. Tuning the Color and Fading Speed. (2023) Bulletin of the Chemical Society of Japan, 96 (7), pp. 614 – 623 **Q2**
2. Sousa C.M., Fernandes J.R., Coelho P.J. Naphthopyrans as efficient dual color photoinitiators for volumetric 3D printing. (2023) European Polymer Journal, 196, 112312 **Q1**
3. Graça V., Berthet J., Delbaere S., Coelho P.J. Photochromism of 2H-naphtho[1,2-b]pyran-4-carboxylates. (2023) Dyes and Pigments, 212, 111130 **Q2**
4. Lima E., Reis L.V. Photodynamic Therapy: From the Basics to the Current Progress of N-Heterocyclic-Bearing Dyes as Effective Photosensitizers (2023) Molecules, 28 (13), 5092 **Q2**
5. Lima E., Barroso A.G., Ferreira O., Boto R.E., Fernandes J.R., Almeida P., Silvestre S.M., Santos A.O., Reis L.V. Benz[e]indole-bearing aminosquaraine dyes: Which of the amines introduced into the squaric ring will be able to induce the best in vitro photodynamic effect? (2023) Dyes and Pigments, 215, 111239 **Q2**
6. Alves D.M., Prata J.V., Silvestre A.J., Monteiro O.C. Novel C-dots/titanate nanotubular hybrid materials with enhanced optical and photocatalytic properties. (2023) Journal of Alloys and Compounds, 936, art. no. 168143 **Q1**

#### IV.4.1.2. Q3 and Q4 journals

7. Tkach V.V., Morozova T.V., Prymachenko S.V., Korniienko I.M., Yastremska L.S., Kuznetsova O.O., Chychun V.A., da Paiva Martins J.I.F., Dos Reis L.V., Karakoyun N., Kushnir M.V. The Theoretical Description of Furfural and Lactic Acid Cathodic Determination in Bread and Milk. (2023) Biointerface Research in Applied Chemistry, 13 (6), 600 **Q3**
8. Tkach V.V., Kushnir M.V., de Oliveira S.C., Shevchenko I.M., Odyntsova V.M., Omelyanchik V.M., Omelyanchik L.O., Luganska O.V., Kopiika V.V., Kormosh Z.O., Ivanushko Y.G., Kryvetskyi V.V., Kryvetska I.I., Kryvetskyi I.V.,

- Yemelienenko N.R., Rusnak V.F., Yagodynets P., Masna Z.Z., Dos Reis L.V. Theoretical Description for Anti-COVID-19 Drug Molnupiravir Electrochemical Determination over the Poly-((1,2,4-triazole)-co-(squaraine dye)) Composite with Cobalt (III) Oxyhydroxide (2023) *Biointerface Research in Applied Chemistry*, 13 (1), 74 **Q3**
9. Tkach V.V., Kushnir M.V., Kopiika V.V., Luganska O.V., Omelyanchik L.O., Kormosh Z.O., Kucher M.M., Garcia J.R., Palamarek K.V., Bagrii K.L., Vitriak O.P., Medvedeva A.O., De Oliveira S.C., Yagodynets P.I., Niyazov L.N., Musayeva D.M., Samadov B., Payentko V.V., Demianenko E.M., Martins J.I.F.D.P., Dos Reis L.V., Karputina M.V., Khargelia D.D., Nazymok Y.V., Ivanushko Y.G., Palytsia Y.V. Theoretical Description of Sotolone Electrochemical Determination in Wine in Basic Media over an Undoped Conducting Polymer. (2023) *Biointerface Research in Applied Chemistry*, 13 (5), 470 **Q3**
  10. Tkach V.V., Kushnir M.V., Kopiika V.V., Luganska O.V., Omelyanchik L.O., Kormosh Z.O., Mytchenok M.P., Garcia J.R., Palamarek K.V., Bagrii K.L., Vitriak O.P., Medvedeva A.O., De Oliveira S.C., Yagodynets P.I., Razhabova D.B., Niyazov L.N., Musayeva D.M., Kosimov X., Jabborova O., Samadov B., Sagdullayeva G., Hamdanova G., Payentko V.V., Demianenko E.M., da Paiva Martins J.I.F., Dos Reis L.V. The Theoretical Description for Amavadin-Ion Electrochemical Determination in Amanita muscaria Mushroom Pulp and Extract by Galvanostatic Conducting Polymer Doping. (2023) *Biointerface Research in Applied Chemistry*, 13 (4), 400 **Q3**
  11. Tkach V.V., Kushnir M.V., de Oliveira S.C., Shevchenko I.M., Odyntsova V.M., Omelyanchik V.M., Omelyanchik L.O., Luganska O.V., Kopiika V.V., Kormosh Z.O., Ivanushko Y.G., Kryvetskyi V.V., Kryvetska I.I., Kryvetskyi I.V., Yemelienenko N.R., Rusnak V.F., Yagodynets P.I., Masna Z.Z., Dos Reis L.V., Grygorenko O.M., Piatnytska G.T. Theoretical Description for Diclophenac Electrochemical Determination over an Undoped Conducting Polymer. (2023) *Biointerface Research in Applied Chemistry*, 13 (1), 67 **Q3**
  12. Tkach V.V., Kushnir M.V., Kopiika V.V., Luganska O.V., Omelyanchik L.O., Kormosh Z.O., Mytchenok M.P., Garcia J.R., Palamarek K.V., Bagrii K.L., Vitriak O.P., Medvedeva A.O., De Oliveira S.C., Yagodynets P.I., Razhabova D.B., Niyazov L.N., Musayeva D.M., Kosimov X., Jabborova O., Samadov B., Sagdullayeva G., Hamdanova G., Payentko V.V., Demianenko E.M., Martins J.I.F.P., Dos Reis L.V. Theoretical Description for Ibotenic Acid and

Muscazone Determination in Mushroom Pulp and Biological Liquids over Conducting Polymer-Modified Electrode. (2023) *Biointerface Research in Applied Chemistry*, 13 (3), 275 **Q3**

13. Gomes V.S.D., Ferreira J.C.C., Boto R.E., Almeida P., Fernandes J.R., Sousa M.J., Reis L.V., Gonçalves M.S.T. Evaluation of Antifungal Activity and Potential Application as Fluorescent Probes of Indolenine and Benzo[e]Indole-Based Squarylium Dyes. (2023) *Photochemistry and Photobiology*, 99 (5), pp. 1282 – 1292 **Q3**

#### **IV.4.1.3. New Journals (Impact factor pending)**

14. Pacheco M.L., Pinto T.V., Sousa C.M., Guedes A., Blanco G., Pintado J.M., Coelho P.J., Freire C., Pereira C.R. Tuning the Photochromic Properties of WO<sub>3</sub>-Based Materials toward High-Performance Light-Responsive Textiles. (2023) *ACS Applied Optical Materials*, 1 (8), pp. 1434 – 1451
15. Tkach V.V., Kushnir M.V., de Oliveira S.C., Ivanushko Y.G., Sykyrytska T.B., Biryuk I.G., Luganska O.V., Kopyika V.V., Domnich V.I., Yagodynets P.I., Kormosh Z.O., Morozova T.V., Martins J.I.F., dos Reis L.V. Theoretical description of the electrochemical detection of the drug pilocarpine, assisted by the dye compound squaric with vanadium (III) oxyhydroxide [Descrição teórica da detecção eletroquímica da droga pilocarpina, auxiliada pelo corante composto squaric com oxihidróxido de vanádio (III)] [Descripción teórica de la detección electroquímica del fármaco pilocarpina, asistida por el compuesto de colorante escuárico con el oxihidróxido de vanadio (III)]. (2023) *Revista Colombiana de Ciencias Químico-Farmacéuticas(Colombia)*, 52 (1), pp. 514 – 527

#### **IV.4.2.3.1. Publications in proceedings**

1. Chouzende, I., Costa, A.I., Barata, P.D., Semedo, M.C., Martins, S., Cardoso, F.M.H., Lobo, M.L. & Prata, J.V. (2023). Carbon Dots from Porphyridium cruentum Microalgae by High-efficient Hydrothermal Approaches: Biocompatibility and Antioxidant Capabilities, *Chem. Proc.* 14(1), 4. <https://doi.org/10.3390/ecsoc-27-16074>
2. Chouzende, I., Costa, A.I., Barata, P.D., Semedo, M.C., Martins, S., Cardoso, F.M.H., Lobo, M.L. & Prata, J.V. (2023). Green Synthesis of Luminescent



Carbon Nanomaterials from *Porphyridium cruentum* Microalgae; Med. Sci. Forum 23(1), 3. <https://doi.org/10.3390/msf2023023003>

#### IV.4.2. Oral presentations

1. J.V.Prata, "The supramolecular nature of carbon dots - A model linking their behavior in solution and solid state", RG4 Meeting – CIQUP, 18 December 2023, Porto, Portugal.
2. C. Gabriel, S. Martins, H. Cardoso, P.D. Barata, M.C. Semedo, "Comparison of High-Value Bioproducts from *Chlorococcum amblystomatis* grown under autotrophic and heterotrophic conditions", 6º Simpósio Produção e Transformação de Alimentos em Ambiente Sustentável", Escola Superior Agrária – Instituto Politécnico de Portalegre, 25 de Maio 2023, Elvas, Portugal.

#### IV.4.3. Poster presentations at national and international meetings

##### IV.4.3.1. International meetings

1. Marçalo, A.R., Semedo, M.C., Martins, S., Barata, P.D., Costa, A.I., Cardoso, F.M.H., Reboredo, F.H., *Composition, nutritive value, and bioactivity of five edible algae sold in the Portuguese market*, I International Meeting Molecules4Life, Universidade de Trás-os-Montes e Alto Douro, 20-22 September **2023**, Vila Real, Portugal.
2. Cintra, C., Martins, S., Semedo, M.C., Barata, P.D., Costa, A.I., Figueiredo, A.S., Cardoso, H., *Functional Properties of Bioactive Compounds from *Porphyridium cruentum* and their Application in Food Industry*, I International Meeting Molecules4Life, Universidade de Trás-os-Montes e Alto Douro, 20-22 September **2023**, Vila Real, Portugal.
3. Chouzende, I., Costa, A.I., Barata, P.D., Martins, S., Semedo, M.C., Cardoso, F.M.H., Prata, J.V., *Green Synthesis of Luminescent Carbon Nanomaterials from *Porphyridium cruentum* Microalgae*, I International Meeting Molecules4Life, Universidade de Trás-os-Montes e Alto Douro, 20-22 September **2023**, Vila Real, Portugal.
4. Antunes, B.G., Barata, P.D., Costa, A.I., Semedo, M.C., Martins, S., Cardoso, F.M.H., Prata, J.V., *Comparative Study of Tomato Waste Carbon Dots Bioactivity: Conventional Heating vs. Microwave Irradiation*, I International

- Meeting Molecules4Life, Universidade de Trás-os-Montes e Alto Douro, 20-22 September **2023**, Vila Real, Portugal.
5. Sousa, D.A., Berberan-Santos M.N., Prata J.V., *Advanced Fluorescence Characterization of Biomass-derived Carbon Nanodots*, I International Meeting - Molecules4Life, 20-22 September, **2023**, Vila Real, Portugal.
  6. Chouzende, I.; Costa, A.I.; Barata, P.D.; Semedo, M.C.; Martins, S.; Cardoso, F.M.H., Lobo, M.L., Prata, J.V., *Síntese de Pontos de Carbono Fluorescentes assistida por Microondas a partir da Biomassa da Microalga Porphyridium cruentum*, XXVII Encontro Luso-Galego de Química, 22-24 Novembro **2023**, Fundação Dr. António Cupertino de Miranda, Porto, Portugal.
  7. Antunes, B.G., Barata, P.D., Costa, A.I., Semedo, M.C., Martins, S., Cardoso, F.M.H., Lobo, M.L., Prata, J.V., *Nanopontos de Carbono Fluorescentes Derivados de Desperdícios do Tomate: Avaliação da Citotoxicidade e Aplicação em Bioimagem*, XXVII Encontro Luso-Galego de Química, 22-24 Novembro **2023**, Fundação Dr. António Cupertino de Miranda, Porto, Portugal.
  8. Conduto, M.G., Barata, P.D., Costa, A.I., Semedo, M.C., Martins, S., Cardoso, H., Prata, J.V., *Valorização da Biomassa de Microalgas produzidas em Desperdícios Alimentares na Síntese de Pontos de Carbono Fluorescentes Bioativos*, XXVII Encontro Luso-Galego de Química, 22-24 Novembro **2023**, Fundação Dr. António Cupertino de Miranda, Porto, Portugal.
  9. Marçalo, A.R., Semedo, M.C., Martins, S., Barata, P.D., Costa, A.I., Cardoso, F.M.H., Reboredo, F.H., *Nutritional Profile and in vitro Biological Activities of Edible Algae from Various Origins Available in the Portuguese Market*, XXVII Encontro Luso-Galego de Química, 22-24 Novembro **2023**, Fundação Dr. António Cupertino de Miranda, Porto, Portugal.

#### IV.4.3.2. National meetings

1. Fernandes, J.M., Pimenta, S., Barata, P.D., Ferreira-Pinto, M., Ribeiro-Barros, A.I., Ramalho, J.C., Semedo, M. C., Martins, S., *Impact of altitude and shading on bioactivity of green coffee beans from Gorongosa, Mozambique*, 6<sup>o</sup> Simpósio - Produção e Transformação de Alimentos em Ambiente Sustentável, 25 Maio **2023**, Escola Superior Agrária - Instituto Politécnico de Portalegre, Elvas, Portugal.
2. Chouzende, I., Costa, A.I., Barata, P.D., Semedo, M.C., Martins, S., Prata, J.V., *Utilização de Microalgas na Síntese de Pontos de Carbono Bioativos*,

- iFEQB - Fórum de Engenharia Química e Biológica, Instituto Superior de Engenharia de Lisboa, Instituto Politécnico de Lisboa, 16 a 19 de Maio de **2023**, Lisboa, Portugal.
3. Antunes, B.G., Barata, P.D., Costa, A.I., Semedo, M.C., Martins, S., Cardoso, F.M.H., Prata, J.V., *Valorização de Desperdícios da Indústria do Tomate na Síntese de Nanomateriais de Carbono com Atividade Biológica*, iFEQB - Fórum de Engenharia Química e Biológica, Instituto Superior de Engenharia de Lisboa, Instituto Politécnico de Lisboa, 16 a 19 de Maio de **2023**, Lisboa, Portugal.
  4. Marçalo, Ana R., Semedo, Magda C., Martins, Sónia, Barata, Patrícia D., Costa, Alexandra I., Reboredo, Fernando H., *Avaliação da Composição e Bioatividade de Algas Comestíveis Comercializadas em Portugal*, iFEQB - Fórum de Engenharia Química e Biológica, Instituto Superior de Engenharia de Lisboa, Instituto Politécnico de Lisboa, 16 a 19 de Maio de **2023**, Lisboa, Portugal.
  5. Marques, C., Ferrer, V., Pratas, R., Chouzende, I., Antunes, B.G., Costa, A.I., *Síntese de Materiais de Carbono Luminescentes a partir de Microalgas*, iFEQB - Fórum de Engenharia Química e Biológica, Instituto Superior de Engenharia de Lisboa, Instituto Politécnico de Lisboa, 16 a 19 de Maio de **2023**, Lisboa, Portugal.

## **IV.5. Participation in National and International Organizations**

### **IV.5.1. Participation in Committees**

1. Costa, A.I. & Barata, P.D.: Organizing Committee Members of I International Meeting Molecules 4 Life (CQVR-UTAD) to be held from 20-22 September 2023 <https://molecules4life-2023.events.chemistry.pt/>

### **IV.5.2. Participation in editorial and special issues of international scientific journals**

#### **IV.5.2.1. Special Issue Guest Editor**

1. Materials, MDPI AG, Basel (Switzerland), Special Issue: “Biological Applications and Synthesis of Organic Synthetic Dyes”, 2022. Deadline for manuscript submissions: 20 March 2023. Lucinda V. Reis

2. Pharmaceuticals, MDPI AG, Basel (Switzerland), Special Issue "Anticancer Compounds in Medicinal Plants 2023", 2022, Guest Editor P. Santos and L. Barros.

#### **IV.5.2.2. Reviewing for International Scientific Journals**

1. Costa, A.I.: Chemosensors (1), Molbank (1). Prata, J.V.: ACS Materials & Interfaces (2), ACS Sensors (1), Catalysts (2), Chemical Communications (1), Dalton Transactions (3), Journal of Molecular Structure (2), Materials Advances (2), Molecules (1), Nanomaterials (1), New Journal of Chemistry (3), RSC Advances (3).