



**Universidade do Minho**

**Escola de Ciências**

**Relatório de Actividades**

**Centro de Química/UM**

**Ano 2014**

**Dezembro 2014**

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## PARTE I

### 1. Descrição da subunidade e reflexão sobre o grau de adequação da sua organização e funcionamento

The Chemistry Research Centre of the University of Minho (CQ/UM) is a research unit that functions within the School of Sciences of the University of Minho promoting research in the domain of Chemistry. The CQ/UM was financed by the Foundation for Science and Technology (FCT) FEDER-COMPETE through the project FCOMP-01-0124-FEDER-037302 (ref<sup>a</sup> FCT PEst-C/QUI/UI0686/2013) entitled “Projecto Estratégico-UI 686- 2013-2014”. FCT also gave financial support through the Portuguese Nuclear Magnetic Resonance network, which was approved in the “Roteiro Nacional de Infraestruturas” in 2014. The CQ members are either full-time equivalent researchers (FTEs - with a PhD degree), PhD students or collaborators (MSc students) both with theses concluded and ongoing. The CQ/UM had 38.6 FTEs, 27.1 PhD students and 66 collaborators. This team refers to 31-12-2013.

The members of the Centre are distributed between 4 research groups according to their scientific interests and affinities and the PhD students are sometimes supervised by members of two research groups:

- Synthesis and Applications of Amino Acids (AA) with 5.5 FTEs, 4 PhD students and 6 collaborators;
- Biological Chemistry (BC) with 5 FTEs and 3.5 PhD students and 1.5 collaborators.
- Electrochemistry and Environment (EE) with 16 FTEs, 7.5 PhD students and 43.5 collaborators;
- Synthesis and Applications of Heterocycles (HC) with 12.1 FTEs, 11.5 PhD students and 15 collaborators;

The FCT finances also the contract of a “Bolsista de Gestão de Ciência e Tecnologia” to accomplish the correct management of the research unit and of all the research projects.

The organization and management procedures of the research unit are implemented in accordance with the internal regulations of the CQ/UM. The Centre is managed by a coordinating committee on behalf of a scientific council that includes all FTEs. Both these organs are presided over by the Coordinator of the research unit. The coordinating committee is composed by the four principal investigators of the research groups and by one delegate from each research group. This committee coordinates implementation of research policy, plans the activities of the unit and prepares the annual and pluriannual plans, reports and budgets for approval by the scientific council. The Coordinator of the unit officially represents the unit, convenes the committees meetings and implements the decisions of these bodies. An advisory committee was created and accompanies and advises future research activities of the Centre, in accordance with FCT regulations. An advisory committee was created and accompanies and advises future research activities of the Centre, in accordance with FCT regulations.

## 2. Principais objetivos

Three scientific domains have been identified as the basis for research within the CQ/UM: Medicinal Chemistry, the Environment and new Advanced Materials.

The AA group continues the development of new methods and intermediates for peptide synthesis and their application in the production of peptides, peptide analogues, peptidomimetics and heterocyclic peptide derivatives with potential biological activity and application in the fields of drug discovery and new materials. In 2014 this work has been developed on:

- New synthetic methods for the preparation of N-alkyldehydroamino acid derivatives, the synthesis and application of alpha, alpha-dialkylglycines;
- The synthesis of unnatural amino acids for chemosensory applications;
- The synthesis of new cyclic RGD-peptides;
- The preparation of photocleavable protecting groups and phototriggers;
- The synthesis and molecular modeling of antimicrobial peptaibols,
- The development of new dehydropeptidic hydrogelators;
- The synthesis and biological applications of NIR probes.

One of the objectives within the BC group is the design, synthesis, characterization and in vitro and in vivo evaluation of novel metal complexes potentially useful for medical imaging (PET, SPECT, MRI, Fluorescence) and therapy. The development of metal chelate constructs and nanostructures functionalised with metal chelates endowed with imaging and therapy capabilities, theragnostics, is also sought.) Development of aqueous two-phase systems (ATPS) for purification of DNA continues to be another goal of the BC group. This year the previous interest in plasmid DNA for gene therapy was extended to the isolation of genomic DNA from bacteria for clinical diagnostics in microfluidic devices. Other interests include the application of molecular modelling for drug design peptidomimetics and the simulation of DNA in room temperature ionic liquids (RTILs).

During 2014 the research activity of the EE group has focused on the development of analytical methods and the preparation and characterization of materials. These include novel materials that show potential for application in domains of catalysis, environmental protection or drug encapsulation. The design and preparation of metal complexes with non-linear optical activity has continued. Polymer formulations have been prepared and evaluated for use in biomedical applications, surface-protecting layers or in optical lens production. Group members have applied electrochemical methods in the development of clean synthetic processes, for evaluation of anti-oxidant capacity or to effect preliminary screening of anti-cancer drugs. Electrochemical processes have also been applied in energy recovery from wastewaters and electrochemical methods are being used for the evaluation of components for improved electrochemical generators.

The HC group holds key synthetic chemistry competencies that include expertise in the design, preparation and characterization of a broad range of heterocyclic compounds, carba- and aza-sugar derivatives and macrocyclic complexes. The use of metal-catalysed reactions (namely Suzuki-Miyaura, Sonogashira, Buchwald-Hartwig and Cu(I)-azide-alkyne cycloaddition) and/or the development of new synthetic methods, including asymmetric synthesis, will allow the preparation of a wide range of novel molecules. Most of these compounds will be tailored to meet the societal needs in terms of new drug candidates or materials.

The biological activity of the new compounds will be tested through national and international collaborations, in particular as antioxidant, antipsychotic, anticancer, antiangiogenic, antitubercular, antifungal and antibacterial agents. These studies include the encapsulation of new anticancer compounds in nanoliposomes for drug delivery.

Synthetic chemistry has an important role in the preparation of advanced functional materials and new heterocycles will be designed and prepared for nonlinear optical, photochromic, OLEDs, DSSCs, catalytic and sensor applications. The chemical functionalization of carbon nanotubes for composite applications or as precursors of functionalized graphene nanoribbons is also a growing research area within the research group. The chemical functionalization of carbon nanotubes for electrochemical sensors, composite applications or as precursors of functionalized graphene nanoribbons is also a growing research area within the research group.

### **3. Resultados alcançados durante o ano de 2014**

During 2014 the AA group developed new strategies for the preparation of cyclic RGD peptides to conjugate with mono and bifunctional metal chelators. The synthesis of non-proteinogenic AAs and heterocycles for application as UV and NIR fluorescent imaging probes, chemosensors and bioactive compounds was continued. The synthesis and characterization of new peptidic hydrogelators was continued. Solution and solid phase synthesis of antimicrobial peptaibols and analogues, aided by molecular dynamic simulations, was continued, along with conformational (NMR and FT-IR) and membrane activity on model membranes studies. The synthesis of alpha, alpha-dialkylglycines by solid phase Ugi reaction continued together with the synthesis of N-alkylamino acids. The design and synthesis of novel heterocyclic photocleavable protecting groups by one- and two-photon excitation for the caging of amino acids (including neurotransmitters), biogenic amines and its biosynthetic precursors was continued. The study of the electrochemical behaviour of new AA derivatives was also pursued.

In the BC group new tetraaza based Gd(III) chelates (mononuclear and binuclear) were prepared and their relaxometric behaviour was characterized in collaboration with other research groups.

*In vitro* and modelling studies of  $^{68}\text{Ga(III)}$  labeled cyclic RGD peptide conjugates as potential diagnostic radiopharmaceutical agents were performed.

Synthetic methodologies for the preparation of fluorescent Au nanoclusters functionalized with Gd(III) chelates as bimodal medical imaging agents (fluorescence/MRI) were developed. Synthetic methodologies for the preparation of Au nanoparticles functionalized with Gd(III) chelates and addressed to cellular receptors, as contrast agents for MRI, were developed. Adequate aqueous two-phase systems for the isolation of genomic DNA from bacteria (*Escherichia coli* and *Pseudomonas aeruginosa*) were developed.

The results obtained by EE group members reflect the transfer of group research interest to novel materials and new analytical and synthetic methods within the broad domain of "Sustainable Chemistry". Environmentally-friendly heterogeneous catalysts have been developed using nanostructured materials. Drug delivery systems using zeolites to encapsulate anti-cancer drugs, have been prepared and tested. In collaboration with other members of the Centre, metal coordination complexes, have been prepared and characterized to prepare materials for application in non-linear optical devices. Polymer formulations have been optimized to demonstrate additive effectiveness in resisting degradation. Biodegradable synthetic polymers have been prepared and evaluated for potential use in biomedical applications. Novel polymer electrolyte formulations and hybrid separator membranes have been prepared for applications in advanced displays, windows and high-energy batteries. Hybrid gels, with appropriate formulations and properties, have been prepared for various applications including the production of optical lenses and surface coatings. Low-impact electro-synthetic methods have been developed to modify organic substrates and cyclize unsaturated organic compounds. A microbial fuel cell was developed to treat wastewater and carbon nanotube electrocatalysts were also used to remove recalcitrant pollutants from wastewater. Electroanalytical methods were used to screen anticancer drug candidates and a new electrochemical method was developed to characterize the antioxidant capacity of specific compounds.

In the HC group, metal catalyzed couplings and nucleophilic substitutions were used to prepare thienopyridines derivatives selected by rational design (IPBragança) that were tested as inhibitors of tyrosine kinase membrane receptors involved in cancer and angiogenesis (IPATIMUP and FMUP). The interaction with DNA and the encapsulation in nanoliposomes for drug delivery were studied by fluorescence (Centre of Physics – CFUM).

Metabolite derivatives of phenolic acids present in extracts of wild edible mushrooms, were synthesized and their biological activities were evaluated in collaboration with other research groups (IPBragança, Univ. Belgrado - Sérvia).

Different chromene, indolizine, imidazole, pyrimidine and purine derivatives, from in silico screening or inspired by bioactive natural compounds were designed and prepared by new synthetic methods. Some of these compounds were tested as anticancer, antimicrobial (including *Mtb*) and antioxidant agents through collaborative work with members of the Biology Department and ICVS (UMinho), Univ. Fernando Pessoa (Porto) and Leiden Univ. Medical School (Netherlands). A number of promising drug candidates was identified and inspired further work in this area.

New enantioselective Diels-Alder reactions involving erythrose dienes or 2,4-pentadienol and azadienophiles led to cycloadducts used as precursors of aza-sugar type compounds. Click chemistry was used for the synthesis of new glycoconjugates containing a 1,2,3-triazole unit bearing amino acids, esters and coumarins.

A wide range of novel heterocyclic systems were prepared through several synthetic methodologies. DFT studies were performed and linear and nonlinear optical, thermal, catalytic and sensor properties of these heterocycles were evaluated in solution and in solid matrices (PMMA polymer, liquid crystals and nanofibers) for photochromic and NLO applications, through national and international collaborations.

The Diels-Alder cycloaddition of maleic anhydride to the CNT surface allowed to incorporate the anhydride unit, a valuable precursor for further chemical transformations that will improve the interaction with different polymeric materials.

#### **4. Atividades para valorização do conhecimento desenvolvidas durante o ano de 2014**

In the context of the research carried out by the members of this Centre, knowledge transfer may involve the formal registration of methods, products or applications as national or international patents or the optimization of synthetic or analytical processes that are requested by industrial partners. While these activities are not considered to be principal objectives of the members of the Centre they have been undertaken in the past and are welcomed by the members of the Centre as contracted tasks that provide additional financial income.

Detailed one- and two-photon excitation studies of fluorescent caged biomolecules involved members of the AA group in collaboration with researchers from Strathclyde University, Glasgow, UK. The new hydrogels prepared by the AA group were characterized in collaboration with the Brandeis University, Waltham, Massachusetts, USA and with the Department of Chemistry of the University of Reading, UK. The rheological properties of hydrogels have been studied in collaboration with Dr. Loic Hilliou of the Polymer Engineering Centre of the University of Minho. The imaging agents synthesized by the BC, HC and the AA groups are also evaluated within national (UC) and international collaborations (Univ. Hospital, Basel and École Polytechnique Fédéral de Lausanne, Switzerland; Centre de Biophysique Moléculaire CNRS, France). The development of protein based ligands for the affinity purification of plasmids in aqueous two-phase systems is carried out in collaboration with the Univ. of Aston, Cambridge and London.

The imaging agents synthesized by the BC and the AA groups are evaluated within national (UC) and international collaboration (École Polytechnique Fédéral de Lausanne, Switzerland). Studies using microfluids devices with aqueous two-phase systems are being done with the collaboration of the Algoritmi research centre of the School of Engineering (UM).

Within the context of the research carried out by the members of this Centre, knowledge transfer may involve the formal registration of methods, products or applications as national or international patents or the optimization of synthetic processes or analytical procedures that are requested by industrial partners and sponsors. While these activities are not considered to be principal objectives of the members of the Centre they have been undertaken in the past and are welcomed by the members of the Centre as contracted tasks that may provide additional financial income.

Currently members of the EE group collaborate with industrial partners in solving specific problems related to the characterization of chemical substances. These are short-term projects that are paid for, on a pro-rata basis, as analytical services. A substantial part of the research carried out by members of this group involves collaboration across scientific boundaries, with research colleagues from other Sciences or Engineering domains. These joint projects are expected to continue as scientifically productive collaborations. Examples of these interactions include projects in which members of the HC group synthesize ligands that are subsequently incorporated into organometallic complexes. These novel compounds may be used in NLO devices or in catalysis. Members of the EE group characterize the behavior of these compounds using a variety of methods.

The synthesis of carbon-based nanomaterials and the functionalization of CNTs involves researchers from the HC and EE groups in collaboration with members of the Polymer Engineering Department. These new materials and composites are prepared and characterized by members of the Centre.

Some of synthesized compounds were tested as anticancer, antimicrobial (including Mtb) and antioxidant agents through collaborative work with members of the Biology Department and ICVS (UMinho), Univ. Fernando Pessoa (Porto), IPATMUP (Institute of Molecular Pathology and Immunology - Univ. Porto), Fac. Medicine – UPorto, IPBragança, Leiden Univ. Medical School (Netherlands), Univ. Belgrado - Serbia.

A number of promising drug candidates was identified and inspired further work in this area.

## **5. Atividades de interação com a sociedade implementadas durante 2014**

- Olimpíadas de Química Júnior - em colaboração com a Sociedade Portuguesa de Química, a 10<sup>a</sup> edição desta atividade decorreu nos laboratórios do Departamento de Química e no anfiteatro da Escola de Ciências da Universidade do Minho, no dia 5 de abril. Nesta edição das OQJ participaram 30 escolas com 30 equipas, o que se traduziu num número de participantes (90 alunos e 30 professores acompanhantes). Foi organizado por Maria Manuela Silva (EE), Maria José Medeiros (EE), Gabriela Botelho (EE), Susana Costa (AA), Manuela Raposo (HC) e Sílvia Lima (AA).

- Químicos e Bioquímicos: Desafios profissionais do séc. XXI - empreendedorismo & empregabilidade em Química e Bioquímica, encontro organizado para os alunos da Licenciatura de Química e Bioquímica que decorreu a 25 de junho de 2014 na Biblioteca Lúcio Craveiro da Silva. A organização esteve a cargo dos



docentes João Carlos Marcos (BC), Isabel Correia Neves (EE), Dulce Geraldo (EE) e M. Alice Carvalho (HC).

- Estágios Ciência Viva no Laboratório - "Ocupação Científica de Jovens nas Férias – Edição 2014 (Ciência Viva) de 30 de junho a 4 de julho, evento organizado por Alice Dias (HC) e Maria José Medeiros (EE) e contou com a participação de Maria Alice Carvalho (HC) (2 estágios: "Síntese de novos anticancerígenos", e Síntese de pirimidopirimidinas para combate à tuberculose" .

(30 de Junho a 4 Julho) e de Alice Maria Dias (2 estágios: "Síntese de novos candidatos a medicamentos anticancerígenos", 7 a 11 julho; "Síntese de novos candidatos a medicamentos para combate à tuberculose" 7 a 11 Julho).

**HC** - Alice Maria Dias, palestra "Química e Saúde: a aventura de descobrir novos medicamentos", Escola de Ciências da Universidade do Minho, 11 de novembro de 2014. (30 alunos do 11º ano. Escola Secundária de Barcelinhos).

**HC** - Alice Maria Dias, palestra "Química e Saúde: a aventura de descobrir novos medicamentos", Escola de Ciências da Universidade do Minho, 12 de novembro de 2014. (17 alunos do 9º ano da Escola Secundária Camilo Castelo Branco, Famalicão).

**EE** - António Maurício Fonseca - ,Escola de ciências, Universidade do Minho, Braga, "A Química Forense no desvendamento do crime", 04 de junho de 2014.

**EE** - C. Jorge Silva - Membro da comissão organizadora da "Festa de Ciência" realizado na Universidade do Minho, Braga, entre 12 e 14 de Maio, 2014, sendo responsável pelo Concurso "Faz e traz o teu laboratório!"

**EE** - C. Jorge Silva - Membro da Comissão organizadora do congresso "Escola Energia e Ambiente" realizado na Universidade do Minho, Braga, em 9 e 10 de Maio, 2014 (atividade desenvolvida no âmbito do Programa "A Minha Escola de Ciências" financiado pela Agência Nacional para a Cultura Científica – Ciência Viva)

**EE** - C. Jorge Silva - Realização da atividade "Vem Experimentar" destinadas a alunos dos 12º ano da Escola Secundária de Barcelinhos, realizada no Departamento de Química da U. Minho, 16 de Janeiro de 2014.

**EE** - C. Jorge Silva - Realização da atividade "Vem Experimentar" destinadas a alunos dos 12º ano da Escola Secundária de Vieira do Minho, realizada no Departamento de Química da U. Minho, 31 de Janeiro de 2014

**EE** - C. Jorge Silva - Realização da atividade "Vem Experimentar" destinadas a alunos dos 12º da Escola Secundária de Barcelos, que decorreu no Departamento de Química em 6 de Março de 2014.

**EE** - C. Jorge Silva - Realização da atividade "Vem Experimentar" destinadas a alunos dos 12º da Escola Secundária de Vila Verde, que decorreu no Departamento de Química em 12 de Março de 2014.

**EE** - C. Jorge Silva - Realização da atividade “Vem Experimentar” destinadas a alunos dos dos 12º da Escola Alcaide de Faria, Barcelos, que decorreu no Departamento de Químico em, 7 de Maio de 2014.

**EE** - C. Jorge Silva - Realização da atividade “Vem Experimentar” destinadas a alunos dos 12º do Colégio La Salle, Barcelos, que decorreu no Departamento de Química em 28 de Novembro de 2014.

**EE** - M. Gabriela Botelho, palestra “Polímeros amigos ou inimigos do ambiente” Escola Secundária de Vila Verde no âmbito do projeto “A minha Escola de Ciências”, 28 de Maio de 2014.

## **6. Coordenação e participação em projetos de investigação com financiamento externo**

**AA** - Principal Investigator – Susana Paula **Costa** - **PTDC/QUI-BIQ/118389/2010** “Structure based design, biological activity and model membrane permeation studies of antimicrobial peptides bearing unnatural amino acids” total financial support 99.330,00 Euros. UM proponent S.P. Costa (AA), total financial support UM 99.330 Euros 2012- 2015.

**HC** - Principal Investigator – Maria João **Queiroz** -**PTDC/QUI-QUI/111060/2009** “New antitumoral and antiangiogenics heterocyclic compounds: synthesis, molecular modelling, screening of enzymatic inhibition and tumor and endothelial cell lines assays with membrane receptors of tyrosine kinase as targets” Total 134.529,00 Euros. Proponent Institution Univ. do Minho (30.744,00 Euros); Participants Institutions: ESA-IPBragança (66.441,00 Euros) and Fac. Medicine, Univ. do Porto (37.344,00 Euros). Início 24 de Dezembro de 2010 – Fim 30 junho 2014 (with 6 months of prorrogation).

Classification- A

**HC** – Principal Investigator UA – Margarida Isabel dos Santos Amaral – UM instituição participante - Maria Fernanda **Proença** - **PTDC/CTM-NAN/119184/2010** “Modulation of induced pluripotent stem cells differentiation by carbon nanotube templates – StemCelCan.” Total 131.140,00 Euros. Proponent Institution Univ. Aveiro (53.021,00 Euros) Participant Institutions: Biocant (54.485,00 Euros), UM (23.634,00).

**HC** – Principal Investigator – Maria José **Alves** - **PTDC/QEQ-MED/1671/2012** “Concise and Highly Stereoselective Strategy in the Synthesis of Aza-sugars. Theoretical Studies and Biological Evaluation of Products.” Total funding 197.479,00€ início e fim previsto do projeto 03-06-2013 a 03-06-2015.

**EE** - **PTDC/CTM-NAN/119979/2010** Synthesis of solar-activated materials for the controlled release of volatile compounds (PI: CFUM, team member from EE, total funding of 151 140,00 euros) 01-03-2012 to 28-02-2015, 1 000 euros in 2014.

**EE** - **PTDC/EPH-ARQ/5204/2012** “Dialogue among sciences - Multidisciplinary analysis of navegability and anchoring during the Roman period (Esposende), (PI: UP, team members from EE, total funding of 85.621,00 euros), funding UM 7 500,00 euros, 2 000 euros in 2014.

- **O Novo Norte – NORTE-07-0124-FEDER-000039** - Programa Operacional Regional do Norte, “Programas Integrados de IC&DT - SAESCTN-PIIC&DT/1/2011”, Projeto aprovado: n-SteP – Nanostructured systems for Tailored Performance, WP1, WP2 - Preparation and characterization of the catalysts (PI: IPC-UM, team members from BC, EE and HC) total funding of 47 000 euros over 2013/2014, 10 000 euros in 2014. Supervising the pos-doc fellow Carmen Seijo (UMINHO/BPD/35/2013)
- Ação Integrada Luso-Espanhola Refa E 136/12, Desenvolvimento de sensores para a deteção de biotoxinas em bivalves, funding of 4 000 euros para a UMinho (team members from EE) 1 500 euros in 2014.

## 7. Financiamento

	<b>Financiamento atribuído em 2014</b>	<b>Financiamento recebido em 2014</b>	<b>Financiamento executado em 2014</b>	<b>Nº de Projetos em curso</b>
<b>Projeto Estratégico FCT</b>	85.448,00€	68.434,91€	72.725,77€*	1
<b>Projectos FCT</b>	110.536,00€	77.042,41€	74.587,12€	4
<b>Proj. Nacionais (bilaterais,...)</b>	1500	1500	1500	1
<b>Proj. Internacionais (FP7, ...)</b>				
<b>Rede Nacional de RMN-UM</b>	16.550,00€	16.550,00€	16.517,67	1
<b>Proj. Industria internacional</b>				
<b>Proj. Industria nacional</b>				
<b>Total</b>	214.034,00€	163.527,32€	165.330,56€	7

\* O financiamento executado é superior ao recebido devido a adiantamento de verbas por parte da Universidade.

## 8. Indicadores genéricos

### 8.1. Equipa de Investigação

<b>Investigação</b>	<b>2014</b>
<b>Classificação</b>	Excellent
<b>Investigadores</b>	
Docentes/Investigadores Ens. Superior	28
Compromisso com a Ciência	1
Colaboradores	39
Post-Docs	9
Doutorandos	28
Mestrandos	47
<b>TOTAL</b>	<b>152</b>

### 8.2. N.º de teses de Mestrado e de Doutoramento concluídas e em curso, durante 2013.

<b>N.º de teses de Mestrado</b>	<b>Concluídas</b>	19
	<b>Em curso</b>	47
<b>N.º de teses de Doutoramento</b>	<b>Concluídas</b>	5
	<b>Em curso</b>	28

## 9. Investigação

### 9.1. Grupos de Investigação

<b>Designação do grupo de investigação</b>	Synthesis and Application of Amino Acids (AA)
<b>Coordenador</b>	Paula Margarida Ferreira
<b>Área de investigação</b>	Amino acid and Peptide Chemistry
<b>Instituição de Acolhimento</b>	CQ/UM School of Sciences
<b>Membros do grupo</b>	<b>FTERS:</b> Luís S. Monteiro Paula M.T. Ferreira Susana P. G. Costa Maria Sameiro Gonçalves Sílvia P. Lima

	<p><b>Post-Doc researchers</b></p> <p>Rosa Batista SFRH/BPD/79333/2011 (HC/AA)</p> <p><b>PhD Students</b></p> <p>Arsénio Vasconcelos de Sá (AA+ BC) (concluído maio 2014)</p> <p>Helena Pereira Vilaça SFRH/BD/72651/2010 (AA+ BC)</p> <p>André Fontes SFRH/BD/63676/2009 (AA + BC)</p> <p>Cátia Esteves SFRH/BD/68360/2010 (AA + HC)</p> <p>Rosa Cristina Ferreira SFRH/BD/86408/2012 (AA + HC)</p> <p>Ana Soares SFRH/BD/80813/2011 (AA)</p>
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<b>Designação do grupo de investigação</b>	Biological Chemistry (BC)
<b>Coordenador</b>	João Carlos Marcos
<b>Área de investigação</b>	Biological Chemistry
<b>Instituição de Acolhimento</b>	CQ/UM School of Sciences
<b>Membros do grupo</b>	<p><b>FTERs:</b></p> <p>João Carlos Marcos</p> <p>João Paulo André</p> <p>José Alberto Martins</p> <p><b>Researchers hired under the Programme</b></p> <p><b>“Compromisso com a Ciência”</b></p> <p>Nuno Micaêlo (until June 2014)</p> <p><b>PhD students</b></p> <p>Arsénio Sá SFRH/BD/63639/2009 (BC/AA) (concluiu em maio 2014)</p> <p>Miguel Ferreira SFRH/BD/63994/2009 (BC) (concluiu em dezembro 2014)</p> <p>Maria Helena Vilaça SFRH/BD/72651/2010 (BC/AA)</p> <p>André Fontes SFRH/BD/63676/2009 (BC/AA)</p> <p>Tarsila Castro SFRH/BD/79195/2011 (BC)</p>

<b>Designação do grupo de investigação</b>	Electrochemistry and the Environment (EE)
<b>Coordenador</b>	Michael John Smith
<b>Área de investigação</b>	Electrochemical, Catalysis, Analytical Chemistry, Materials Chemistry, Physical Chemistry
<b>Instituição de Acolhimento</b>	University of Minho / School of Sciences

<b>Membros do grupo</b>	<p><b>FTEs:</b></p> <p>Michael J Smith          Maria José Medeiros          Carlos Jorge Silva          António Maurício Fonseca          Pier Parpot          Maria de Fátima Bento          Maria Dulce Geraldo          Ana Paula Bettencourt          Maria Isabel Correia Neves          Maria Manuela Silva          Maria Gabriela Botelho</p> <p><b>Researchers hired under the Programme</b></p> <p><b>“Compromisso com a Ciência”</b></p> <p>César Oliveira</p> <p><b>Research hired in the scope of a research project</b></p> <p>Iwona Kuzniarska-Biernacka</p> <p>Sandra Barros (SFRH/BPD/85399/2012)          Rui Pereira (SFRH/BPD/87759/2012)          Rui Gusmão (SFRH/BPD/86690/2012)</p> <p><b>Post-doctoral researchers:</b></p> <p>Sandra Barros SFRH/BPD/85399/2012 (EE)          Rui Pereira SFRH/BPD/87759/2012 (EE)          Rui Gusmão SFRH/BPD/86690/2012 (EE/HC)</p> <p><b>PhD students:</b></p> <p>Raquel Santos Oliveira SFRH/BD/64189/2009) (concluiu em janeiro 2014)</p> <p>Daniela Correia SFRH/BD/82411/2011          Juliana Dias SFRH/BD/90215/2012          Maria Rodrigues Castro SFRH/BD/78037/2011          Renato Gonçalves SFRH/BD/88379/2012          Rita Gonçalves SFRH/BD/88379/2012          Rita Barros Leones SFRH/BD/90366/2012          Rita Bacelar Marreiros SFRH/BD/62601/2009          Sara Marques Fernandes SFRH/BD/87786/2012</p>
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	<p>Venceslau Muiuane (Bolsa Doutorado Gulbenkian)</p> <p>Marta Pinheiro Ferreira SFRH/BD/97273/2013</p> <p>Raquel Carneiro Alves SFRH/BD/97232/2013</p> <p>Natália Sofia B. Vilaça SFRH/BD/97797/2013</p>
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<b>Designação do grupo de investigação</b>	Heterocyclic Compounds
<b>Coordenador</b>	Maria Fernanda J.R.P. Proença
<b>Área de investigação</b>	Química
<b>Instituição de Acolhimento</b>	Centro de Química- Universidade do Minho
<b>Membros do grupo</b>	<p><b>FTERS:</b></p> <p>Maria Fernanda Proença</p> <p>Maria João R. P. Queiroz</p> <p>Maria José Alves</p> <p>Ana Paula Esteves</p> <p>Maria Manuela Marques Raposo</p> <p>António Gil Fortes</p> <p>Maria Alice Carvalho</p> <p>Alice Maria Dias</p> <p><b>Post-Doc grant researchers:</b></p> <p>Marta Sílvia Costa SFRH/BPD/79609/2011 (HC)</p> <p>Rui Filipe Araújo SFRH/BPD/88920/2012 (HC)</p> <p>Rui Gusmão SFRH/BPD/86690/2012 (HC/EE)</p> <p>Agathe Bégouin SFRH/BPD/36753/2007 (HC) (até nov.2014)</p> <p>Manuel Ricardo C. Calhelha SFRH/BPD/68344/2010 (HC 60%) also affiliated to CIMO/Escola Superior Agrária/IPBragança (HC)</p> <p>Rosa Batista SFRH/BPD/79333/2011 (HC/AA)</p> <p><b>PhD students:</b></p> <p>Vera Duarte SFRH/BD/61290/2009 (concluiu em fevereiro de 2014)</p> <p>Sandrina Heleno SFRH/BD/70304/2010 (HC) (concluiu em 19 dez.2014)</p> <p>Vera Alexandra P. Machado (HC)</p> <p>Elina Marinho SFRH/BD/73659/2010 (HC)</p> <p>Tatiana Dias* SFRH/BD/88245/2012 (HC)</p>

	Juliana Andrade grant of “Programa Ciência sem fronteiras” 246713/2012-7 (HC) Eunice Cunha (DEP-EEng) Ashly Rocha SFRH/BD/79565/2011 (HC) Nádia Senhorães SFRH/BD/73721/2010 (HC) Cristina Rafaela Guimarães SFRH/BD/78307/2011 (HC) Cidália Castro SFRH/BD/78037/2011 (HC/EE) Sara Fernandes SFRH/BD/87786/2012 (HC/EE) Rosa Cristina Ferreira SFRH/BD/86408/2012 (HC/AA) Cátia Esteves SFRH/BD/68360/2010 (HC/AA) Cristina Elizabete Sousa SFRH/BD/87292/2012 (HC) * até setembro 2014
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## 9.2. Produtividade Científica

### 1. Artigos em revistas internacionais (referenciadas no ISI)

**AA** (6AA+3AA/BC+7AA/HC=16)

**AA1**- Piloto, A. M.; Costa, S. P. G.; Gonçalves, M. S. T., “Wavelength-selective cleavage of o-nitrobenzyl and polyheteroaromatic benzyl protecting groups”, Tetrahedron 2014, 70, 650-657.

<http://dx.doi.org/10.1016/j.tet.2013.11.100> (IF13=2.817)

**AA2** - Monteiro, L. S.; Pereira-lima, S. M. M. A.; Pereira, S.; Machado, J. N., “Synthesis of N-Alkyl-C $\alpha$ , $\alpha$ -Dimethylglycine Derivatives”, ARKIVOC 2014, 170–180.

<http://dx.doi.org/10.3998/ark.5550190.0015.500> (IF13=1.076)

**AA3**- Raju, B. R.; Sampaio, D. M. F.; Silva, M. M.; Coutinho, P. J. G.; Gonçalves, M. S. T., “Ultrasound promoted synthesis of Nile Blue derivatives”, Ultrason. Sonochem. 2014, 21: 360-366.

<http://www.sciencedirect.com/science/article/pii/S1350417713001181> (IF13=3.816)

**AA4**- Raju, B. R.; Garcia, A. M. F.; Costa, A. L. S.; Coutinho, P. J. G.; Gonçalves, M. S. T., “Synthesis of new benzo[a]phenoxazinium probes possessing carboxylic ester, hydroxyl and amino functional groups: photophysical studies in dry ethanol and conjugation with CdTe quantum dots”, Dyes Pigm. 2014, 110:203-213. <http://www.sciencedirect.com/science/article/pii/S014372081400134X> (IF13= 3.468)

**AA5**- Lopes, M.; Alves, C. T.; Raju, B. R.; Gonçalves, M. S. T.; Coutinho, P. J. G.; Henriques, M.; Belo, I., “Application of benzo[a]phenoxazinium chlorides in antimicrobial photodynamic therapy of Candida albicans biofilms, J. Photochem. Photobiol. B: Biology 2014, 141:93-99.



<http://www.sciencedirect.com/science/article/pii/S1011134414002826> (IF13= 2.803)

**AA6** - Vilaça, H. ; Ferreira, P. M. T. ; Micaelo, N. M.; “New cyclic RGD peptides: synthesis, characterization, and theoretical activity towards  $\alpha\beta_3$  integrin”, Tetrahedron 2014, 70, 5420-5427.

<http://dx.doi.org/10.1016/j.tet.2014.06.121> (IF13=2.817)

**AA7/BC10** - Ferreira, M. F.; Pereira, G.; Martins, A. F.; Martins, C. I. O; Prata, M. I. M; Petoud, S.; Toth, E.; Ferreira, P. M. T.; Martins, J. A.; Geraldés, C. F. G. C.; “Ln[DO3A-N-alpha-(pyrenebutanamido)propionate] complexes: optimized relaxivity and NIR optical properties” Dalton Trans., 2014, 43, 3162-3173. <http://dx.doi.org/10.1039/C3DT52958D> (IF13=4.097)

**AA8/BC11** – Ferreira, M. F.; Pereira, G.; Andre, J. P. ; Prata, M. I. M.; Ferreira, P. M. T.; Martins, J. A.; Geraldés, C. F. G. C.; “Ga[NO2A-N-(alpha-amino)propionate] chelates: synthesis and evaluation as potential tracers for Ga-68 PET” Dalton Trans., 2014, 43, 8037-8047.

<http://dx.doi.org/10.1039/c4dt00386a> (IF13=4.097)

**AA9/BC12** - Vilaça, H., Ferreira, P.M.T., Micaelo, N.M. New cyclic RGD peptides: Synthesis, characterization, and theoretical activity towards  $\alpha\beta_3$  integrin Tetrahedron, 2014, 35, 5420-5427

<http://dx.doi.org/10.1016/j.tet.2014.06.121> (IF13=2.817)

**AA10/HC28** - Batista, R. M. F.; Costa, S. P. G.; Silva, R. M. P.; Lima, N. E. M.; Raposo, M. M. M. “Synthesis and evaluation of arylfuryl-bis(indolyl)methanes as selective chromogenic and fluorogenic ratiometric receptors for mercury ion in aqueous solution”, Dyes Pigments 2014, 102:293–300.

<http://dx.doi.org/10.1016/j.dyepig.2013.11.008> (IF13=3.468)

**AA11/HC29** - Batista, R. M. F.; Costa, S. P. G.; Raposo, M. M. M., “Selective colorimetric and fluorimetric detection of cyanide in aqueous solution using novel heterocyclic imidazo-anthraquinones”, Sensors Actuators B: Chem 2014, 191:791-799. <http://dx.doi.org/10.1016/j.snb.2013.10.030>

(IF13=3.840)

**AA12/HC30** - Batista, R. M. F.; Oliveira, E.; Costa, S. P. G.; Lodeiro, C.; Raposo, M. M. M., “Cyanide and fluoride colorimetric sensing by novel imidazo-anthraquinones functionalized with indole and carbazole”, Supramol. Chem. 2014, 26:71-80. <http://dx.doi.org/10.1080/10610278.2013.824082>

(IF13=2.132)

**AA13/HC31**- Oliveira, E.; Batista, R. M. F.; Costa, S. P. G.; Raposo, M. M. M.; Lodeiro, C., “Synthesis and solvatochromism studies of novel bis(indolyl)methanes bearing functionalized arylthiophene groups as new colored materials”, Photochem. Photobiol. Sci. 2014, 13:492-498.

<http://dx.doi.org/10.1039/C3PP50352F> (IF13=2.939)

**AA14/HC32**- Baptista, R. M. F.; Isakov, D.; Raposo, M. M. M.; Belsley, M.; Bdikin, I.; Kholkin, A. L.; Costa, S. P. G., de Matos Gomes, E., "Ferroelectric nanofibers with an embedded optically nonlinear benzothiazole derivative", J. Nanopart. Res. 2014, 16:2502. <http://dx.doi.org/10.1007/s11051-014-2502-3>

(IF13=2.278)

**AA15/HC33**- Marin-Hernandez, C.; Santos-Figueroa, L.; Moragues, E. M. E.; Raposo, M. M. M.; Batista, R. M. F.; Costa, S. P. G.; Pardo, T.; Martínez-Máñez, R.; Sancenón, F., "Imidazo-anthraquinone derivatives for the chromo-fluorogenic sensing of basic anions and trivalent metal cations", J. Org. Chem. 2014, 79:10752-10761. <http://dx.doi.org/10.1021/jo501515e> (IF13=4.638)

**AA16/HC27** – Francisco Carla S.; Rodrigues Lígia R.; Cerqueira Nuno M.F.S.A.; Oliveira-Campos Ana M.F.; Esteves Ana P. "Novel benzopsoralen analogues: Synthesis, biological activity and molecular docking studies", Eur. J. Med. Chem. 2014, 87, 298-305 <http://dx.doi.org/10.1016/j.ejmech.2014.09.066> (IF2013=3.432)

**BC** (9BC +3BC/AA+1BC/EE=13)

**BC1** - André, J.P. "Viewing Scenes of the History of Chemistry through the Opera Glass", Journal of Chemical Education, 2014, <http://dx.doi.org/10.1021/ed500057w> (IF2013= 1.001)

**BC2** - Caramelo-Nunes, C., Almeida, P., Marcos, J.C., Tomaz, C.T. "Aromatic ligands for plasmid DNA chromatographic analysis and purification: an overview" Journal of Chromatography A, 2014, 1327, 1-13 <http://dx.doi.org/10.1016/j.chroma.2013.12.057> (IF2013= 4.258)

**BC3** - Caramelo-Nunes, C., Gabriel, M.F., Almeida, P., Marcos, J.C., Tomaz, C.T. "Negative pseudo-affinity chromatography for plasmid DNA purification using berenil as ligand" Journal of Chromatography B, 2014, 944, 39-42 <http://dx.doi.org/10.1016/j.jchromb.2013.10.043> (IF2013= 2.694)

**BC4** - Castro, T.G., Micaêlo, N.M. Conformational and thermodynamic properties of non-canonical  $\alpha\alpha$  dialkyl glycines in the peptaibol alamethicin: Molecular dynamics studies Journal of Physical Chemistry B 2014, 118 (33), 9861-9870. <http://dx.doi.org/10.1021/jp505400q> (IF2013= 3.377)

**BC5** - Castro, T.G., Micaêlo, N.M. Modeling of peptaibol analogues incorporating nonpolar  $\alpha\alpha$  dialkyl glycines shows improved  $\alpha$  helical preorganization and spontaneous membrane permeation Journal of Physical Chemistry B, 2014 (3) 118 (3), 649-658 <http://dx.doi.org/10.1021/jp4074587> (IF:2013= 3.377)

**BC6** - Latif, M.A.M., Tejo, B.A., Abedikargiban, R., Abdul Rahman, M.B., Micaêlo, N.M. Modeling stability and flexibility of -Chymotrypsin in room temperature ionic liquids Journal of Biomolecular Structure and Dynamics, 2014, 32 (8), 1263-1273 <http://dx.doi.org/10.1080/07391102.2013.813411> (IF:2013= 2.983)

**BC7** - Jumbri, K., Abdul Rahman, M.B., Abdulmalek, E., Ahmad, H., Micaelo, N.M. An insight into structure and stability of DNA in ionic liquids from molecular dynamics simulation and experimental studies Physical Chemistry Chemical Physics, 2014, 16 (27), 14036-14046.

<http://dx.doi.org/10.1039/C4CP01159G> (IF:2013= 4.198)

**BC8** - Mohammad Latif, M.A., Micaêlo, N.M., Abdul Rahman, M.B. Influence of anion-water interactions on the behaviour of lipases in room temperature ionic liquids RSC Advances, 2014, 4 (89), 48202-48211. <http://dx.doi.org/10.1039/C4RA07460B> (IF:2013= 3.708)

**BC9** - Latif, M.A.M., Micaêlo, N., Abdul Rahman, M.B. Solvation free energies in [bmim]-based ionic liquids: Anion effect toward solvation of amino acid side chain analogues Chemical Physics Letters, 2014, 615, 69-74. <http://dx.doi.org/10.1016/j.cplett.2014.08.073> (IF:2013= 1.991)

**BC10/AA7** - Ferreira, M. F.; Pereira, G.; Martins, A. F.; Martins, C. I. O.; Prata, M. I. M.; Petoud, S.; Toth, E.; Ferreira, P. M. T.; Martins, J. A.; Geraldes, C. F. G. C. Ln[DO3A-N- $\alpha$  (pyrenebutanamido)propionate] complexes: optimized relaxivity and NIR optical properties. Dalton Trans., 2014, 43, 3162-3173. <http://dx.doi.org/10.1039/C3DT52958D>

**BC11/AA8** - Ferreira, M. F.; Pereira, G.; André, J. P.; Prata, M. I. M.; Ferreira, P. M. T.; Martins, J. A.; Geraldes, C. F. G. C. Ga[NO2A-N-( $\alpha$ amino)propionate] chelates: synthesis and evaluation as potential tracers for  $^{68}\text{Ga}$  PET. Dalton Trans., 2014, 43, 8037-8047. <http://dx.doi.org/10.1039/C4DT00386A>

**BC12/AA9** - Vilaça, H., Ferreira, P.M.T., Micaelo, N.M. New cyclic RGD peptides: Synthesis, characterization, and theoretical activity towards  $\alpha\beta 3$  integrin Tetrahedron, 2014, 35, 5420-5427. <http://dx.doi.org/10.1016/j.tet.2014.06.121>

**BC13/EE43** - Mesquita C.S., Oliveira R., Bento F., Geraldo D., Rodrigues J.V., Marcos J.C. "Simplified 2,4-dinitrophenylhydrazine spectrophotometric assay for quantification of carbonyls in oxidized proteins." Analytical Biochemistry, 2014, 458, 69-71. <http://dx.doi.org/10.1016/j.ab.2014.04.034> (IF:2013= 2.305)

**EE** (39EE+3EE/HC+1EE/BC=43)

**EE1** - Moura, I.; Botelho, G.; Machado, A. V., "Characterization of EVA/PLA blends when exposed to different environments", Journal of Polymers and Environment, 2014, 22:148-157. <http://dx.doi.org/10.1007/s10924-013-0614-y> (IF=1.628)

**EE2** - Santos, R. M.; Botelho, G.; Machado, A. V., "Development of acrylonitrile butadiene-styrene composites with enhanced UV stability", Journal of Materials Science, 2014, 49:510-518. <http://dx.doi.org/10.1007/s10853-013-7728-4> (IF=2.305)

**EE3** - Araújo, A.; Botelho, G.; Oliveira, M.; Machado, A. V., "Influence of Clay type on the stability of PLA based nanocomposites", Journal of Applied Clay Science, 2014, 88:144-150. <http://dx.doi.org/10.1016/j.clay.2013.12.005> (IF=2.703)

**EE4** - Fernandes, J. G.; Correia, D. M.; Botelho, G.; Padrão, J.; Gama, F. M.; Ribeiro, C.; Sencadas, V.; Gomez Ribelles, J. L.; Lanceros-Méndez S., "PHB/PEO electrospun fibers containing chlorhexidine for

drug delivery applications”, Polymer Testing, 2014, 34:64-71.  
<http://dx.doi.org/10.1016/j.polymeresting.201312.007> (IF=1.816)

**EE5** - Lanceros-Mendez, S.; Lopes, A. C.; Ribeiro, C.; Sencadas, V., Botelho, G., "Effect of filler content on morphology and physical-chemical characteristics of electrospun poly(vinylidene fluoride)/NaY-zeolite fiber membranes and their suitability for biomedical applications", Journal of Materials Science, 2014, 49: 3361-3370. <http://dx.doi.org/10.1007/s10853-014-8043-4> (IF=2.305)

**EE6** - Correia, D. M.; Ribeiro, C.; Coelho, J.; Botelho, G.; Gómez Ribelles, J. L.; Lanceros-Mendez, S.; Sencadas, V., "Influence of electrospinning parameters on Poly(hydroxybutyrate) electrospun membranes fiber size and distribution", Polymer Engineering and Science, 2014, 54:1608-1617. <http://dx.doi.org/10.1002/pen.23704> (IF=1.441)

**EE7** - Correia, D. M.; Dourado, F.; Padrao, J.; Sencadas, V.; Botelho, G.; Lanceros Mendez, S., "Processing and characterization of alpha-elastin electrospun membranes", Applied Physics A-Materials Science and Processing, 2014, 115:1291-1298. <http://dx.doi.org/10.1007/s00339-013-7984-9> (IF=1.694)

**EE8** - Araujo, A.; Oliveira, M.; Oliveira, R.; Botelho, G.; Machado, A. V., "Biodegradation assessment of PLA and its nanocomposites", Environmental Science and Pollution Research, 2014, 21:9477-9486. <http://dx.doi.org/10.1007/s11356-013-2256-y> (IF=2.757)

**EE9** - Botelho, G.; Oliveira, T.; Alves, N. M.; Mano, J. F., "Inclusion Complexes of  $\alpha$ -cyclodextrins with Poly(D,L-lactid acid)-Structural Characterization and Glass transition Dynamics", Colloid and Polymer Science, 2014, 292:863-871. <http://dx.doi.org/10.1007/s00396-013-3127-2> (IF=2.410)

**EE10** - Neto, A. I.; Cibrão, A. C.; Correia, C.; Carvalho, R.; Luz, G.; Ferrer, G. G.; Botelho, G.; Picart, C.; Alves, N. M.; Mano, J. F., "Nanostructured Polymeric Coatings Based on Chitosan and Dopamine-modified Hyaluronic Acid for Biomedical Applications" Small, 2014, 10:2459-2469. <http://dx.doi.org/10.1002/smll.201303568> (IF=7.514)

**EE11** - Correia, D. M.; Gámiz- González, A.; Botelho, G.; Vidaurre, A.; Gomez Ribelles, J. L.; Lanceros-Mendez S.; Sencadas V., "Effect of neutralization and cross-linking on the thermal degradation of chitosan electrospun membranes", Journal of Thermal Analysis and Calorimetry, 2014, 117:123-130. <http://dx.doi.org/10.1007/s10973-014-3707-5> (IF=2.206)

**EE12** - Correia, D. M.; Gonçalves, R.; Ribeiro, C.; Sencadas, V.; Botelho, G.; Gomez Ribelles, J. L.; Lanceros Mendez, S., "Electrosprayed poly(vinylidene fluoride) microparticles for tissue engineering applications" The Royal Society of Chemistry-Advances, 2014, 4:33013-33021. <http://dx.doi.org/10.1039/c4ra04581e> (IF=3.708)

**EE13** - Dias, J.; Correia, D. M.; Botelho, G.; Sencadas, V.; Lanceros-Méndez, S., "Electrical properties of intrinsically conductive core-shell polypyrrole/poly(vinylidene fluoride) electrospun fibers", Synthetic Metals, 2014, 197:198-203. <http://dx.doi.org/10.1016/j.synthmet.2014.09.01> (IF=2.222)

- EE14** - Ribeiro, S.; Costa, P.; Ribeiro, C.; Sencadas, V.; Botelho, G.; Lanceros-Méndez, S., "Electrospun styrene-butadiene-styrene elastomer copolymers for tissue engineering applications: effects of butadiene/styrene ratio, block structure, hydrogenation and carbon nanotube loading" *Composites Part B*, 2014, 67:30-38. <http://dx.doi.org/10.1016/j.compositesb.2014.06.025> (IF=2.602)
- EE15** - Correia, D. M.; Costa, C. M.; Pereira, J. N.; Silva, M. M.; Botelho, G.; Gomez Ribelles, J. L.; Lanceros-Méndez, S., "Physicochemical properties of poly(vinylidene fluoride-trifluoroethylene)/poly(ethylene oxide) blend membranes for lithium ion battery applications: influence of PEO molecular weight" *Solid State Ionics*, 2014, 268:54-67. <http://dx.doi.org/10.1016/j.ssi.2014.09.029> (IF=2.112)
- EE16** - Martins, P.; Gomez, V.; Lopes, A. C.; Tavares, C.; Botelho, G.; Irusta, S.; Lanceros-Mendez, S., "Improving photocatalytic performance and recyclability by the development of Er- doped and Er/Pr-codoped TiO<sub>2</sub> PVDF-TrFE composite membranes" *The Journal of Physical Chemistry C*, 2014, 118:27944-27953. <http://dx.doi.org/10.1021/jp509294v> (IF=4.835)
- EE17** - Matos M., Pereira M. A., Parpot P., Brito A. G., Nogueira R., "Influence of tetracycline on the microbial community composition and activity of nitrifying biofilms", *Chemosphere*, 2014, 117:295-302. <http://dx.doi.org/10.1016/j.chemosphere.2014.06.094> (IF13=3.499)
- EE18** - Abrunhosa L., Inês A., Rodrigues A. I., Guimarães A., Pereira V. L., Parpot P., Mendes-Faia A., Venâncio A., "Biodegradation of ochratoxin A by *Pediococcus parvulus* isolated from Douro wines", *Int. J. Food Microbiol.*, 2014, 188:45-52. <http://dx.doi.org/10.1016/j.ijfoodmicro.2014.07.019> (IF13=3.155)
- EE19** - Martins G., Peixoto L., Teodorescu S., Parpot P., Nogueira R., Brito A.G., "Impact of an external electron acceptor on phosphorus mobility between water and sediments", *Bioresource Technol.*, 2014, 151:419-423. <http://dx.doi.org/10.1016/j.biortech.2013.10.048> (IF13=5.039)
- EE20** - Gusmão, R.; López-Puente, V.; Pastoriza-Santos, I.; Pérez-Juste, J.; Proença, M. F.; Bento, F.; Geraldo, D.; Paiva, M. C.; González-Romero, E.; "Enhanced electrochemical sensing of polyphenols by an oxygen-mediated surface", *RSC Adv.*, 2015, 5: 5024-5031, <http://dx.doi.org/10.1039/C4RA12660B> (IF13= 3.708)
- EE21** - Oliveira, R.; Geraldo, D.; Bento, F.; "Radical scavenging activity of antioxidants evaluated by means of electrogenerated HO radical", *Talanta*, 2014, 129:320–327. <http://dx.doi.org/10.1016/j.talanta.2014.05.047> . (IF13= 3.511)
- EE22** - Mesquita, C. S.; Oliveira, R.; Bento, F.; Geraldo, D.; Rodrigues, J. V.; Marcos, J. C.; "Simplified 2,4-dinitrophenylhydrazine spectrophotometric assay for quantification of carbonyls in oxidized proteins", *Analytical Biochemistry*, 2014, 458: 69–71. <http://dx.doi.org/10.1016/j.ab.2014.04.034> (IF13= 2.305)
- EE23** - Oliveira, R.; Geraldo, D.; Bento, F.; "Electrogenerated HO radical reactions: the role of competing reactions on the degradation kinetics of hydroxy-containing aromatic compounds", *Electrochimica Acta*, 2014 135:19–26. <http://dx.doi.org/10.1016/j.electacta.2014.04.012> (Impact Factor13: 4.086)

- EE24** - Leones R.; Botelho M.; F. Sentanin F.; Cesarino I.; Pawlicka A.; Camargo A.; Silva M. M., "Pectin-Based polymer electrolytes with Ir(III) complexes", *Molecular Crystals and Liquid Crystals*, 2014, 604:1-9. <http://dx.doi.org/10.1080/15421406.2014.968049> (IF13 = 0.491)
- EE25** - Leones R.; Fernandes M.; Ferreira R. A. S.; Cesarino I.; Lima J. F.; Carlos L. D.; Bermudez V. de Zea; Magon C. J.; Donoso J. P.; Silva M. M.; Pawlicka A., "Luminescent DNA-and Agar- based membranes", *Journal of Nanoscience and Nanotechnology*, 2014, 14(9): 6685-6692. <http://dx.doi.org/10.1166/jnn.2014.9368> (IF13 = 1.339)
- EE26** - Leones R.; Costa C. M.; Machado A. V.; Esperança J.M.S.S.; Silva M. M.; Lanceros-Méndez S., "Effect of ionic liquid anion type in the performance of solid polymer electrolytes based poly(vinylidene fluoride-trifluoroethylene)", *Electroanalysis*, 2014, 12:. <http://dx.doi.org/10.1002/elan.201400530> (IF13 = 2.502)
- EE27** - Pereira R. F. P.; Silva M. M.; de Zea Bermudez V., "Bombyx mori silk fibers: An Outstanding Family of Materials", *Macromolecular Materials and Engineering* 2014, 299. <http://dx.doi.org/10.1002/201400276> (IF13 = 2.781)
- EE28** - Sousa R. E.; Nunes-Pereira J.; Costa C. M.; Silva M. M.; Lanceros-Méndez S., "Microstructural variations of poly(vinylidene fluoride co-hexafluoropropylene) and their influence on the thermal, dielectric and piezoelectric properties", *Polymer Testing*, 2014, 40: 245-255. <http://dx.doi.org/10.1016/j.polymertesting.2014.09.012> (IF13 = 1.816)
- EE29** - Barros S. C.; Silva A. A.; Costa D. B.; Cesarino I.; Costa C. M.; Lanceros-Méndez S.; Pawlicka A.; Silva M. M., "Thermo-sensitive chitosan-cellulose derivative hydrogels: swelling behaviour and morphologic studies", *Cellulose*, 2014, 21: 4531-4544. <http://dx.doi.org/10.1007/s10570-014-0442-9> (IF13=3.033)
- EE30** - Vieira F.; Morgado J. C.; Almeida J.; Silva M. M.; Sá J., "Representations of academic life: Institutional and Personal Values", *Revista Electrónica de Investigación*, 2014, 16 (2):52-67. <http://redie.uabc.mx/vol16no2/contents-vieiraetal.html> (IF13=0.10 Q4)
- EE31** - Cardoso M. A.; Fernandes M.; Rodrigues L. C.; Leones R.; Silva M. M.; de Zea Bermudez V., "Quasi-anhydrous proton conducting di-ureasiç hybrid electrolytes incorporating a protic ionic liquid", *Electrochimica Acta*, 2014, 147: 288-293 <http://dx.doi.org/10.1016/j.electacta.2014.09.125> (FI13=4.086)
- EE32** - Costa C. M.; Leones R.; Silva M. M.; Lanceros-Méndez S., "Influence of different salts in poly(vinylidene fluoride-co-trifluoroethylene) electrolyte separator membranes for batteries applications", *Journal of Electroanalytical Chemistry*, 2014, 727: 125-134. <http://dx.doi.org/10.1016/j.jelechem.2014.06.013> (FI13=2.871)
- EE33** - Gonçalves M. C.; Rodrigues L. C.; Silva M. M.; Ferreira R. A. S.; Carlos L. D.; Hümmer J.; de Zea Bermudez V., "Di-Urethanesil Hybrid Electrolytes Doped with Mg(CF<sub>3</sub>SO<sub>3</sub>)<sub>2</sub>", *Ionics*, 2014, 20: 29–36. <http://dx.doi.org/10.1007/s11581-013-0959-1> (IF13 = 1.836)

- EE34** - Sousa R. E.; Nunes-Pereira J.; Costa C. M.; Silva M. M.; Lanceros-Méndez S.; Hassoun J.; Scrosati B.; Appetecchi G. B., "Influence of the porosity degree of Poly(vinylidene fluoride-co-hexafluoropropylene) separators in the performance of Li-ion batteries", *Journal of Power Sources*, 2014, 263: 29-36. <http://dx.doi.org/10.1016/j.jpowsour.2014.04.014> (IF13 = 5.211)
- EE35** - Neto M. J.; Leones R.; Sentanin F.; Esperança J. M. S. S.; Medeiros M. J.; Pawlicka A.; Silva M. M., "Ionic liquids for solid-state electrolytes and electrosynthesis", *Journal of Electroanalytical Chemistry*, 2014, 714-715: 63-69. <http://dx.doi.org/10.1016/j.jelechem.2013.12.013> (FI13 = 2.871)
- EE36** - Nunes-Pereira J.; Costa C. M.; Sousa R. E.; Machado A. V.; Silva M. M.; Lanceros-Méndez S., "Li-ion battery separator membranes based on barium titanate and poly(vinylidene fluoride-co-trifluoroethylene) Filer size and concentration effects", *Electrochimica Acta*, 2014, 117: 276-284. <http://dx.doi.org/10.1016/j.electacta.2013.11.122> (FI13 = 4.086)
- EE37** - Leones R.; Fernandes M.; Sentanin F.; Cesarino I.; Lima J. F.; Zea Bermudez V.; Pawlicka A.; Magon C. J.; Donoso J. P.; Silva M. M., "Ionically conducting Er<sup>3+</sup>-doped DNA – based biomembranes for electrochromic devices", *Electrochimica Acta*, 2014, 120: 327-333. <http://dx.doi.org/10.1016/j.electacta.2013.12.006> (FI13 = 4.086)
- EE38** - Raju B. R.; Sampaio D. M. F.; Silva M. M.; Coutinho P. J. G.; Gonçalves M. S. T., "Ultrasonics promoted synthesis of Nile Blue derivatives", *Ultrasonics Sonochemistry*, 21, 2014, 21(1): 360-366. <http://dx.doi.org/10.1016/j.ultsonch.2013.05.010> (FI13 = 3.816)
- EE39** - Smith, M.J.; Vale, I.C.; Gray, F.M.; "Identification of paper by stationary phase performance", *J. Chem. Educ.*, 91 (2014) 1679–1683. <http://dx.doi.org/10.1021/ed400473g> (IF14 = 1,000)
- EE40**. Figueira, R.M.; Silva, C. J. R.; Pereira, E. V., "Organic-inorganic Hybrid Sol-Gel Coatings for Metal Corrosion Protection", *Journal of Coatings Technology and Research*, available online <http://dx.doi.org/10.1007/s11998-014-9595-6> (IF = 1,280)
- EE41**. Gonçalves, L. F. F. F.; Silva, C. J. R.; Kanodarwala, F. K.; Stride, J. A.; Pereira, M. R.; Gomes, M. J. M., "Influence of Cd<sup>2+</sup>/S<sup>2-</sup> molar ratio and of different capping environments in the optical properties of CdS nanoparticles incorporated within a hybrid diureasil matrix", *Applied Surface Science*, 314 (2014) 877-887 <http://dx.doi.org/10.1016/j.apsusc.2014.06.181> (IF = 2.538)
- EE42**. Figueira, R.M.; Silva, C. J. R.; Pereira, E. V., Salta, M. M., "Alcohol-aminosilicate Hybrid Coatings for Corrosion Protection of Galvanized Steel in Mortar", *Journal of The Electrochemical Society*, 161 (6) (2014) C349-C362 <http://dx.doi.org/10.1149/2.103406jes> (IF = 2.859)
- EE43**. Gonçalves, L. F. F. F.; Kanodarwala, F. K.; Stride, J. A.; Silva, C. J.R.; Pereira, M. R.; Gomes, M. J. M., "One-pot Synthesis of CdSe nanoparticles exhibiting quantum size effect within a sol-gel derived ureasilicate matrix", *Journal of Photochemistry and Photobiology A: Chemistry*, 285 (2014) 21-29 <http://dx.doi.org/10.1016/j.jphotochem.2014.04.005> (IF = 2,291)

**EE44.** S. D. F. C; Silva, J.P.B.; Silva, C. J. R.; Costa, M. F. M.; Gomes, M. J. M., "Optical and electrical behavior of organic/inorganic hybrid with embedded gold nanoparticles", *Journal of Sol-Gel Science and Technology*, 69(1) (2014) 52-60 <http://dx.doi.org/10.1007/s10971-013-3185-4> (IF = 1.547)

**EE45.** Gonçalves, L. F. F. F.; Kanodarwala, F. K.; Stride, J. A.; Silva, C. J.R.; Pereira, M. R.; Gomes, M. J. M., "Synthesis and characterization of organic-inorganic hybrid materials prepared by sol-gel and containing CdS nanoparticles prepared by a colloidal method using poly(N-vinyl-2-pyrrolidone)", *Journal of Sol-Gel Science and Technology*, 71(1) (2014) 69-78 <http://dx.doi.org/10.1007/s10971-014-3334-4> (IF = 1.547)

**EE46.** Gonçalves, L. F. F. F.; Silva, C. J.R.; Kanodarwala, F. K.; Stride, J. A.; Pereira, M. R.; Gomes, M. J. M., "Synthesis of an optically clear, flexible and stable hybrid ureasilicate matrix doped with CdSe nanoparticles produced by reverse micelles", *Materials Chemistry and Physics*, 147(1-2) (2014) 86-94 <http://dx.doi.org/10.1016/j.matchemphys.2014.04.010> (IF = 2.129)

**EE52.** Alves R.; Silva M. M., "The influence of glicerol and formaldehyde in gelatin-based polymer electrolytes", *Molecular Crystals & Liquid Crystals*, 2014, 591(1): 64-73. <http://dx.doi.org/10.1080/15421406.2013.822739> (FI13 = 0.491)

**EE47/HC35** - Kuźniarska-Biernacka I., Parpot P., Oliveira C., Silva A. R., Alves M. J., Fonseca A. M., Neves I. C. "Norbornene Oxidation by Chiral Complexes Encapsulated in NaY Zeolite", *J. Phys. Chem. C*, 2014, 118 (33):19042–19050. <http://dx.doi.org/10.1021/jp5031812> (IF13=4.835)

**EE48/HC36** - Neto, M.J.; Leones, R.; Sentanin, F.; Esperança, J.M. S. S.; Medeiros, M.J.; Pawlicka, A.; Silva, M.M.; Ionic liquids for solid-state electrolytes and electrosynthesis, *J. Electroanal. Chem.*, 2014, 714–715, 63–69, <http://dx.doi.org/10.1016/j.jelechem.2013.12.013> (IF = 2.871)

**EE49/HC34**- Araújo, Rui F.; Proença, Fernanda; Silva, Carlos J.; Paiva, Conceição; Villar-Rodil, Silvia; Tascón, Juan M, "The solvent effect on the sidewall functionalization of multi-walled carbon nanotubes with maleic anhydride" *Carbon*, 2014, 78, 401-414. <http://dx.doi.org/10.1016/j.carbon.2014.07.019> (IF2013=6.16)

**EE50-HC37.** Araújo, R. F.; Proença, M. F.; Silva, C. J.; Paiva, M. C.; Villar-Rodil, S.; D. Tascón J. M.; "The solvent effect on the sidewall functionalization of multi-walled carbon nanotubes with maleic anhydride", *Carbon*, 78 (2014) 401-414 <http://dx.doi.org/10.1016/j.carbon.2014.07.019> (IF = 6.160)

**EE51/BC13**- Mesquita C.S., Oliveira R., Bento F., Geraldo D., Rodrigues J.V., Marcos J.C. "Simplified 2,4-dinitrophenylhydrazine spectrophotometric assay for quantification of carbonyls in oxidized proteins." *Analytical Biochemistry*, 2014, 458, 69-71. <http://dx.doi.org/10.1016/j.ab.2014.04.034> (IF:2013=2.305)

**HC** (26HC+7HC/AA+3HC/EE=36)



- HC1** - Sousa, Cristina E.; Mendes, Raquel R.; Costa, Flora T.; Duarte, Vera C.M.; Gil Fortes A.; Alves, Maria José "Synthesis of Iminosugars from Tetroses" *Curr. Org. Synth.*, 2014, 11, 182-203. <http://dx.doi.org/10.2174/15701794113106660074> (IF2013: 2.439)
- HC2** - Mendes, Raquel R.; Duarte, Vera C. M.; Gil Fortes, A. Alves, Maria J. "Synthesis and evaluation of alpha-, beta-glucosidase inhibition of 1-N-carboxamide-1-azafagomines and 5-epi-1-azafagomines", *Carbohydrate Res.*, 2014, 395, 52-57. <http://dx.doi.org/10.1016/j.carres.2014.06.015> (IF2013: 1.966)
- HC3** - Duarte, Vera C. M.; Gil Fortes, A.; Alves, Maria J. "Enantioselective Diels-Alder Cycloadditions in the Synthesis of Two Enantiomeric Sets of Chiral Polyhydroxylated Pipecolic Acid Derivatives" *Synlett*, 2014, 25, 1751-1755. . <http://dx.doi.org/10.155/s-0034-1378227> (IF2013: 2.463)
- HC4** - Riaz, Sadaf; Ullah Khan, Islam; Yar, Muhammad; Ashraf, Muhammad; Tanzeel, Ur Rehman; Shaukat, Ayesha; Jamal, Syed Babar; Duarte, Vera C.M.; Alves, Maria J. "Novel pyridine-2,4,6-tricarbohydrazide derivatives: Design, synthesis, characterization and in vitro biological evaluation as alpha- and beta-glucosidase inhibitors" *Bioorg. Chem.* 2014, 57, 148-154. <http://dx.doi.org/10.1016/j.bioorg.2014.10.007> (IF2013: 2.141)
- HC5**- Garcia-Amorós, J.; Reig, M.; Castro, M. C. R.; Cuadrado, A.; Raposo, M. M. M.; Velasco, D., "Molecular photo-oscillators based on highly accelerated heterocyclic azo dyes in nematic liquid crystals", *Chem. Comm.* 2014, 50: 6704-6706. <http://dx.doi.org/10.1039/c4cc01450b> (IF2013=6,718)
- HC6**- Wojciechowski, A.; Raposo, M. M. M.; Castro, M. C. R.; Kuznik, W.; Fuks-Janczrek, I.; Bureš, F.; Kityk, I. V. "Nonlinear optical materials formed by push-pull (bi)thiophene derivatives functionalized with di(tri)cyanovinyl acceptor groups", *J. Mater. Sci: Mater. Electron.* 2014, 25:1745-1750. <http://dx.doi.org/10.1007/s10854-014-1793-6> (IF2013=1.966)
- HC7**- Ribeiro, Ana I.; Gabriel, Carla; Cerqueira, Fátima; Maia, Marta; Pinto, Eugénia; Sousa, João C.; Medeiros, Rui; Proença, M. Fernanda; Dias, Alice M. "Synthesis and antimicrobial activity of novel 5-aminoimidazole-4-carboxamidrazones", *Bioorg. Med. Chem. Lett.*, 2014, 24, 4699–4702. <http://dx.doi.org/10.1016/j.bmcl.2014.08.025> (IF: 2.331), <http://hdl.handle.net/1822/31692>
- HC8**- Rocha, Ashly; Bacelar, Ana H.; Joana Fernandes, Joana; Proença, M. Fernanda; Carvalho, M. Alice "6-Carbohydrazonamidepurines: Convenient Precursors for 4,8-Disubstituted Pyrimido[5,4-d]pyrimidines", 2014, *Synlett*, 343. <http://dx.doi.org/10.1055/s-0033-1340344> (IF2013=2.463)
- HC9** - Correia, Carla; Leite, Cláudia; Proença, M. Fernanda; Carvalho, M. Alice "Synthesis and radical scavenging activity of phenol-imidazole conjugates" 2014, *Bioorg. Med. Chem. Lett.*, 2768-2772. <http://dx.doi.org/10.1016/j.bmcl.2014.04.026> (IF2013=2.331)
- HC10**- Gama, José B.; Ohlmeier, Steffen; Martins, Teresa G.; Fraga, Alexandra G.; Sampaio-Marques, Belém; Carvalho, Maria A.; Proença, Fernanda; Silva, Manuel T.; Pedrosa, Jorge ; Ludovico, Paula "Proteomic analysis of the action of the Mycobacterium ulcerans toxin mycolactone: targeting host cells

cytoskeleton and collagen", 2014, PLOS Neglected Tropical Diseases, 8 (8), e3066.  
<http://dx.doi.org/10.1371/journal.pntd.0003066> (IF2013=4.489)

**HC11**- Boot, Arnoud; Brito, Alexandra; van Wezel, Tom; Morreau, Hans; Costa, Marta; Proença, Fernanda, "Anticancer activity of novel pyrido[2,3-b]indolizine derivatives: the relevance of phenolic substituents", *Anticancer Research*, 2014, Apr; 34(4):1673-7. (IF2013=1.872)

PMID: 24692696 [PubMed - indexed for MEDLINE]

**HC12**- Costa, Marta; Rodrigues, Ana; Proença, Fernanda, "Synthesis of 3-aminochromenes: the Zincke reaction revisited" *Tetrahedron*, 2014, 70, 4869-4875 (IF2013=2.817)

<http://dx.doi.org/10.1016/j.tet.2014.05.074>

**HC13** - Areias, Filipe; Proença, Fernanda, "A base-catalyzed cascade route to phenolic 6-cyanopurines via O-alkylformamidoximes", *Synlett*, 2014, 2014, 25(18), 2595-2598 (IF=2.463)

<http://dx.doi.org/10.1055/s-0034-1379237>

**HC14** - Heleno, Sandrina A.; Ferreira, Isabel C.F.R.; Calhelha, Ricardo C.; Esteves, Ana P.; Martins, Anabela; Queiroz, Maria João R.P.; "Cytotoxicity of *Coprinopsis atramentaria* extract, organic acids and their synthesized methylated and glucuronate derivatives" *Food Res. Int.* 2014, 55, 170-175. (IF13 = 3.050) <http://dx.doi.org/10.1016/j.foodres.2013.11.012>

**HC15** – Pereira, Carla; Calhelha, Ricardo C.; Barros, Lillian; Queiroz, Maria João R.P.; Ferreira, Isabel C.F.R.; "Synergisms in antioxidant and anti-hepatocellular carcinoma activities of artichoke, milk thistle, and borututu syrups" *Ind. Crop. Prod.*, 2014, 52, 709-713

<http://dx.doi.org/10.1016/j.indcrop.2013.11.050> (IF13= 3.208)

**HC16** – Guimarães, Rafaela; Barros, Lillian; Calhelha, Ricardo C.; Carvalho, Ana Maria; Queiroz, Maria João R.P.; Ferreira, Isabel C.F.R.; "Bioactivity of different enriched phenolic extracts of wild fruits from Northeastern Portugal: A comparative study" *Plant Food Hum. Nutr.* 2014, 69, 37-42.

<http://dx.doi.org/10.1007/s11130-013-0394-5> (IF2013 = 2.416).

**HC17** – Dias, Maria Inês; Barreira, João C.M.; Calhelha, Ricardo C.; Queiroz, Maria-João R.P.; Oliveira, M. Beatriz P.P.; Soković, Marina; Ferreira, Isabel C.F.R.; Two-dimensional PCA highlights the differentiated antitumor and antimicrobial activity of methanolic and aqueous extracts of *Laurus nobilis* L. from different origins. *Biomed Res. Int.*, 2014, Article ID 520464, 10 pages. (IF2013=2.706)

<http://dx.doi.org/10.1155/2014/520464> <http://hdl.handle.net/10198/9868>

**HC18** - Calhelha, Ricardo C.; Peixoto, Daniela; Vilas Boas, Miguel; Queiroz, Maria-João R. P.; Ferreira, Isabel C.F.R.; "Antioxidant activity of aminodiarlamines in the thieno[3,2-b]pyridine series: radical scavenging activity, lipid peroxidation inhibition and redox profile" *J. Enzym. Inhib. Med. Chem.*, 2014, 29, Ed: 3, 311-316. <http://dx.doi.org/10.3109/14756366.2013.777718> (IF2013= 2.383)

**HC19** - Rodrigues, A.R.O.; Carvalho, M.S.D.; Cardoso, J.A.V.; Calhelha, R.C.; Queiroz, M.-J.R.P.; Coutinho, P.J.G.; Castanheira, E.M.S.; "Benzothienoquinolines: new one-pot synthesis and fluorescence

studies of their interaction with DNA and polynucleotides” J. Photochem. & Photobiol., A: Chemistry 2014, 294, 20-30. (IF13=2.291) <http://dx.doi.org/10.1016/j.jphotochem.2014.08.001>

Repositório UM <http://hdl.handle.net/1822/30740>

**HC20** - Calhela, Ricardo C.; Falcão, Soraia; Queiroz, Maria João R.P.; Vilas-Boas, Miguel; Ferreira, Isabel C. F. R.; Cytotoxicity of Portuguese Propolis: The Proximity of the In Vitro Doses for Tumor and Normal Cell Lines, BioMed Res. Int., 2014, vol. 2014, Article ID 897361, 7 pages. <http://dx.doi.org/10.1155/2014/897361> <http://hdl.handle.net/10198/10152> (IF2013 = 2.706)

**HC21** – Pereira, Carla; Barreira, João C.M.; Calhela, Ricardo C.; Queiroz, Maria João R.P.; Barros, Lillian; Ferreira, Isabel C.F.R.; “New insights on the effects of formulation type and compositional mixtures over the antioxidant and cytotoxic activities of dietary supplements based-on hepatoprotective plants” Food & Function, 5, 2052-2060. <http://dx.doi.org/10.1039/c4fo00387> (IF13 = 2.907)

**HC22** - Caroch, Márcio; Calhela, Ricardo C.; Queiroz, Maria-João R.P.; Bento, Albino; Morales, Patricia; Soković, Marina; Ferreira, Isabel C.F.R.; “Infusions and decoctions of Castanea sativa flowers as effective antitumor and antimicrobial matrices” Ind. Crop. Prod. 2014, 62, 42-46.

<http://dx.doi.org/10.1016/j.indcrop.2014.08.016> (IF = 3.208)

**HC23** - Heleno, Sandrina A.; Ferreira, Isabel C.F.R.; Ćirić, Ana; Glamočlija, Jasmina; Martins, Anabela; Queiroz, Maria-João R.P.; Soković, Marina; “Coprinopsis atramentaria extract, its organic acids and synthesized glucuronated and methylated derivatives as antibacterial and antifungal agents” Food & Function 2014, 5, 2521-2528. <http://dx.doi.org/10.1039/c4fo00490f> (IF13 = 2.907)

**HC24** – Costa, Cátia N. C.; Hortelão, Ana C. L.; Ramos, J. M. F.; Oliveira, A. D. S.; Calhela, Ricardo; C. Queiroz, Maria-João R. P.; Coutinho, Paulo J. G.; Castanheira, Elisabete M. S.; "A New Antitumoral Heteroarylaminothieno[3,2-b]pyridine Derivative: Incorporation in Liposomes and Interaction with Proteins Monitored by Fluorescence" Photochem. Photobiol. Sci. 2014. vol. 13, Edition 12, 1730-1740. (IF13 = 2.939) <http://dx.doi.org/10.1039/C4PP00287C>

Repositório UM <http://hdl.handle.net/1822/30742>

**HC25** - Pinto, Eugenia; Neves, Helena; Hrimpeng, Karnjana; Silva, Ana-Filipa; Begouin, Agathe; Lopes, Graciliana; and Queiroz, Maria-Joao R.P.; “Antimicrobial Activity and Mechanism of Action of New N-heteroaryl-1H-(benz)imidazoles” Mini-Reviews in Medicinal Chemistry, 2014, 14 (11): 941 – 952.

<http://dx.doi.org/10.2174/1389557514666141029225524> (IF13 = 3.186)

**HC26** - Pereira, Carla; Calhela, Ricardo C.; Antonio, Amílcar L.; Queiroz, Maria João R.P.; Barros, Lillian; Ferreira, Isabel C.F.R.; “Effects of gamma radiation on chemical and antioxidant properties, anti-hepatocellular carcinoma activity and hepatotoxicity of borututu” Innov. Food Sci. Emerg. Technol. 2014, 16, 271-277. (IF13=2.248) <http://dx.doi.org/10.1016/j.ifset.2014.05.010>

**HC27/AA16** – Francisco Carla S.; Rodrigues Lígia R.; Cerqueira Nuno M.F.S.A.; Oliveira-Campos Ana M.F.; Esteves Ana P. "Novel benzopsoralen analogues: Synthesis, biological activity and molecular docking

studies", *Eur. J. Med. Chem.* 2014, 87, 298-305 <http://dx.doi.org/10.1016/j.ejmech.2014.09.066> (IF2013=3.432)

**HC28/AA10**- Batista, R. M. F.; Costa, S. P. G.; Silva, R. M. P.; Lima, N. E. M.; Raposo, M. M. M. "Synthesis and evaluation of arylfuryl-bis(indolyl)methanes as selective chromogenic and fluorogenic ratiometric receptors for mercury ion in aqueous solution", *Dyes Pigments* 2014, 102:293–300. <http://dx.doi.org/10.1016/j.dyepig.2013.11.008> (IF2013=3.468)

**HC29/AA11**- Batista, R. M. F.; Costa, S. P. G.; Raposo, M. M. M. "Selective colorimetric and fluorimetric detection of cyanide in aqueous solution using novel heterocyclic imidazo-anthraquinones", *Sensors Actuators B: Chem* 2014, 191:791-799. <http://dx.doi.org/10.1016/j.snb.2013.10.030> (IF2013=3.840)

**HC30/AA12**- Batista, R. M. F.; Oliveira, E.; Costa, S. P. G.; Lodeiro, C.; Raposo, M. M. M., "Cyanide and fluoride colorimetric sensing by novel imidazo-anthraquinones functionalized with indole and carbazole", *Supramol. Chem.* 2014, 26:71-80. <http://dx.doi.org/10.1080/10610278.2013.824082> (IF2013=2.132)

**HC31/AA13**- Oliveira, E.; Batista, R. M. F.; Costa, S. P. G.; Raposo, M. M. M.; Lodeiro, C. "Synthesis and solvatochromism studies of novel bis(indolyl)methanes bearing functionalized arylthiophene groups as new colored materials", *Photochem. Photobiol. Sci.* 2014, 13:492-498. <http://dx.doi.org/10.1039/C3PP50352F> (IF13=2.939)

**HC32/AA14**- Baptista, R. M. F.; Isakov, D.; Raposo, M. M. M.; Belsley, M.; Bdikin, I.; Kholkin, A. L.; Costa, S. P. G., de Matos Gomes, E. "Ferroelectric nanofibers with an embedded optically nonlinear benzothiazole derivative", *J. Nanopart. Res.* 2014, 16:2502. <http://dx.doi.org/10.1007/s11051-014-2502-3> (IF13=2.278)

**HC33/AA15**- Marin-Hernandez, C.; Santos-Figueroa, L.; Moragues, E. M. E.; Raposo, M. M. M.; Batista, R. M. F.; Costa, S. P. G.; Pardo, T.; Martínez-Mañez, R.; Sancenón, F., "Imidazo-anthraquinone derivatives for the chromo-fluorogenic sensing of basic anions and trivalent metal cations", *J. Org. Chem.* 2014, 79:10752-10761. <http://dx.doi.org/10.1021/jo501515e> (IF13=4.638)

**HC34/EE49**- Araújo, Rui F.; Proença, Fernanda; Silva, Carlos J.; Paiva, Conceição; Villar-Rodil, Silvia; Tascón, Juan M, "The solvent effect on the sidewall functionalization of multi-walled carbon nanotubes with maleic anhydride" *Carbon*, 2014, 78, 401-414. <http://dx.doi.org/10.1016/j.carbon.2014.07.019> (IF2013=6.16)

**HC35/EE47**- Kuźniarska-Biernacka, I; Parpot, P.; Oliveira, C.; Silva, A.R.; Alves, M.J.; Fonseca, A.M.; Neves, I.C "Norbornene Oxidation by Chiral Complexes Encapsulated in NaY Zeolite", *J. Phys. Chem. C* 2014, 118, (33), 19042-19050. <http://dx.doi.org/10.1021/jp5031812> (IF2013: 4.835)

**HC36/EE48** - Neto, M.J.; Leones, R.; Sentanin, F.; Esperança, J.M. S. S.; Medeiros, M.J.; Pawlicka, A.; Silva, M.M.; [Ionic liquids for solid-state electrolytes and electrosynthesis], *J. Electroanal. Chem.*, 2014, 714–715, 63–69, <http://dx.doi.org/10.1016/j.jelechem.2013.12.013> (IF = 2.871)

**HC37/EE50**- Araújo, R. F.; Proença, M. F.; Silva, C. J.; Paiva, M. C.; Villar-Rodil, S.; D. Tascón J. M.; "The solvent effect on the sidewall functionalization of multi-walled carbon nanotubes with maleic anhydride", Carbon, 78 (2014) 401-414 <http://dx.doi.org/10.1016/j.carbon.2014.07.019> (IF = 6.160)

### Accepted

**EE** - Ferreira M., Pinto M.F., Neves I.C., Fonseca A.M., Soares O.S.G.P., Órfão J.J.M., Pereira M.F.R., Figueiredo J.L., Parpot P., "Electrochemical oxidation of aniline at mono and bimetallic electrocatalysts supported on carbon nanotubes", Chem. Eng. J., 2015, 260:309–315. <http://dx.doi.org/doi:10.1016/j.cej.2014.08.005> (IF13=4.058)

**HC** - Dias, Alice M.; Ferreira, M. La Salette "Supermarket Column Chromatography of Leaf Pigments" Revisited: Simple and Ecofriendly Separation of Plant Carotenoids, Chlorophylls, and Flavonoids from Green and Red Leaves", J. Chem. Educ., <http://dx.doi.org/10.1021/ed500299j> (IF: 1.001) <http://hdl.handle.net/1822/32008> Publication Date (Web): November 14, 2014.

**HC/EE** – Durães, C.; Lombard, J.; Pereira, S.; Esteves, A. P. Medeiros, J. M. "Synthesis of Five-Membered Heterocycles by Indirect Electrochemical Approach in "Green" Media", J. Electrochem. Soc. 2015, 162, G1-G7 <http://dx.doi.org/10.1149/2.1031414jes> (IF=2,859)

**HC/EE**- Gusmão, Rui; López-Puente, Vanesa; Pastoriza-Santos, Isabel; Pérez-Juste, Jorge; Proença, M. Fernanda; Bento, Fátima; Geraldo, Dulce; Paiva, Conceição; González-Romero, Elisa; "Enhanced electrochemical sensing of polyphenols by oxygen-mediated surface" RSC Adv., 2014.

## 2. Artigos em revistas nacionais

**EE** - Oliveira, C., "Dialogue between Chemistry and archaeology – Gas chromatographic analysis of ceramic artifacts" Química, Boletim da Sociedade Portuguesa de Química, 134:51-58. [http://periodicos.spq.pt/Boletim/BSPQ\\_N134/BSPQ\\_N134.pdf](http://periodicos.spq.pt/Boletim/BSPQ_N134/BSPQ_N134.pdf).

**EE2**. Figueira, R. B.; Pereira, E. V.; Silva, C. J.R.; Salta, M. M., "Corrosion of Hot-dip Galvanized Steel reinforcement", Corrosão e Protecção de Materiais, 33 (3) (2014) 51-61

**EE3**. Costa, M. L. C. S.; Silva, C. J.R.; Cruz-Santos, A., "Desenvolvimento do Jogo Didático "Corrida da Química"", Química – Boletim da Sociedade Portuguesa de Química, 134 (2014) 71-76

## 3. Actas de Congressos Internacionais

**AA** (4AA/HC=4)

**AA1/HC4** Batista, R. M. F.; Raposo, M. M. M.; Costa, S. P. G., "Synthesis and Evaluation of an Imidazo-Benzocrown Ether Functionalised Amino Acid as a new Fluorimetric Chemosensor for Metal Ion Detection", Proceedings of the 17th Int. Electron. Conf. Synth. Org. Chem., b004; Sciforum Electronic Conference Series, Vol. 17; Seijas, J. A.; Tato, M. P. V. and Lin, S.-K. (Eds), MDPI, Basel, Switzerland, 2014 (ISBN: 3-906980-46-0). <http://dx.doi.org/10.3390/ecsoc-17-b004>

**AA2/HC5** Esteves, C. I. C.; Raposo, M. M. M.; Costa, S. P. G., "Amino Acids Based on 2,4,5-Triarylimidazoles: Synthesis and Evaluation as new Chemosensors for Ion Recognition", Proceedings of the 17th Int. Electron. Conf. Synth. Org. Chem., b015; Sciforum Electronic Conference Series, Vol. 17; Seijas, J. A.; Tato, M. P. V. and Lin, S.-K. (Eds), MDPI, Basel, Switzerland, 2014 (ISBN: 3-906980-46-0). <http://dx.doi.org/10.3390/ecsoc-17-b015>.

**AA3/HC6** Ferreira, R. C. M.; Batista, R. M. F.; Costa, S. P. G.; Raposo, M. M. M., "Synthesis and Photophysical Characterization of Novel Tri-(hetero)Arylimidazoles", Proceedings of the 17th Int. Electron. Conf. Synth. Org. Chem., a042; Sciforum Electronic Conference Series, Vol. 17; Seijas, J. A.; Tato, M. P. V. and Lin, S.-K. (Eds), MDPI, Basel, Switzerland, 2014 (ISBN: 3-906980-46-0). <http://dx.doi.org/10.3390/ecsoc-17-a042>

**AA4/HC7** Lima, N. E.; Batista, R. M. F.; Costa, S. P. G.; Raposo, M. M. M., "Iodine-Catalysed Synthesis of a Novel Meso-Substituted Dipyrrromethane and its Evaluation as a Cation Chemosensor", Proceedings of the 17th Int. Electron. Conf. Synth. Org. Chem., a002; Sciforum Electronic Conference Series, Vol. 17; Seijas, J. A.; Tato, M. P. V. and Lin, S.-K. (Eds), MDPI, Basel, Switzerland, 2014 (ISBN: 3-906980-46-0). <http://dx.doi.org/10.3390/ecsoc-17-a002>

## **BC** (1BC+EE)

**EE8/BC1**. Gregory, M.; Sarmiento, B.; Duarte, S.; Martins, J. A.; Silva, C.; Coutinho, O.; Dias, A. "Curcumin loaded MPEG-PCL di-block copolymer nanoparticles protect glioma cells from oxidative damage", *Planta Med.* 2014; 80 - P2N13 (Book of Abstracts 62nd International Congress and Annual Meeting of the Society of Medicinal Plant and Natural Product Research (Alberto Dias and Paulo Silva, eds) Guimarães, Portugal, 31. August – 4. September 2014)

<http://dx.doi.org/10.1055/s-0034-1394833>

## **EE** (5EE+1EE/HC)

**EE1** - Leones R.; Sentanin F.; Esperança J. M. S. S.; Pawlicka A.; de Zea Bermudez V.; Silva M. M., "Chitosan And Ionic Liquid Based Solid Polymer Electrolytes: The Anion Alkyl Chain Length Effect", *ECS Transactions*, 2014, 61(14): 51-59. <http://dx.doi.org/10.1149/06114.0051ecst>

**EE2** - Fernandes M.; Botas A. M. P.; Leones R.; Pereira S.; Silva M. M.; Ferreira R. A. S.; Carlos L. D.; Fortunato E.; Rego R.; de Zea Bermudez V., "Luminescent electrochromic device based on a biohybrid electrolyte doped with a mixture of potassium triflate and europium  $\beta$  - diketonate complex", ECS Transactions, 2014, 61(5): 213-225. <http://dx.doi.org/10.1149/06105.0213ecst>

**EE3**- Gregory, M.; Sarmiento, B.; Duarte, S.; Martins, J. A.; Silva, C.; Coutinho, O.; Dias, A. "Curcumin loaded MPEG-PCL di-block copolymer nanoparticles protect glioma cells from oxidative damage", Planta Med. 2014; 80 - P2N13 (Book of Abstracts 62nd International Congress and Annual Meeting of the Society of Medicinal Plant and Natural Product Research (Alberto Dias and Paulo Silva, eds) Guimarães, Portugal, 31. August – 4. September 2014)

<http://dx.doi.org/10.1055/s-0034-1394833>

**EE4**. Fontinha, R.; Salta, M. M.; Zheludkevich, M. L.; Ferreira, M. G. S.; Figueira, R. B.; Pereira, E. V.; Silva, C. J. R., "Influence of pH on the corrosion protection of epoxy-silica-zirconia sol-gel coatings applied on EN AW-6063 aluminium alloy", ECS Trans. 2014, 58(38): 9-16

<http://dx.doi.org/10.1149/05838.0009ecst>

**EE5**. Figueira, R.M.; Silva, C. J. R.; Pereira, E. V., "Electrochemical Evaluation of Hot-Dip Galvanized Steel (HDGS) Coated with Organic-Inorganic Hybrid Sol-Gel in Cementitious Materials", ECS Trans. 2014, 58(38): 71-79 <http://dx.doi.org/10.1149/05838.0071ecst>

**EE6**. Fontinha, R.; Salta, M. M.; Zheludkevich, M. L.; Ferreira, M. G. S.; Figueira, R. B.; Pereira, E. V.; Silva, C. J. R., "Influence of pH on the corrosion protection of epoxy-silica-zirconia sol-gel coatings applied on EN AW-6063 aluminium alloy", ECS Trans. 2014, 58(38): 9-16

<http://dx.doi.org/10.1149/05838.0009ecst>

**EE7**. Figueira, R.M.; Silva, C. J. R.; Pereira, E. V., "Electrochemical Evaluation of Hot-Dip Galvanized Steel (HDGS) Coated with Organic-Inorganic Hybrid Sol-Gel in Cementitious Materials", ECS Trans. 2014, 58(38): 71-79 <http://dx.doi.org/10.1149/05838.0071ecst>

**EE8/BC1**. Gregory, M.; Sarmiento, B.; Duarte, S.; Martins, J. A.; Silva, C.; Coutinho, O.; Dias, A. "Curcumin loaded MPEG-PCL di-block copolymer nanoparticles protect glioma cells from oxidative damage", Planta Med. 2014; 80 - P2N13 (Book of Abstracts 62nd International Congress and Annual Meeting of the Society of Medicinal Plant and Natural Product Research (Alberto Dias and Paulo Silva, eds) Guimarães, Portugal, 31. August – 4. September 2014)

<http://dx.doi.org/10.1055/s-0034-1394833>

**EE9/HC8** - Neto M. J.; Esperança J. M. S. S.; Esteves A. P.; Medeiros M. J.; Silva M. M., "The study of indirect electroreductive cyclization of propargyl derivatives using  $[\text{Ni}(\text{tmc})]\text{Br}_2$  as catalyst in ionic liquids", ECS Transactions, 2014, 61 (30): 51-55. <http://dx.doi.org/10.1149/06130.0051ecst>

**HC** (3HC+4HC/AA+1HC/EE=8)

**HC1** - Castro, M. C. R.; Coelho, P.; Raposo, M. M. M., Synthesis and characterization of the photochromic properties of new dyes bearing benzothiazole or benzothiazolium acceptor groups. Proceedings of the 17th Int. Electron. Conf. Synth. Org. Chem., a029; Sciforum Electronic Conference Series, Vol. 17; Seijas, J. A.; Tato, M. P. V. and Lin, S.-K. (Eds), MDPI, Basel, Switzerland, 2014 (ISBN: 3-906980-46-0). <http://dx.doi.org/10.3390/ecsoc-17-a029>

**HC2** - Fernandes, S. S. M.; Raposo, M. M. M., Synthesis and characterization of formyl-thienylpyridazines as versatile precursors for several optical applications. Proceedings of the 17th Int. Electron. Conf. Synth. Org. Chem., a038; Sciforum Electronic Conference Series, Vol. 17; Seijas, J. A.; Tato, M. P. V. and Lin, S.-K. (Eds), MDPI, Basel, Switzerland, 2014 (ISBN: 3-906980-46-0). <http://dx.doi.org/10.3390/ecsoc-17-a038>

**HC3**- Marques, A.; Cateto, C.A.; Calhelha, R.; Barros, L.; Queiroz, M.J.R.P.; Belgacem, M.N.; Rodrigues, A.E.; Ferreira, I.C.F.R.; Barreiro, M.F. "Bioactivity evaluation of four technical lignins: Alcell, Indulin-AT, Sarkanda and Curan 27-11P." 12th International Chemical and Biological Engineering Conference (CHEMPOR 2014), September 10-12, 2014, Porto, Portugal. P-BE34; 89-91p.

**HC4/AA1**- Batista, R. M. F.; Raposo, M. M. M.; Costa, S. P. G., "Synthesis and Evaluation of an Imidazo-Benzocrown Ether Functionalised Amino Acid as a new Fluorimetric Chemosensor for Metal Ion Detection", Proceedings of the 17th Int. Electron. Conf. Synth. Org. Chem., b004; Sciforum Electronic Conference Series, Vol. 17; Seijas, J. A.; Tato, M. P. V. and Lin, S.-K. (Eds), MDPI, Basel, Switzerland, 2014 (ISBN: 3-906980-46-0). <http://dx.doi.org/10.3390/ecsoc-17-b004>

**HC5/AA2**- Esteves, C. I. C.; Raposo, M. M. M.; Costa, S. P. G., "Amino Acids Based on 2,4,5-Triarylimidazoles: Synthesis and Evaluation as new Chemosensors for Ion Recognition", Proceedings of the 17th Int. Electron. Conf. Synth. Org. Chem., b015; Sciforum Electronic Conference Series, Vol. 17; Seijas, J. A.; Tato, M. P. V. and Lin, S.-K. (Eds), MDPI, Basel, Switzerland, 2014 (ISBN: 3-906980-46-0). <http://dx.doi.org/10.3390/ecsoc-17-b015>

**HC6/AA3**- Ferreira, R. C. M.; Batista, R. M. F.; Costa, S. P. G.; Raposo, M. M. M., "Synthesis and Photophysical Characterization of Novel Tri-(hetero)Arylimidazoles", Proceedings of the 17th Int. Electron. Conf. Synth. Org. Chem., a042; Sciforum Electronic Conference Series, Vol. 17; Seijas, J. A.; Tato, M. P. V. and Lin, S.-K. (Eds), MDPI, Basel, Switzerland, 2014 (ISBN: 3-906980-46-0). <http://dx.doi.org/10.3390/ecsoc-17-a042>

**HC7/AA4**- Lima, N. E.; Batista, R. M. F.; Costa, S. P. G.; Raposo, M. M. M., "Iodine-Catalysed Synthesis of a Novel Meso-Substituted Dipyrromethane and its Evaluation as a Cation Chemosensor", Proceedings of the 17th Int. Electron. Conf. Synth. Org. Chem., a002; Sciforum Electronic Conference Series, Vol. 17; Seijas, J. A.; Tato, M. P. V. and Lin, S.-K. (Eds), MDPI, Basel, Switzerland, 2014 (ISBN: 3-906980-46-0). <http://dx.doi.org/10.3390/ecsoc-17-a002>



**HC8/EE9** - Neto M. J.; Esperança J. M. S. S.; Esteves A. P.; Medeiros M. J.; Silva M. M., "The study of indirect electroreductive cyclization of propargyl derivatives using [Ni(tmc)]Br<sub>2</sub> as catalyst in ionic liquids", ECS Transactions, 2014, 61 (30): 51-55. <http://dx.doi.org/10.1149/06130.0051ecst>

#### 4. Actas de Congressos nacionais

**EE1.** Silva, C, J. R., Moreira, S.; Gomes, M. J. M; M. Costa, M. F., "Characterization of optical and electrical properties of organic-inorganic hybrid gels doped with Au nanoparticles", COST Action MPO901 - NanoTP, Final Scientific Meeting, IMN, Nantes, France, 2-5 April, 2014

**EE2.** Figueira, R.M.; Silva, C. J. R.; Pereira, E. V.; Salta, M. M., "Electrochemical evaluation of hot-dip galvanized steel (HDGS) coated with organic-inorganic hybrid (OIH) materials in simulated concrete pore solutions, HINT COST Action MP1202 - HINT Meeting, Turku (Finland) 16-19 June 2014.

**EE3.** Figueira, R.M.; Silva, C. J. R.; Pereira, E. V., "Ureasilicate hybrid coatings for corrosion protection of galvanized steel in chloride-contaminated simulated concrete pore solution – HINT Scientific Workshop on Applications of Hybrid Materials Interfaces", COST Action MP1202 - HINT Workshop, 15-17 September 2014, Istanbul, Turkey.

**EE4.** Campos, A. L. C.; Silva, C. J. R.; Gomes M. J. M., "Síntese de agregados de nanopartículas de óxido de ferro num fluido e observação das propriedades magnéticas, 3º Simposio Iberoamericano de Divulgación y Formación en Nanotecnología", NANODYF '2014, San José, Costa Rica, 4-8 August, 2014.

**EE5/BC1.** Gregory, M.; Sarmiento, B.; Duarte, S.; Martins, J. A.; Silva, C.; Coutinho, O.; Dias, A., "Curcumin loaded MPEG-PCL di-block copolymer nanoparticles protect glioma cells from oxidative damage", 62nd International Congress and Annual Meeting of the Society of Medicinal Plant and Natural Product Research, Guimarães, Portugal, 31 August – 4 September, 2014

#### 5. Comunicações em congressos internacionais

**AA** (9AA+4AA/HC=13)

**AA1-** Santos, F.; Gonçalves, M. S. T.; Costa, S. P. G., "Spectroscopic Characterization of a Coumarin-Labelled Therapeutic Tetrapeptide", 18th Int. Electron. Conf. Synth. Org. Chem., 1-30 November 2014; Sciforum Electronic Conference Series, Vol. 18, 2014, b018. <http://dx.doi.org/10.3390/ecsoc-18-b018>

**AA2-** Soares, A. M. S.; Fonseca, A. S. C.; Costa, S. P. G.; Gonçalves, M. S. T., "A Novel Photoresponsive Benzoquinolone: Evaluation of the Release of Model Amino Acids", 18th Int. Electron. Conf. Synth. Org. Chem., 1-30 November 2014; Sciforum Electronic Conference Series, Vol. 18, 2014, a033. <http://dx.doi.org/10.3390/ecsoc-18-a033>

- AA3**- Soares, A. M. S.; Costa, S. P. G.; Gonçalves, M. S. T., "Benzoxazole Derivatives as Phototriggers for the Release of Butyric Acid", 18th Int. Electron. Conf. Synth. Org. Chem., 1-30 November 2014; Sciforum Electronic Conference Series, Vol. 18, 2014, a034. <http://dx.doi.org/10.3390/ecsoc-18-a034>
- AA4** - Raju, B. R.; Ribeiro, G. M.; Coutinho, P. J. G.; Gonçalves, M. S. T., "Synthesis and photophysics of new benzophenoxazine derivatives fused with julolidine", a036, 18th Int. Electron. Conf. Synth. Org. Chem., <http://www.sciforum.net/conference/ecsoc-18/>, 1-30 novembro 2014
- AA5** - Leitão, M. I.; Raju, B. R.; Sousa, M. J.; Gonçalves, M. S. T., "Evaluation of newly synthesised benzo[a]phenoxazinium chlorides as fluorescent probes using *Saccharomyces Cerevisiae* as model organism", b021, 18th Int. Electron. Conf. Synth. Org. Chem., <http://www.sciforum.net/conference/ecsoc-18/>, 1-30 novembro 2014.
- AA6** - Leitão, M. I.; Raju, B. R.; Sousa, M. J.; Gonçalves, M. S. T., "Antiproliferative activity of 2,3,6,7-tetrahydro-1H-benzo[a]quinolizino[1,9-hi]phenoxazin-14(5H)-iminium chloride derivatives", b027, 18th Int. Electron. Conf. Synth. Org. Chem., <http://www.sciforum.net/conference/ecsoc-18/>, 1-30 novembro 2014.
- AA7** - Conceição, R. C. O.; Gonçalves, M. S. T.; Costa, S. P. G., "Photorelease of neurotransmitter amino acids from coumarin derivatives", QS43, XX Encontro Luso-Galego de Química, Porto, Portugal, 26- 28 novembro 2014.
- AA8** - Santos, F. C.; Gonçalves, M. S. T.; Costa, S. P. G., "A photolabile prodrug of tetrapeptide AAPV bearing 7-methoxycoumarin at the C-terminal", QS30, XX Encontro Luso-Galego de Química, Porto, Portugal, 26-28 novembro 2014.
- AA9** - Leitão, M. I.; Raju, B. R.; Sousa, M. J.; Gonçalves, M. S. T., "Synthesis, photophysical properties and structure–activity relationship studies of novel benzo[a]phenoxazinium chlorides", QS47, XX Encontro Luso-Galego de Química, Porto, Portugal, 26-28 novembro 2014.
- AA10/HC10**- Esteves, C. I. C.; Rosa, M. M. F.; Raposo, M. M. M.; Costa, S. P. G., "Synthesis and Ion Recognition Studies of Novel Benzimidazol-5-yl-L-Alanines", 18th Int. Electron. Conf. Synth. Org. Chem., 1-30 November 2014; Sciforum Electronic Conference Series, Vol. 18, 2014, b002. <http://dx.doi.org/10.3390/ecsoc-18-b002>
- AA11/HC11**- Ferreira, R. C. M.; Costa, S. P. G.; Raposo, M. M. M., "Synthesis, Characterization and Evaluation of Fluorimetric Chemosensors for Ions Based on Diphenylimidazole Derivatives", 18th Int. Electron. Conf. Synth. Org. Chem., 1-30 November 2014; Sciforum Electronic Conference Series, Vol. 18, 2014, b012. <http://dx.doi.org/10.3390/ecsoc-18-b012>
- AA12/HC12**- Batista, R. M. F.; Costa, S. P. G.; Raposo, M. M. M., "UV-vis spectroscopic characterization of heterocyclic azines as colorimetric chemosensors for metal ion detection", 18th Int. Electron. Conf. Synth. Org. Chem., 1-30 November 2014; Sciforum Electronic Conference Series, Vol. 18, 2014, b005. <http://dx.doi.org/10.3390/ecsoc-18-b005>

**AA13/HC13**- Raposo, M. M. M.; Batista, R. M. F.; Kuźniarska-Biernacka, I.; Costa, S. P. G.; Fonseca, A. M. C.; Neves, I. C., “Synthesis and photophysical characterization of heterocyclic azines and the corresponding copper complexes as versatile compounds for optical applications”, P220, XXVth IUPAC Symposium on Photochemistry, Bordeaux, France, 13-18 July 2014.

**BC** (1BC)

**BC1** - Maria Isabel Prata<sup>1</sup>, Arsénio de Sá, Sérgio P. Rodrigues, Vitor H. Alves, Paula Ferreira, João P André, “<sup>68</sup>Ga labelled RGD peptides for imaging of  $\alpha\beta$  integrin expression in neovasculature”, World Molecular Imaging Congress, Seoul, 17-20 Set 2014 (poster)

**EE** (33EE+1EE/HC=34)

**EE1** - Kuźniarska-Biernacka I., Ferreira M., Soares O.S.G.P., Órfão J.J.M., Pereira M.F.R., Figueiredo J.L., Neves I.C., Fonseca A.M. , Parpot P., “Electrochemical oxidation of Emerging Pollutants with carbon nanotubes supported metal catalysts”, Meeting of International Society of Electrochemistry, Lausanne, Switzerland, 31 August - 5 September, 2014.

**EE2** - Kuźniarska-Biernacka I., Ferreira M., Soares O.S.G.P., Órfão J.J.M., Pereira M.F.R., Figueiredo J.L., Neves I.C., Fonseca A.M., Parpot P., “Electrochemical reduction of nitrate ions in aqueous medium using carbon nanotubes supported metal catalysts”, Meeting of International Society of Electrochemistry, Lausanne, Switzerland, 31 August - 5 September, 2014.

**EE3** - Kuźniarska-Biernacka I., Ferreira M., Soares O.S.G.P., Órfão J.J.M., Pereira M.F.R., Figueiredo J.L., Neves I.C., Fonseca A.M., Parpot P., “ Electrooxidation of emerging pollutants using modified carbon nanotube electrodes in aqueous solution”, 5th EuCheMS Chemistry Congress, Istanbul, Turkey, 31 August - 5 September, 2014.

**EE4** - Lourenço, T.; Oliveira, T.; Ferreira, A. M.; Oliveira, R.; Bento, F.; Geraldo, D.; Almeida Aguiar, C.; Cunha, A. “Antimicrobial and antioxidant properties of propolis ethanolic extracts from Terceira Island (Azores, Portugal)”, 62nd International Congress and Annual Meeting of the Society for Medicinal Plant and Natural Product Research - GA2014; Universidade do Minho, Guimarães, Portugal, 31 august – 4 september 2014.

**EE5** - Pereira, D. S.; Geraldo, M.D.; Siani, A. C.; Tostes, J. B. O.; Mazzei, J. L.; Valente, L. M. M.; “Alkaloid and polyphenolic profiles of Brazilian Uncaria tomentosa leaves”, 62nd International Congress and Annual Meeting of the Society for Medicinal Plant and Natural Product Research - GA2014; Universidade do Minho, Guimarães, Portugal, 31 august – 4 september 2014.

**EE6** - Lourenço, T.; Ferreira, A. M.; Bento, F.; Geraldo, D.; Oliveira, R.; Almeida-Aguiar, C.; Cunha, A.; "Preparação de extratos de própolis dos Açores e avaliação das suas atividades antimicrobiana e antioxidante", III Congresso Ibérico de Apicultura. Mirandela, Portugal, 13-15 abril 2014.

**EE7** - Correia, D. M.; Gonçalves, R.; Ribeiro, C.; Sencadas, V.; Botelho, G.; Gomez Ribelles, J. L.; Lanceros-Méndez, S., "Tailoring poly(vinylidene fluoride) microstructure and dimensionality for tissue engineering applications" 8th International Conference on Polymers Fibers and Biotechnology, Braga, Portugal, 25-27 May. (comunicação oral)

**EE8** - Dias, J.; Magalhães, B.; Martins, M.; Costa, C.M.; Lopes, A.C.; Esperança, J.M.S.S.; Botelho, G.; Silva, M. M.; Lanceros-Méndez, S., "High performance electromechanical actuators based on poly(vinylidene fluoride)/ionic liquid blends" 5th International Conference on Advanced Nanomaterials, Aveiro, Portugal, 2-4 July. (comunicação oral)

**EE9** - Magalhães, B.; Dias, J.; Martins, M.; Lopes, A. C.; Botelho, A. C.; Lanceros-Mendez, S., "Actuators based on electroactive polymers". International Conference of Physical Students 2014, Heidelberg, Germany, 10-17 August. (comunicação oral)

**EE10** - Oliveira, M.; Abreu, A. S.; Rodrigues, P.; Botelho, G.; Machado, A. V., " Synthesis of functional block copolymers by controlled radical polymerization" 8th International Conference on Polymer Modification, Degradation and Stabilization, Portoroz, Eslovénia, 31 August-4 September. (comunicação oral)

**EE11** - Gonçalves, R.; Correia, D.; Martins, P.; Moya, X.; Ghidini, M.; Sencadas, V.; Botelho, G.; Mathur, N.D.; Lanceros Mendez, S., "Magnetolectric CoFe<sub>2</sub>O<sub>4</sub>/polyvinylidene fluoride electrospun nanofibers" 8th International Conference on Polymers Fibers and Biotechnology, Braga, Portugal, 25-27 May (comunicação em painel).

**EE12** - Dias, J.; Correia, D.; Botelho, G.; Lanceros-Méndez, S.; Sencadas, V., "Electrical properties of core-shell polypyrrole/poly(vinylidene fluoride) electrospun fibers" 5th International Conference on Advanced Nanomaterials, Aveiro, Portugal, 2-4 July (comunicação em painel)

**EE13** - Martins, P. M.; Gomez, V.; Lopes, A. C.; Tavares, C.; Botelho, G.; Irusta, S.; Lanceros-Mendez, S., "Improving photocatalytic performance and recyclability by the development of Er- doped and Er/Pr-codoped TiO<sub>2</sub> PVDF-TrFE composite membranes" 5th International Conference on Advanced Nanomaterials, Aveiro, 2-4 July (comunicação em painel)

**EE14** - Botelho, G.; Santos, E.; Araujo, A.; Machado, A. V.; Fehine, G., "Reprocessing of poly(lactic acid): effect on properties" 8th International Conference on Polymer Modification, Degradation and Stabilization, Portoroz, Eslovénia, 31 August-4 September. (comunicação em painel)

**EE15** - Botelho, G.; Salazar, H.; Lima, A. C.; Lopes, A. C.; Lanceros Mendez, S., "Modification of PVDF-TrFE membranes for drug release" 8th International Conference on Polymer Modification, Degradation and Stabilization, Portoroz, Eslovénia, 31 August-4 September. (comunicação em painel)

**EE16** - Correia, D. M.; Gonçalves, R.; Ribeiro, C.; Sencadas, V.; Botelho, G.; Gomez Ribelles, J.L.; Lanceros-Méndez S., "Processing of piezoelectric poly(vinylidene fluoride) electrosprayed microspheres for tissue engineering applications" 2nd International Conference on Bioinspired and Biobased Chemistry & Materials, Nice, France, 14-17 October. (comunicação em painel)

**EE17** - Martins, P. M.; Miranda, R.; Lopes, A. C.; Tavares, C.; Botelho, G.; Lanceros-Mendez, S., "Improving recyclability of photocatalytic TiO<sub>2</sub> by its incorporation into PVDF-TrFE membranes" 2nd International Conference on Bioinspired and Biobased Chemistry & Materials, Nice, France, 14-17 October. (comunicação em painel)

**EE18** - Nunes-Pereira J.; Costa C. M.; Silva M. M.; Lanceros-Méndez S., "Porous membranes based on poly(vinylidene trifluoroethylene) for Li-ion battery applications", 19th Meeting of the Portuguese Electrochemical Society, XVI Iberic Meeting of Electrochemistry, Universidade de Aveiro, Aveiro, Portugal, 30 June to 02 July 2014.

**EE19** - Pereira, R. F. P.; Silva M. M.; de Zea Bermudez V., "Silk fibroin based multifunctional materials", 8th International Conference on Polymer and Fiber Biotechnology, Braga, Portugal, 25 - 27 May 2014.

**EE20** - Barros S. C.; Silva A. A.; Costa D. B.; Costa C. M.; Lanceros-Mendez S.; Cesarino I.; Sentanin F.; Pawlicka A.; Silva M. M., "Thermo-sensitive chitosan-(hydroxypropyl)methyl cellulose hydrogels: swelling, thermal and morphologic behaviour", 8th International Conference on Polymer and Fiber Biotechnology, Braga, Portugal, 25 - 27 May 2014.

**EE21** - Leones R.; Esperança J. M. S. S.; de Zea Bermudez V.; Silva M. M., "Chitosan and Ionic Liquid Based Solid Polymer Electrolytes: The Anion Alkyl Chain Length Effect", 225th ECS Meeting, Orlando, Florida, E.U.A., 11 - 16 May 2014.

**EE22** - Leones R.; Costa C. M.; Machado A. V.; Esperança J. M. S. S.; Silva M. M.; Lanceros-Méndez S., "Solid Polymer Electrolytes Based on Poly(vinylidene fluoride-trifluoroethylene) and the [N1 1 1 2(OH)][NTf<sub>2</sub>] Ionic Liquid for Energy Storage Applications", 225th ECS Meeting, Orlando, Florida, E.U.A., 11 - 16 May 2014.

**EE23** - Fernandes M.; A. M. P. Botas A. M. P.; Leones R.; Pereira S.; Silva M. M.; Ferreira R. S.; Carlos L. D.; Fortunato E.; Rego R.; de Zea Bermudez V., "Luminescent Electrochromic Device Based on a Biohybrid Electrolyte Doped with a Mixture of Potassium Triflate and a Europium  $\beta$ -diketonate Complex", 225th ECS Meeting, Orlando, Florida, E.U.A., 11 - 16 May 2014.

**EE24** - Costa C. M.; Leones R.; Machado A. V.; Esperança J. M. S. S.; Silva M. M.; Lanceros-Méndez S., "Effect of ionic liquid anion type in the performance of solid polymer electrolytes based on poly(vinylidene fluoride-trifluoroethylene)", ECS & SMEQ Joint International Meeting, Cancun, Mexico, 5 - 9 Oct 2014.

**EE25** - Sousa R. E.; Nunes-Pereira J.; Costa C. M.; Silva M. M.; Lanceros-Méndez S.; Hassoun J.; Scrosati B.; Appetecchi G. B., "Influence of the degree of porosity of poly(vinylidene fluoride-co-hexafluoropropylene) separator membranes in the performance of Li-ion batteries", 19th Meeting of the

Portuguese Electrochemical Society, XVI Iberic Meeting of Electrochemistry, Universidade de Aveiro, Aveiro, Portugal, 30 June to 02 July 2014.

**EE26** - Gören A.; Costa C. M.; Silva M. M.; Lanceros-Méndez S., "Influence of drying conditions on cathode characteristics and performance for battery applications", 19th Meeting of the Portuguese Electrochemical Society, XVI Iberic Meeting of Electrochemistry, Universidade de Aveiro, Aveiro, Portugal, 30 June to 02 July 2014.

**EE27** - Pereira, R. F. P.; Silva M. M.; de Zea Bermudez V., "From silk fibers to multifunctional hybrid materials", E-MRS Spring Meeting, Congress Center - Lille, France, 27 - 29 May 2014.

**EE28** - Landi, M.; Araújo, A.; Costa, F.; Oliveira, H.; Oliveira, C.; Morais, R. and Bernardes, J. P., "Ancient DNA in archaeological fish remains from the South of Portugal". Symposium ArchaeoAnalytics – Chromatography and DNA analysis in Archaeology, Esposende, Portugal, 12th September 2014.

**EE29** - Oliveira, C. and Rodrigues, S., "Chemical analysis of organic residues found in a megalithic context in Castelo de Vide (Alto Alentejo – Portugal)". Symposium ArchaeoAnalytics – Chromatography and DNA analysis in Archaeology, Esposende, Portugal, 12th September 2014.

**EE30** - Oliveira, C.; Morais, R.; Sousa, M. J. and Bernardes, J. P., "Analysis of honey residues found in honeypot sherds and beehives". Symposium ArchaeoAnalytics – Chromatography and DNA analysis in Archaeology, Esposende, Portugal, 12th September 2014.

**EE31** - Morgado, S.; Oliveira, C. and Morais, R., "Etno-archaeological study of open topped oil lamps. Results of chemical analysis". Symposium ArchaeoAnalytics – Chromatography and DNA analysis in Archaeology, Esposende, Portugal, 12th September 2014.

**EE32** - Oliveira, C.; Morais, R.; Araújo, A. and Fernández, A., "Fish amphorae from the Atlantic front". Symposium ArchaeoAnalytics – Chromatography and DNA analysis in Archaeology, Esposende, Portugal, 12th September 2014.

**EE33** - Oliveira, C.; Correia, V.; Buraca, I. and Triães R., "Results of chemical analysis applied to local amphorae from the roman city of Conimbriga". Symposium ArchaeoAnalytics – Chromatography and DNA analysis in Archaeology, Esposende, Portugal, 12th September 2014.

**EE34/HC**- Neto, M.J.; Esperança, J.M.S.S.; Esteves, A.P.; Medeiros, M.J.; Silva, M.M.; "The Study of Indirect Electroreductive Cyclisation of Propargyl Derivatives using [Ni(tmc)]Br<sub>2</sub> as Catalyst in Ionic Liquids", 225th ECS Meeting, Orlando, FL, USA, 11-16 May.

**HC** (9HC+4HC/AA+1HC/EE=14)

**HC1**- Heleno, S.A.; Martins, A.; Queiroz, M.J.R.P.; Ferreira, I.C.F.R. "Comparative bioactive properties of Coprinopsis atramentaria extract, organic acids and synthesized derivatives" 62th International Congress

and Annual Meeting of the Society for Medicinal Plant and Natural Product Research- GA2014. 31th August-4th September 2014, University of Minho, Guimarães, Portugal. SL15, 34p (Oral communication)

**HC2-** Duarte, Vera C. M.; Gil Fortes, A.; Alves, Maria J. “Enantioselective Synthesis of alfa-(4-hydroxyl)-arylglycines in the presence of BINOL and aryl Borates”, poster presented in the XX Encontro Luso-Galego de Química, 26-28 novembro 2014, Porto, Portugal.

**HC3-** Ferreira, Juliana; Gil Fortes, A.; Alves, Maria José “Síntese de percussores de tetrahydroquinolinas via reação Diels-Alder” poster presented in the XX Encontro Luso-Galego de Química, 26-28 novembro 2014, Porto, Portugal.

**HC4-** Noro, Jennifer; Duarte, Vera C. M.; Silva, Paulo; Sousa, Cristina E.; Gil Fortes, A.; Alves, Maria J. “Síntese de um análogo da Ceramida a partir da D-eritrose como potencial inibidor de beta-glicosidasas”, poster presented in the XX Encontro Luso-Galego de Química, 26-28 novembro 2014, Porto, Portugal.

**HC5-** Sousa, Cristina; Alves, M.J. “Enantioselective Diels-Alder cycloaddition in the synthesis of Pyridazine compounds” poster presented in the XX Encontro Luso-Galego de Química, 26-28 novembro 2014, Porto, Portugal.

**HC6-** Noro, Jennifer; Duarte, Diana; Olival, Ana Cristina; Alves, M. J.; K. T, Lin, Paul “Synthesis and Preliminary Evaluation of Mononaphthalimides Derivatives in Cancer Cell Lines” 26-30 outubro 2014, Calvi, França.

**HC7-** Fernandes, S. S. M.; Raposo, M. M. M., “Synthesis and characterization of novel thienylpyridazine derivatives”, a016, “18th International Electronic Conference on Synthetic Organic Chemistry”, 1-30 november 2014, Sciforum Electronic Conferences Series. <http://dx.doi.org/10.3390/ecsoc-18-a016>

**HC8-** Castro, M. C. R.; Raposo, M. M. M., “Synthesis and characterization of the photophysical properties novel heterocyclic imines”, a048, “18th International Electronic Conference on Synthetic Organic Chemistry”, 1-30 november 2014, Sciforum Electronic Conferences Series. <http://dx.doi.org/10.3390/ecsoc-18-a048>

**HC9-** Gabriel, Carla; Maia, Marta; Pinto, Eugénia; Dias, Alice; Ribeiro, Ana; Proença, Maria; Medeiros, Rui; Cerqueira, Fátima “Action of three (Z)-5-amino-N'-aryl-1-methyl-1H-imidazole-4-carbohydrazonamides on mitochondrial activity of Candida sp. and its effect in NO production”, poster presented in the “XX Encontro Luso-Galego de Química”, 26-28 November, 2014, Porto, Portugal.

**HC10/AA10-** Esteves, C. I. C.; Rosa, M. M. F.; Raposo, M. M. M.; Costa, S. P. G., “Synthesis and Ion Recognition Studies of Novel Benzimidazol-5-yl-L-Alanines”, 18th Int. Electron. Conf. Synth. Org. Chem., 1-30 November 2014; Sciforum Electronic Conference Series, Vol. 18, 2014, b002. <http://dx.doi.org/10.3390/ecsoc-18-b002>

**HC11/AA11-** Ferreira, R. C. M.; Costa, S. P. G.; Raposo, M. M. M., “Synthesis, Characterization and Evaluation of Fluorimetric Chemosensors for Ions Based on Diphenylimidazole Derivatives”, 18th Int.

Electron. Conf. Synth. Org. Chem., 1-30 November 2014; Sciforum Electronic Conference Series, Vol. 18, 2014, b012. <http://dx.doi.org/10.3390/ecsoc-18-b012>

**HC12/AA12** - Batista, R. M. F.; Costa, S. P. G.; Raposo, M. M. M., "UV-vis spectroscopic characterization of heterocyclic azines as colorimetric chemosensors for metal ion detection", 18th Int. Electron. Conf. Synth. Org. Chem., 1-30 November 2014; Sciforum Electronic Conference Series, Vol. 18, 2014, b005. <http://dx.doi.org/10.3390/ecsoc-18-b005>

**HC13/AA13** - M. M. M. Raposo, R. M. F. Batista, I. Kuźniarska-Biernacka, S. P. G. Costa, A. M. C. Fonseca, I. C. Neves, "Synthesis and photophysical characterization of heterocyclic azines and the corresponding copper complexes as versatile compounds for optical applications", P220, poster presented in the "XXVth IUPAC Symposium on Photochemistry", 13-18 July 2014, Bordeaux, France.

**HC14/EE34** - Neto, M.J.; Esperança, J.M.S.S.; Esteves, A.P.; Medeiros, M.J.; Silva, M.M.; "The Study of Indirect Electroreductive Cyclisation of Propargyl Derivatives using [Ni(tmc)]Br<sub>2</sub> as Catalyst in Ionic Liquids", 225th ECS Meeting, Orlando, FL, USA, 11-16 May.

## 6. Comunicações em congressos nacionais

**AA** (14AA+2AA/HC =16)

**AA1** - Conceição, R. C. O.; Gonçalves, M. S. T.; Costa, S. P. G., "New coumarin derivatives with extended conjugation as fluorescent probes", P5, III Encontro em Técnicas de Caracterização e Análise Química, Braga, Portugal, 6 Junho 2014.

**AA2** - Santos, F. C.; Gonçalves, M. S. T.; Costa, S. P. G., "Pyrenylmethyl-Ala-Ala-Pro-Val as a photolabile peptide prodrug", P31, III Encontro em Técnicas de Caracterização e Análise Química, Braga, Portugal, 6 Junho 2014.

**AA3** - Castro, V. I. B.; Carvalho, C. M.; Costa, S. P. G.; Pereira-Lima, S. M. M. A., "HPLC purification and structural characterization by NMR spectroscopy and mass spectrometry of Peptaibolin mimetics", P4, III Encontro em Técnicas de Caracterização e Análise Química, Braga, Portugal, 6 Junho 2014.

**AA4** - Carvalho, C. M.; Castro, V. I. B.; Pereira-Lima, S. M. M. A.; Costa, S. P. G., "Analysis of permeation of model membranes by Peptaibolin mimetics by fluorescence spectroscopy", P3, III Encontro em Técnicas de Caracterização e Análise Química, Braga, Portugal, 6 Junho 2014.

**AA5** - Soares, A. M. S.; Costa, S. P. G.; Gonçalves, M. S. T., "Photorelease of butyric acid from an oxo-benzopyranoxazole prodrug", P35, III Encontro em Técnicas de Caracterização e Análise Química, Braga, Portugal, 6 Junho 2014.



**AA6** - Lopes, M. J. B.; Silva, C. J.; Costa, S. P. G.; Cardoso, A., “Estudo da emissão de radiação IV por partículas biocerâmicas em têxteis”, P19, III Encontro em Técnicas de Caracterização e Análise Química, Braga, Portugal, 6 Junho 2014.

**AA7** - Rego, A. I.; Costa, S. P. G.; Carvalho, J. A.; “Análise dos desvios de cor em tingimentos de fibras têxteis por espectrofotometria”, P27, III Encontro em Técnicas de Caracterização e Análise Química, Braga, Portugal, 6 Junho 2014.

**AA8** - Amorim, I. C. S.; Pereira-Lima, S. M. M. A.; Costa, S. P. G., “Espetroscopia de RMN em estudos de relação estrutura-atividade de péptidos antimicrobianos”, P41, III Encontro em Técnicas de Caracterização e Análise Química, Braga, Portugal, 6 Junho 2014.

**AA9** - Silva, M. C. C.; Costa, S. P. G.; Pereira-Lima, S. M. M. A., “Espetroscopia de infravermelho e dicroísmo circular em estudos de relação estrutura-atividade de péptidos antimicrobianos”, P57, III Encontro em Técnicas de Caracterização e Análise Química, Braga, Portugal, 6 Junho 2014.

**AA10** - Guimarães, L. F.; Szweczyk, M.; Gonçalves, M. S. T.; Monteiro, L. S., “Sulfonamidas como grupos protetores de aminoácidos: clivagem electroquímica”, P9, III Encontro em Técnicas de Caracterização e Análise Química, Braga, Portugal, 6 junho 2014.

**AA11** - Ribeiro, G. M.; Raju, B. R.; Coutinho, P. J. G.; Gonçalves, M. S. T., “Photophysical studies of new benzophenoxazine fused julolidine NIR probes”, P28, III Encontro em Técnicas de Caracterização e Análise Química, Braga, Portugal, 6 junho 2014.

**AA12**- Carvalho, M. M. T.; Raju, B. R.; Coutinho, P. J. G.; Gonçalves, M. S. T., “Benzo[a]phenoxazinium chlorides with aliphatic, aromatic and chlorinated terminals in 5- and 9-amino positions: photophysical characterisation in anhydrous ethanol”, P26, III Encontro em Técnicas de Caracterização e Análise Química, Braga, Portugal, 6 junho 2014.

**AA13**- Leitão, M. I.; Raju, B. R.; Sousa, M. J.; Gonçalves, M. S. T., “Intracellular distribution of a benzo[a]phenoxazinium chloride in *Saccharomyces cerevisiae*, P18, III Encontro em Técnicas de Caracterização e Análise Química, Braga, Portugal, 6 junho 2014.

**AA14** - Lopes, C.; Ferreira, J. C.; Raju, B. R.; Gonçalves, M. S. T.; Sousa, M. J., “Molecular pathways involved in the yeast cell death induced by a benzo[a]phenoxazine derivative”, II Symposium of the PhD programme on Molecular and Environmental Biology, Braga, Portugal, 27 novembro 2014.

**AA15/HC9** - Esteves, C. I. C.; Raposo, M. M. M.; Costa, S. P. G., “Optical chemosensing of metal cations by modified amino acids bearing a bithienyl heterocyclic moiety”, P8, III Encontro em Técnicas de Caracterização e Análise Química, Braga, Portugal, 6 Junho 2014.

**AA16/HC10** - Rosa, M. E.; Esteves, C. I. C.; Raposo, M. M. M.; Costa, S. P. G., “Photophysical characterization of fluorescent amino acids based on tryptophan, tyrosine and phenylalanine”, P30, III Encontro em Técnicas de Caracterização e Análise Química, Braga, Portugal, 6 Junho 2014.

**EE** (11EE+3EE/HC =14)

**EE1.** Magalhães, B.; Dias, J.; Martins, M.; Lopes, A. C.; Botelho, G.; Lanceros-Mendez, S., “Atuadores baseados em Polímeros Eletroativos Iônicos”. Encontro Nacional de Estudantes de Física 2014, Aveiro, Portugal, 16 February. (comunicação oral)

**EE2.** Gonçalves, B.; Botelho, G.; Lanceros Mendez, S., “Desenvolvimento de tintas para impressão de sensores” III Encontro de Técnicas de Caracterização e Análise Química, Universidade do Minho, 6 de Junho. (comunicação em painel)

**EE3.** Salazar, H.; Botelho, G.; Lanceros Mendez, S., “Novos Materiais Foto-catalíticos” III Encontro de Técnicas de Caracterização e Análise Química, Universidade do Minho, 6 de Junho. (comunicação em painel)

**EE4.** Macedo, C.; Botelho, G.; Silva, M. M., “Polímeros eletroativos baseados em líquidos iónicos e PVDF” III Encontro de Técnicas de Caracterização e Análise Química, Universidade do Minho, 6 de Junho. (comunicação em painel)

**EE5.** Alves, M.; Botelho, G.; Machado, A. V., “Avaliação da estabilidade de derivados de celulose” III Encontro de Técnicas de Caracterização e Análise Química, Universidade do Minho, 6 de Junho. (comunicação em painel)

**EE6.** Oliveira, R.; Louçano, J.; Bento, F.; Geraldo, D.; “Assessment of activity and capacity of antioxidants based on kinetics of the reaction with electrogenerated HO radicals,” 19º Encontro da Sociedade Portuguesa de Electroquímica, Aveiro, june-july, 2014

**EE7.** Araújo, A.; Geraldo, D.; Bento, M. F.; Moreira, S.; Gomes, I.; “Estratégia de implementação do REACH”, III Encontro em Técnicas de Caracterização e Análise Química, Universidade do Minho, 6 june 2014.

**EE8.** Lage, C.; Geraldo, D.; “Sensores baseados em nanotubos de carbono funcionalizados por ligação não-covalente”, III Encontro em Técnicas de Caracterização e Análise Química, Universidade do Minho, 6 june 2014.

**EE9.** Forte, M.; Geraldo, D.; “Funcionalização de nanotubos de carbono por electrografting com sais de diazónio”, III Encontro em Técnicas de Caracterização e Análise Química, Universidade do Minho, 6 june 2014.

**EE10-** Gusmão, R.; Proença, F.; Paiva, C.; Geraldo, D.; Bento, F.; “Electrochemical sensing using carboxylated multiwalled carbon nanotubes”, III Encontro em Técnicas de Caracterização e Análise Química, Universidade do Minho, 6 june 2014.

**EE11-** Bento, F.; Oliveira, R.; Geraldo, D.; “Antioxidant activity evaluation using electrogenerated HO radicals”, Symposium of the Analytical Division of SPQ-2014, 14-15 April 2014.

- EE12.** Cardona, J. B. C.; Silva, C. J. R., "Performance of doped organic-inorganic hybrid gels obtained by sol-gel methodas corrosion protection coatings of HGDS in contact with mortar", 3º Encontro da Técnicas de Caraterização e Análise Química, Universidade do Minho, Braga (Portugal), 6 Junho, 2014 (P2)
- EE13.** Neves, A. F. F.; Silva, C. J. R., "Implementação de métodos de ensaio químico de papéis celulósicos paraaplicação eléctrica", 3º Encontro da Técnicas de Caraterização e Análise Química, Universidade do Minho, Braga (Portugal), 6 Junho, 2014 (P24)
- EE14.** Cristóvão L. S. Gonçalves, Ana Paula Bettencourt, Silva, C. J. R., "Uso de sensores baseados em nanotubos de carbono (CNTs) para quantificação de metais tóxicos em amostras ambientais", 3º Encontro da Técnicas de Caraterização e Análise Química, Universidade do Minho, Braga (Portugal), 6 Junho, 2014 (P46)
- EE15.** Ana Isa S. Sampaio, Silva, C. J. R., "Métodos de caraterização de papéis utilizados para a proteção e armazenamento de documentos na alimentação – a perspetiva de conservação", 3º Encontro da Técnicas de Caraterização e Análise Química, Universidade do Minho, Braga (Portugal), 6 Junho , 2014 (P56)
- EE16.** Figueira, R. B.; Silva, C. J. R.; Pereira, E. V.; Salta, M. M., "Ureasilicate evaluation of hot-dip galvanized steel (HGDS) coated with organic-inorganic hybrid materials in simulated concrete pore solution", XIX Meeting of the Portuguese Electrochemical Society, XVI Iberic Meeting of Electrochemistry, Aveiro (Portugal), 30 Junho – 3 Julho, 2014 (P-21).
- EE17.** Cardona, J. B. C.; Figueira, R. B.; Silva, C. J. R.; Pereira, E. V., "Test of OIH gel composites with embedded corrosion inhibitors as corrosion protection coatings of hot-dip galvanized steel (HDGS)", XIX Meeting of the Portuguese Electrochemical Society, XVI Iberic Meeting of Electrochemistry, Aveiro, Portugal, 30 Junho – 3 Julho, 2014 (0-17)
- EE18.** Costa, M. L. C. S.; Silva, C. J. R. Anabela Cruz-Santos, A., "Desenvolvimento e implementação do jogo "Corrida da química" em alunos do 8º ano com e sem NEE", 1º Congresso Cabo-Verdiano de Educação Inclusiva, 4 e 5 Dezembro, 2014, Praia, Cabo Verde (C19)
- EE19-HC14.** Paiva, S.; Dias, A.; Carvalho, A.; Cunha, A.; Pinheiro, A. I.; Gonçalves, A.M.; Silva, C.; Coutinho, E.; Cunha, L.; Araújo, M. C.; Almeida, M. T.; Simões, P. P.; Baptista, R.; Vaz, E., "Universidade e Escolas Secundárias em rede: Projeto "A minha Escola de Ciências". SciCom Pt 2014" - Congresso de Comunicação de Ciência. 3 e 4 de Junho de 2014, Porto, Portugal.
- EE20/HC11.** Pereira, N.; Gusmão, R.; Araújo, R.; Paiva, C.; Proença, F.; Bento, F.; Geraldo, D.; "Comportamento voltamétrico de perlenos bismides modificados em GCE e SPE", III Encontro em Técnicas de Caracterização e Análise Química, Universidade do Minho, 6 june 2014.
- EE21/HC12.** Gusmão, R.; López-Puente, V.; Pastoriza-Santos, I., Pérez-Juste, J.; Proença, F.; Bento, F.; Geraldo, D.; Paiva, C.; González-Romero, E.; "Heat-Treatments for carbon ativation of comercial screen printed electrodes", 19º Encontro da Sociedade Portuguesa de Electroquímica, Aveiro, june- july, 2014.

**EE22/HC13**- Pereira, N.; Gusmão, R.; Oliveira, R.; Araújo, R.; Paiva, C.; Proença, F.; Bento, F.; Geraldo, D.; "Non-covalent modification of voltammetric SPE sensors", Symposium of the Analytical Division of SPQ-2014, 14-15 april 2014.

**HC** (8HC+2HC/AA+3HC/EE=13)

**HC1**- Fernandes, S. S. M.; Castro, M. C. R.; Mesquita, I.; Andrade, L.; Mendes, A.; Raposo, M. M. M., "Synthesis and characterization of heterocyclic dyes containing a thienyl bridge for dye sensitized solar cells", poster presented in "Workshop on Nanostructures for Solar Cells", 2-3 october 2014, Braga, Portugal.

**HC2**- Senhorães, Nádia; Proença, M. Fernanda; Dias, Alice M. "NMR Characterization of New 2,6- and 6,8-Diaminopurines", poster presented in the "III Encontro de Técnicas de Caracterização e Análises Químicas", Braga, 6 june 2014.

**HC3**- Fernandes, Soraia; Pereira, Eva; Proença, M. Fernanda; Dias, Alice M. "Characterization of New 5-Aminoimidazole Derivatives", poster presented in the "III Encontro de Técnicas de Caracterização e Análises Químicas", Braga, 6 june, 2014.

**HC4**- Gabriel, C.; Grenho, L.; Dias, A. M.; Ribeiro, A. I.; Proença, M. F.; Fernandes, M. H.; Monteiro, F. J.; Ferraz, M. P.; Medeiros, R.; Cerqueira, F. "High in vitro activity of synthetic 5-aminoimidazole-4-carboxamidrazones against Candida biofilms formation on nanohydroxyapatite", poster presented in the "4th I3S Annual Meeting", Póvoa de Varzim, October 30-31, 2014.

**HC5**- Paiva, Sandra; Dias, Alice; Carvalho, Ana; Cunha, Ana; Pinheiro, A. Isabel; Gonçalves, Arminda M.; Silva, Carlos; Coutinho, Elisabete; Cunha, Luís; Araújo, M. Cláudia; Almeida, M. Teresa; Simões, Pedro P.; Baptista, Rui; Vaz, Estelita "Universidade e Escolas Secundárias em rede: Projeto "A minha Escola de Ciências"." poster presented in the "SciCom Pt 2014 - Congresso de Comunicação de Ciência", Porto, 3-4 June de 2014.

**HC6**- Queiroz, Maria-João R .P.; Rodrigues, A. Rita O; Castanheira, E.MS.; Coutinho, P. J. "Nickel based magnetoliposomes for delivery of new potential antitumor compounds 11th International Conference on Nanosciences & Nanotechnologies NN14, Grece 8-11 july 2014, Thesaloniki, Greece.

**HC7** - Machado, Vera A.; Peixoto, Daniela; Costa, Raquel; Calhela, Ricardo C.; Abreu, Rui M.V.; Ferreira, Isabel C. F. R.; Soares, Raquel; Queiroz, Maria-João R .P. "Synthesis Molecular Docking and Biological Evaluation of new 1-Aryl-3-[3-(thieno[3,2-b]pyridin-7-ylthio)phenylureas as Potent Type II VEGFR-2 Tyrosine Kinase Inhibitors" (poster R026), International Symposium of Medicinal Chemistry, 7-11 september 2014, Lisbon Portugal.

**HC8** - Queiroz, Maria-João R .P.; Peixoto, Daniela; Calhela, Ricardo C.; Soares, Pedro; Santos, Tiago; Lima, Raquel T.; Campos, Joana F.; Abreu, Rui M.; Ferreira, Isabel C. F. R. M.; Vasconcelos, Helena "New

di(hetero)aryl)ethers and Di(hetero)arylamines in the thieno[3,2-b]pyridine series: Synthesis, Growth Inhibitory Activity on tumor Cell lines and Non Tumor Cells, Effects on cell cycle and on Apoptosis" (poster R039), International Symposium of Medicinal Chemistry, 7-11 september 2014, Lisbon Portugal

**HC9/AA15**- Esteves, C. I. C.; Raposo, M. M. M.; Costa, S. P. G., "Optical chemosensing of metal cations by modified amino acids bearing a bithienyl heterocyclic moiety", P8, poster presented in the "III Encontro em Técnicas de Caracterização e Análise Química", Braga, Portugal, 6 June 2014.

**HC10/AA16**- Rosa, M. E.; Esteves, C. I. C.; Raposo, M. M. M.; Costa, S. P. G., "Photophysical characterization of fluorescent amino acids based on tryptophan, tyrosine and phenylalanine", P30, poster presented in the "III Encontro em Técnicas de Caracterização e Análise Química", Braga, Portugal, 6 June 2014.

**HC11/EE20** - Pereira, N.; Gusmão, R.; Araújo, R.; Paiva, C.; Proença, F.; Bento, F.; Geraldo, D.; "Comportamento voltamétrico de perilenos bismides modificados em GCE e SPE", III Encontro em Técnicas de Caracterização e Análise Química, Universidade do Minho, 6 June 2014.

**HC12/EE21** - Gusmão, R.; López-Puente, V.; Pastoriza-Santos, I., Pérez-Juste, J.; Proença, F.; Bento, F.; Geraldo, D.; Paiva, C.; González-Romero, E.; "Heat-Treatments for carbon activation of comercial screen printed electrodes", 19º Encontro da Sociedade Portuguesa de Electroquímica, Aveiro, June- July, 2014.

**HC13/EE22** - Pereira, N.; Gusmão, R.; Oliveira, R.; Araújo, R.; Paiva, C.; Proença, F.; Bento, F.; Geraldo, D.; "Non-covalent modification of voltammetric SPE sensors", Symposium of the Analytical Division of SPQ-2014, 14-15 April 2014.

**HC14/EE19**. Paiva, S.; Dias, A.; Carvalho, A.; Cunha, A.; Pinheiro, A. I.; Gonçalves, A.M.; Silva, C.; Coutinho, E.; Cunha, L.; Araújo, M. C.; Almeida, M. T.; Simões, P. P.; Baptista, R.; Vaz, E., "Universidade e Escolas Secundárias em rede: Projeto "A minha Escola de Ciências". SciCom Pt 2014" - Congresso de Comunicação de Ciência. 3 e 4 de Junho de 2014, Porto, Portugal.

## 7. Livros e Capítulos de livros internacionais

**EE**. Smith, M.J.; Gray, F.M.; "Recycling and disposal of battery materials", Encyclopedia of Energy, Science, Technology and Applications, J.H. Lehr, J. Keely, T. Kigery, S. Krivit, (Eds.), John Wiley & Sons, New York, EUA (Dec 2014).

**EE**. Gray, F.M.; Smith, M.J.; "Polymer Electrolytes for Lithium Secondary Batteries", Encyclopedia of Energy, Science, Technology and Applications, J.H. Lehr, J. Keely, T. Kigery, S. Krivit, (Eds.), John Wiley & Sons, New York, EUA (Dec 2014).

## 8. Livros e Capítulos de livros nacionais

**EE** - Neves, I. C; Fonseca, A. M; Oliveira, C; Parpot, P; Kuźniarska-Biernacka, I; Morais, R; “Characterization of ceramic fragments from Esposende´s Bético Augustano shipwreck by XRD and SEM-EDS”, O Irado Mar Atlântico, Ed. R Morais, H. Granja, A.M. Cerdán, 2013, pp. 247-261. ISBN:978-989-97443-1-8.

**EE** - Oliveira, C; Kuźniarska-Biernacka, I; Parpot, P; Neves, I. C; Fonseca, A. M; Morais, R; “Chemical analysis of organic residues in amphorae from the Baetica shipwreck of Esposende”, O Irado Mar Atlântico, Ed. R Morais, H. Granja, A.M. Cerdán, 2013, pp. 263-281. ISBN:978-989-97443-1-8.

## 9. Patentes

**BC** - Marcos, J.C. , Martins, J.A. , Jorge, P., da Silva, N.M. “Isolation of plasmid DNA in aqueous two-phase systems using cationic polymers” Portuguese Patent nº 105438, Granted 14/08/2014

## 10. Spin-offs, start-ups e outras empresas

M.F. Proença, Promotora da Spin-off da Universidade do Minho “EARTH ESSENCES, LDA” aprovada em Maio de 2013.

### 9.3. Números globais da produtividade científica da subunidade

Artigos em revistas		Atas de congressos		Comunicações em congressos		Livros e Cap. De Livros		Patentes	Spin-offs, start-ups e outras empresas
Intern.	Nacion.	Intern.	Nacion.	Intern.	Nacion.	Intern.	Nacion.		
103	3	16	5	57	46	2	2	1	1

### 9.4. Reconhecimento científico

#### 1. Prémios e distinções atribuídas

#### 2. Palestras a convite em conferências

**AA1**- Gonçalves, M.S.T., “Long-wavelength fluorescent probes based on new Nile Blue derivatives”, comunicação oral convidada, O6A, 1st International Congress on Chromogenic and Emissive Materials, Costa de Caparica, Portugal, 8-10 setembro de 2014.

**EE1** - Amaral L., Coelho P., Santana F.1, Brito A.G., Peixoto L., Ribeiro D., Martins G., Parpot P, “Restaurative Water Technologies: From an Old Tradition to a New Paradigm”, 44th World Chemistry Congress (IUPAC), Istanbul, Symposium I, Turkey, 11 - 16 August, 2013 (Keynote lecture).

**EE2** - M.F. Pinto, M. Ferreira, I.C. Neves, , A.M. Fonseca, L. Peixoto, A.G. Brito, R. Nogueira, O.S.G.P. Soares, J.J.M. Órfão, M.F.R. Pereira, J.L Figueiredo and P. Parpot, “Electrocatalysts based on carbon nanotubes: application to wastewater treatments” , 3rd Forum on Electrochemistry and Innovation, Vila Real, Portugal, 16-17 September 2013 (Keynote lecture).

**EE3** - Gabriela Botelho “Química e Ambiente-atividades experimentais com polímeros” 3º Encontro de professores de Ciências experimentais, Areal Editores, Culturgest, Lisboa, 16 de fevereiro de 2013.

**EE4** - Gabriela Botelho “Química e Ambiente-atividades experimentais com polímeros” 3º Encontro de professores de Ciências experimentais, Areal Editores, Exponor, Porto, 9 de março de 2013.

### **3. Participação em corpos editoriais de revistas científicas**

**BC** - João Paulo André – Editor of Boletim da Sociedade Portuguesa de Química.

**EE** - Maria Manuela Silva – Member of the editorial board of Challenges of Modern Technology since 2011.

**EE** - Maria Manuela Silva – Member of the editorial board of Journal of Chemistry since 2013.

**EE** - António Maurício Fonseca - Editorial Board of journal ISRN Inorganic Chemistry. (<http://www.isrn.com/journals/ic/editors>)

**EE** - Gabriela Botelho – Member of the editorial board of Scientific Journals of the Hindawi Publishing Corporation

**HC** – Maria Manuela M. Raposo - Member of the editorial board of American Journal of Optics and Photonics

**HC** - Maria Manuela M. Raposo - Member of the editorial board of Mediterranean Journal of Chemistry

### **4. Organização de conferências nacionais**

**AA** – S.P. Costa, III Encontro em Técnicas de Caracterização e Análise Química, Braga, Portugal, 6 Junho 2014.

**EE** - M. F. Bento e M. D. Geraldo, membros da comissão organizadora das III Jornadas de Electroquímica e Inovação, Vila Real, 16, 17 de setembro, 2013.

**EE** - M. D. Geraldo, A.P. Estevão, membros da comissão organizadora do III Encontro em Técnicas de Caracterização e Análise Química, Universidade do Minho, 6 de junho, 2014.

**EE** - Pier Parpot, membro da comissão científica da 18th Meeting of the Portuguese Electrochemical Society. 25-27th March 2013, Porto, Portugal.

**EE** - Químicos e Bioquímicos: Desafios profissionais do séc. XXI – empreendedorismo & empregabilidade em Química e Bioquímica - encontro organizado para os alunos da Licenciatura de Química e Bioquímica que decorreu a 25 de junho de 2014 na Biblioteca Lúcio Craveiro da Silva. Participaram os docentes João Carlos Marcos, Isabel Correia Neves, Dulce Geraldo e M. Alice Carvalho.

**HC** - M. Fernanda Proença, membro da comissão organizadora do 20º Encontro Galaico-Português, Porto, 26-28 Novembro 2014.

## 5. Organização de conferências internacionais

**HC** - M. Fernanda Proença, member of the organizing committee of EFMC-ISMC 2014, XXIII International Symposium on Medicinal Chemistry, Lisboa, Portugal - September 7-11, 2014.

### Outras Atividades

**HC** - M. Fernanda **Proença**, avaliadora de projetos de investigação submetidos à Universidade de Leuven (KU Leuven, Bélgica) para financiamento (junho 2014).

**HC** - M. Fernanda **Proença**, avaliadora de relatórios finais de projetos FCT atribuídos nos anos de 2008 e 2009 (a partir de junho de 2014).

**HC** - M. Fernanda **Proença**, avaliadora de bolsas de pós-doutoramento Belgas submetidas à Research Foundation - Flanders (Fonds Wetenschappelijk Onderzoek - Vlaanderen, FWO) (abril 2014).

**HC** - M. Fernanda **Proença**, membro do júri do concurso para provimento de um lugar de Professor Associado na área disciplinar de Química da Universidade de Aveiro (Edital nº 452/2013, DR nº91, 2ª Série, de 13-05-2013 (28 janeiro 2014)

**HC** - Maria João **Queiroz** – membro do painel da Química 2014 da FCT na avaliação de bolsas individuais de doutoramento e pós-doutoramento.

**HC** - Maria João **Queiroz**- vogal nas provas de Agregação em Química-Univ. do Minho de Maria Manuela Silva, jan.2014.

## 9.5. Internacionalização

### 1. Publicações em colaboração com parceiros internacionais



AA/BC – 1  
AA/HC – 1  
BC – 4  
EE – 21  
EE/HC – 2  
HC – 8  
TOTAL = 32

**2. Projetos de I&D em colaboração com parceiros internacionais**

**3. Participação em redes de investigação**

Rede Portuguesa de RMN – Responsável na Univ. do Minho Maria João Queiroz

**4. Investigadores estrangeiros na subunidade orgânica**

EE- Iwona - Inv. Auxiliar – Polish - Projeto ON2 - nStep -

**5. Estudantes estrangeiros de pós-graduação na subunidade orgânica**

Cármén Seijo Post-Doc – Spanish – Projeto ON2 - nStep

Agathe Begouin Post-Doc – French – Research Grant FCT

Juliana Andrade PhD Student – Brazilian – Research Grant Ciência sem Fronteiras

**PARTE II****10. Medidas implementadas na sequência do relatório produzido pela Comissão de Acompanhamento Externo em 2013 (anexar o relatório da CAE, relativo ao ano de 2013).**

Não foi ainda enviado o relatório de 2013 para a Comissão Externa de Acompanhamento.

**11. Análise SWOT**

<p style="text-align: center;"><b>Strengths</b></p> <ul style="list-style-type: none"> <li>- Scientifically mature team of researchers with a good output record of publications in ISI/SCOPUS indexed journals.</li> <li>- Multidisciplinary collaborations within the CQ, other research centres of UM and other Nat. and Int. Universities.</li> <li>- Consolidated International cooperation.</li> <li>- Membership of the national NMR network (RNNMR/PTNMR)</li> </ul>	<p style="text-align: center;"><b>Threats</b></p> <ul style="list-style-type: none"> <li>- No prospect of future funding according to the unfair assessment of the unit for 2015-2020: to improve laboratory infrastructures and safety conditions. to maintain research equipment.</li> </ul>
<p style="text-align: center;"><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>- Recent Master degree courses are a source of new researchers.</li> <li>- New PhD course in Chemistry was approved by the Ministry.</li> <li>- Collaborations with Iberian Nanotechnology Lab (Braga) are being developed.</li> </ul>	<p style="text-align: center;"><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>- Insufficient technical and administrative support that unable the possibility of responding to European project calls.</li> <li>- Insufficient collaborations with industry.</li> </ul>