



Publications

Reactors and Nuclear Safety Unit

Operation and Exploitation of the Reactor, Dosimetry (RPI) and Reactor Calculations

Books

Review of Generation III/III+ Fission Reactors, Chapter 22; J.G. Marques, in Nuclear Energy Encyclopedia: Science, Technology and Applications, Jay H. Lehr, Steven B. Krivit, Thomas B. Kingery (Editors), John Wiley & Sons, Hoboken, 2011, 231-254. ISBN 978-0470894392

Safety of Nuclear Fission Reactors: Learning from Accidents, Chapter 15; J.G. Marques, in Nuclear Energy Encyclopedia: Science, Technology and Applications, Jay H. Lehr, Steven B. Krivit, Thomas B. Kingery (Editors), John Wiley & Sons, Hoboken, 2011, 127-149. ISBN 978-0470894392

International Journals

J.G. Marques, M. Sousa, J.P. Santos, A.C. Fernandes, Characterization of the Fast Neutron Irradiation Facility of the Portuguese Research Reactor after Core Conversion, *Applied Radiation and Isotopes* 69 (2011) 1128-1130.

A.F. Gurbich, D. Abriola, N.P. Barradas, A.R. Ramos, I. Bogdanovic-Radovic, M. Chiari, C. Jeynes, M. Kokkoris, M. Mayer, L. Shi, I. Vickridge, *Measurements and Evaluation of Differential Cross-sections for Ion Beam Analysis*, J. Korean Phys. Soc. 59 (2011) 2010-2013.

D. Abriola, N.P. Barradas, I. Bogdanović-Radović, M. Chiari, A.F. Gurbich, C. Jeynes, M. Kokkoris, M. Mayer, A.R. Ramos, L. Shi, I. Vickridge, *Development of a Reference Database for Ion Beam Analysis and Future Perspectives*, Nucl. Instrum. Methods Phys. Res. B 269 (2011) 2972-2978.

National Journals

J.G. Marques, O Acidente na Central Nuclear de Fukushima-I: O que Sabemos, *Gazeta de Física* 34/1 (2011) 57-59.

Conference proceedings

T.A. Girard, T.A. Morlat, M. Felizardo, A.C. Fernandes, A. R. Ramos, J.G. Marques, New Limits on WIMP Interactions from the SIMPLE Dark Matter Search, Proceedings of 8th International Conference on the Identification of Dark Matter (IDM2010), Montpellier, France, 2010, Proceedings of Science 55 (2011) 1-7

S. Gaillot, B. Pouchin, J.G. Marques, I. López Calle, F.J. Franco Peláez, J.A. Agapito, Jules Horowitz Reactor Project: Exploration Tests Concerning WIFI Modules Behaviour under Gamma Flux, Proceedings RADECS 2011 Conference, Sevilla, 2011.

M. Felizardo (for the SIMPLE Collaboration), Instrumentation, Acquisition and Analysis of the Phase II SIMPLE Dark Matter Search Signals, Proc. Identification of Dark Matter 2010 Meeting, Proceedings of Science PoS(IDM2010)006 2011.

Nuno P. Barradas, E. Alves, Z. Siketić, I. Bogdanović Radović, Stopping Power of He, C and O in InN, American Institute of Physics Conf. Proc. 1336 (2011) 319-324.

Communications

Invited

J.G. Marques, “Energia Nuclear: Prós e Contras”, Olimpíadas de Física, Instituto Superior Técnico, 7 May 2011.

J.G. Marques, “Energia Nuclear”, Seminário, Escola Secundária Rainha D. Amélia, 10 May 2011.

J.G. Marques, “Segurança em Centrais Nucleares”, Colóquio Japão 2011, Lisboa 1755: Com e Sem Nuclear, Museu Nacional de História Natural, 18 May 2011.

J.G. Marques, “O Acidente em Fukushima-I”, Seminário, ITN, 24 May 2011.

J.G. Marques, “The Fukushima-I Accident”, Colóquio do Departamento de Física, Instituto Superior Técnico, 25 May 2011.

J.G. Marques, “Energia Nuclear e Fukushima”, Conferência sobre Ética Ambiental, Escola Secundária Marquês de Pombal, 16 June 2011.

N. P. Barradas, Neutron Beams in the Portuguese Research Reactor, IAEA Regional Workshop on Concerted Actions in Research and Applications with Neutron Beams in Europe, Budapest, Hungary, 1-3 June 2011

N. P. Barradas, Summary Report on Neutron Imaging, 2nd Coordination Meeting of the Mediterranean Research Reactor Network, IAEA, Vienna, Austria, 22-24 June 2011.

N. P. Barradas, Status Report - Portuguese Research Reactor, 2nd Coordination Meeting of the Mediterranean Research Reactor Network, IAEA, Vienna, Austria, 22-24 June 2011.

N. P. Barradas, Visible light response photocatalytic materials based on TiO₂ grown DC-reactive magnetron sputtering - N content, Midterm Meeting of SPIRIT, 10-11 March 2011 Farnham Castle.

N. P. Barradas, Pitfalls in IBA data analysis, 20th International Conference on Ion Beam Analysis, 10-15 de Abril de 2011, Itapema, Brazil.

Thesis

MSc

Quentin Vinckier, Effets des Radiations Neutroniques et Gamma sur le Comportement de Transistors de Type HEMT et MOSFET, Master en Sciences de l'Ingénieur Industriel en Génies Physique et Nucléaire, Institut Supérieur Industriel de Bruxelles, 2011. Supervisor: J.G. Marques.

Norberto José Sobral Catarino, Caracterização de Danos e Ativação Óptica de Európio Implantado em Nitreto de Gálio Polar e Não-polar, Master in Physical Engineering, Faculdade de Ciências, Universidade de Lisboa. Co-supervisor: J.G. Marques.

Joana Bravo Catela Pinto dos Santos, Estudo do Al₂O₃:Mg,Y e do Perspex Vermelho na Caracterização de Campos Mistos de Radiação do

Reactor Português de Investigação, Master in Physical Engineering, Faculdade de Ciências, Universidade de Lisboa. Supervisor: J.G. Marques.

Luís Miguel Cabeça Marques, Estudo Comparativo de Detectores de HPGe, NaI(Tl) e CdZnTe para Aplicações em Segurança e para Resposta a Ameaças Nucleares e Radiológicas, Master in Physical Engineering, Faculdade de Ciências, Universidade de Lisboa. Co-Supervisor: J.G. Marques.

Internal Reports

A. Kling, Radiological Control at the Portuguese Research Reactor (RPI), Report January 1 – December 31, 2010, ITN/RPI-R-11-116.

J. Marques, N. Barradas, A. Kling, Ana Rita Wahl, RPI Annual Report, ITN/RPI-R-2011/117.

A. Kling, Radiological Control at the Portuguese Research Reactor (RPI), Report January 1 – June 30, 2011. A. Kling ITN/RPI-R-11-118.

Applied Dynamics

Journals

X. Delaune, P. Piteau, V. Debut, J. Antunes, "Experimental validation of inverse techniques for the remote identification of impact forces in gap-supported systems subjected to local and flow turbulence excitations", *ASME Journal of Pressure Vessel Technology*, Vol. 5, Paper 051301 (2011).

R. Hanson, S. Ziada, "Effect of acoustic resonance on the dynamic lift of tube arrays", *Journal of Fluids and Structures*, Vol. 27, pp. 367-382 (2011).

Conference proceedings

V. Debut, O. Inácio, J. Antunes, "A linearized modal approach for predicting wolf notes", *Proceedings of the International Congress on Sound and Vibration (ISCV 18)*, 10-14 July 2011, Rio de Janeiro, Brasil.

J. Antunes, X. Delaune, P. Piteau, "Time-domain simulation of the random vibrations of tubes subjected to turbulence-conveying flows", Paper 57162, *Proceedings of the ASME 2011 Pressure Vessels and Piping Conference (PVP 2011)*, July 17-21, 2011, Baltimore, USA.

X. Delaune, J. Antunes, P. Piteau, L. Borsoi, "Experiments and computations of a loosely supported tube under two-phase flow buffeting and fluid-elastic coupling forces", *21st International Conference on Structural Mechanics in Reactor Technology (SMIRT 21)*, 6-11 November 2011, New Delhi, India.

Communications

J. Antunes, "Modélisation des instruments par méthodes modales : méthodologie et illustrations". *Colloquium on "Bowed and plucked string instruments"*, 23 May 2011, ITEM, Le Mans, France.

V. Debut, "Phénomènes de note de loup: résultats théoriques et expérimentaux". *Colloquium on "Bowed and plucked string instruments"*, 23 May 2011, ITEM, Le Mans, France.

V. Debut, "Wolf-note phenomenon: theoretical experimental results". *Violin Acoustics Meeting*, 24-29 September 2011, University of Cambridge, UK.

Internal Reports

J. Antunes, P. Piteau, "VITAMINE : Méthodes simplifiées pour la simulation des excitations temporelles par la turbulence des écoulements transverse et axial", *Report ITN/ADL-Nov11-1*.

J. Antunes, "Réponse vibratoire des crayons combustibles à l'excitation par la turbulence de l'écoulement axial : Analyse de l'influence du terme de transport", *Report ITN/ADL-Nov11-2*.

J. Antunes, X. Delaune, P. Piteau, "TGV-ICE : Calcul des modes de coque de la maquette en air et immergée", *Report ITN/ADL-Dec11-1*.

Seminars

J. Antunes, "Modélisation et effets de la convection axiale dans l'excitation par la turbulence des écoulements", *Commissariat à l'Energie Atomique, Centre d'Études de Saclay*, France, 11 July 2011.

Neutron Activation in Environment, Nutrition and Epidemiology

Book Chapters

M.C. Freitas, N. Canha, M. Martinho, M. Almeida-Silva, S.M. Almeida, P. Pegas, C. Alves, C. Pio, M. Trancoso, R. Sousa, F. Mouro, T. Contreiras (2011) Indoor Air Quality in Primary Schools, Advanced Topics in Environmental Health and Air Pollution Case Studies, Anca Maria Moldoveanu (Ed.), ISBN: 978-953-307-525-9, InTech. Available from: <http://www.intechopen.com/articles/show/title/indoor-air-quality-in-primary-schools>

International Journals

N. Canha, M. Almeida, M.C. Freitas, S.M. Almeida, Seasonal Variation of Total Particulate Matter and Children Respiratory Diseases at Lisbon Basic Schools using Passive Methods. *Procedia Environmental Sciences* 4 (2011) 170-183.

N. Canha, M.C. Freitas, I. Dionisio, A.M.G. Pacheco, H.M. Anawar Chemical extraction potential of superficial waters in soils of abandoned sulphide-mining areas. *Proc. Radiochim. Acta* 1 (2011) 377–381.

M. Almeida-Silva, N. Canha, C. Galinha, H.M. Dung, M.C. Freitas, T. Siteo, Trace elements in wild and orchard honeys, *Applied Radiation and Isotopes* 69 (11) (2011) 1592-1595.

M. Almeida-Silva, N. Canha, M.C. Freitas, H.M. Dung, I. Dionísio, Air pollution at an urban traffic tunnel in Lisbon, Portugal – an INAA study. *Applied Radiation and Isotopes* 69 (11) (2011) 1586-1591.

H.M. Anawar, M.C. Freitas, N. Canha (2011) Evaluation of atmospheric dispersion of contaminated mining particulates by biomonitors. *Int. J. Environ. Health.* 5 (1/2) (2011) 84-92.

H.M. Anawar, N. Canha, M.C. Freitas, I.S. Regina, A. Garcia-Sanchez. Effects of different drying processes on the concentrations of metals and metalloids in plant materials. *J. Radioanal. Nucl. Chem.* 289 (2011) 29-34.

H.M. Anawar, M.C. Freitas, N. Canha, I.S. Regina Arsenic, antimony and other trace element contamination in a mine tailings affected area and uptake by tolerant plant species. *Environmental Geochemistry and Health* 33 (4) (2011) 353-362.

A.M.J.Cruz, M.C. Freitas, T.G.Verburg, N. Canha, H.Th. Wolterbeek Response of exposed bark and exposed lichen to an urban area. *Proc. Radiochim. Acta* 1 (2011) 363–369.

S.M. Almeida, N. Canha, Ana Silva, M.C. Freitas, P. Pegas, C. Alves, M. Evtugina, C.A. Pio Children Exposure to Atmospheric Particles in Indoor of Lisbon Primary Schools. *Atmospheric Environment* 45 (2011) 7594-7599.

N. Canha, M. Almeida-Silva, M. C. Freitas, S. M. Almeida, H. Th. Wolterbeek: Lichens as biomonitors at indoor environments of primary schools. *Journal of Radioanalytical and Nuclear Chemistry*, 291(1) (2011) 123-128.

N. Canha, M. C. Freitas, M. Almeida-Silva, S. M. Almeida, H. M. Dung, I. Dionísio, J. Cardoso, C. A. Pio, A. Caseiro, T. G. Verburg, H. Th. Wolterbeek: Burn wood influence on outdoor air quality in a small village: Foros de Arrão, Portugal, 2011. *Journal of Radioanalytical and Nuclear Chemistry.* 1 (2011) 1261-1.

C. Galinha, H.M. Anawar, M.C. Freitas, A.M.G. Pacheco, M. Almeida-Silva, J. Coutinho, B. Maças, A.S. Almeida, Neutron activation analysis of wheat samples, *Applied Radiation and Isotopes*, 69 (2011) 1596-1604.

C. Galinha, M. C. Freitas, A.M.G. Pacheco, J. Coutinho, B. Maças, A. S. Almeida Radiotracing selenium in bread-wheat seeds for a Se-biofortification program: an optimization study in seed enrichment. *Journal of Radioanalytical and Nuclear Chemistry*, 291 (2011) 193-195.

C. Galinha, M. C. Freitas, A.M.G. Pacheco, J. Coutinho, B. Maças, A. S. Almeida Determination of selenium in bread-wheat samples grown under a Se-supplementation regime in actual field conditions. *Journal of Radioanalytical and Nuclear Chemistry*, 291 (2011) 231-235.

C. Viegas, C. Ramos, M. Almeida, R. Sabino, C. Verissimo, L. Rosado Air fungal contamination in ten hospitals food units in Food and Environment I. *WIT Transactions on Biomedicine and Health*, (2011) 127-132.

H.M. Dung, M. Blaauw, D. Beasley, M.C. Freitas (2011) Development of the k_0 -based cyclic neutron activation analysis for short-lived radionuclides. *J. Radioanal. Nucl. Chem.* 291 (2) (2011) 1372-2.

A.V. Silva, R. Bettencourt da Silva, M. F. Camões Optimization of the determination of chemical oxygen demand in wastewaters. *Analytica Chimica Acta*, 699 (2) (2011) 161-169.

M.C. Freitas, S.M. Almeida, H.M. Dung, I. Dionísio, A.M.G. Pacheco, Analysis of air particulate matter in TeflonTM and quartz filters by short-irradiation, epithermal-neutron activation with Compton suppression. *Proc. Radiochim. Acta* 1 (2011) 371-375.

P.N. Pegas, C. A. Alves, M. G. Evtugina, T. Nunes, M. Cerqueira, M. Franchi, C. A. Pio, S. M. Almeida, S. Cabo Verde and M. C. Freitas Seasonal evaluation of outdoor/indoor air quality in primary schools in Lisbon, *J. of Environmental Monitoring* 13 (2011) 657-667.

P.N. Pegas, C.A. Alves, M.G. Evtugina, T. Nunes, M. Cerqueira, M. Franchi, C.A. Pio, S.M. Almeida, M.C. Freitas, Indoor air quality in elementary schools

of Lisbon in Spring, *Environmental Geochemistry Health* 33, (2011) 455-468.

P.N. Pegas, C.A. Alves, M.G. Scotto, M.G. Evtugina, C.A. Pio, M.C. Freitas, Risk factors and prevalence of asthma and rhinitis among primary school children in Lisbon, *Revista Portuguesa de Pneumologia* 17, (2011) 109-116.

S.M. Sarmento, T.G. Verburg, S.M. Almeida, M.C. Freitas, H.Th. Wolterbeek (2009) Robustness of different regression modelling strategies in epidemiology: a time-series analysis of hospital admissions and air pollutants in Lisbon (1999–2004), *Environmetrics* 22, (2011) 86-97.

Conference Proceedings

N. Canha M.C. Freitas, M. Martinho, M. Almeida-Silva, S.M. Almeida, P. Pegas, C. Alves, C. Pio, M. Trancoso, R. Sousa, F. Mouro, T. Contreiras (2011) Indoor Air Quality in Primary Schools. Proceedings of the 14th International Conference on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes (HARMO 14), Kos Island, Greece, 2-6 October (ISBN 978-960-89650-6-5), pages 312-316.

H.M. Dung, M.C. Freitas, I. Dionisio, S.M. Almeida, B. Vieira (2011) Chemical Elements in Airborne Particulate Matter at Pico Mountain, Azores Island (Portugal) in Period from August 2008 to June 2009, The Global Conference on Global Warming 2011, 11-14 July, Lisbon, Portugal.

A.V. Silva, S.M. Almeida, M.C. Freitas, A.M. Marques, A.I. Silva, C.A. Ramos, T. Pinheiro, S. M. Garcia, G. Domingues, A.I. Miranda (2011) Measurement of fugitive emissions during harbour operations, The Global Conference on Global Warming 2011, 11-14 July, Lisbon, Portugal.

S.M. Almeida, M.C. Freitas, A.I. Silva, A.V. Silva, N. Canha, A. Cruz, C. Repolho, H.M. Dung, A. Caseiro, C.A. Pio (2011) Impact of Maritime Air Mass Trajectories on the Western European Coast Urban Aerosol, Global Conference On Global Warming 2011, 11-14 July, Lisbon, Portugal.

A.V. Silva, S.M. Almeida, S. M. Sarmento, A.M.J.Cruz, T. Verburg, A.I. Miranda (2011) Air pollution and Hospital Admission for Cardiorespiratory Diseases in Setúbal, Portugal. CAPAC II - International Conference on Air Pollution and Control, 2011, Antalya – Turkey, 19-23 September.

S.M. Almeida, M.C. Freitas, A.I. Pedro, T. Ribeiro, J. Lage, A.V. Silva, N. Canha, M. Almeida-Silva, T. Siteo, I. Dionisio, S. Garcia, G. Domingues, J. Perim de Faria, B. González Fernández, D. Ciaparra (2011) Integration of biomonitoring and instrumental techniques to assess the air quality in an industrial area located in the coastal of central Asturias, Spain. CAPAC II - International Conference on Air Pollution and Control, 2011, Antalya – Turkey, 19-23 September.

S.M. Almeida, M. Almeida-Silva, M. Pinto, D. Rodrigues (2011) Indoor Air Quality in Portugal. CAPAC II - International Conference on Air Pollution and Control, 2011, Antalya – Turkey, 19-23 September.

M. Almeida-Silva, S. M. Almeida, A. Dias (2011) Indoor air quality in urban environments. CAPAC II - International Conference on Air Pollution and Control, 2011, Antalya – Turkey, 19-23 September.

A.M.J Cruz, M.C. Carmo, T.G. Verburg, H.Th. Wolterbeek (2011) Effect of atmospheric pollutants and environmental data on respiratory and circulatory disease in Lisbon, Portugal. CAPAC II - International Conference on Air Pollution and Control, 2011, Antalya – Turkey, 19-23 September.

Communications

Invited

S.M. Almeida (2011) Auditoria à Qualidade do Ar Interior em Edifícios de Serviços – Casos de Estudo. Conferência Turismo e Desenvolvimento Sustentável, 5th April, Teatro Municipal de Portimão.

S.M. Almeida (2011) Qualidade do Ar Interior (Ventilação, Toxicidade dos Sistemas e dos Materiais, Análise de Risco). Curso Prosperidade Renovável - Energia I, IBN e LPN, 2nd February.

S.M. Almeida (2011) Qualidade do Ar Interior em Escolas, Custos e Oportunidades, Gestão de Edifícios, Consumo Energético, Qualidade do Ar Interior. Custos e Oportunidades, Ordem dos Engenheiros, 13 January.

Oral

N. Canha, S.M. Almeida, M.C. Freitas (2011) Indoor air quality studies in schools in Lisbon, Portugal. National Institute for Health and Welfare of Finland, Kuopio – Finland, 13th December.

N. Canha, M.C. Freitas, S.M. Almeida, H.M. Dung, I. Dionísio, A.M.G. Pacheco, H.TH. Wolterbeek (2011) Indoor passive deposition at classrooms of Lisbon elementary schools: Characterization of the total particulate matter using k0-INAA and natural radionuclide measurements. RRMIC – Radiobioassay & Radiochemical Measurements Conference, Sandestin, Florida, USA, 31 October – 4 November.

A.V. Silva, S.M. Almeida, S. M. Sarmento, A.M.J.Cruz, T. Verburg, A.I. Miranda (2011) Air pollution and Hospital Admission for Cardiorespiratory Diseases in Setúbal, Portugal. CAPAC II - International Conference on Air Pollution and Control, 2011, Antalya – Turkey, 19-23 September.

S.M. Almeida, M.C. Freitas, A.I. Pedro, T. Ribeiro, J. Lage, A.V. Silva, N. Canha, M. Almeida-Silva, T. Siteo, I. Dionisio, S. Garcia, G. Domingues, J. Perim de Faria, B. González Fernández, D. Ciaparra (2011) Integration of biomonitoring and instrumental techniques to assess the air quality in an industrial

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- area located in the coastal of central Asturias, Spain. CAPAC II - International Conference on Air Pollution and Control, 2011, Antalya – Turkey, 19-23 September.
- S.M. Almeida, M. Almeida-Silva, M. Pinto, D. Rodrigues (2011) Indoor Air Quality in Portugal. CAPAC II - International Conference on Air Pollution and Control, 2011, Antalya – Turkey, 19-23 September.
- M. Almeida-Silva, S. M. Almeida, A. Dias (2011) Indoor air quality in urban environments. CAPAC II - International Conference on Air Pollution and Control, 2011, Antalya – Turkey, 19-23 September.
- A.M.J Cruz, M.C. Carmo, T.G. Verbung, H.Th. Wolterbeek (2011) Effect of atmospheric pollutants and environmental data on respiratory and circulatory disease in Lisbon, Portugal. CAPAC II - International Conference on Air Pollution and Control, 2011, Antalya – Turkey, 19-23 September.
- S.M. Almeida, M.C. Freitas, A.I. Silva, A.V. Silva, N. Canha, A. Cruz, C. Repolho, H.M. Dung, A. Caseiro, C.A. Pio (2011) Impact of Maritime Air Mass Trajectories on the Western European Coast Urban Aerosol, The Global Conference On Global Warming 2011, 11-14 July, Lisbon, Portugal.
- H.M. Dung, M.C. Freitas, I. Dionisio, S.M. Almeida, B. Vieira (2011) Chemical Elements in Airborne Particulate Matter at Pico Mountain, Azores Island (Portugal) in Period from August 2008 to June 2009, The Global Conference On Global Warming 2011, 11-14 July, Lisbon, Portugal.
- M. Trancoso, A. Sousa, F. Mouro, M.C. Freitas, S.M. Almeida, N. Canha (2011) Indoor air quality: Measurement uncertainty as a tool for the anion-cation balance acceptance criteria. Eurachem – Recent developments in measurement uncertainty, Lisbon, Portugal, 6-7 June.
- N. Canha, M.C. Freitas, M. Silva-Almeida, S.M. Almeida, H. M. Dung, I. Dionísio, J. Cardoso, C.A. Pio, A. Caseiro, T.G. Verbung, H.T. Wolterbeek (2011) Burn Wood Influence on Outdoor Air Quality in a small village, Portugal, Modern Trends in Activation Analysis – 13 (MTAA-13), College Station, Texas, 12 – 20 March.
- C. Galinha, M.C. Freitas, A.M.G. Pacheco, J. Coutinho, B. Maças, A.S. Almeida (2011) Selenium and Iodine as Radiotracers in Wheat Samples, Modern Trends in Activation Analysis – 13 (MTAA 13), Texas A&M University, Texas – U.S.A., 13-18 March 2011.
- H.M. Dung, M. Blaauw, D. Beasley, M.C. Freitas (2011) Development of the k₀-based cyclic neutron activation analysis for short-lived radionuclides, Modern Trends in Activation Analysis – 13 (MTAA-13), College Station, Texas, 12 – 20 March.
- H.M. Dung, N.H. Canha, Zs. Révay, D.G. Beasley M.C. Freitas, S.M. Almeida, Prompt Gamma Neutron Activation Analysis System at the Portuguese Research Reactor, Modern Trends in Activation Analysis-13 (MTAA-13), College Station, Texas, 12-20 March.
- Poster**
- S.M. Almeida, A. Silva, M.C. Freitas, A.M. Marques, C.A. Ramos, A.I. Silva, T. Pinheiro (2011) Characterization of Dust Material Emitted during Harbour Activities by k₀-INAA and PIXE, Modern Trends in Activation Analysis – 13 (MTAA-13), College Station, Texas, 12 – 20 March.
- N. Canha, M. Silva-Almeida, M.C. Freitas, S.M. Almeida, H.T. Wolterbeek (2011) Lichens as biomonitors at indoor environments of primary schools, Modern Trends in Activation Analysis – 13 (MTAA-13), College Station, Texas, 12 – 20 March.
- N. Canha, A.M.J.Cruz, S.M. Almeida, A. Silva, M.C. Freitas, H.Th. Wolterbeek (2011) Atmospheric particles in indoor of Lisbon primary schools. International Conference on Occupational and Environmental Health (ICOEH), Porto – Portugal, 17-19 October.
- A.M.J. Cruz, N. Canha, M.C. Freitas, S.M. Almeida, T.G. Verbung, H.Th. Wolterbeek (2011) Assessment of the meteorological conditions influence on spatial and temporal variation of biomonitors conductivity at Lisbon city, Portugal. International Conference on Occupational and Environmental Health (ICOEH), Porto – Portugal, 17-19 October.
- N. Canha, M.Martinho, M.Almeida-Silva, M.C. Freitas, S.M. Almeida, P. Pegas, C. Alves, C. Pio, M. Trancoso, R. Sousa, F. Mouro, T. Contreiras (2011) Indoor air quality in primary schools. 14th International Conference on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes - Harmo-14. Kos Island, Greece, 2-6 October.
- A.M.J.Cruz, N. Canha, M.C. Freitas, S.M. Almeida, H.Th. Wolterbeek (2011) Spatial and temporal variation of biomonitors conductivity at Lisbon city, Portugal. CAPAC II - International Conference on Air Pollution and Control, Antalya – Turkey, 19-23 September.
- N. Canha, M.C. Freitas, A.M.G. Pacheco (2011) Response of air-pollution biomonitors under three different meteorological conditions. 3rd INCC - International Nuclear Chemistry Congress, Sicily – Italy, 18 - 23 September.
- C. Viegas, C. Veríssimo, R. Sabino, M. Almeida-Silva, S. Viegas: Could mycotoxins in the air be a public health problem in Portugal?, 2011. International Conference on Air Pollution and Control (CAPAC II). Antalya, Turkey, 2011.
- C. Galinha, M.C. Freitas, A.M.G. Pacheco, J. Coutinho, B. Maças, A.S. Almeida. Selenium in Portuguese wheats grown under a soil-supplementation regime in actual field conditions, determined by cyclic neutron activation analysis. 57th Annual Radiobioassay and Radiochemical

Measurements Conference (RRMC 2011), Destin FL, 31 October - 4 November 2011.

C. Galinha, M.C. Freitas, A.M.G. Pacheco. Elemental concentrations in Portuguese rice samples by instrumental neutron activation analysis. 57th Annual Radiobioassay and Radiochemical Measurements Conference (RRMC 2011), Destin FL, 31 October - 4 November.

C. Galinha, M.C. Freitas, A.M.G. Pacheco. Elemental characterization of bread and durum wheat by instrumental neutron activation analysis. International Nuclear Chemistry Congress (3rd - INCC), Sicily, Italy, 18-23 September 2011.

C. Galinha, M.C. Freitas, A.M.G. Pacheco. Trace Elements and Contaminants in Barley. Trace Elements in Food 4 (TEF-4), King's College, Aberdeen - Scotland, 19-22 June 2011.

C. Galinha, M.C. Freitas, A.M.G. Pacheco, A.S. Almeida, J. Coutinho, B. Maças. Determination of Selenium in Wheat Samples. Modern Trends in Activation Analysis – 13 (MTAA 13), Texas A&M University, Texas – U.S.A., 13-18 March 2011.

A. V. Silva, R. B. da Silva, M. F. Camões. Detailed Evaluation of the Uncertainty for the Determination of the Chemical Oxygen Demand in Wastewater. Eurachem/CITAC 2011- Workshop “Recent Developments in Measurement Uncertainty”, 6-7 de Junho de 2011.

A.V. Silva, S.M. Almeida, M.C Freitas, A.M. Marques, A.I. Silva, C.A. Ramos, T. Pinheiro, S. M. Garcia, G. Domingues, A.I. Miranda, Measurement of fugitive emissions during harbour operations, The Global Conference on Global Warming 2011, 11-14 July, 2011, Lisbon, Portugal.

Thesis

Tiago Alexandre Pereira Velez Ribeiro (2011) “Mapeamento de metais pesados em zona industrial através da utilização de biomonitorios”, MSc, Instituto Superior Técnico, Novembro.

Catarina Galinha (2011) “Diferentes técnicas radioanalíticas para obtenção de selénio em amostras de cereais”, MSc, Instituto Superior Técnico, Junho.

Ana Isabel Pedro (2011) “Influence of the traffic-related suspended particles in the city of Setúbal, Portugal”, Unidade Curricular “Projecto de Investigação” da licenciatura em Saúde Ambiental, Escola Superior de Tecnologias da Saúde de Lisboa.

Andreia Ferreira (2011) “Influence of the traffic-related suspended particles in the city of Setúbal, Portugal”, Unidade Curricular “Projecto de Investigação” da licenciatura em Saúde Ambiental, Escola Superior de Tecnologias da Saúde de Lisboa.

Ana Isabel Pedro (2011) “Actividades de Investigação no Instituto Tecnológico e Nuclear” Unidade Curricular “Estágio II” da licenciatura em Saúde Ambiental, Escola Superior de Tecnologias da Saúde de Lisboa.

Radiological Protection and Nuclear Safety Unit

Dosimetry and Radiobiology

International Journals

E. A. Ainsbury *et al.* Review of retrospective dosimetry techniques for external ionising radiation measurements. *Radiat Prot Dosim.*, 147(4), (2011) 573–592.

D.L. Ramos, J.F. Gaspar, M. Pingarilho, O.M. Gil, A.S. Fernandes, J. Rueff, N.G. Oliveira. Genotoxic effects of doxorubicin in cultured human lymphocytes with different Glutathione S-transferases genotypes. *Mutat Res.*, 724(1-2), (2011) 28-34.

J. G. Alves, P. Ambrosi, D. Bartlett, L. Currivan, JWE van Dijk, E. Fantuzzi, V. Kamenopoulou. The new European Commission technical recommendations for monitoring individuals occupationally exposed to external radiation. *Radiat Prot Dosim.*, 114 (1-4), (2011) 17-25.

M.F. Pereira, J.G. Alves, S. Sarmento, J.A. M. Santos, M.J. Sousa, M. Gouvêa, A.D. Oliveira, J.V. Cardoso, L.M. Santos. Preliminary assessment of the dose to the interventional radiologist in fluoro-CT guided procedures. *Radiat Prot Dosim.*, 114 (1-4), (2011) 488-452.

L.C. Freire, M.F. Pereira, A.M. Calado, L.M. Santos, J.V. Cardoso, J.G. Alves. Evaluation of the performance of two LiF:Mg,Ti and LiF:Mg,Cu,P dosimeters for extremity monitoring. *Radiat. Prot. Dosim.*, 114 (1-4), (2011) 140-143.

M. Neves, F.C. Teixeira, I. Antunes, A. Majkowska, L. Gano, A.C. Santos. Chemical and biological evaluation of ^{153}Sm and $^{46/47}\text{Sc}$ complexes of indazolebisphosphonates for targeted radiotherapy. *Applied Radiation and Isotopes*, 69, (2011) 80-84.

C. Lederer *et al.* $^{197}\text{Au}(n,\gamma)$ cross section in the unresolved resonance region. *Phys. Rev. C*, 83 (3), (2011), 034608.

S. Di Maria, S. Barros, J. Bento, P. Teles, P. Vaz, M. Pereira, C. Figueira, G. Paulo. TLD measurements and Monte Carlo simulations for glandular dose and scatter fraction assessment in mammography: a comparative study. *Radiation Measurements*, 46, (2011) 1103-1108.

D. Tarrío *et al.* Neutron-induced fission cross-section of ^{208}Pb and ^{209}Bi from threshold to 1 GeV: An improved parameterization. *Phys. Rev. C*, 83 (4), (2011) 044620.

G. Tagliente, *et al.* Neutron capture on ^{94}Zr : Resonance parameters and Maxwellian-averaged cross sections. *Phys. Rev. C*, 84, (2011) 015801.

P. Nogueira, M. Zankl, H.Schlattl, P. Vaz. Dose conversion coefficients for monoenergetic electrons

incident on a realistic human eye model with different lens cell populations. *Phys. Med. Biol.*, 56, (2011) 6919-6934.

R. Luis, J. Bermudez, J.C. David, D. Ene, I.F. Goncalves, Y. Kadi, C. Kharoua, F. Negoita, R. Rocca, Y. Romanets, L. Tecchio, P. Vaz. EURISOL Multi-MW Target Unit – MAFF Configuration: Dosimetry and Activation Studies. *Nuclear Technology*, 175 (2), (2011) 445-449.

M.A. Lopez, *et al.* EURADOS coordinated action on Research, quality assurance and training of internal dose assessments. *Rad. Res.*, 144 (1-4) (2011) 349-352.

National Journals

A.D. Oliveira, J. Bento, *BioKinModels. A computational tool to solve and to analyze models of compartments.* Radioproteção, Vol. 2, Nº 18-19, SPPCR, 2011.

International Conference Proceedings

V. Martins, A.C. Antunes, J. Cardoso, L. Santos, O. Monteiro Gil. Influence of age and gender in response to γ -radiation in Portuguese individuals using chromosomal aberration assay – Preliminary findings. Proceedings of EPRBiodose 2010 International Conference. Conference, published in *Radiation Measurements*, 46 (9) (2011) 1000-1003, 10-14 October 2010, Mandelieu La Napoule (Cannes), France.

A. Belchior, O. Gil, P. Almeida, P. Vaz. Evaluation of the cytotoxicity and the genotoxicity induced by α radiation in an A549 cell line. Proceedings of EPRBiodose 2010 International Conference. Conference, published in *Radiation Measurements* 46 (9) (2011) 958-961, 10-14 October 2010, Mandelieu La Napoule (Cannes), France.

A.M. Romero, J. Garcia-Alves, P. Ambrosi, D. Bartlett, L. Currivan, J. van Dijk, E. Fantuzzi, V. Kamenopoulou. Revisión de las nuevas recomendaciones técnicas de la comisión europea para la vigilancia individual de los trabajadores expuestos a radiación externa (ed.2009). 2nd Joint Congress of the Spanish Medical Physics and Radiation Protection Societies, 10-13 May, Sevilla, Spain, (2011).

J. G. Alves, P. Ambrosi, D. Bartlett, L. Currivan, JWE van Dijk, E. Fantuzzi, V. Kamenopoulou. The European technical recommendations for monitoring individuals occupationally exposed to external radiation. 7th International Workshop on Ionizing Radiation Monitoring, 02-07 December, Oarai, Japan (2011).

- R. Sarmiento *et al.* Measurement of the $^{236}\text{U}(n,f)$ cross-section at n_TOF. Proceedings of ND2010 International Conference on Nuclear Data for Science and Technology. Conference published in Journal of the Korean Physical Society, 59 (2) 1793-1796, 26-30 April, Jeju Island, South Korea (2011).
- C. Guerrero *et al.* Study of photon strength function of actinides: the case of ^{235}U , ^{238}Np and ^{241}Pu . Proceedings of ND2010 International Conference on Nuclear Data for Science and Technology. Conference published in Journal of the Korean Physical Society, 59 (2) 1510-1513, 26-30 April, Jeju Island, South Korea (2011).
- E. Chiaveri *et al.* Past, present and future of the n TOF facility at CERN. Proceedings of ND2010 International Conference on Nuclear Data for Science and Technology. Conference published in Journal of the Korean Physical Society, 59 (2) 1620-1623, 26-30 April, Jeju Island, South Korea (2011).
- C. Guerrero *et al.* Characterization of the new n TOF neutron beam: fluence, profile and resolution. Proceedings of ND2010 International Conference on Nuclear Data for Science and Technology. Conference published in Journal of the Korean Physical Society, 59 (2) 1624-1627, 26-30 April, Jeju Island, South Korea (2011).
- D. Cano-Ott *et al.* Neutron capture measurements on minor actinides at the n TOF facility at CERN: past, present and future. Proceedings of ND2010 International Conference on Nuclear Data for Science and Technology. Conference published in Journal of the Korean Physical Society, 59 (2) 1809-1812, 26-30 April, Jeju Island, South Korea (2011).
- E. Mendoza *et al.* Improved neutron capture cross section measurements with the n-TOF total absorption calorimeter. Proceedings of ND2010 International Conference on Nuclear Data for Science and Technology. Conference published in Journal of the Korean Physical Society, 59 (2) 1813-1816, 26-30 April, Jeju Island, South Korea (2011).
- D. Tarrío *et al.* High-energy neutron-induced fission cross sections of natural lead and bismuth-209. Proceedings of ND2010 International Conference on Nuclear Data for Science and Technology. Conference published in Journal of the Korean Physical Society, 59 (2) 1904-1907, 26-30 April, Jeju Island, South Korea (2011).
- C. Paradela *et al.* $^{237}\text{Np}(n,f)$ cross section: new data and present status. Proceedings of ND2010 International Conference on Nuclear Data for Science and Technology. Conference published in Journal of the Korean Physical Society, 59 (2) 1908-1911, 26-30 April, Jeju Island, South Korea (2011).
- M. Calviani *et al.* Fission cross-section measurements of ^{233}U , ^{245}Cm and $^{241,243}\text{Am}$ at CERN n-TOF facility. Proceedings of ND2010 International Conference on Nuclear Data for Science and Technology. Conference published in Journal of the Korean Physical Society, 59 (2) 1912-1915, 26-30 April, Jeju Island, South Korea (2011).
- G. Giubrone *et al.* The role of Fe and Ni for S-process nucleosynthesis and innovative nuclear technologies. Proceedings of ND2010 International Conference on Nuclear Data for Science and Technology. Conference published in Journal of the Korean Physical Society, 59 (2) 2106-2109, 26-30 April, Jeju Island, South Korea (2011).
- R. Luís *et al.* Optimization studies of the CERN-ISOLDE neutron converter – fission target system. Proceedings of the 4th High Power Targetry Workshop, 2-6 May, Malmö, Sweden (2011).
- S. Di Maria, M. Ottolini, M. Sarotto, F. Martín-Fuertes, M. Vazquez, E.M. Mbala, P. Teles, P. Vaz, D. Castelliti, M. Reale, L. Mansani, P. Baeten. Neutronic assessment and criticality analysis of the in-vessel fuel storage facilities in the Central Design Team (CDT) Project., Proceedings of the 15th International Conference on Emerging Nuclear Energy Systems (ICENES 2011), 15-19 May, San Francisco, USA (2011).

International Communications

Oral

S.Di Maria, M. Ottolini, M. Sarotto, F. Martín-Fuertes, M. Vazquez, E.M. Mbala, P. Teles, P. Vaz, D. Castelliti, M. Reale, L. Mansani, P. Baeten. *Neutronic Assessment and Criticality Analysis of the In-Vessel Fuel Storage Facilities in the Central Design Team (CDT) Project.* 15th International Conference on Emerging Nuclear Energy Systems, 15-19 May 2011, San Francisco, California.

R. Sarmiento *et al.* Measurement of the $^{236}\text{U}(n,f)$ cross-section at n_TOF. ND2010 International Conference on Nuclear Data for Science and Technology. Conference, 26-30 April 2011, Jeju Island, South Korea.

Thesis

MSc.

Ana Teresa Casimiro Nunes, *Dose optimization in CT, in nuclear medicine and in PET-CT procedure.* Masters in Biomedical Engineering, Faculty of Sciences and Technology, University of Coimbra. September 2011. Supervisor: P. Vaz and P. Madeira (Hospital S. José – CHLC).

Mariana da Silva Rufino, *Study of pediatric exposure in computed tomography in Portuguese pediatric hospitals.* Masters in Biomedical Engineering, Faculty of Sciences and Technology, University of Coimbra. September 2011. Supervisor: P. Vaz and P. Madeira (Hospital S. José – CHLC).

Ana Luísa Antunes Neves, *Study of pediatric exposure in CT: assessment of radiosensitivity issues.* Masters in Biomedical Engineering, Faculty of Sciences and Technology, University of Coimbra. September 2011. Supervisor: P. Vaz and P. Madeira (Hospital S. José – CHLC).

Bruno Miguel da Cruz Martins, *Avaliação da dose absorvida na tiróide, em cintigrafias com ^{123}I e $\text{Na}^{99\text{m}}\text{TcO}_4^-$ utilizando modelos biocinéticos e métodos de Monte Carlo*. Masters in Radiações Aplicadas às Tecnologias de Saúde, Escola Superior de Tecnologia de Saúde de Lisboa. December 2011. Supervisor: P. Vaz and F. Alves (Escola Superior de Tecnologia de Saúde de Lisboa).

Luís Miguel Cabeça Marques, *Estudo comparativo de detectores de HPGc, NaI(Tl), CdZnTe para aplicações em segurança e para resposta a ameaças nucleares e*

radiológicas. Masters in Physics Engineering, Faculty of Sciences of the University of Lisbon. December 2011. Supervisor: P. Vaz and J. Marques.

BSc.

Inês Arêde, Joana Vaz, *Caracterização da Sala de Angiografia*. Licenciatura em Radiologia, Universidade Atlântica. July 2011. Supervisors: J.G. Alves, M. Pereira, S. Tecelão (Univ. Atlântica).

Metrology Laboratory of Ionizing radiation

International Journals

H. Silva, J. Cardoso, C. Oliveira. Development of a new ionisation chamber for Hp(10) measurement, using Monte-Carlo simulation and experimental methods, *Radiation Protection Dosimetry*, 144 (1-4), (2011) 168-172.

International Communications

Oral

A.S. Ribeiro, C. Oliveira, M.G. Cox, J. Alves e Sousa, L.L. Martins, J. Cardoso, P. Lime de. *Modelling and uncertainty evaluation for the radiation quality parameters used in Metrological management of diagnostic radiology dosimeters*. Conference on Advanced Mathematical and Computational Tools in Metrology and Testing, 20-22 June 2011, Goteborg, Sweden.

C. Oliveira, J. Cardoso, L. Santos. *Experience of the National Laboratory of Metrology of Ionizing Radiations (LMRI): The TRS N° 398: experimental conditions at LMRI. Traceability and intercomparison results.* Workshop- IAEA supported national TPS audit", 24 September 2011, Coimbra, Portugal.

V. Sochor *et al.* *Comparison of measurements and Monte Carlo simulations of 3D distributions of dose-to-water by brachytherapy sources*. Conference on Advanced Metrology for Cancer Therapy, 29 Nov.–1 Dec. 2011, Braunschweig, Germany.

J. Plagnard, C. Oliveira, D. Cutarella, J. Gouriou, M. Rodrigues, L. Portugal, J. Cardoso, I. Aubineau-Lanièce. *Full characterisation of the ^{125}I IBt bebig I25.S16 brachytherapy source and sensitivity study of the absorbed dose to water due to the seed dimensional variations*. Conference on Advanced Metrology for Cancer Therapy, Nov 29th - Dec 1st, 2011, Braunschweig, Germany.

National Communications

Oral

C. Oliveira, J. Cardoso, L. Santos, P. Lime de, D. Góis, M. Oliveira. *A dosimetria no radiodiagnóstico*. 4º Encontro Nacional da Sociedade Portuguesa de Metrologia. 11 Nov., Lisboa, Portugal.

C. Oliveira. *Técnicas não invasivas*. Colóquio "A Metrologia na Saúde". Instituto Português da Qualidade. 13 December 2011, Lisboa, Portugal.

Thesis

M.Sc.

Décia Clotilde Perestrelo Góis, *Caracterização das qualidades de radiação de uma ampola de raios X com ânodo de tungsténio no âmbito da mamografia*. Faculdade Ciências e Tecnologia da Universidade Nova de Lisboa. Lisboa 2011. Supervisor: C. Oliveira and J. Cardoso.

Ana Isabel Água-Morna Braga de Carvalho, *Projecto, construção e caracterização de um irradiador portátil com fonte de Cs-137 para verificação metrológica de monitores fixos de área*. Faculdade Ciências e Tecnologia da Universidade Nova de Lisboa. Lisboa 2011. Supervisor: C. Oliveira and J. Cardoso.

Mário Fartaria de Oliveira, *Estudos dosimétricos em radiodiagnóstico*. Faculdade Ciências e Tecnologia da Universidade Nova de Lisboa. Lisboa 2011. Supervisor: C. Oliveira and J. Cardoso.

BSc.

Vanessa Pereira, *Estudo do calibrador de doses modelo PTW Curiementor 3*. ESTeSL. Lisboa. 2011. Supervisor: C. Oliveira and J. Cardoso.

Diana D. Duarte, *Trabalhos experimentais realizados em medicina nuclear e protecção radiológica no âmbito da metrologia das radiações ionizantes*. ESTeSL. Lisboa. 2011. Supervisor: J. Cardoso.

Environmental Radioactivity

International Journals

F.P. Carvalho, J.M. Oliveira, A.M. Soares. Sediment accumulation and bioturbation rates in the deep Northeast Atlantic determined by radiometric techniques. *ICES Journal Marine Science*, 68(3), (2011) 427-435.

F.P. Carvalho, J.M. Oliveira, G. Alberto. Factors affecting ^{210}Po and ^{210}Pb activity concentrations in mussels and implications for environmental bio-monitoring programmes. *Journal of Environmental Radioactivity*, 102, (2011) 128-137.

F.P. Carvalho, J.M. Oliveira, M. Malta. Radionuclides in plants growing on sludge and water from uranium mine water treatment. *Ecological Engineering*, 37, (2011) 1058-1063.

J. Lourenço, A. Silva, F. Carvalho, J. Oliveira, M. Malta, S. Mendo, F. Gonçalves, R. Pereira. Histopathological changes in the earthworm *Eisenia andrei* associated with the exposure to metals and radionuclides. *Chemosphere* 85, (2011) 1630-1634.

J.I. Lourenço, R.O. Pereira, A.C. Silva, J.M. Morgado, F.P. Carvalho, J.M. Oliveira, M.P. Malta, A.A. Paiva, S.A. Mendo, F.J. Gonçalves. Genotoxic endpoints in the earthworms sub-lethal assay to evaluate natural soils contaminated by metals and radionuclides. *Journal of Hazardous Materials* 186, (2011) 788-795.

O. Masson, *et al.* Tracking of airborne radionuclides from the damaged Fukushima Dai-Ichi nuclear reactors by European networks. *Environmental Science and Technology* 45 (18), (2011) 7670-7677.

National Journals

F.P. Carvalho. As descobertas científicas de Marie Curie e o seu legado à ciência e à humanidade. *Revista CAPTAR 3 (2)* (2011) 1-11.

F.P. Carvalho. Segurança na aviação: os scanners de corpo inteiro para controlo de passageiros. *Revista SEGURANÇA 200 (Janeiro/Fevereiro)* (2011) 10-13.

M.J. Madruga, M. Reis. Natural radioactivity in building materials: the European legislation and its implementation in Portugal. *Radioproteção*, Vol. II (nº18-19), ISBN -0874-7016, (2011) 42-46.

International Conference Proceedings

F.P. Carvalho, J.M. Oliveira, M. Malta, (2011). Vegetation fires and release of radioactivity into the air. In: "Environ. Health and Biomedicine", WIT Transactions on Biomedicine and Health Vol.15. WIT Press, UK, p 3-9.

F.P. Carvalho (2011). Marie Curie and the discovery of radium. In: "The New Uranium Mining Boom. Challenge and lessons learned". B. Merkel and M. Schipek (Edts), Springer-Verlag Berlin, p 3-13.

F.P. Carvalho, J.M. Oliveira, W.E. Falck (2011). Geochemistry of radionuclides in groundwaters at the former uranium and radium mining region of Sabugal, Portugal. In: "The New Uranium Mining Boom. Challenge and lessons learned". B. Merkel and M. Schipek (Edts), pp. 81-90. Springer-Verlag Berlin.

F.P. Carvalho, J.M. Oliveira, M. Malta. Radionuclides in deep-sea fish and other organisms from the North Atlantic Ocean. Proceedings of an ICES-sponsored symposium. Published in *ICES Journal Marine Science*, 68 (2) (2011) 333-340, 27-30 April 2009, Faial, Azores, Portugal.

F.P. Carvalho. Polonium (^{210}Po) and lead (^{210}Pb) in marine organisms and their transfer in marine food chains. Proceedings of International Topical Meeting on Polonium and Radioactive Lead Isotopes. Published in *Journal of Environmental Radioactivity*, 102 (2011) 462-472, 26-28 October 2009, Seville, Spain.

M. Malta, F.P. Carvalho. Radionuclides in marine mammals of the Portuguese coast. Proceedings of International Topical Meeting on Polonium and Radioactive Lead Isotopes. Published in *Journal of Environmental Radioactivity* 102 (2011) 473-478, 26-28 October 2009, Seville, Spain.

A.R. Gomes, J. Abrantes, A. Libânio, M.J. Madruga, M. Reis (2011). Improvement of the quality assurance in tritium analyses in waters by LSC. In: LSC 2010, Advances in Liquid Scintillation Spectrometry. Radiocarbon, Editor: P. Cassette, ISBN: 978-0-9638314-7-7, University of Arizona, Tucson, Arizona, USA, p. 211-218.

I. Lopes, J. Abrantes, J. Melo, M.J. Madruga, M. Reis (2011). LSC- Quality assurance on gross alpha/beta measurements in waters. In: LSC 2010, Advances in Liquid Scintillation Spectrometry. Radiocarbon, Editor: P. Cassette, ISBN: 978-0-9638314-7-7, University of Arizona, Tucson, Arizona, USA, p. 203-209.

J. Melo, I. Lopes, J. Abrantes, M.J. Madruga, M. Reis (2011). Comparative study of gross alpha and beta measurements in drinking waters. In: LSC 2010, Advances in Liquid Scintillation Spectrometry. Radiocarbon, Editor: P. Cassette, ISBN: 978-0-9638314-7-7, University of Arizona, Tucson, Arizona, USA, p. 99-105.

International Communications

Oral

F.P. Carvalho. *Uranium series radionuclides in the water column of the Northeast Atlantic Ocean*. IAEA International Symposium on Isotopes in Hydrology, Marine Ecosystems, and Climate Change Studies, Oceanographic Museum 27 March-1 April 2011. Book of Abstracts (Keynote lecture). Monaco.

PUBLICATIONS

F.P. Carvalho, J.M. Oliveira, A.M. Soares. *210Pb-excess and sediment accumulation rates at the Iberian continental margin*. IAEA International Symposium on Isotopes in Hydrology, Marine Ecosystems, and Climate Change Studies, Oceanographic Museum 27 March–1 April 2011. Book of Abstracts. Monaco.

Poster

F.P. Carvalho, J.M. Oliveira, M. Malta. *Radiation exposure through smoke inhalation from biomass burning*. International Conference on Radioecology & Environmental Radioactivity, Environment and Nuclear Renaissance. Book of Abstracts. 19-24 June 2011, Hamilton, Ontario, Canada.

F.P. Carvalho, J.M. Oliveira, M. Malta. *Cycling of uranium series radionuclides in a freshwater pond*. International Conference on Radioecology & Environmental Radioactivity, Environment and Nuclear Renaissance. Book of Abstracts. 19-24 June 2011, Hamilton, Ontario, Canada.

F.P. Carvalho, J.M. Oliveira. *Bioassay of uranium isotopes in human urine by alpha spectrometry*. International Conference on Radioecology & Environmental Radioactivity, Environment and Nuclear Renaissance. Book of Abstracts. 19-24 June 2011, Hamilton, Ontario, Canada.

F.P. Carvalho, J.M. Oliveira, M. Malta. *Radioactivity in surface waters near the old uranium mines of Quarta-Feira Valley, Portugal*. International Conference on Radioecology & Environmental Radioactivity, Environment and Nuclear Renaissance.

Book of Abstracts. 19-24 June 2011, Hamilton, Ontario, Canada.

J. Lourenço, R. Pereira, J. Morgado, F.P. Carvalho, J.M. Oliveira, M.P. Malta, A. Paiva, F. Gonçalves, S. Mendo. *In situ and laboratorial assays with earthworms for the risk assessment of sites contaminated with radioactive wastes*. International Conference on Radioecology & Environmental radioactivity Environment and Nuclear Renaissance. Book of Abstracts. 19-24 June 2011, Hamilton, Ontario, Canada.

S.M. Marques, R. Pereira, F.P. Carvalho, J.M. Oliveira, M.P. Malta, F. Gonçalves. *In situ short-term growth effects in *Pelophylax perezi* tadpoles exposed in uranium mine ponds*. International Conference on Radioecology & Environmental radioactivity Environment and Nuclear Renaissance. Book of Abstracts. 19-24 June 2011, Hamilton, Ontario, Canada.

Internal Reports

M.J. Madruga, F.P. Carvalho, M. Reis, J. Alves, J.A. Corisco, R. Trindade, I. Lopes, J. Abrantes, J.M. Oliveira, L. Silva, L. Portugal, M. Malta, A. Libânio, A. Mourato, G. Silva, L. Santos, A. Baptista, A.R. Gomes, E. Andrade, G. Carvalhal, J. Melo, M. Pereira. *Programas de Monitorização Radiológica Ambiental (Ano 2010)*. Internal Report UPSR, Série A, nº38/11, ISBN 978-989-96542-6-6, Depósito Legal 194022/03, pp. 135.

Radioprotection and Radioactive Waste

International Journals

P. Duarte, A. Mateus, I. Paiva, R. Trindade, P. Santos: *Usefulness of systematic in situ gamma-ray surveys in the radiometric characterization of natural systems with poorly-contrasting geological features (examples from NE of Portugal)*. *J. Applied Radiation and Isotopes* 69, (2011) 463-474.

National Communications

Oral

C. Oliveira, L. Portugal, I. Paiva, M. Reis, R. Trindade. *A Metrologia das Radiações Ionizantes na Indústria Metalúrgica*, ITN/EURAMET, 4º Encontro Nacional da SPMet, Metrologia – Suporte da Competitividade na Indústria, ISQ, Tagus Park, Oeiras, Nov.11th, 2011

Applied Geochemistry & Luminescence on Cultural Heritage

Books and Book Chapters

F. Ruiz, M. Pozo, M. I. Carretero, M. Abad, M. L. González-Regalado, J. M. Muñoz, J. Rodríguez-Vidal, L. M. Cáceres, J. G. Pendón, M. I. Prudêncio and M. I. Dias (2011). Birth, Evolution And Death Of A Lagoon: Late Pleistocene To Holocene Palaeoenvironmental Reconstruction Of The Doñana National Park (Sw Spain). In: Lagoons: Biology, Management and Environmental Impact, Ch. 13, Editor: Adam G. Friedman, ISBN: 978-1-61761-738-6, 2011 Nova Science Publishers, Inc., 371-398.

M. Abad, F. Ruiz, M. Pozo, M.I. Carratero, J. Rodríguez-Vidal, L.M. Cáceres, J.M. Muñoz, M.L. González-Regalado, J.G. Pendón, A. Toscano, J. Borrego, M.I. Prudêncio, M.I. Dias (2011). Correlation between millennial mining activities and heavy metal pollution in two southwestern Spanish estuaries. In: Heavy Metal Sediments, Ch. 5, Editor: Lucia H. Sanz, ISBN 978-1-61470-690-8, 2011 Nova Science Publishers, Inc., 1-12.

Journals

M.I. Prudêncio, M.I., Dias, J.C. Waerenborgh, F. Ruiz, M.J. Trindade, M. Abad, R. Marques, M.A. Gouveia, Rare earth and other trace and major elemental distribution in a pedogenic calcrete profile (Slimene, NE Tunisia). *Catena*, 87 (2011) 147-156.

R. Marques, M.I. Prudêncio, M.I. Dias, F. Rocha, Patterns of rare earth and other trace elements in different size fractions of clays of Campanian-Maastrichtian deposits from the Portuguese western margin (Aveiro and Taveiro Formations). *Chemie der Erde*, 71 (2011) 337-347.

C.I. Burbidge, S.I. Cabo Verde, A.C. Fernandes, M.I. Prudêncio, M.L. Botelho, M.I. Dias, G. Cardoso, Dosimetry in the multi kilo-Gray range using optically-stimulated luminescence (OSL) and thermally-transferred OSL from quartz. *Radiation Measurements*, 46 (2011) 860-865.

R. Marques, M.I. Dias, M.I. Prudêncio, F. Rocha, Upper Cretaceous clayey levels from western Portugal (Aveiro and Taveiro regions: clay mineral and trace-elements distribution). *Clays and Clay Minerals*, 59(3) (2011). 315-327.

M.J. Trindade, M.I. Dias, F. Rocha, M.I. Prudêncio, J. Coroado, Bromine volatilization during firing of calcareous and non-calcareous clays: Archaeometric implications. *Applied Clay Science*, 53 (2011) 489-499.

F. Ruiz, M. Abad, M.L. González Regalado, E.X.M. García, A. Toscano, M.I. Prudêncio, M.I., Dias, E.

Galán, M.I. González, Predation on ostracod populations of two north African lagoons. *Crustaceana*, 84 (2011) 1537-1545.

C.I. Burbidge, A.L. Rodrigues, M.I. Dias, M.I. Prudêncio, G. Cardoso. (available in 2011) (2010). Optimisation of preparation and measurement protocols for luminescence dating of small samples from a suite of porcelains and faiences. *Journal of Mediterranean Archaeology and Archaeometry*, 10, (2011) 53-60.

R. Marques, M.I. Prudêncio, J.C. Warrenborgh, F. Rocha, M.I. Dias, E. Ferreira da Silva. Geochemistry and mineralogy of volcanic ash red paleosol from Fogo island (Cape Verde). *Mineralogical Magazine*, 75 (3) (2011) 1408.

Trindade, M.J., Rocha, F., Prudêncio, M.I., Dias, M.I. Trace element mobility during spheroidal weathering of dolerite dykes from central Portugal. *Mineralogical Magazine*, 75 (3) (2011) 2030.

M.I. Prudêncio, M.I. Dias, J.C. Waerenborgh, M.J. Trindade, F. Ruiz, R. Marques, M.A. Gouveia, M. Abad, Rare earth and other trace and major elemental distribution in a pedogenic calcrete profile (Slimene, NE Tunisia), *Catena* 87 (2011) 147-156.

Conference Proceedings

M.J. Trindade, M.I. Prudêncio, M.I. Dias, F. Rocha (2011), Mobilization and re-distribution of major and trace elements during spheroidal weathering of dolerites from Fornos de Algodres area. Proceedings of the VIII Cong. Ibérico de Geoquímica (Castelo Branco, Portugal), 1, 361-366.

R. Marques, M.I. Prudêncio, J.C. Waerenborgh, F. Rocha, M.I. Dias, E. Ferreira da Silva (2011), Iron and other chemical elements in a paleosol developed on volcanic ash in Fogo Island (Cape Verde). Proceedings of the VIII Cong. Ibérico de Geoquímica (Castelo Branco, Portugal), 1, 211-416.

R. Marques, M.I. Prudêncio, J.C. Waerenborgh, F. Rocha, M.I. Dias, E. Ferreira da Silva, Iron and other chemical elements in a paleosol developed on volcanic ash in Fogo Island (Cape Verde), *Proceedings VIII Cong. Iberico de Geoquímica, Castelo Branco, Portugal* 411-416 (2011).

Communications

Invited

M. I. Dias. Materials, Pigments, Dating, Authenticity: Portuguese faience and Chinese Porcelain produced for the Portuguese market (XVI to XVIII Centuries). Applications of synchrotron radiation sources for

compositional and structural characterization of objects in cultural heritage, forensics and materials science. IAEA technical meeting (TM-40771). IAEA Headquarters, Vienna, Austria, 17-21 October 2011.

M. I. Dias, *Análise por activação com neutrões em estudos de Arqueometria e Ciências da Terra*. 50º Aniversário Do Reactor Português de Investigação, 27 de Abril de 2011.

C. I. Burbidge. Facets of luminescence for dating. Conference on Micro-Raman Spectroscopy and Luminescence Studies in the Earth and Planetary Sciences (CORALS II), Museo Nacional de Ciencias Naturales, Madrid, May 18-20, 2011.

Oral

M.I. Prudêncio, M. A. Stanojev Pereira, J.G. Marques, M.I. Dias, L. Esteves, C.I. Burbidge, M.J. Trindade, M.B. Albuquerque. Neutron tomography for the assessment of consolidant impregnation efficiency in Portuguese glazed tiles (XVII - XVIII centuries). TECHNART, Berlin, Germany, April 26 - 29, 2011.

R. Marques, M.I. Prudêncio, J.C. Waerenborgh, F. Rocha, M.I. Dias, E. Ferreira da Silva. Ferro e outros elementos químicos num paleosolo desenvolvido em cinzas vulcânicas na ilha do Fogo (Cabo Verde). VIII Congresso ibérico de Geoquímica / VII Semana de Geoquímica, 26-28 Set. 2011, Castelo Branco, Portugal.

T.P. Silva, M.O. Figueiredo, M.I., Prudêncio. Ascertaining the degradation state of ceramic tiles: a preliminary non-destructive step in view of conservation treatments using gamma radiation. EMAC'11, Viena, Austria, 29 Sept - 1 October 2011, p. 39.

M.I. Prudêncio. Nuclear Techniques for the characterization and preservation of the Portuguese cultural heritage – research activities developed during 2010-2011. IAEA TC Project RER/8/015. Regional Planning and Coordination Meeting. 7-9 Sept. 2011, Warsaw; Poland.

M.J. Trindade, M.I. Prudêncio, M.I. Dias, F. Rocha. Mobilização e re-distribuição de elementos maiores e traço durante a meteorização esferoidal de doleritos da Área de Fornos de Algodres. VIII Congresso ibérico de Geoquímica / VII Semana de Geoquímica, 26-28 Set. 2011, Castelo Branco, Portugal.

R. Marques, M.I. Prudêncio, F. Rocha, E. Ferreira da Silva, M.I. Dias, C. I. Burbidge. Mineralogy, geochemistry and radiometry in paleoweathered carbonatites from Fogo island, Cape Verde. EUROCLAY, 26 June – 1 July 2011, Antalya, Turkey.

M.J. Trindade, M.I. Prudêncio, F. Rocha, M.I. Dias. Variation of mineral and chemical composition, especially actinides and lanthanides, in size fractions of residual clays of dolorite and aplite dykes from central Portugal. EUROCLAY, 26 June – 1 July 2011, Antalya, Turkey.

C.I. Burbidge, A.L. Rodrigues, M.I. Dias, M.I. Prudêncio e G. Cardoso. Técnicas para a datação por luminescência de amostras pequenas de cerâmicas cozidas a alta temperatura. IX Congresso Ibérico de Arqueometria, CIA-IX, 26-28 Outubro de 2011, Lisboa, Portugal.

C. Fabião, M.I. Dias e M.I. Prudêncio. Contributos arqueométricos para o conhecimento da construção da província romana da Lusitania. IX Congresso Ibérico de Arqueometria, CIA-IX, 26-28 Outubro de 2011, Lisboa, Portugal.

C. Fabião, I. Filipe, M.I. Dias, M.I. Prudêncio, M.J. Trindade e M.A. Gouveia. O Contributo da arqueometria para o estudo económico do baixo Tejo em época romana: o caso da Casa do Governador da Torre de Belém, Lisboa. IX Congresso Ibérico de Arqueometria, CIA-IX, 26 -28 Outubro de 2011, Lisboa, Portugal.

A.L. Rodrigues, C.I. Burbidge, M.I. Dias, F. Rocha, A.C. Valera e M.I. Prudêncio. Estudos de Luminescência, Mineralogia e Geoquímica no Contexto Arqueológico do Monte Carrascal – Ferreira do Alentejo, Portugal. IX Congresso Ibérico de Arqueometria, CIA-IX, 26-28 Outubro de 2011, Lisboa, Portugal.

T. Silva, S. Cabo Verde, C.I. Burbidge, A.C. Fernandes, M.L. Botelho, M.I. Dias, G. Cardoso e M.I. Prudêncio. Perfis de contaminação e inactivação microbiana em azulejos. IX Congresso Ibérico de Arqueometria, CIA-IX, 26-28 Outubro de 2011, Lisboa, Portugal.

M.A. Stanojev Pereira, M.I. Prudêncio, J.G. Marques, M.O. Figueiredo, M.I. Dias, T.P. Silva, L. Esteves, C.I. Burbidge, M.J. Trindade e M.B. Albuquerque. Tomografia de neutrões aplicada a azulejos do séc. XVII – visualização para caracterização, diagnóstico e optimização de técnicas de conservação. IX Congresso Ibérico de Arqueometria, CIA-IX, 26-28 Outubro de 2011, Lisboa, Portugal.

C.I. Burbidge, G. Cardoso, D.C.W. Sanderson, M.I. Dias. Constraint of time averaged water content using drained measurements. 13th International Conference on Luminescence and Electron Spin Resonance Dating 10-14 July 2011, Torun, Poland.

C.I. Burbidge, O. Monteiro Gil, J. Alves, J. Cardoso, L. Santos. Proposal: Retrospective dosimetry of a gloved hand. EURADOS Annual Meeting 2011. Czech Technical University, Prague, 7-11/02/2011.

R. Marques, M.I. Prudêncio, J.C. Waerenborgh, Fernando Rocha, M.I. Dias, E. Ferreira da Silva, Iron and other chemical elements in a paleosol developed on volcanic ash in Fogo island (Cape Verde), VIII Congresso Ibérico de Geoquímica, Castelo Branco, Portugal, 24-28 September 2011.

Poster

R. Marques, M.I. Prudêncio, J.C. Warrenborgh, F. Rocha, M.I. Dias, E. Ferreira da Silva. Geochemistry and mineralogy of volcanic ash red paleosol from

- Fogo island (Cape Verde). Goldschmidt 2011, August 14-19, 201, Prague, Czech Republic.
- M.J. Trindade, F. Rocha, M.I. Prudêncio, M.I. Dias. Trace element mobility during spheroidal weathering of dolerite dykes from central Portugal. Goldschmidt 2011, August 14-19, 2011, Prague, Czech Republic.
- R. Marques, M.I. Prudêncio, J.C. Waerenborgh, F. Rocha, M.I. Dias, E. Ferreira da Silva, Geochemistry and mineralogy of volcanic ash red paleosol from Fogo island (Cape Verde), *Goldschmidt 2011*, Prague, Czech Republic, 14-19 August, 2011.
- M.M.S. Cabral Pinto, E. Ferreira da Silva, M.V.G. Silva, M.I. Prudêncio, R. Marques, P. Melo-Gonçalves. Geochemical background values of chemical elements in stream sediments of Santiago island, Cape Verde. VIII Congresso Ibérico de Geoquímica / VII Semana de Geoquímica, 26-28 Set. 2011, Castelo Branco, Portugal.
- C.I. Burbidge, S.I. Cabo Verde, A.C. Fernandes, M.I. Prudêncio, M.L. Botelho, M.I. Dias e G. Cardoso. Dosimetria Retrospectiva, na gama dos kGy, para Monitorização no Tratamento de Azulejos Históricos. IX Congresso Ibérico de Arqueometria, CIA-IX, 26 - 28 Outubro de 2011, Lisboa, Portugal.
- T.P. Silva, M.O. Figueiredo, M.I. Prudêncio. Tile pathologies: green stains in blue-and-white glazes from an 18th century tile panel figuring Lisbon. TECHNART, Berlin, Germany, April 26 – 29, 2011.
- C.I. Burbidge, M.I. Dias, G. Cardoso, L. Oosterbeek, C. Scarre, M.I. Prudêncio, D. Franco, R. Marques, A. Cruz e P. Cura. Cronologias por luminescência nas paisagens de transição do Ribatejo. IX Congresso Ibérico de Arqueometria, CIA-IX, 26 -28 Outubro de 2011, Lisboa, Portugal.
- G. Cardoso, L. Oosterbeek e M.I. Dias. Construção de uma base de dados de datações de sítios arqueológicos da Península Ibérica: contribuição para o estudo de sequências cronológicas. IX Congresso Ibérico de Arqueometria, CIA-IX, 26 -28 Outubro de 2011, Lisboa, Portugal.
- M.I. Dias, M. Ondina Figueiredo, M. Antónia Matos, A. Pais, M.I. Prudêncio, T. Pena Silva, C.I. Burbidge, A.L. Rodrigues e J.P. Veiga. Datação, autenticidade, materiais e pigmentos. Estudos laboratoriais sobre Faiança Portuguesa e Porcelana Chinesa produzida para o mercado Português (séculos XVI a XVIII). IX Congresso Ibérico de Arqueometria, CIA-IX, 26 -28 Outubro de 2011, Lisboa, Portugal.
- M.I. Dias, J. Raposo, C. Fabião, A. Guerra, J. Bugalhão, A.L. Duarte, A. Sabrosa, M.I. Prudêncio e M.J. Trindade. Arqueometria e o estudo das ânforas lusitanas: o caso do Núcleo Arqueológico da Rua dos Correeiros, em Lisboa. IX Congresso Ibérico de Arqueometria, CIA-IX, 26 -28 Outubro de 2011, Lisboa, Portugal.
- M.J. Trindade, M.I. Dias, M.I. Prudêncio e F. Rocha. Indicadores geoquímicos e mineralógicos de cerâmicas arqueológicas e matérias-primas argilosas do Algarve. IX Congresso Ibérico de Arqueometria, CIA-IX, 26 -28 Outubro de 2011, Lisboa, Portugal.
- J.C. Waerenborgh, M.I. Prudêncio, M.I. Dias e M.A. Gaspar. Estudo por Espectroscopia Mössbauer da tecnologia de produção da cerâmica cinzenta Romana de Braga (Norte de Portugal). IX Congresso Ibérico de Arqueometria, CIA-IX, 26 -28 Outubro de 2011, Lisboa, Portugal.
- M.I. Prudêncio, T.P. Silva, M.I. Dias, J.G. Marques, M.A. Stanojev Pereira, M.O. Figueiredo, L. Esteves, M.B. Albuquerque, M.L. Botelho, S.I. Cabo Verde, M.J. Trindade, C.I. Burbidge, R. Marques. Non-destructive and micro-invasive techniques for cultural heritage diagnostics - a case study of glazed tiles from Portuguese historical buildings. I Encontro de Património Azulejar. Lisboa: O Azulejo e a cidade. CML, Novembro, 2011, Lisboa, Portugal.

Environmental and Analytical Chemistry

Books and Book Chapters

A.M.M. Soares (2011). Upwelling, efeito de reservatório, radiocarbono: construção de cronologias absolutas e inferências paleoambientais. In A.M.S. Bettencourt, M.I.C. Alves, S. Monteiro-Rodrigues, *Variações Paleoambientais e Evolução Antrópica no Quaternário do Ocidente Peninsular*. Braga: APEQ/CITCEM. 11-21.

Journals

P.M. Carreira, J.M. Marques, J. Espinha Marques, H.I. Chaminé, P.E. Fonseca, F. Monteiro Santos, R.M. Moura, J.M. Carvalho (2011) Defining the Dynamics of groundwater in Serra da Estrela Mountain área, central Portugal: na isotopic and hydrogeochemical approach. *Hydrogeology Journal*, 1, vol. 19, 117-131. ISSN 1431-2174

F.P. Carvalho, J.M. Oliveira, A.M.M. Soares (2011). Sediment accumulation and bioturbation rates in the deep Northeast Atlantic determined by radiometric techniques. *IGES Journal of Marine Science*, 68(3), 427-435.

M.R. Carvalho, P.M. Carreira J.M. Marques, G. Capasso, F. Grassa, J.C. Nunes (2011) Geochemistry of groundwater from Graciosa Island (Azores): a contribution to the hydrothermal system conceptual model. *Mineralogical Magazine*, 75 (3). 630. ISSN 0026-461X.

J.M. De la Rosa, F.J. González-Vila, H. Knicker, J.A. González-Pérez, M.F. Araújo (2011) Molecular composition of sedimentary humic acids from South West Iberian Peninsula. A multi-proxy approach. *Organic Geochemistry*, 42, 791-802.

- J.M. De la Rosa, H. Knicker (2011) Bioavailability of N released from pyrogenic organic matter: An incubation study. *Soil Biology and Biochemistry*, 43, 2368-2373.
- J.M. De la Rosa, L. Sánchez García, J.R. de Andrés, F.J. González-Vila, J.A. González-Pérez, H. Knicker (2011) Contribution of Black Carbon in recent sediments of the Gulf of Cadiz. Applicability of different quantification methodologies. *Quaternary International*, 243, 264-272.
- J.M. De la Rosa, M. Santos, M.F. Araújo (2011) Metal binding by Humic Acids extracted from recent sediments from the Southwest Atlantic coast of the Iberian Peninsula. *Estuarine Coastal and Shelf Sciences*, 93, 478-485.
- J. Espinha Marques, A. Carvalho, J.M. Marques, H.I. Chamíné, A. Guerner, R. Moura, P.M. Carreira, O. Neves, J. Samper, F.T. Rocha (2011) A methodology for assessing the impact of the use of road salt on groundwater resources in a mountain environment (Serra da Estrala, central Portugal). *Cadrenos Lab. Xeolóxico de Laxe*. Vol. 36, 79-98. ISSN 0213-4497.
- E. Figueiredo, P. Valério, M.F. Araújo, R.J.C. Silva, A.M.M. Soares (2011) Inclusions and metal composition of ancient copper-based artefacts: a diachronic view by micro-EDXRF and SEM-EDS. *X-Ray Spectrometry*, 40, 325-332.
- E. Figueiredo, M.F. Araújo, R.J.C. Silva, J.C. Senna-Martinez, J.L. Inês Vaz (2011) Characterisation of Late Bronze Age large size shield nails by EDXRF, micro-EDXRF and X-ray digital radiography. *Applied Radiation and Isotopes*, 69, 1025-1211.
- J.A. Gonzalez-Perez, F.J. Gonzalez-Vila, M.E. Arias; J. Rodriguez, J.M. De la Rosa; T. Marañón; L. Clemente (2011) Soil lipid assemblage in *Rhododendron ponticum* ssp. *baeticum* and adjacent *Quercus canariensis* stands in their native habitat (Sierra de Luna, Cádiz, Spain). *Environmental Chemistry Letters*, 9, 453-464.
- A.R. Pereira, C. Ramos, J. Trindade, J.A. Gomes, J. Rocha, H. Granja, L. Gonçalves, A.M.M. Soares, J.M. Martins (2011). FMI 5000: Um projecto sobre mudanças ambientais holocénicas. *Finisterra*, XLVI, 91, 99-106.
- B. Pereira de Oliveira, J.M. De la Rosa, A.Z. Miller, C. Saiz-Jimenez, A. Gómez-Bolea, M. Sequeira Barga, A. Dionisio (2011) An integrated approach to assessing the origins of black films on a granite monument. *Environmental Earth Sciences*, 63, 1677-1690.
- J. Rodríguez-Vidal, F. Ruiz, L.M. Cáceres, M. Abad, L. González-Regalo, M. Pozo, M. Carretero, A.M.M. Soares, F.G. Toscano (2011). Geomarkers of the 218–209 BC Atlantic tsunami in the Roman Lacus Ligustinus (SW Spain): A palaeogeographical approach. *Quaternary International*, 242, (1) (2011) 201–212.
- I. Gutiérrez-Zugasti, S.H. Andersen, A.C. Araújo, C. Dupont, N. Milner, A.M.M. Soares (2011). Shell midden research in Atlantic Europe: State of the art, research problems and perspectives for the future. *Quaternary International*, 239, (1-2) (2011) 70-85.
- V. Martins, M. F. Araújo, E.F. Silva, J.M.A. Dias, R. Calisto, J.-M. Jouanneau, O. Weber, F. Rocha, Upwelling dominated oceanographic periods in the Ria de Vigo during the late Holocene. *Journal of Coastal Research*, SI 64, (2011) 1998-2001.
- A.M.M. Soares, J.M.M. Martins, J.L. Cardoso (2011). Marine radiocarbon reservoir effect of coastal waters off Cape Verde Archipelago. *Radiocarbon*, 53(2), 289-296.

Conference Proceedings

M.F. Bem Hamouda, P.M. Carreira, H. Eggenkamp, J.M. Marques, F. Monteiro dos Santos, R. Gonçalves, P. Represas (2011) Understanding the origin of salinization of the coastal aquifer of Sousse (Tunisia) using geochemical and isotope investigations. Proceedings International Symposium on Isotopes in Hydrology, Marine Ecosystems, and Climate Change Studies. Eds IAEA-Environment Programme & Water Resources Programme. Monaco, IAEA-CN-186. 236.

P.M. Carreira, J.M. Marques, M.R. Carvalho, F. Grassa, G. Capasso, D. Nunes, J.C. Nunes (2011) Stable isotope feature of groundwaters from Graciosa volcanic Island (Azores) – preliminary results. Central European Geology. Acta Geologica Hungarica. Proceedings Isotope Workshop XI (ESIR), Budapest, Hungary, Ed. Attila Demény & Elmer Pal-Molnár. Vol 54 (1-2). 131. ISSN 1788-2281.

P.M. Carreira, D. Nunes, A.M. Monge Soares, M.A. Marques da Silva (2011) Paleoáguas como arquivos de alterações climáticas: caso de estudo o sistema multiaquífero Cretácico de Aveiro. Livro de Comunicações 8º Seminário Sobre Águas Subterrâneas. Ed. APRH. Lisbon (Portugal) 61-64.

P.M. Carreira, J.M. Marques, M.R. Carvalho, D. Nunes, M. Antunes da Silva (2011) Isotopic and geochemical signatures of Melgaço CO₂-rich cold mineral waters – NW Portugal. Proceedings International Symposium on Isotopes in Hydrology, Marine Ecosystems, and Climate Change Studies. Eds IAEA-Environment Programme & Water Resources Programme. Monaco, IAEA-CN-186. 142.

A. Carvalho, J. Espinha Marques, J.M. Marques, P.M. Carreira, C. Mansilha (2011) Índices de Contaminação de água subterrânea por NaCl e CaCl na região da Serra da Estrela. Livro de Comunicações 8º Seminário Sobre Águas Subterrâneas. Ed. APRH. 33-37.

J.M. De la Rosa, M.E. Varela, S.R. Faria, F.J. González-Vila, H. Knicker, M.F. Araújo, J.A. González-Pérez, J.J. Keizer (2011) Fast characterization of wildfire effects on soil organic matter by analytical pyrolysis. Proceedings book of the 3rd International Meeting of Fire Effects on Soil

Properties (FESP). Ed., A. Vieira, A. Bento Gonçalves, Guimarães (Portugal) ISBN: 978-989-97214-0-1.

E. Díaz-Martínez, E. Rebollada, A.M.M. Soares (2011). Fortificaciones vitrificadas protohistóricas en España. "Actas do VI Simpósio sobre Mineração e Metalurgia Históricas no Sudoeste Europeu (Vila Velha de Ródão, 18-20 June 2010) 81-87.

F. Geirinhas, M. Gaspar, J.C. Senna-Martinez, E. Figueiredo, M.F. Araújo, R.J.C. Silva (2011) Copper isotopes on artifacts from Fraga dos Corvos First Bronze Age habitat site and nearby Cu occurrences: an approach on metal provenance. Actas del Quinto Congreso Internacional sobre minería y metalurgia Históricas en el Suroeste Europeu, Ed., J.M. Mata-Perelló, L. Torro I Abat, M.N. Fuentes Prieto, Co-Ed., A.N. Campo, O. Pucha Riart, SeDPGYM, 177-184. ISBN: 978 99910 1 790 6.

A.P. Gonçalves, A.M.M. Soares, A.C. Silva, L. Berrocal-Rangel (2011) – Stone Beads from Late Bronze Age and Early Iron Age Settlements from South-Western Portugal: Analyses by X-Ray Diffraction. Proceedings of the 37th International Symposium on Archaeometry (13th-16th May 2008, Siena, Italy). Part 2, 227-231.

F. Grassa, G. Capasso, P.M. Carreira, M.R. Carvalho, J.M. Marques, M. Antunes da Silva (2011) Helium isotopes distribution in NW Iberian península: evidences of local neotectonic activity. Central European Geology. Acta Geologica Hungarica. Proceedings Isotope Workshop XI (ESIR), Budapest, Hungary, Ed. Attila Demény & Elmér Pal-Molnár. Vol 54 (1-2). 104. ISSN 1788-2281.

J.M. Marques, P.M. Carreira, J. Espinha Marques, H.I. Chaminé, P.E. Fonseca, F.A. Monteiro Santos, H.G.M. Eggemkamp, J. Teixeira (2011) A methodology for the assessment of low-temperature geothermal systems (N-Portugal): the "eyes" of geosciences. Livro de Comunicações 8º Seminário Sobre Águas Subterrâneas. Ed. APRH. 89-93

J.M. Marques, P.M. Carreira, H.G.M. Eggemkamp, M. Antunes da Silva (2011) Strontium isotopic ($^{87}\text{Sr}/^{86}\text{Sr}$) and geochemical signatures of CO_2 -rich thermal mineral waters (N-Portugal). Central European Geology. Acta Geologica Hungarica. Proceedings Isotope Workshop XI (ESIR), Budapest, Hungary, Ed. Attila Demény & Elmér Pal-Molnár. Vol 54 (1-2). 141. ISSN 1788-2281.

E. Figueiredo, M.F. Araújo, R.J.C. Silva (2011). A ponta de lança da gruta da nascente do Algarinho (Penela) no contexto da metalurgia do Bronze Final, in Actas do Encontro Internacional sobre Ciência e Novas Tecnologias aplicadas à Arqueologia na Villa Romana do Rabaçal, Penela, Terras de Sícó, Portugal, Câmara Municipal de Penela, p.41-49 (ISBN 978-989-95800-7-7).

Communications

Oral

A. Cruces, J. C. Quaresma, M. C. Freitas, C. Andrade, T. Ferreira, M. F. Araújo (2011) Evidências geológicas e arqueológicas para a transição climática entre o Período Quente Romano e o "Período das Trevas" no SW alentejano (Portugal). IV Jornadas do Quaternário, Coimbra, 9-10 December, 16.

E. Figueiredo (2011) Copper and tin for artefact production: issues around bronze composition and production in Late Bronze Age Central Portugal. L'Étain dans l'Occident Ancient, Toulouse (France) 14-16 September.

J.C. Senna-Martinez, E. Figueiredo, M.F. Araújo, R.J.C. Silva, P. Valério, J.L. Inês Vaz (2011) Metalurgia e Sociedade no Mundo Baiões-Santa Luzia: resultados do Projecto METABRONZE. Conferencias na Sociedade de Geografia, Lisbon, 2 March.

P. Valério, R.J.C. Silva, T. Ricou, M. Fátima Araújo, A.M. Monge Soares (2011) Metais dos Hipogeus do Bronze Pleno da Horta do Folgão (Serpa, Portugal). Estudo Arqueometalúrgico. IX Congresso Ibérico de Arqueometria, Lisbon, 26-28 October, 72.

J.M.M. Martins, A.M. Martín, P.J.C. Portela, A.M.M. Soares (2011) Improving the radiocarbon dating of marine shells from Canary Islands towards the construction of reliable and accurate chronologies. Radiocarbon and Archaeology, 6th International Symposium, Pafos, Cyprus, 10-15 April.

A.M.M. Soares, A.R. Pereira, J.M.M. Martins, P.J. Portela (2011) Radiocarbon dating of aeolianite formation. IV Jornadas do Quaternário, Coimbra, 9-10 December, 16.

Poster

J.M. De la Rosa, F.J. González-Vila, J.A. González-Pérez, F. Fatela, M.F. Araújo (2011) Cambios Temporales en el Origen de la Materia Orgánica en las Marismas del Río Miño (NW Península Ibérica) Mediante Marcadores Lipídicos. VIII Congresso Ibérico de Geoquímica, Castelo Branco (Portugal), 24-28 September

J.M. De la Rosa, M.E. Varela, S.R. Faria, F.J. González-Vila, H. Knicker, M.F. Araújo, J.A. González-Pérez, J. J. Keizer (2011) Fast characterization of wildfire effects on soil organic matter by analytical pyrolysis. 25th International Meeting on Organic Geochemistry, Interlaken (Switzerland), 19-23 September.

E. Figueiredo, F. Lopes, M.F. Araújo, R.J.C. Silva, J.C. Senna-Martinez, E.V.P. Luís (2011) Os primeiros bronzes do território Português: uma primeira abordagem arqueometalúrgica a um conjunto de machados Bujões/Barcelos. IX Congresso Ibérico de Arqueometria, Lisboa, 26-28 October.

E. Figueiredo, M.F. Araújo, R.J.C. Silva, J.C. Senna-Martinez, J.L. Inês Vaz (2011) Artefactos

ornamentais: um estudo arqueometalúrgico de metais da Idade do Bronze do Centro de Portugal, IX Congresso Ibérico de Arqueometria, Lisbon, 26-28 October.

E. Figueiredo, M.F. Araújo, R.J.C. Silva, J.C. Senna-Martinez (2011) An archaeometallurgical study of Late Bronze Age ornamental artefacts from Western Iberian Peninsula, Non-destructive and microanalytical techniques in art and cultural heritage TECHNART 2011, Berlin (Germany), 26-29 April.

A.P. Gonçalves, J.L. Cardoso, M.J. Oliveira, P. Valério, A.M. Monge Soares (2011) Métodos instrumentais de análise na identificação da matéria mineral utilizada na manufatura de uma provável conta de colar do povoado fortificado calcolítico da Moita da Ladra (Vila Franca de Xira, Lisboa). IX Congresso Ibérico de Arqueometria, Lisboa, 26-28 October, 104.

J.A. González-Pérez, J.M. De la Rosa, H. Knicker, F.J. González-Vila, T. Boski (2011) Biomarkers along a Holocene sedimentary sequence from the Guadiana River estuarine area. 25th International Meeting on Organic Geochemistry, Interlaken (Switzerland), 19-23 September.

J.A. González-Pérez, J.M. De la Rosa, H. Knicker, F.J. González-Vila (2011) Evolution of organic matter in lignite-containing sediments under different environmental conditions. Analytical pyrolysis (Py-

GC/MS) proxy. 25th International Meeting on Organic Geochemistry, Interlaken (Switzerland), 19-23 September.

B. Pereira de Oliveira, J.M. de la Rosa, A.Z. Miller, A. Dionísio, T. Silveira, M.A. Sequeira Braga (2011) Origem dos filmes negros sobre património construído. Diversos olhares. IX Congresso Ibérico de Arqueometria, Lisbon, 26-28 October.

F. Pereira, R.J.C. Silva, A.M.M. Soares, M.F. Araújo (2011) Estudo arqueometalúrgico de artefactos provenientes do Castro de Vila Nova de São Pedro (Azambuja, Portugal). IX Congresso Ibérico de Arqueometria, Lisbon, 26 - 28 de October.

Thesis

MSc

Catarina Pontes Fernandes Carmelo de Matos (2011) Environmental aspects associated with the use of geothermal resources: high vs. low enthalpies. MSc thesis in Mining and Geological Engineering, Instituto Superior Técnico, Universidade Técnica de Lisboa, December 12th.

Filipa Isabel Peralta da Silva Pereira (2011) Archaeometallurgical study of artefacts from Castro de Vila Nova de São Pedro (Ajambuja, Portugal). MSc thesis in Conservation and Restoration, Universidade Nova de Lisboa, Monte de Caparica, October 19th.

Inorganic and Organometallic Chemistry

Journals

E. Di Santo, M. Santos, M.C. Michelini, J. Marçalo, N. Russo, J.K. Gibson, Gas-Phase Reactions of the Bare Th²⁺ and U²⁺ Ions with Small Alkanes, CH₄, C₂H₆, and C₃H₈: Experimental and Theoretical Study of Elementary Organoactinide Chemistry, *J. Am. Chem. Soc.* 133 (2011) 1955–1970.

P. X Rutkowski, M.C. Michelini, T.H. Bray, N. Russo, J. Marçalo, J.K. Gibson, Hydration of Gas-Phase Ytterbium Ion Complexes Studied by Experiment and Theory, *Theor. Chem. Acc.* 129 (2011) 575-592.

X. Wang, L. Andrews, D. Ma, L. Gagliardi, A.P. Gonçalves, C.C.L. Pereira, J. Marçalo, C. Godart, B. Villeroy, Infrared Spectra and Quantum Chemical Calculations of the Uranium-Carbon Molecules UC, CUC, UCH, and U(CC)₂, *J. Chem. Phys.* 134 (2011) 244313/1-11.

C.C.L. Pereira, C.J. Marsden, J. Marçalo, J.K. Gibson, Actinide Sulfides in the Gas Phase: Experimental and Theoretical Studies of the Thermochemistry of AnS (An = Ac, Th, Pa, U, Np, Pu, Am and Cm), *Phys. Chem. Chem. Phys.* 13 (2011) 12940-12958.

J. Marçalo, M. Santos, J.K. Gibson, Gas-Phase Reactions of Doubly Charged Actinide Cations with Alkanes and Alkenes—Probing the Chemical Activity

of 5f Electrons from Th to Cm, *Phys. Chem. Chem. Phys.* 13 (2011) 18322-18329.

J.B. Branco, G. Lopes, A.C. Ferreira, Catalytic Oxidation of Methane over KCl-LnCl₃ Eutectic Molten Salts, *Catal. Commun.* 12 (2011) 1425-1427.

A.C. Coelho, M. Nolasco, S.S. Balula, M.M. Antunes, C.C.L. Pereira, F.A. Almeida Paz, A.A. Valente, M. Pillinger, P. Ribeiro-Claro, J. Klinowski, I.S. Gonçalves, Chemistry and Catalytic Activity of Molybdenum(VI)-Pyrazolylpyridine Complexes in Olefin Epoxidation. Crystal Structures of Monomeric Dioxo, Dioxo-μ-oxo, and Oxodiperoxo Derivatives, *Inorg. Chem.* 50 (2011) 525–538.

P.J.A. Madeira, M. Faddoul, M.B. Afonso, P.D. Vaz, M.T. Fernandez, J.P. Leal, On the Way to Understand Antioxidants: Chromanol and Dimethoxyphenols Gas-phase Acidities, *J. Mass. Spectrom.* 46 (2011) 640–648.

R. Melo, J.P. Leal, M.L. Botelho, Radiolytic Degradation Mechanism of Gallic Acid and its End-products, *Rapid Commun. Mass Spectrom.* 25 (2011) 218–222.

Conference Proceedings

M. Varela, J.P. Leal, MOODLE - A Way of Teaching in the 21st Century, *INTED2011 Proceedings*, L. Gómez Chova, D. Martí Belenguer, I. Candel Torres

(Eds.), International Association of Technology, Education and Development-IATED, Valencia, 2011.

S. Leal, J.P. Leal, H. Fernandes, A Blended-learning Approach to the Boyle-Mariotte Law, *Proceedings 1st Experiment@ International Conference*, Lisboa, 2011.

Other publications

J.P. Leal, Chemical Elements: What's in a Name?, *Science* 334 (2011) 176-176.

B.J. Herold, A.A.S.C.M. Machado, J. Cardoso, J. Marçalo, J.A.L. Costa, M.C. Magalhães, M.H. Garcia, O. Pellegrino, O. Serra, R.B. Faria, R.T. Henriques, Hidretos Parentais, Nomenclatura Aditiva e Substitutiva... Serão Apenas Nomes Novos para Conceitos Velhos?, *Química (Boletim da Sociedade Portuguesa de Química)* 122 (2011) 49-53.

S.C. Leal, J.P. Leal, M.A.F. Faustino, A.M.S. Silva, A Química Orgânica no Ensino Secundário: A Percepção dos Alunos, *Química (Boletim da Sociedade Portuguesa de Química)* 122 (2011) 59-62.

J.P. Leal, Co-author of the texts of the Exhibition "A Química entre Nós...", Bayer Portugal/Comissão Nacional da UNESCO (2011).

Patents

N. Pinhão, A. Janeco, J.B. Branco, Processo de Conversão de Metano e um Oxidante em Gás de Síntese e Hidrocarbonetos Utilizando um Plasma Não-Térmico, Assignee: Instituto Tecnológico e Nuclear (ITN), INPI (patent request number Pt-105078), 26-12-2011 (Request 1000034711 - in evaluation).

A. Boavida, J.B. Branco, J. Condeço, M. Gonçalves, T. Pardal, R. Fernandes, Processo para Conversão Eletroquímica Selectiva de Dióxido de Carbono, Assignee: OMNIDEA (AeroSpace Technology and Energy Systems) Lda., INPI (patent request number Pt-105566), 15-03-2011 (Process 3808 - in evaluation).

Communications

Oral

C.J. Marsden, J. Marçalo, C.C.L. Pereira, J.K. Gibson, US_2^{2+} is not "thio-uranyl"!, *WATOC 2011- Ninth Triennial Congress of the World Association of Theoretical and Computational Chemists*, Santiago de Compostela, Spain, July 2011.

J. Marçalo, A.F. Lucena, C. Lourenço, B. Monteiro, L. Maria, J.M. Carretas, P. X Rutkowski, J.K. Gibson, Mass Spectrometry of Rare Earths—From Compound Characterization to Fundamental Gas-Phase Properties, *XXIV. Terrae Rarae 2011*, Karlsruhe, Germany, October 2011.

M.A. Antunes, J. Coutinho, L.C.J. Pereira, I.C. Santos, M. Mazzanti, J. Marçalo, M. Almeida, Mononuclear Uranium Complexes for Magnetic Materials, *General Workshop of the PICs Action on*

Strongly Correlated Systems: From Intermetallics to Molecular Materials, Sacavém, November 2011.

A. Ruivo, R. Rodrigues, L. Costa, R.C. Silva, A. Pires de Matos, Ruby Copper Thin Layers in Float Glass by Using Spray Pyrolysis or Ionic Exchange in Melted Copper Compounds, *Annual Meeting of the Society of Glass Technology*, Oxford, UK, September 2011.

A. Pires de Matos, C. Queiroz, F. Lopes, The 18th Century Arcana of William Stephens, *Annual Meeting of the Society of Glass Technology*, Oxford, UK, September 2011.

B.J. Herold, J.A. Costa, M.H. Garcia, R.T. Henriques, A. Machado, M.C. Magalhães, J. Marçalo, O. Pellegrino, Hidretos Parentais, Nomenclatura Aditiva e Substitutiva... Serão Apenas Nomes Novos para Conceitos Velhos?, *XXII Encontro Nacional da Sociedade Portuguesa de Química*, Braga, July 2011.

J.P. Leal, Compuquímica, *1º Encontro "Aqui há ciência...e palavras!"*, Almodovar, May 2011, invited talk.

M. Varela, J.P. Leal, MOODLE - A Way of Teaching in the 21st Century, *INTED 2011, The International Technology, Education and Development Conference*, Valencia, Spain, March 2011.

M. Varela, J.P. Leal, Second Life: A Fine Way to Spread Chemistry through the Internet, *EduLearn11*, Barcelona, Spain, July 2011.

S. Leal, J.P. Leal, Material Didáctico/Pedagógico para o Ensino da Química, *XXII Encontro Nacional da Sociedade Portuguesa de Química*, Braga, July 2011.

S. Leal, J.P. Leal, Production of Educational Material for the Teaching of Chemistry, *8th International Conference "Hands-on Science" (HSCI 2011)*, Ljubljana, Slovenia, September 2011.

S.C. Leal, J.P. Leal, H. Fernandes, A Blended-Learning Approach to the Boyle-Mariotte Law, *1st Experiment@ International Conference*, Lisboa, November 2011.

M.A. Antunes, J.T. Coutinho, L.C.J. Pereira, I.C. Santos, M. Mazzanti, J. Marçalo, M. Almeida, Mononuclear uranium complexes for magnetic materials, *Workshop on Strongly Correlated Electron and Complex Systems; From Intermetallics to Molecular Materials*, ITN, Sacavém, Portugal, 10–11 November 2011.

Poster

A.P. Gonçalves, A.F. Lucena, C.C.L. Pereira, J. Marçalo, J.K. Gibson, L. Andrews, Thorium and Uranium Carbide Cluster Cations in the Gas Phase, *41èmes Journées des Actinides*, Stará Lesná, Slovakia, April 2011.

A.F. Lucena, C.C.L. Pereira, C.J. Marsden, A.P. Gonçalves, J. Marçalo, J.K. Gibson, L. Andrews, Sulfuretos e Carbonetos de Tório em Fase Gasosa, *Ciência QB - 1º Encontro dos alunos de doutoramento do DQB - FCUL*, Lisboa, June 2011.

- C.C.L. Pereira, A.F. Lucena, C.J. Marsden, J. Marçalo, J.K. Gibson, Thorium and Uranium Polysulfides in the Gas Phase, *XXII Encontro Nacional da Sociedade Portuguesa de Química*, Braga, July 2011.
- A.F. Lucena, J.M. Carretas, J. Marçalo, P. X Rutkowski, J.K. Gibson, Questioning the Effective Charge of Uranyl, UO_2^{2+} , by ESI/QITMS, *XXII Encontro Nacional da Sociedade Portuguesa de Química*, Braga, July 2011.
- B. Monteiro, C. Lourenço, J.M. Carretas, J. Marçalo, N. Zorz, L. Berthon, Coordination Study of a New Tetradentate N-Donor Ligand by Lanthanide(III) and Americium(III) Ions, *XXII Encontro Nacional da Sociedade Portuguesa de Química*, Braga, July 2011.
- C. Lourenço, M.C. Oliveira, M. Santos, J. Marçalo, J.K. Gibson, The Gas-Phase Thermochemistry of Tantalum Monoxide and Dioxide, *XXII Encontro Nacional da Sociedade Portuguesa de Química*, Braga, July 2011.
- L. Maria, I.C. Santos, A. Cruz, J. Marçalo, A.M. Martins, Synthesis and Characterization of d^{0f^n} Metal Complexes Based on a New Trans-N,N'-Bis(Phenolate)-Cyclam Ligand, *EuCOMC XIX - XIX EuCheMS Conference on Organometallic Chemistry*, Toulouse, France, July 2011.
- E. Mora, L. Maria, I.C. Santos, J.M. Carretas, J. Marçalo, B. Biswas, J. Pécaut, M. Mazzanti, New Diamine Bis-Phenolate Thorium(IV) and Uranium(IV) Complexes, *XXII Encontro Nacional da Sociedade Portuguesa de Química*, Braga, July 2011.
- J. Marçalo, L. Maria, I.C. Santos, A. Cruz, A.M. Martins, New d^{0f^n} Metal Halide Complexes Supported by a Trans-N,N'-bis(phenolate) Cyclam Ligand, *XXII Encontro Nacional da Sociedade Portuguesa de Química*, Braga, July 2011.
- J.M. Carretas, J. Cui, I.C. Santos, A. Cruz, L. Maria, J. Marçalo, Uranium(III, IV) and Thorium(IV) Tris(pyrazolyl)methane Complexes, *XXII Encontro Nacional da Sociedade Portuguesa de Química*, Braga, July 2011.
- M.A. Antunes, L.C.J. Pereira, I.C. Santos, M. Mazzanti, J. Marçalo, M. Almeida, $[\text{U}(\text{Tp}^{\text{Me}_2})_2(\text{bipy})]^+$: A Cationic Uranium(III) Complex with Single-Molecule-Magnet Behaviour, *5th EuCheMS Conference on Nitrogen Ligands*, Granada, Spain, September 2011.
- M.A. Antunes, L.C.J. Pereira, I.C. Santos, M. Mazzanti, J. Marçalo, M. Almeida, $[\text{U}(\text{Tp}^{\text{Me}_2})_2(\text{bipy})]^+$: A Cationic Uranium(III) Complex with Single-Molecule-Magnet Behaviour, *5th EuCheMS Conference on Nitrogen Ligands*, Granada, Spain, 4-8 September 2011.
- A.C. Ferreira, G. Lopes, A.P. Gonçalves, J.B. Branco, Catalytic Reduction of N_2O by CH_4 using Lanthanide Chloride Molten Salts, *XXII Encontro Nacional da Sociedade Portuguesa de Química*, Braga, July 2011.
- G. Lopes, A.C. Ferreira, A.P. Gonçalves, J.B. Branco, Selective Oxidation of Methane to C2 Hydrocarbons with Chloride Molten Salts, *XXII Encontro Nacional da Sociedade Portuguesa de Química*, Braga, July 2011.
- J.P. Leal, L.M.C. Silva, P.G. Rosado, T.A. Gasche, J.B. Branco, Energética de Alcóxidos de Metais Alcalinos com Dióis, *XXII Encontro Nacional da Sociedade Portuguesa de Química*, Braga, July 2011.
- P.G. Rosado, L.M.C. Silva, J.B. Branco, T.A. Gasche, J.P. Leal, Etanodiol e Butanodiol: Iguais ou Diferentes?, *XXII Encontro Nacional da Sociedade Portuguesa de Química*, Braga, July 2011.
- J. Vitorino, C.E.S. Bernardes, J.P. Leal, M.E. Minas da Piedade, Estudo de Líquidos Iónicos por FT-ICR-MS e por Calorimetria, *Ciência QB - 1º Encontro dos alunos de doutoramento do DQB - FCUL*, Lisboa, June 2011.
- J. Vitorino, C.E.S. Bernardes, J.P. Leal, M.E. Minas da Piedade, Fully Experimental Determination of the Cohesive Energy of a PIL: 1-methylimidazolium Ethanoate, *XXII Encontro Nacional da Sociedade Portuguesa de Química*, Braga, July 2011.
- R.C. Santos, A.L. Teixeira, J.P. Leal, A.O. Falcão, J.A. Martinho Simões, ThermInfo: Collecting, Retrieving, and Estimating Reliable Thermochemical Data, *XXII Encontro Nacional da Sociedade Portuguesa de Química*, Braga, July 2011.
- S. Leal, J.P. Leal, Produção de Materiais Didáctico-Pedagógicos para o Ensino da Química, *Ciência QB - 1º Encontro dos alunos de doutoramento do DQB - FCUL*, Lisboa, June 2011.
- S. Leal, J.P. Leal, Produção de Materiais Didáctico-Pedagógicos para o Ensino da Química, *III Encontro Regional de Professores de Física e Química*, Beja, October 2011.

Radiopharmaceutical Sciences

Journals

L. R. Goethals, I. Santos, V. Caveliers, A. Paulo, F. De Geeter, L. Gano, C. Fernandes, T. Lahoutte, Rapid hepatic clearance of (99m)Tc-TMEOP: a new candidate for myocardial perfusion imaging, *Contrast Media Mol. Imaging* 6 (2011) 178-188.

S. Gama, F. Mendes, F. Marques, I. C. Santos, M. F. Carvalho, I. Correia, J. C. Pessoa, I. Santos, A. Paulo, Copper(II) complexes with tridentate pyrazole-based ligands: synthesis, characterization, DNA cleavage activity and cytotoxicity, *J. Inorg. Biochem.* 105 (2011) 637-644.

- J. D. G. Correia, A. Paulo, P. D. Raposinho, I. Santos, Radiometallated peptides for molecular imaging and targeted therapy, *Dalton Trans.* 40 (2011) 6144-6167.
- C. Francisco, S. Gama, F. Mendes, F. Marques, I. C. Santos, A. Paulo, I. Santos, J. Coimbra, E. Gabano, M. Ravera, Pt(II) complexes with bidentate and tridentate pyrazolyl-containing chelators: synthesis, structural characterization and biological studies, *Dalton Trans.* 40 (2011) 5781-5792.
- C. Moura, L. Gano, I. C. Santos, I. Santos, A. Paulo, $^{99m}\text{Tc}^{\text{I}}/\text{Re}^{\text{I}}$ tricarbonyl complexes with tridentate cysteamine based Ligands: synthesis, characterization and in vitro/in vivo evaluation, *Eur. J. Inorg. Chem.* (2011) 5405-5413.
- G. R. Morais, H. V. Miranda, I. C. Santos, I. Santos, T. F. Outeiro, A. Paulo, Synthesis and in vitro evaluation of fluorinated styryl benzazoles as amyloid-probes, *Bioorg. Med. Chem.* 19 (2011) 7698-7710.
- T. Esteves, F. Marques, A. Paulo, J. Rino, P. Nanda, C. J. Smith, I. Santos, Nuclear targeting with cell-specific multifunctional tricarbonyl M(I) (M is Re, ^{99m}Tc) complexes: synthesis, characterization, and cell studies, *J. Biol. Inorg. Chem.* 16 (2011) 1141-1153.
- E. Palma, J. D. G. Correia, M. P. C. Campello, I. Santos, Bisphosphonates as radionuclide carriers for imaging or systemic therapy, *Mol BioSys.* 7 (2011) 2950-2966.
- D. Gambino, M. Fernández, D. Santos, G. A. Etcheverría, O. E. Piro, F. R. Pavan, C. Q.F. Leite, I. Tomaz, F. Marques, Searching for gallium bioactive compounds: Ga(III) complexes of tridentate salicylaldehyde semicarbazone derivatives. *Polyhedron* 30 (2011) 1360-1366.
- F. Mendes, A. Casini, M. Groessl, A.A. Nazarov, G. Sava, I. Santos, Dyson PJ (2011) "Zinc-finger protein poly-(ADP-ribose) polymerase as a target for metal-based anticancer agents" *J Med Chemistry*, 54:2196-2206.
- F. Mendes, A. Paulo, I. Santos (2011) "Functional monitoring of multidrug resistance with SPECT and PET radiopharmaceuticals" Review, *Dalton Trans.*,40:5377-5393.
- J. D. G. Correia, M. Morais, P. D. Raposinho, M. C. Oliveira, I. Santos. (99m)Tc(I)-Labeled Homobivalent alpha-MSH Analogs for Melanoma Detection, *Biopolymers* 96 (4) (2011) 504.
- M. Morais, S. Subramanian, M. Martins, U. Pandey, G. Samuel, S. Pereira, M. Venkatesh, João D. G. Correia, Isabel Santos, Mannosylated Dextran Derivatives Labeled with $\text{fac-}[\text{M}(\text{CO})_3]^+$ (M = ^{99m}Tc , Re) for Specific Targeting of Sentinel Lymph Node, *Mol. Pharmaceutics* 8, (2011) 609-620.
- B. L. Oliveira, P. D. Raposinho, F. Mendes, I. C. Santos, I. Santos, A. Ferreira, C. Cordeiro, A. P. Freire, J. D. G. Correia, Targeting nitric oxide synthase with $^{99m}\text{Tc}/\text{Re}$ -tricarbonyl complexes containing pendant guanidino or isothioureia moieties, *J. Organomet. Chem.* 696 (2011) 1057-1065.
- E. Palma, J. D. G. Correia, B. L. Oliveira, L. Gano, I. C. Santos, I. Santos, $^{99m}\text{Tc}(\text{CO})_3$ -labeled pamidronate and alendronate for bone imaging, *Dalton Trans.* 40 (2011) 2787-2796.
- M. Morais, J.D.G Correia, P. D. Raposinho, M. C. Oliveira, I. Santos, (99m)Tc(1)-Cyclic alpha-MSH Analogs for MC1R Targeting, *Biopolymers*, 96, 4, (2011) 515.

Conference Proceedings

A. Capelo, L. Areias, S. Marques, L. Gano, S. Chaves, M. A. Esteves, M. A. Santos. A New Tripodal Hydroxypyrimidone Sequestering Agent. Acta of the XXII International Symposia on Metal Complexes – ISMEC 2011 June 13-16, 2011, Gardini Naxos, Italy.

Communications

Oral

I. Santos, Nuclear Targeting with Cell-Specific Multifunctional Tricarbonyl M(I) Complexes (M= Re, ^{99m}Tc), EU COST D39, Final Meeting, Dublin, Ireland, July 5-6, 2011.

M. Morais, João D. G. Correia, Isabel Santos, Nanocompounds for Specific Targeting of Sentinel Lymph Node, EU COST D38 Final Meeting, Keble College, Oxford, UK, September 12-15th, 2011.

B.L. Oliveira, I. S. Moreira, I. Santos, P.A. Fernandes, M. J. Ramos, J. D. G. Correia, Structural insight into the binding mode of metal-based iNOS inhibitors by computational methods, EU COST D38 Final Meeting, Keble College, Oxford, UK, September 12-15th, 2011.

Tomaz AI, Jakusch T, Morais TS, Almeida RFM, Marques F, Mendes F, Enyedey EA, Costa Pessoa J, Kiss T, Garcia MH, $[\text{Ru}(\text{II})(\eta^5\text{-Cp})(\text{BPY})(\text{PPh}_3)]^+$, a promising antitumor agent: an in vitro study regarding its biological activity, 4th European Conference on Chemistry for Life Sciences (ECCLS), Budapest, Hungary, 2011.

Poster

F. Silva, C. Fernandes, M. P. C. Campello, L. Gano, P. Raposinho, A. Paulo, I. Santos, PEGylated DOTA-NAPamide derivative for in vivo targeting of Melanoma, World Molecular Imaging Congress, San Diego (USA), Sep. 2011.

C. Moura, L. Gano, F. Mendes, P. D. Raposinho, I. C. Santos, A. Paulo, I. Santos, $^{99m}\text{Tc}(\text{I})$ Tricarbonyl Complexes Bearing Dialkylaminoalkyl Pharmacophores: Synthesis, Characterization and Biological Evaluation, 6th European Molecular Imaging Meeting, Leiden, The Netherlands, June 2011.

A. Capelo, L. Areias, S. Marques, L. Gano, S. Chaves, M. A. Esteves, M. A. Santos. A New Tripodal Hydroxypyrimidone Sequestering Agent. XXII Int. Symp. on Metal Complexes – ISMEC 2011, Gardini Naxos, Italy, June 2011.

C. Neto, C. Fernandes, C. Oliveira, L. Gano, F. Mendes, T. Kniess, I. Santos. Radiosynthesis and biological evaluation of novel receptor tyrosine kinase inhibitors for in vivo targeting of EGFR. 19th International Symposium on Radiopharmaceutical Sciences. 28th august to 2nd september 2011. Amsterdam. Journal of Labelled Compounds and Radiopharmaceuticals, 2011, 54, S-171.

S. Cunha, C. Fernandes, M. Cristina Oliveira, L. Gano, I. Santos, ^{67}Ga - Estradiol Derivative Complex for Breast Cancer Imaging, 6th European Molecular Imaging Meeting –EMIM 2011. 19th to 21st June 2011, Leiden, The Netherlands.

S. Cunha, C. Fernandes, M. C. Oliveira, L. Gano, Isabel Santos. Síntese e caracterização de complexos derivados do estradiol para diagnóstico e/ou terapia do cancro da mama, 1º Encontro dos alunos de doutoramento do DQB – FCUL. 7th June 2011.

P. Antunes, P.D. Raposinho, C. Fernandes, I. Santos, ^{67}Ga - and $^{99\text{m}}\text{Tc}$ -labeled short Neuropeptide Y analog for breast cancer imaging, 6th European Molecular Imaging Meeting-EMIM 2011, June 19-21 2011, Leiden, The Netherlands.

M. Morais, P. D. Raposinho, M. C. Oliveira, J. D. G. Correia, I. Santos, $^{99\text{m}}\text{Tc}(\text{CO})_3$ -Labeled α -MSH Analogs, 1st Meeting of FCUL PhD Students, Lisbon, Portugal, 7th June 2011.

F. Silva, C. Fernandes, L. Gano, P. Raposinho, A. Paulo, I. Santos, Complexos de Ga^{67}Ga para Detecção do Melanoma: Síntese, Caracterização e Estudos Biológicos, 1º Encontro dos alunos de doutoramento do DQB – FCUL. 7th June 2011.

B. L. Oliveira, I. S. Moreira, I. Santos, P. A. Fernandes, M. J. Ramos, J. D. G. Correia, Re(I) complexes with L-Arg derivatives as inhibitors of iNOS: structural determinants, 5th Theoretical Biophysics, International Symposium, 2011, Madeira (Portugal)

P. Lubal, M.P.C Campello, R. Ševčík, J. Vaněk, R. Ševčíková, P. Hermann, I. Santos, M. Martínéz, Solution Study of Metal Complexes with Macrocyclic Ligands having Carboxylate and Phosphonate Pendant Arms, 11th International Symposium on Applied Bioinorganic Chemistry, Barcelona, Spain, December 2011.

Morais TS, Garcia MH, Tomaz AI, Marques F, Mendes F, Robalo MP, Madeira PJA (2011) “New ruthenium (II) cyclopentadienyl compounds: cytotoxicity and proteins binding” ISABC 11 - 11th International Symposium on Applied Bioinorganic Chemistry, Barcelona, Spain December 2011.

T. Esteves, F. Marques, J. Rino, A. Paulo, C. J. Smith, I. Santos, “Complexos Específicos Trifuncionais de $[\text{99mTc}(\text{CO})_3]^+$ Direcionados ao Núcleo de Células Alvo”, Ciência QB – 1º Encontro dos Alunos de Doutoramento do DQB – FCUL, Lisboa, Portugal, Junho 2011 (poster).

T. Esteves, F. Marques, J. Rino, A. Paulo, C. J. Smith, I. Santos, “Specific Multifunctional fac- $[\text{M}(\text{CO})_3]^+$

(M = Re, $^{99\text{m}}\text{Tc}$) Complexes Directed to the Nucleus of Targeted Cells”, COST D38 “Metal-based Systems for Molecular Imaging Applications”, Oxford, Inglaterra, Setembro 2011.

M. Morais, Paula D. Raposinho, M. C. Oliveira, João D. G. Correia, Isabel Santos, Novel $^{99\text{m}}\text{Tc}(\text{CO})_3$ -Labeled Cyclic α -MSH Analogs, 22nd American Peptide Symposium, San Diego, USA, 25-30th June 2011.

João D. G. Correia, M. Morais, Paula D. Raposinho, M. C. Oliveira, Isabel Santos, Homobivalent α -MSH Analogs Labeled with fac- $[\text{99mTc}(\text{CO})_3]^+$ for Targeting MC1R in vivo, 22nd American Peptide Symposium, San Diego, USA, 25-30th June 2011.

Other Publications

M. C. Oliveira, T. Kniess, I. Santos, Radiosynthesis and biological evaluation of novel receptor tyrosine kinase inhibitors for in vivo targeting of EGFR and VEGFR, DAAD/FCT (0811983 (441.00)). Progress report submitted to FCT/DAAD, 2011.

M. C. Oliveira, L. Gano, F. Marques, T. Thiemann. F. Botelho. Radioligandos para o receptor estrogénico-potencial clínico em imagem e terapia de tumores da mama. Fundação Calouste Gulbenkian. Proc N° 96476. Progress report submitted to Gulbenkian, 2011.

Thesis

PhD

T. Esteves, Complexos de Elementos Emissores de Radiação Gama e de Electrões Auger para Diagnóstico e/ou Terapia do Cancro, Departamento de Química e Bioquímica, Faculdade de Ciências da Universidade de Lisboa, 2011. Supervisor: Isabel Rego Santos.

C. Neto, Sondas Radioactivas Dirigidas a Receptores do Factor de Crescimento Epidérmico e a Receptores Estrogénicos. Departamento de Química e Bioquímica, Faculdade de Ciências da Universidade de Lisboa, 2011. Supervisors: Isabel Rego Santo, M. Cristina Oliveira.

E. Palma, Complexos Organometálicos de Re e Tc com Propriedades Osteotrópicas para Imagiologia e/ou Terapia, Departamento de Química e Bioquímica, Faculdade de Ciências da Universidade de Lisboa, 2011. Supervisors: Isabel Rego Santos, J. D. G. Correia.

Undergraduate

S. Barros, Radiopéptidos análogos da alpha-MSH específicos para o receptor MC1 sobre-expresso no melanoma: optimização da farmacocinética, Training Thesis, BSc in Medicina Nuclear, ESTeSL (2011) supervisor P. Raposinho.

S. Brites, Radiomarcção de péptidos análogos do Neuropeptido Y para diagnóstico do cancro da mama, Training Thesis, BSc in Medicina Nuclear, ESTeSL (2011) supervisor P. Raposinho.

Solid State

Books and Book Chapters

E.V. Tsipis, V.V. Kharton, "Electrodes for high-temperature electrochemical cells: novel materials and recent trends, Ch. 6 in "Solid State Electrochemistry II: Electrodes, Interfaces and Ceramic Membranes", Ed. V.V. Kharton, Wiley-VCH, Weinheim (2011) pp 265-329 [ISBN: 978-3-527-32638-9].

Journals

A.M. Adamska, L. Havela, A. Błachowski, K. Ruebenbauer, J. C. Waerenborgh, N.-T.H. Kim-Ngan, A. V. Kolomiets, Hydrogen absorption and ^{57}Fe Mössbauer effect in UFeGe, *J. Alloys and Comp.* 509, (2011) 5453-5459.

M.A. Antunes, L.C.J. Pereira, I.C. Santos, M. Mazzanti, J. Marçalo, M. Almeida [U(Tp^{Me2})₂(bipy)]⁺: A Cationic Uranium(III) Complex with Single-Molecule-Magnet Behavior, *Inor. Chem.* 50 (2011) 9915-9917.

M. Clemente-León, E. Coronado, M. López-Jordà, J.C. Waerenborgh, Multifunctional magnetic materials obtained by insertion of spin crossover Fe^{III} complexes into chiral 3D bimetallic oxalate-based ferromagnets, *Inorg. Chem.* 50, (2011) 9122-9130.

A.P. Gonçalves, P. Estrela, A. De Visser, E.B. Lopes, I. Catarino, G. Bonfait, M. Godinho, M. Almeida, D. Gnida, D. Kaczorowski, Single-crystal study on the heavy-fermion antiferromagnet UZn₁₂, *J. Phys: Condensed Matter* 23, (2011) 045602.

A. P. Gonçalves, G. Delaizir, E. B. Lopes, L. M. Ferreira, O. Rouleau and C. Godart, Chalcogenide Glasses as Prospective Thermoelectric Materials, *Journal of Electronic Materials*, 40(5) (2011) 1015-1017.

E.L. Green, L.L. Lumata, J.S. Brooks, P.L. Kuhns, A.P. Reyes, M. Almeida, M.J. Matos, R.T. Henriques, J.A. Wright, S.E. Brown, Co-existence and interaction of magnetic field-dependent Peierls and spin-Peierls ground states in (Perylene)₂[Pt(mnt)₂], *Phys. Rev. B*, (R), *Rapid Communications* 84 (2011) 121101.

L. Havela, K. Miliyanchuk, A.P. Gonçalves, J.C. Waerenborgh, L.C.J. Pereira, P. Gaczynski, E.B. Lopes, J. Pešička, Increase of T_C in UFe_{2+x} synthesized by ultrafast cooling, *Intermetallics* 19 (2011) 113-120.

M.S. Henriques, D. Berthebaud, L.C.J. Pereira, E.B. Lopes, M.B.C. Branco, H. Noël, O. Tougait, E. Šantavá, L. Havela, P.A. Carvalho, A.P. Gonçalves, Structural and physical properties of the U₉Fe₇Ge₂₄ uranium germanide, *Intermetallics* 7 (2011) 841-847.

V.A. Khomchenko, L.C.J. Pereira, J.A. Paixão, Substitution-driven structural and magnetic phase transitions in Bi_{0.86}(La, Sm)_{0.14}FeO₃ system *J. Phys. D: Appl. Phys.* 44 (2011) 185406.

V.A. Kolotygin, E.V. Tsipis, A.L. Shaula, E.N. Naumovich, J.R. Frade, S.I. Bredikhin, V.V. Kharton,

Transport, thermomechanical and electrode properties of perovskite-type (La_{0.75-x}Sr_{0.25+x})_{0.95}Mn_{0.5}Cr_{0.5-x}Ti_xO_{3-δ} (x = 0-0.5), *J. Solid State Electrochem.*, 15 (2011) 313-327.

A.Ya. Neiman, E.V. Tsipis, V.Yu. Kolosov, N.N. Pestereva, E.A. Elizarova, P. Chapon, M.Yu. Nekhin, Mutual electrosurface transfer and phase formation at the MeWO₄/WO₃ (Me = Ca, Sr, Ba) interface: electron microscopy data, *J. Surf. Inv. X-ray, Synchrotron and Neutron Techniques*, 5 (2011) 979-985.

A.Ya. Neiman, A.V. Tanskaya, E.V. Tsipis, L.M. Fyodorova, B.D. Antonov, Effect of size factor on mechanism of interaction between Al₂O₃ and Bi₂O₃ and conductivity of composite on their basis, *Nanotechnol. Rus.*, 6 (2011) 218-226.

A.I.S. Neves, I.C. Santos, L.C.J. Pereira, C. Rovira, E. Ruiz, D. Belo, M. Almeida, Ni-2,3-thiophenedithiolate Anions in New Architectures An In-Line Mixed-Valence Ni Dithiolene (Ni₄-S₁₂) Cluster, *Eur. J. Inorg. Chem.* (2011).4807-4815.

D. Nunes, R. Colaço, A.P. Gonçalves, L.C.J. Pereira, P.A. Carvalho, "Microstructures and magnetic domain configurations of NdFe₁₁Ti and Nd₂(Fe,Ti)₁₇ aggregates", *Appl. Phys. A* 104 (2011) 1053-1060.

L. Rátkai, A.P. Gonçalves, G. Delaizir, C. Godart, I. Kaban, B. Beuneu, P. Jóvári, The Cu and Te coordination environment in Cu-doped Ge-Te glasses, *Solid State Commun.* 151 (2011) 1524-1527.

J.A. Silva, A. Pereira Magalhães, M. Ramos Silva, A.J.F.N. Sobral, L.C.J. Pereira, Diaqua (6-bromopicolinato-κ²N, O) (nitrato-κ²O, O) copper (II), *Acta Cryst. E* 67(2) (2011) m 160.

E. Steven, A. Kiswandhi, D. Krstovska, J.S. Brooks, M. Almeida, A.P. Gonçalves, M.S. Henriques, G.M. Luke, T.J. Williams, Robust properties of the superconducting ferromagnet UCoGe, *Appl. Phys. Letters* 98 (2011) 132507.

E. Steven, J.G. Park, A. Paravastu, E.B. Lopes, J.S. Brooks, O. Englander, T. Siegrist, P. Kaner, R.G. Alamo, Physical characterization of functionalized spider silk: electronic and sensing properties, *Sci. Technol. Adv. Mat.* 12 (2011) 055002.

E.V. Tsipis, E.N. Naumovich, M.V. Patrakeev, A.A. Yaremchenko, I.P. Marozau, A.V. Kovalevsky, J.C. Waerenborgh, V.V. Kharton, Oxygen deficiency, vacancy clustering and ionic transport in (La,Sr)CoO_{3-δ}, *Solid State Ionics*, 192 (2011) 42-48.

E.V. Tsipis, J.C. Waerenborgh, V.V. Kharton, Surface states and stability of Fe-containing perovskite electrodes for SOFCs/SOECs by conversion-electron Mössbauer spectroscopy, *Electrochem. Commun.* 13 (2011) 685-688.

Yu. Verbovytsky, L.C.J. Pereira, A.P. Gonçalves, Crystal structure and magnetic properties of YbZn_{8.3-}

$_{9,2}\text{Ga}_{2,7-1,8}$ with BaHg_{11} structure type, *J. Alloys Compd.* 509(3) (2011) L14-L17.

Yu. Verbovitskiy, D. Kaczorowski, A.P. Gonçalves, On new ternary phases from Eu-Zn-T (T=Al and Ga) systems, *Intermetallics* 19 (2011) 613-620.

Yu. Verbovitskiy, N. Leal, A.P. Gonçalves, New representatives with BaAl_4 , $\text{La}_3\text{Al}_{11}$ and BaHg_{11} structure types from the R-Zn-Ga systems (R = Y, Lu, Gd-Tm), *Intermetallics* 19 (2011) 1080-1084.

Yu. Verbovitskiy, L.C.J. Pereira, E.B. Lopes, A.P. Gonçalves, Crystal structure and properties of the new ternary $\text{YbZn}_x\text{Ga}_{4-x}$ and $\text{Yb}_3\text{Zn}_{11-x}\text{Ga}_x$ phases, *Intermetallics* 19 (2011) 1989-1995.

Yu. Verbovitskiy, L.C.J. Pereira, A.P. Gonçalves, Crystal structure and magnetic properties of $\text{YbZn}_{0,7}\text{In}_{1,3}$, *Journal of Rare Earths*, 29 (2011) 943.

J.C. Waerenborgh, E.V. Tshipis, L.C.J. Pereira, M. Avdeev, E.N. Naumovich, V.V. Kharton, Magnetization, Mössbauer and isothermal dilatometric behavior of oxidized $\text{YBa}(\text{Co,Fe})_4\text{O}_{7+\delta}$, *Dalton Trans.* 41 (2011) 667-678.

J.C. Waerenborgh, E.V. Tshipis, A.A. Yaremchenko, V.V. Kharton, Surface analysis of mixed-conducting ferrite membranes by the conversion electron Mössbauer spectroscopy, *J. Solid State Chem.* 184 (2011) 2610-2614.

A.A. Yaremchenko, E.V. Tshipis, A.V. Kovalevsky, J.C. Waerenborgh, V.V. Kharton, Stability, oxygen permeability and chemical expansion of $\text{Sr}(\text{Fe,Al})\text{O}_{3-\delta}$ - and $\text{Sr}(\text{Co,Fe})\text{O}_{3-\delta}$ - based membranes, *Solid State Ionics* 192 (2011) 259-268.

Communications

Invited oral

M. Almeida, Conducting and magnetic two chain compounds; from 1D systems to spin-ladders, *International School and Symposium on Multifunctional Molecule-based Materials*, Argonne National Laboratory, USA, 13-18 March 2011.

D.Belo, Neutral Metals, *Seminars of the Chemistry Department of IST under the ChemForum initiative*, Instituto Superior Técnico, Lisboa, Portugal, 9 June of 2011.

D.Belo, Single Component Molecular Metals in Plastic Electronics, *XXII Encontro Nacional da SPQ*, Braga, Portugal, 3-6 July, 2011.

A.P. Gonçalves, Phase diagrams for actinide intermetallics, *The 8th School on the Physics and Chemistry of the Actinides*, Stará Lesná, Slovakia, 9-12 April 2011.

A.P. Gonçalves, C. Godart, Alternative strategies for thermoelectric materials development, *NATO Advanced Research Workshop-New materials for thermoelectric applications: theory and experiment*, Hvar, Croatia, 19-25 September 2011.

Oral

M.L. Afonso, R.A. L.Silva, M. Matos, Q. Ferreira, R.T. Henriques, A. Viana, M. Almeida, Electrocrystallisation of $(\text{Perylene})_2\text{M}(\text{mnt})_2$ salts, *9th International Symposium on Crystalline Organic Metals, Superconductors and Ferromagnets, ISCOM'2011*, Poznań-Gniezno, Poland, 25-30 September, 2011.

M.L. Afonso, R.A.L. Silva, L.C.J. Pereira, E.B. Lopes, M. Matos, Q. Ferreira, R.T. Henriques, A. Viana, M. Almeida, Electrocrystallisation of $(\text{Perylene})_2[\text{M}(\text{mnt})_2]$ sal, *Workshop on Strongly Correlated Electron and Complex Systems; From Intermetallics to Molecular Materials*, ITN, Sacavém, Portugal, 10-11 November 2011.

A.C. Cerdeira, S. Rabaça, D. Simão, S. Oliveira, P. Girginova, I.C. Santos, L.C.J. Pereira, J.T. Coutinho, R.T. Henriques, M. Almeida, Dithiolene Complexes Containing N Coordinating Groups: Towards New Coordination Structures, *Workshop on Strongly Correlated Electron and Complex Systems; From Intermetallics to Molecular Materials*, ITN, Sacavém, Portugal 10-11 November, 2011.

J.T. Coutinho, M.A. Antunes, L.C.J. Pereira, I.C. Santos, M. Mazzanti, J. Marçalo, M. Almeida, Single-Molecule-Magnet behaviour in U compounds, *Workshop on Strongly Correlated Electron and Complex Systems; From Intermetallics to Molecular Materials*, ITN, Sacavém, Portugal, 10-11 November 2011.

S.I.G. Dias, S. Rabaça, L.C.J. Pereira, I.C. Santos, R.T. Henriques, M. Almeida, Bisdithiolene complexes based on extended ligands with TTF and pyridine moieties, *Workshop on Strongly Correlated Electron and Complex systems; From Intermetallics to Molecular Materials*, ITN, Sacavém, Portugal, 10-11 November 2011

A.P. Gonçalves, G. Delaizir, C. França, E.B. Lopes, O. Roleau, C. Godart, Approaches for the development of new thermoelectric materials: the chalcogenide glasses case, *E-MRS 2011 Spring Meeting*, Nice, France, 9-13 May 2011.

A.P. Gonçalves, E.B. Lopes, G. Delaizir, C. Godart, Semiconducting glasses: A new class of thermoelectric materials?, *9th European Conference on Thermoelectrics - ECT2011*, Thessaloniki, Greece, 28-30 September 2011.

E.L. Green, J.S. Brooks, P.L. Kuhns, A.P. Reyes, J. Wright, S. Brown, M. Almeida, High Magnetic Field Investigation of a Low-Dimensional Organic Conductor $\text{Per}_2\text{Pt}[\text{mnt}]_2$, *9th International Symposium on Crystalline Organic Metals, Superconductors and Ferromagnets, ISCOM'2011*, Poznań-Gniezno, Poland, 25-30 September, 2011.

M.S. Henriques, T. Malnoe, A.C. Ferro, O. Tougait, R. Vilar, A.P. Gonçalves, Studies on the U-Fe-Sb ternary system, *Workshop on Strongly Correlated Electron and Complex Systems; From Intermetallics*

- to *Molecular Materials*, Sacavém, Portugal, 10-11 November 2011.
- M.S. Henriques, J.C. Griveau, A. Lignie, L.C.J. Pereira, E.B. Lopes, S. Surblé, L. Havela, E. Šantavá, S. Heathman, O. Tougait, A.P. Gonçalves, Sample preparation and low temperature properties of some U germanide intermetallics, *41^{èmes} Journées des Actinides and 8th School on Physics and Chemistry of the Actinides*, Stará Lesná, Slovakia, 7-12 April 2011.
- E. Laukhina, V. Lebedev, V. Laukhin, R. Pfatner, M. Mas-Torrent, L. Ferreras, E.B. Lopes, A.I.S. Neves, D. Belo, M. Almeida, J. Veciana, C. Rovira, Polymeric films “Self-metallized” with organic molecular conductors, *9th International Symposium on Crystalline Organic Metals, Superconductors and Ferromagnets, ISCOM’2011*, Poznań-Gniezno, Poland, 25-30 September, 2011.
- E.Laukhina, V. Lebedev, V. Laukhin, A. Pérez del Pino, E.B. Lopes, A.I.S. Neves, D. Belo, M. Almeida, J. Veciana, C. Rovira, Single Component Molecular Metals in Plastic Electronics, *Workshop on Strongly Correlated Electron on Complex Systems; From Intermetallics to Molecular Materials*, ITN, Sacavém, Portugal, 10-11 November, 2011.
- E.B. Lopes, A.P. Gonçalves, G. Delaizir, C. Godart, CuAsTe a New Family of Thermoelectric Glasses, *9th European Conference on Thermoelectrics- ECT2011*, Thessaloniki, Greece, 28-30 September 2011.
- E.B. Lopes, A.P. Gonçalves, G. Delaizir, C. Godart, Chalcogenide Glasses as Promising Thermoelectric Materials, *Workshop on Strongly Correlated Electron and Complex Systems; From Intermetallics to Molecular Materials*, ITN-Sacavém, Portugal, 10-11 November 2011.
- E.N. Naumovich, M.V. Patrakeev, E.V. Tsipis, A.A. Yaremchenko, V.A. Kolotygin, A.V. Kovalevsky, J.C. Waerenborgh, V.V. Kharton, Oxygen deficiency, defect interactions and transport in perovskite-type (Ln,A)(Fe,M)O_{3-δ} (Ln = La, Pr; A = Sr, Ba, Ca; M = Al, Nb), *International Conference on Solid State Ionics SSI-18*, Warsaw, Poland, 3-8 July 2011.
- A.I.S. Neves, I.C. Santos, J.T. Coutinho, L.C.J. Pereira, E.B. Lopes, R.T. Henriques, H. Alves, D. Belo, M. Almeida, New bisdithiolene complexes based on substituted thiophenic ligands for magnetic and conducting materials, *Workshop on Strongly Correlated Electron and Complex Systems; From Intermetallics to Molecular Materials*, ITN, Sacavém, Portugal, 10–11 November 2011.
- S. Oliveira, S. Rabaça, S.I.G. Dias, R.T. Henriques, M. Almeida, Bisdithiolene Complexes containing pyridine rings: precursor to electropolymerised materials, *Workshop on Complex and Strongly Correlated Systems; From Intermetallics to Molecular Materials*, ITN, Sacavém, Portugal, 10–11 November 2011.
- R.A.L. Silva, M.L. Afonso, I.C. Santos, D. Belo, R. Freitas, E.B. Lopes, J. Coutinho, L.C.J. Pereira, R.T. Henriques, M. Almeida, C. Rovira, New DT-TTF salts, *Workshop on Strongly Correlated Electron and Complex Systems; From Intermetallics to Molecular Materials*; *From Intermetallics to Molecular Materials*, ITN, Sacavém, Portugal, 10–11 November 2011.
- E. Steven, J.G. Park, A. Paravastu, E.B. Lopes, J.S. Brooks, O. Englander, T. Siegrist, Physical characterization of functionalized spider silk for electronic and sensing applications, *9th Int. Symposium on Crystalline Organic Metals, Superconductors and Ferromagnets, ISCOM’ 2011*, Poznań-Gniezno, Poland, 25-30 September, 2011.
- B. Vieira Spin Crossover in Iron III (nsal)₂-trien Complexes, *Workshop on Strongly Correlated Electron and Complex systems; From Intermetallics to Molecular Materials*; *From Intermetallics to Molecular Materials*, ITN, Sacavém, Portugal, 10-11 November 2011.
- A.A. Yaremchenko, V. Kharton, V. Kolotygin, M. Patrakeev, E. Tsipis, J. Waerenborgh, Mixed conductivity, stability and anode performance of Fe-doped (La,Sr)(Cr,Mg)O_{3-δ} for SOFC applications, *12th Conference of the European Ceramic Society (ECerS XII)*, Stockholm, Sweden, 19-23 June 2011.
- C. Yuste Vivas, M.R. Silva, J. Silva, A.L. Magalhães, J.F.-Soria, A.J.F.N. Sobral, L.C.J. Pereira, Synthesis, structural characterization and study of the magnetic properties of low dimensionality copper(II) compounds with azo-carboxylate ligands, *Workshop on Strongly Correlated Electron and Complex Systems; From Intermetallics to Molecular Materials*, ITN, Sacavém, Portugal, 10–11 November 2011.

Poster

- M.L. Afonso, R.A. L.Silva, L.C.J. Pereira, R.R. Freitas, E.B. Lopes, M. Matos, R.T. Henriques, A. Viana, M. Almeida, Electrocrystallisation of (Perylene)₂M(mnt)₂ compounds; the M = Pd salts, *9th International Symposium on Crystalline Organic Metals, Superconductors and Ferromagnets, ISCOM’2011*, Poznań-Gniezno, Poland, 25-30 September, 2011.
- A.C. Cerdeira, D. Simão, P.I. Girginova, I.C. Santos, L.C.J. Pereira, R.T. Henriques, M. Almeida, New Transition Metal Dithiolene Complexes with N-Coordinating Group, *5th EuCheMS Conference on Nitrogen Ligands*, Granada, Spain, 4-8 September 2011.
- S.I.G. Dias, S. Rabaça, A.I.S. Neves, J.T. Coutinho, L.C.J. Pereira, I.C. Santos, J.Wallis, M. Almeida, Complexes based on TTF-derivatives bearing pyridine rings, *5th EuCheMS Conference on Nitrogen Ligands*, Granada, Spain, 4-8 September 2011.
- Yu.A. Fedotov, A.I. Ivanov, E.A. Kudrenko, D.A. Agarkov, I.N. Burmistrov, V.A. Kolotygin, E.V. Tsipis, V.V. Sinitsyn, S.I. Bredikhin, V.V. Kharton, Intermediate temperature SOFC anode components based on A-site deficient (La_{0.5+x}Sr_{0.5-x})_{1-y}Mn_{0.5}Ti_{0.5}O₃.

- δ ($x=0-0.35$), *Int. Conference on Solid State Ionics SSI-18*, Warsaw, Poland, 3-8 July 2011.
- P.I. Girginova, S. Rabaça, A.C. Cerdeira, L.C.J. Pereira, M. Almeida, Heterobimetallic Networks Based on Azo-bisdithiolene Complexes as Bridging Units, *5th EuCheMS Conference on Nitrogen Ligands*, Granada, Spain, 4-8 September 2011.
- A.P. Gonçalves, M.S. Henriques, M. Almeida, L. Havela, A. Adamska, O. Tougait, J.S. Brooks, A. Kiswandhi, E. Steven, Evidence of superconductivity for a UFeGe sample, *41^{èmes} Journées des Actinides*, Stará Lesná, Slovakia, 9-12 April 2011.
- M.S. Henriques, J.C. Griveau, A. Lignie, L.C.J. Pereira, E.B. Lopes, S. Surblé, L. Havela, E. Santava, S. Heathman, O. Tougait, A.P. Gonçalves, Sample preparation and low temperature properties of U/Ge intermetallics, *41^{èmes} Journées des Actinides*, Stará Lesná, Slovakia, 9-12 April 2011.
- V.V. Kharton, E.V. Tsipis, Yu.S. Fedotov, E.N. Naumovich, S.M. Mikhalev, L.C.J. Pereira, J.C. Waerenborgh, M. Avdeev, S.I. Bredikhin, Intermediate-temperature oxygen diffusion and intercalation processes in $\text{YBaCo}_4\text{O}_{7+\delta}$ ($\delta = 0-1.5$), *Int. Conference on Solid State Ionics SSI-18*, Warsaw, Poland, 3-8 July 2011.
- V.A. Kolotygin, E.V. Tsipis, A.L. Shaula, J.R. Frade, S.I. Bredikhin, V.V. Kharton, Mixed conductivity, thermomechanical behavior and electrochemical properties of $(\text{La}_{0.75-x}\text{Sr}_{0.25+x})_{0.95}\text{Mn}_{0.5}\text{Cr}_{0.5-x}\text{Ti}_x\text{O}_{3-\delta}$ perovskites, *International Conference on Solid State Ionics SSI-18*, Warsaw, Poland, 3-8 July 2011.
- A.P. Magalhães, M.R. Silva, C. Yuste, A.J.N. Sobral, L.C.J. Pereira, M. Ghadermazi, F. Faizi, E. Motyeian, Low dimension copper coordination compounds, *VI International Materials Symposium, Materiais 2011, XV Meeting of SPM-Sociedade Portuguesa de Materiais*, Guimarães, Portugal, 18-20 April, 2011.
- A.I.S. Neves, I.C. Santos, L.C.J. Pereira, C. Rovira, E. Ruiz, D. Belo, M. Almeida, New $[\text{Ni}(\alpha\text{-tpdt})_2]^-$ salts and a in line mixed valence ($\text{Ni}_4\text{-S}_{12}$) cluster, *9th International Symposium on Crystalline Organic Metals, Superconductors and Ferromagnets, ISCOM'2011*, Poznań-Gniezno, Poland, 25-30 September, 2011.
- A.I.S. Neves, D. Belo, M. Almeida, Advances on single component molecular metals based on thiophenedithiolenes, *9th International Symposium on Crystalline Organic Metals, Superconductors and Ferromagnets, ISCOM'2011*, Poznań-Gniezno, Poland, 25-30 September, 2011.
- M.R. Nunes, O.C. Monteiro, L.C.J. Pereira, S. Dalui, A.J. Silvestre, Synthesis and Characterization of $(\text{Co},\text{M})\text{TiO}_2$ nanoparticles, *VI International Materials Symposium MATERIAIS 2011, XV meeting of SPM Sociedade Portuguesa de Materiais*, Guimarães, Portugal, 18-20 April 2011.
- M. Pasturel, A.P. Gonçalves, O. Tougait, H. Noël, Crystal structures of binary U-Ru compounds, *41^{èmes} Journées des Actinides*, Stará Lesná, Slovakia, 9-12 April 2011.
- L.C.J. Pereira, J.T. Coutinho, M.A. Antunes, I.C. Santos, M. Mazzanti, J. Marçalo, M. Almeida, SMM behaviour in Uranium mononuclear complexes: $[\text{U}(\text{Tp}^{\text{Me}_2})_2(\text{bipy})]^+$ *3rd European Conference on Molecular Magnetism ECMM 2011*, Paris, France, 22-26 November 2011.
- M. Ramos Silva, C. Yuste, A. Magalhães, L.C.J. Pereira, J.T. Coutinho, J.A. Paixão, Low dimensional Cu(II) complexes, *XXI Congress of the International Union of Crystallography, IUCr2011*, Madrid, Spain, 22-30 August 2011 MS24.P70, *Acta Cryst. A67*, C643-644.
- M. Ramos Silva, A. Pereira Magalhães, C. Yuste, M. Ghadermazi, F. Faizi, E. Motyeian, L.C.J. Pereira, Crystal structure and magnetic properties of a polymeric pyrazindicarboxylato-copper(II) compound, *The first North African Crystallographic Conference NACC-1*, Univ. Hassan II Mohammedia, Casablanca, Morocco, 23-26 November 2010.
- I.C. Santos, B.J.C. Vieira, L.C.J. Pereira, V. Gama, New iron (III) two-step spin crossover compounds, *XXI Congress of the International Union of Crystallography, IUCr2011*, Madrid, Spain, 22-30 August 2011 MS24.P70, *Acta Cryst. A67*, C384.
- A.L. Shaula, M.V. Patrakeev, E.N. Naumovich, J.C. Waerenborgh, V.V. Kharton, Redox behavior and transport properties of $\text{Ca}_2(\text{Fe},\text{M})_2\text{O}_{5\pm\delta}$ ($\text{M} = \text{Mn}, \text{Co}$), *18th International Conference on Solid State Ionics*, Warszawa, Poland, 3-8 July 2011.
- R.A.L. Silva, M.L. Afonso, I.C. Santos, D. Belo, R. Freitas, E.B. Lopes, J. Coutinho, L.C.J. Pereira, R.T. Henriques, M. Almeida, C. Rovira, Electrocrystallisation of $(\text{DT-TTF})_n[\text{M}(\text{mnt})_2]$; the $\text{M}=\text{Pd}$ salt, *9th International Symposium on Crystalline Organic Metals, Superconductors and Ferromagnets, ISCOM' 2011*, Poznań-Gniezno, Poland, 25-30 September, 2011.
- E. Steven, J.G. Park, A. Paravastu, E.B. Lopes, J.S. Brooks, O. Englander, T. Siegrist, Physical characterization of functionalized spider silk for electronic and sensing applications, *Int. School & Symposium on Multifunctional Molecule based Materials*, Chicago, USA, 13-18 March 2011.
- E.V. Tsipis, J.C. Waerenborgh, A.A. Yaremchenko, V.V. Kharton, Surface states of Fe-containing electrodes and membranes in reducing atmospheres: a conversion-electron Mössbauer spectroscopy study, *International Conference on Solid State Ionics SSI-18*, Warsaw, Poland, 3-8 July 2011.
- B.J.C. Vieira, V. Gama, L.C.J. Pereira, I. Santos, New Iron III Spin Crossover System: Towards switchable molecular conductors, *3rd European Conference on Molecular Magnetism, ECMM 2011*, Paris, France, 22-26 November 2011.
- J.C. Waerenborgh, M.I. Prudêncio, M.I. Dias, M.A. Gaspar, Estudo por Espectroscopia Mössbauer da

PUBLICATIONS

tecnologia de produção da cerâmica cinzenta Romana de Braga (Norte de Portugal), *IX Congresso Ibérico de Arqueometria*, ITN/F.C.Gulbenkian, Lisboa, Portugal, 26-28 October 2011.

Theses

PhD

Marta Dias, B-Fe-U ternary phase diagram and ternary compounds characterization, Instituto Superior Técnico, Lisbon, Portugal, May 20, 2011.

Physics and Accelerators Unit

Advanced Materials Research

Journals

- A. Redondo-Cubero, M. Vinnichenko, M. Krause, A. Mücklich, E. Muñoz, A. Kolitsch and R. Gago, Sublattice-specific ordering of ZnO layers during the heteroepitaxial growth at different temperatures, *J. Appl. Phys.* 110, 113516 (2011).
- B. Lacroix, M. P. Chauvat, P. Ruterana, K. Lorenz, E. Alves, A. Syrkin, The high sensitivity of InN under rare earth ion implantation at medium range energy, *Journal of Physics D: Applied Physics*, Volume 44 Number 29 (2011).
- B. Lacroix, S. Leclerc, A. Declémy, K. Lorenz, E. Alves and P. Ruterana, Mechanisms of damage formation in Eu-implanted GaN probed by X-ray diffraction, *EPL (Europhysics Letters)*, Volume 96 Number 4, *EPL* 96 46002, (2011).
- B. Nunes, A.P. Serro, V. Oliveira, M.F. Montemor, E. Alves, B. Saramago, R. Colaço, Ageing effects on the wettability behavior of laser textured silicon, *Applied Surface Science* 257, 2604-2609, (2011)
- D. Nunes, J.B. Correia, P.A. Carvalho, N. Shohoji, H. Fernandes, C. Silva, L.C. Alves, K. Hanada, E. Ōsawa, Production of Cu/diamond composites for first-wall heat sinks, *Fusion Engineering and Design*, Volume 86, Issues 9-11, Pages 2589-2592 (2011).
- D. Nunes, V. Livramento, R. Mateus, J.B. Correia, L.C. Alves, M. Vilarigues, P.A. Carvalho, Mechanical synthesis of copper-carbon nanocomposites: Structural changes, strengthening and thermal stabilization, *Materials Science and Engineering: A* 528, 29-30, 8610-8620 (2011).
- E. Nogales, P. Hidalgo, K. Lorenz, B. Méndez, J. Piqueras and E. Alves, Cathodoluminescence of rare earth implanted Ga₂O₃ and GeO₂ nanostructures, *Nanotechnology* 22, 285706 (7pp) (2011).
- E.M.F. Vieira, S.R.C. Pinto, S. Levichev, A.G. Rolo, A. Chahboun, M. Buljan, N.P. Barradas, E. Alves, S. Bernstorff, O. Conde, M.J.M. Gomes, Influence of the deposition parameters on the growth of SiGe nanocrystals embedded in Al₂O₃ matrix, *Microelectronic Engineering* 88, 509-513 (2011).
- F. Amaral, L.C. Costa, M.A. Valente, A.J.S. Fernandes, N. Franco, E. Alves, F.M. Costa, Colossal dielectric constant of poly- and single-crystalline CaCu₃Ti₄O₁₂ fibres grown by the laser floating zone technique, *Acta Materialia* 59, 102-111 (2011).
- Fiona K. M. Reiser, Diogo R. N. Rosa, Ivaro M. M. Pinto, Joo R. S. Carvalho, Joo X. Matos, Fernanda M. G. Guimares, Luis C. Alves, Daniel P. S. de Oliveira, Mineralogy and geochemistry of tin- and germanium-bearing copper ore, Barrigão re-mobilized vein deposit, Iberian Pyrite Belt, Portugal, *International Geology Review* 53, 10, 1212-1238 (2011).
- G.M. Wright, J. Westerhout, R.S. Al, E. Alves, L.C. Alves, N.P. Barradas, M.A. van den Berg, D. Borodin, S. Brezinsek, S. Brons, H.J.N. van Eck, B. de Groot, A.W. Kleyn, W.R. Koppers, O.G. Kruijt, J. Linke, N.J. Lopes Cardozo, M. Mayer, H.J. van der Meiden, P.R. Prins, G.J. van Rooij, J. Scholten, A.E. Shumack, P.H.M. Smeets, G. De Temmerman, W.A.J. Vijvers, J. Rapp, Materials research under ITER-like divertor conditions at FOM Rijnhuizen, *Journal of Nuclear Materials* 417,1-3 457-462. (2011).
- J. Delgado, M. Vilarigues, A. Ruivo, V. Corregidor, R.C. da Silva, L.C. Alves, Characterisation of Medieval Yellow Silver Stained Glass from Convento de Cristo in Tomar, Portugal, *Nucl. Instr. and Meth.* B269, 2383-2388 (2011).
- J. Palisaitis, C. L. Hsiao, M. Junaid, M.-Y. Xie, V. Darakchieva, J.-F. Carlin, N. Grandjean, J. Birch, L. Hultman, P. O.Å Persson, Standard-free composition measurements of Al_xIn_{1-x}N by low-loss electron energy loss spectroscopy, *Phys. Status Solidi RRL* 5, 50 (2011).
- J.G Lopes, F.C. Alegria, L.M Redondo, J Rocha, E. Alves, Mass spectrometry improvement on an high current ion, *Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms*, Volume 269, Issue 24, Pages 3222-3225, (2011).
- K.P. O'Donnell, I.S. Roqan, Ke Wang, K. Lorenz, E. Alves, M. Boc'kowski, The photoluminescence/excitation (PL/E) spectroscopy of Eu-implanted GaN, *Optical Materials* 33, 1063-1065 (2011).
- L.C. Alves, E. Alves, N P Barradas, R. Mateus, P. Carvalho, J.P.Coad, A.M. Widdowson, J. Likonen, S. Koivuranta and JET-EFDA Contributors, Surface composition and morphology changes of the JET tiles under plasma interaction, *Fusion Engineering and Design*, 86, 9-11, 2557-2560 (2011).
- M. Chubarov, H. Pedersen, H. Högborg, V. Darakchieva, J. Jenssen, P.O. Å. Persson and A. Henry, Epitaxial CVD growth of sp²-hybridized boron nitride using aluminum nitride as buffer layer, *Phys. Status Solidi RRL* 5, 397 (2011).
- M. F. Cerqueira, M. I. Vasilevskiy, F. Oliveira, A. G. Rolo, T. Viseu, J Ayres de Campos, E. Alves and R. Correia, Resonant Raman scattering in ZnO:Mn and ZnO:Mn:Al thin films grown by RF sputtering, *Journal of Physics: Condensed Matter*, Volume 23 Number 33, (2011).
- M. Junaid, D. Lundin, J. Palisaitis, C. L. Hsiao, V. Darakchieva, J. Jensen, P. O.Å Persson, P. Sandström,

- W. K. Lai, L. C. Chen, K. H. Chen, U. Helmerson, L. Hultman, and J. Birchm, Two-domainformation during the epitaxial growth of GaN(0001) on c-plane Al₂=3 (0001) by high-power impulse magnetron sputtering, *J. Appl. Phys.* 110, 123519 (2011).
- M. Peres, S. Magalhães, J. Rodrigues, M.J. Soares, V. Fellmann, A.J. Neves, E. Alves, B. Daudin, K. Lorenz, T. Monteiro, The role of the annealing temperature on the optical and structural properties of Eu doped GaN/AlN QD, *Optical Materials* 33, 1045-1049 (2011).
- M. Peres, S. Magalhaes, V. Fellmann, B. Daudin, A.J. Neves, E. Alves, K. Lorenz, T. Monteiro, Effect of Eu-implantation and annealing on the GaN quantum dots excitonic recombination, *Nanoscale Research Letters*, Volume: 6, Article Number: 378, (2011).
- M. Torrell, R. Kabir, L. Cunha, M. I. Vasilevskiy, F. Vaz, A. Cavaleiro, E. Alves and N. P. Barradas, Tuning of the surface plasmon resonance in TiO₂/Au thin films grown by magnetron sputtering: The effect of thermal annealing, *Journal Of Applied Physics* 109, 074310 (2011).
- M. Vilarigues, P. Redol, A. Machado, P.A. Rodrigues, L.C. Alves, R.C da Silva, Corrosion of 15th and early 16th century stained glass from the monastery of Batalha studied with external ion beam, *Materials Characterization*, Volume: 62 Issue: 2 Pages: 211-217 (2011)
- M.J. Soares, J.P. Leitão, M.I.N. da Silva, J.C. González, F.M. Matinaga, K. Lorenz, E. Alves, M. Peres, T. Monteiro, Structural and optical properties of Er implanted AlN thin films: Green and infrared photoluminescence at room temperature, *Optical Materials* 33, 1055-1058, (2011)
- N. Ben Sedrine, C. Bouhafs, J. C. Harmand, M. Schubert, R. Chtourou, and V. Darakchieva, "Optical properties of GaAs_{0.9-x}N_xSb_{0.1} alloys studied by spectroscopic ellipsometry", *Thin Solid Films* 519, 2838 (2011).
- N. Ben Sedrine, V. Darakchieva, D. Lindgren, B. Monemar, S. B. Che, Y. Ishitani, and A. Yoshikawa, Optical properties of InN/In_{0.73}Ga_{0.27}N multiple quantum wells studied by spectroscopic ellipsometry, Proc. of the E-MRS Spring Meeting, Strasburg, France, 7-11th of June 2010, *Phys. Status Solidi C* 8, 1629 (2011).
- P. Kurinskiy, V. Chakin, A. Moeslang, R. Rolli, E. Alves, L.C. Alves, N. Franco, Ch. Dorn, A.A. Goraieb, Comparative study of fusion relevant properties of Be₁₂V and Be₁₂Ti, *Fusion Engineering and Design*, 86, 9-11, 2454-2457, (2011).
- P. Ruterana, B. Lacroix, K Lorenz, A mechanism for damage formation in GaN during rare earth ion implantation at medium range energy and room temperature, *Journal of Applied Physics*, Volume: 109, Issue: 1, Article Number: 013506 (2011).
- Q. Zheng, F. Dierre, M. Ayoub, J. Crocco, H. Bensalah, V. Corregidor, E. Alves, R. Fernandez-Ruiz, JM. Perez, E. Dieguez, Comparison of radiation detector performance for different metal contacts on CdZnTe deposited by electroless deposition method, *Crystal Research and Technology* Volume: 46, Issue: 11, Pages: 1131-1136 (2011).
- R. Arvinte, J. Borges, R.E. Sousa, D. Munteanu, N.P. Barradas, E. Alves, F. Vaz, L. Marques, Preparation and characterization of CrN_xO_y thin films: The effect of composition, and structural features on the electrical behavior, *Applied Surface Science* 257, 9120-9124, (2011)
- R. C. Adochite, M. Torrell, L. Cunha, E. Alves, N. P. Barradas, A. Cavaleiro, Structural and optical properties of Ag:TiO₂ nanocomposite films prepared by magnetron sputtering, *Optoelectronics and Advanced Materials – Rapid Communications*, Vol. 5, p. 73-79, (2011)
- R. Gago, A. Redondo-Cubero, M. Vinnichenko, L. Vázquez, Annealing of heterogeneous phase TiO₂ films: an X-ray absorption and morphological study, *Chem. Phys. Lett.* 511,367 (2011).
- R. Mateus, P.A. Carvalho, D. Nunes, L.C. Alves, N. Franco, J.B. Correia, E. Alves, Microstructural characterization of the ODS Eurofer 97 EU-batch, *Fusion Engineering and Design* 86, 2386-2389, (2011).
- R.B. Gomes, R. Mateus, E. Alves, H. Fernandes, C. Silva, P. Duarte, Hydrogen retention in gallium samples exposed to ISTTOK plasmas, *Fusion Engineering and Design*, Volume 86, Issues 9-11, Pages 2458-2461, (2011).
- R.P. Borges, B. Ribeiro, A.R.G. Costa, C. Silva, R.C. da Silva, G. Evans, A.P. Goncalves, M.M. Cruz, M. Godinho, Magnetic and transport properties of transition-metal implanted ZnO single crystals, *European Physical Journal B*, Volume: 79, Issue: 2, Pages: 185-195, (2011).
- S.M.C. Miranda, M. Peres, T. Monteiro, E. Alves, H.D. Sun, T. Geruschke, R. Vianden, K. Lorenz, Rapid thermal annealing of rare earth implanted ZnO epitaxial layers, *Optical Materials* 33, 1139-1142, (2011).
- S.R.C.Pinto, A.G. Rolo, M. Buljan, A. Chahboun, S. Bernstorff, N.P. Barradas, E. Alves, R.J. Kashtiban, U. Bangert, M.J.M. Gomes, Low-temperature fabrication of layered self-organized Ge clusters by RF-sputtering *Nanoscale Research Letters*, Volume: 6, Article Number: 341, (2011).
- V. Chakin, A. Moeslang, P. Kurinskiy, R. Rolli, H.-C. Schneider, E. Alves, L.C. Alves, Tritium permeation, retention and release properties of beryllium, *Fusion Engineering and Design* 86, 9-11, 2338-2342, (2011).
- V. Darakchieva, M.Y. Xie, D. Rogalla, H.W. Becker, K. Lorenz, E. Alves, S. Ruffenach, M. Moret, O Briot, Free electron properties and hydrogen in InN grown by MOVPE, *Physica Status Solidi A-Applications And Materials Science*, Volume: 208, Issue: 5, Pages: 1179-1182, (2011).

V. Darakchieva, K. Lorenz, M.-Y. Xie, E. Alves, C. L. Hsiao, L. C. Chen, L. W. Tu, W. J. Schaff, T. Yamaguchi, and Y. Nanishi, Unintentional incorporation of hydrogen in wurtzite InN with different surface orientations, *Journal Of Applied Physics* 110, 063535 (2011).

V. Livramento, D. Nunes, J.B. Correia, P.A. Carvalho, U. Mardolcar, R. Mateus, K. Hanada, N. Shohoji, H. Fernandes, C. Silva, E. Alves, Tungsten-microdiamond composites for plasma facing components, *Journal of Nuclear Materials* 416, 45-48, (2011).

Vincent Fellmann, Perine Jaffrennou, Diane Sam-Giao, Bruno Gayral, Katharina Lorenz, Eduardo Alves, and Bruno Daudin, Ternary AlGaIn Alloys with High Al Content and Enhanced Compositional Homogeneity Grown by Plasma-Assisted Molecular Beam Epitaxy, *Japanese Journal of Applied Physics* 50, 031001 (2011).

V. Corregidor, L. C. Alves, P. A. Rodrigues, M. Vilarigues, and R.C. Silva, "The External Ion Beam Facility in Portugal for Studying Cultural Heritage", e-conservation magazine, 22 40-52, (2011). <http://www.e-conservationonline.com/content/view/1037>

Conference Proceedings

B. Lacroix, S. Leclerc, P. Ruterana, A. Declémy, S.M.C. Miranda, K. Lorenz, and E. Alves, Damage formation in GaN under medium energy range implantation of rare earth ions: a combined TEM, XRD and RBS/C investigation, *Mater. Res. Soc. Symp. Proc.*, Volume: 1342 (2011).

J. Borges, F. Vaz, and L. Marques, E. Alves, Optical properties of AlN_xO_y thin films deposited by DC magnetron sputtering, *Proc. SPIE 8001*, 80010F, doi:10.1117/12.892038 (2011).

K. Lorenz, M. Peres, N. Franco, J.G. Marques, S.M.C. Miranda, S. Magalhães, T. Monteiro, W. Wesch, E. Alves, E. Wendler, Radiation damage formation and annealing in GaN and ZnO, *Oxide-Based Materials and Devices II, Book Series: Proceedings of SPIE*, Volume: 7940, Article Number: 79400O (2011), DOI: 10.1117/12.879402.

K. Lorenz, S. M. C. Miranda, N. P. Barradas, E. Alves, Y. Nanishi, W. J. Schaff, L.W. Tu, V. Darakchieva, Hydrogen In Group-III Nitrides: An Ion Beam Analysis Study, *AIP Conf. Proc.* 1336, 310-313 (2011).

N. P. Barradas, J. Likonen, E. Alves, L.C. Alves, P. Coad, A. Hakola and A. Widdowson, Integration Of SIMS Into a General Purpose IBA Data Analysis Code, *proceedings.aip.org*.

N. P. Barradas, K. Lorenz, V. Darakchieva, E. Alves, A Double Scattering Analytical Model For Elastic Recoil Detection Analysis, *AIP Conf. Proc.* 1336, 314-318 (2011).

Rui M. S. Martins, F. Beckmann, O. Mateus, P. Klaus Pranzas, Synchrotron-radiation based micro-computed

tomography reveals the internal morphology of the first dinosaur embryonic remains reported in Europe, *Photon Science 2010 - Highlights and HASYLAB Annual Report*, 907, (2011).

Rui M. S. Martins, F. Beckmann, O. Mateus, P. Klaus Pranzas, Synchrotron-radiation based micro-computed tomography applied to the study of dinosaur eggshells from the Lourinha Formation (Portugal), *Photon Science 2010 - Highlights and HASYLAB Annual Report*, pp. 909, (2011)

Rui M. S. Martins, N. Schell, Ni-Ti alloy surface modified by plasma immersion ion implantation, *Photon Science 2010 - Highlights and HASYLAB Annual Report*, pp. 109, (2011)

Rui M. S. Martins, N. Schell, Study of dinosaur eggshells from the Lourinha Formation (Portugal) by x-ray diffraction, *Photon Science 2010 - Highlights and HASYLAB Annual Report* pp. 913, (2011)

Rui M. S. Martins, Ni-Ti Surface Modification by plasma immersion ion implantation, *Annual Meeting 2011 of the SPIRIT consortium - User workshop*, no dia 11 de Março de 2011, em Farnham, UK (<http://www.spirit-ion.eu/am2011.html.html>).

Rui M.S. Martins, Felix Beckmann, Rui Castanhinha, Octávio Mateus, and Philipp Klaus Pranzas, Dinosaur and Crocodile Fossils from the Mesozoic of Portugal: Neutron Tomography and Synchrotron-Radiation Based Micro-Computed Tomography, *MRS Proceedings*, Volume: 1319, mrsf10-1319-ww02-03, (2011), doi:10.1557/opl.2011.794.

Communications

Invited

K. Lorenz, S. M. C. Miranda, N. Franco, E. Alves, J. G. Marques, E. Wendler, W. Wesch, M. Peres, T. Monteiro, Radiation damage formation and annealing in GaN and ZnO, N. SPIE Photonics West, *OPTO, Oxide-based Materials and Devices II*, January 22-27 (2011), San Francisco, California United States.

V. Corregidor, L. C. Alves "Application of External Ion Beam at ITN to Cultural Heritage.", 11th Iberian Joint Meeting on Atomic and Molecular Physics June 19-22 (2011), Coimbra, Portugal.

K. Lorenz, S. Magalhães, S. Miranda, N. Catarino, N. Franco, E. Alves, M. Peres, J. Rodrigues, T. Monteiro, I. S. Roqan, K.P. O'Donnell, M. Boćkowski, E. Nogales, B. Méndez, V. Fellmann, B. Daudin, Rare Earth doping of III-nitrides by ion implantation: from 3D to 0D, *Fall Meeting of the European Materials Research Society (E-MRS)*, Symposium J: Rare earth doped semiconductors and nanostructures for photonics, September 19-23 (2011), Warsaw, Poland.

R. Yakimova, V. Darakchieva, R. Yazdi, J. Jenssen, A. Boosalis, T. Hofmann, and M. Sschubert, Epitaxial graphene grown by high temperature sublimation, *3rd International Symposium on the Science and Technology of Epitaxial Graphene*, October (2011), St. Augustine, US.

Oral

A. Boosalis, T. Hofmann, S. Schöche, P. Dowben, S. Gaddam, C. Vamala, J. Kelber, V. Darakchieva, Talk at International conference on SiC and related materials, September (2011), Denver, US.

A. Boosalis, T. Hofmann, S. Schöche, P.A. Dowben, S. Gaddam, C. Vamala, J. Kelber, V. Darakchieva, D.K. Gaskill, and M. Schubert, Optical Properties of Graphene on MgO and SiC Polytypes Determined by Spectroscopic Ellipsometry, *AVS 58th International Symposium*, October (2011), US.

Ben Sedrine, N (presenting), V. Darakchieva, D. Rogala, H.-W. Becker, E. Alves, S. Ruffenach, M. Moret and O. Briot, Free Electron and Phonon Properties of InN Epitaxial Films with Polar, Nonpolar and Semipolar Surface Orientations, *9th International Conference on Nitride Semiconductors*, July 10-14 (2011), Glasgow, UK.

Darakchieva, V (presenting); Lorenz, K; Ruffenach, S; Xie, M.-Y; Alves, E; Moret, M; Briot, O; Schaff, WJ; Hsiao, CL; Chen, LC; Tu, LW; Yamaguchi, T; Nanishi, Y, Hydrogen in InN with polar, nonpolar and semipolar surface orientations, *9th International Conference on Nitride Semiconductors*, July 10-14 (2011), Glasgow, UK.

Darakchieva, V, Monteiro, T, Xie, M.-Y; Son, N.T., Rodrigues, J., Alves, E; Santos, A; Tolstoguzov, A; Usui, A; Hemmingson, C.; Monemar, B Electron irradiation of bulk HVPE GaN: structural properties and photoluminescence, *9th International Conference on Nitride Semiconductors*, 10-14 July 2011, Glasgow, UK.

E. Alves, AlN content influence on the properties of Al_xGa_{1-x}N doped with Prions, *20th International conference on Ion Beam Analysis, Florianopolis, Brasil*, April 2011.

E. Alves, Analysis of ¹³C deposition near the injection point (JW11-FT-3.65), *Task Force Fusion Technology 2011 Annual monitoring Meeting*, December 12-14 (2011), JET Culham Science Centre, UK.

E. Alves, Composition effects on implantation disorder in Al_xGa_{1-x}N, *16th International Conference on Radiation Effects on Insulators, Pequim, China*, August 2011.

L. C. Alves, V. Corregidor, N. Franco, Archaeometry at ITN using Ion Beams and X-ray Diffraction Analysis, *Seminário sobre Conservação e técnicas de análise para o estudo e salvaguarda do patrimônio metálico*, 29-30 March 2011, Lisbon, Portugal.

L. C. Alves, V. Corregidor, R.C. da Silva, A. Rodrigues, Nuclear Techniques in Cultural Heritage, *Workshop on Physical and Chemical Analytical Techniques in Cultural Heritage*, 1-2 June 2011, Lisbon, Portugal.

L.C. Alves, PIXE on Heavy Metals Analysis, *International Workshop on Heavy Metals: from the*

environment to man, 12 December 2011, Lisbon, Portugal.

M. Fialho, K. Lorenz, S. Magalhães, L.C. Alves, T. Monteiro, M. Peres, E. Alves, Influence of Al content on RE lattice site location on Al_xGa_(1-x)N, *Fall Meeting of the European Materials Research Society (E-MRS)*, Symposium J: Rare earth doped semiconductors and nanostructures for photonics, Warsaw, Poland, September 19 – 23, 2011,

R.M.S. Martins, N. Barradas, E. Alves, D. Henke, H. Reuther, M.J. Carmezim, T.M. Silva, J.C.S. Fernandes, Ni-Ti alloy surface modified by plasma immersion ion implantation for biomedical applications, *EUROMAT 2011 – Materials and Devices*; September 14- 15, 2011; Montpellier – France.

U. Wahl, J.G. Correia, P. Miranda, N. Catarino, E. Bosne, M.R. da Silva, and E. Alves, Position-sensitive detectors for RBS channeling experiments: a status report from ITN”, *Joint Research Activity Meeting of the SPIRIT* (Support of Public and Industrial Research using Ion Beam Technology) EU FP7 Collaborative Project, Université Pierre et Marie Curie, 25.-26.1.2011, Paris, France.

V. Darakchieva, K. Lorenz, M.-Y. Xie, N. P. Barradas, E. Alves, W. J. Schaff, C.L. Hsiao, L.C. Chen, L.W. Tu, T. Yamaguchi, Y. Nanishi Unintentional incorporation of hydrogen in InN with different surface orientations, *E-MRS 2011 Spring Meeting*, 9-11 June, 2011, Nice, France.

Poster

A. Boosalis, T. Hofmann, S. Schöche, P. Dowben, S. Gaddam, C. Vamala, J. Kelber, V. Darakchieva, R. Yakimova, L.O. Nyakiti, V.D. Wheeler, R.L. Myers-Ward, C.R. Eddy, Jr., D.K. Gaskill, and M. Schubert, Optical properties of graphene on SiC polytypes determined by spectroscopic ellipsometry from the terahertz to the VUV, *Nano-DDS*, August (2011), US.

A. Boosalis, T. Hofmann, S. Schöche, P. Dowben, S. Gaddam, C. Vamala, J. Kelber, R. Yakimova, V. Darakchieva, L.O. Nyakiti, V.D. Wheeler, R.L. Myers-Ward, C.R. Eddy, D. K. Gaskill, and M. Schubert, Optical Properties of Graphene on Multiple Substrates Determined by Spectroscopic Ellipsometry from the Terahertz to the VUV, *2011 MRS Fall Meeting*, November (2011), Boston, US.

A. Redondo-Cubero, J. Pereiro, K. Lorenz, N. Franco, J. Grandal, E. Alves and E. Muñoz, Relaxation and crystal quality of In_xGa_(1-x)N epilayers grown at intermediate InN contents (x~0.5), *9th International Conference on Nitride Semiconductors*, ICNS-9, July 10 – 15, 2011, Glasgow, U.K..

A. Redondo-Cubero, M.F. Romero, M. Peroni, C. Lanzieri, A. Cetronio and E. Muñoz, Controlled diffusion of Au/Ni/Al/Ti ohmic contacts in AlGa_N/Ga_N HEMTs: limits for the barrier effect of Al, *9th International Conference on Nitride Semiconductors*, ICNS-9, July 10-15, 2011, Glasgow, U.K..

- A. Redondo-Cubero, R. Gago, M. Vinnichenko, F.J. Palomares, A. Mücklich and L. Vázquez, Ripple formation on Si by medium-energy ion beam sputtering with simultaneous metal incorporation, *Nanoscale Pattern Formation at Surfaces*, El Escorial, Spain, September 18-22, 2011.
- B. Lacroix, S.M.C. Miranda, A. Declémy, S. Leclerc, C. Grygiel, K. Lorenz, I. Monnet, E. Alves and P. Ruterana, A comparative investigation of the damage formation in GaN, AlN and InN under rare earth implantation at medium range energy, *9th International Conference on Nitride Semiconductors, ICNS-9*, Glasgow, U.K., July 10 – 15, 2011
- B. Savoini, M. Tardío, R. Ramírez and E. Alves, Surface morphology, thermal and electrical conductivity of α -Al₂O₃ single crystals implanted with Au and Ag ions, *REI 16*, August, 2011, Peking, China.
- M. Chubarov, H. Pedersen, H. Hoegberg, V. Darakchieva, J. Jensen, A. Henry, Epitaxial Cvd Growth of Hexagonal Boron Nitride, *9th International Conference on Nitride Semiconductors*, 10-14 July 2011, Glasgow, UK.
- M. Peres, J. Rodrigues, M. J. Soares, A. J. Neves, T. Monteiro, S. Magalhães, K. Lorenz, N. Franco, J. G. Marques, E. Alves, Influence of neutron irradiation and annealing on the structural and optical properties of GaN, *Spring Meeting of the European Materials Research Society (E-MRS)*, Symposium F: Group III nitrides and their heterostructures for electronics and photonics, May 8-13, 2011, Nice, France.
- N. Catarino, E. Nogales, N. Franco, V. Darakchieva, B. Méndez, E. Alves, K. Lorenz, Damage formation and optical activation of Eu-implanted non-polar and polar GaN, *Spring Meeting of the European Materials Research Society (E-MRS)*, Symposium F: Group III nitrides and their heterostructures for electronics and photonics, May 8-13, 2011, Nice, France.
- N. Catarino, K. Lorenz, N. Franco, V. Darakchieva, E. Alves, E. Nogales, B. Méndez, J. Rodrigues, T. Monteiro, P. Edwards, K. P. O'Donnell, B. Lacroix, P. Ruterana, Non-polar GaN as host for rare earth ions, *9th International Conference on Nitride Semiconductors, ICNS-9*, July 10-15, 2011, Glasgow, U.K..
- P. Miranda, U. Wahl, N. Catarino, K. Lorenz, J.G. Correia, E. Alves, Damage formation and recovery in Fe implanted 6H-SiC, *REI 16*, August, 2011, Peking, China.
- R. Mateus, M. Dias, J. Lopes, V. Livramento, J.B. Correia, P.A. Carvalho, K. Hanada, E. Alves, Deuterium irradiation of SPS sintered W-Ta composites, *15th International Conference on Fusion Reactor Materials*, 16-21 October, 2011, Charleston, USA.
- R. Mateus, P.A. Carvalho, N. Franco, L.C. Alves, M. Fonseca, C. Porosnicu, C.P. Lungu, E. Alves, Formation and delamination of beryllium carbide films, *15th International Conference on Fusion Reactor Materials*, 16-21 October, 2011, Charleston, USA.
- R.M.S. Martins, F. Beckmann, O. Mateus, P. Klaus Pranzas, Neutron Tomography and Synchrotron-radiation based micro-computed tomography applied to the characterization of dinosaur and crocodile fossils from the Mesozoic of Portugal, *EUROMAT 2011* (Symposium D12: Tomographic 3D imaging with hard X-rays and neutrons); September 13-14, 2011; Montpellier, France.
- R.M.S. Martins, N. Schell, K.K. Mahesh, R.J.C. Silva, F.M. Braz Fernandes, Synchrotron radiation-based X-ray diffraction during magnetron co-sputtering of Ni-Ti films, *EUROMAT 2011* (Symposium D12: Tomographic 3D imaging with hard X-rays and neutrons), September 13-14, 2011, Montpellier, France.
- S. Magalhães, K. Lorenz, N. Franco, E. Alves, S. Pereira, L. T. Tan, R. W. Martin, K. P. O'Donnell, I. M. Watson, Structural and morphological analysis of Al(1-x)In_xN grown on Al(1-y)Ga_yN templates, *9th International Conference on Nitride Semiconductors, ICNS-9*, July 10 – 15, 2011, Glasgow, UK.
- S. Schöche, J. Shi, A. Boosalis, P. Kühne, C. M. Herzinger, J. A. Woollam, W. J. Schaff, L. F. Eastman, V. Darakchieva, M. Schubert, and T. Hofmann, Hz optical Hall-effect and MIR-VUV ellipsometry characterization of 2DEG properties in AlGaIn/GaN HEMT structures, *6th Workshop Ellipsometry*, February (2011) Berlin, Germany.
- S. Schöche, J. Shi, A. Boosalis, P. Kühne, C. M. Herzinger, J. A. Woollam, W. J. Schaff, L. F. Eastman, V. Darakchieva, M. Schubert, and T. Hofmann, THz optical Hall-effect and MIR-VUV ellipsometry characterization of 2DEG properties in AlGaIn/GaN HEMT structures, *UNL Graduate Research Symposium*, April (2011), US (Poster Award Winner).
- S. Schöche, T. Hofmann, N.B. Sedrine, V. Darakchieva, B. Monemar, X. Wang, A. Yoshikawa, and M. Schubert, Spectroscopic Ellipsometry and Optical Hall-Effect Studies of Free-Charge Carriers in P-Type InN:Mg, *2011 MRS Fall Meeting*, November (2011), Boston, U.S.A.
- S. Schöche, J. Shi, A. Boosalis, P. Kuehne, C.M. Herzinger, J.A. Woollam, W.J. Schaff, L.F. Eastman, V. Darakchieva, M. Schubert, T. Hofmann, THz optical Hall-effect and MIR-VUV ellipsometry characterization of 2DEG properties in a HfO₂ passivated AlGaIn/GaN HEMT, *9th International Conference on Nitride Semiconductors*, 10-14 July 2011, Glasgow, UK.
- S. Sérgio, M. E. Melo Jorge, Y. Nunes, N.P. Barradas, E. Alves, F. Munnik, Incorporation of N in TiO₂ films grown by DC- reactive magnetron sputtering, *IBA-20*, April 2011, Florianopolis, Brasil.
- V. Darakchieva, A. Boosalis, T. Hofmann, M. Schubert, T. Iakimov, and R. Yakimova, Application of spectroscopic ellipsometry techniques to the studies of epitaxial graphene grown by high-temperature

sublimation, *Workshop on Graphene Synthesis and Characterisation for Applications*, November (2011), Lake Side, UK.

Xie, M-Y (presenting); Darakchieva, V; Yazdi, R; Yakimova, R; Rodrigues, J; Monteiro, T; Alves, E; Lorenz, K, Doping of AlN micro- and nanorods with Eu³⁺ and Tm³⁺, *9th International Conference on Nitride Semiconductors*, 10-14 July 2011, Glasgow, UK.

Thesis

Ph.D.

Luís Jorge Oliveira Carrasco Lança, “*Radiological imaging in Digital Systems: The effect of exposure parameters in diagnostic quality and patient dose*”, by

Universidade de Aveiro, 22 March 2011, Supervisor E. Alves.

M.Sc.

Paula Alexandra Pinto Rodrigues, “*Archaeological Roman Glasses, Comparative characterisation by non-destructive analytical techniques*”, Dep. Conservation and Restoration, Universidade Nova de Lisboa, Lisboa, 18 May 2011. Supervisor: Rui M.C. da Silva.

Norberto José Sobral Catarino, “*Implantação de terras raras em GaN com orientação polar e não-polar*”, Faculdade de Ciências, Universidade de Lisboa, 9 November 2011, Supervisor K. Lorenz.

Biomedical Studies

Books and Book Chapters

P. Napoleão, M. Selas, C. Ramos, A. Turkman, V. Andreozzi, M. Mota Carmo, A. M. Viegas-Crespo, R. Cruz Ferreira, T. Pinheiro. The Role of Inflammatory Biomarkers in the Assessment of Coronary Artery Disease, *Coronary Angiography - Advances in Noninvasive Imaging Approach for Evaluation of Coronary Artery Disease*, Branislav Baskot (Ed.), ISBN: 978-953-307-675-1, InTech, (2011) pp. 414.

Journals

I. Emerit, J. Antunes, J.M. Silva, J. Freitas, T. Pinheiro, P. Filipe, Clastogenic Plasma Factors in Psoriasis - Comparison of phototherapy and anti-TNF α treatments, *Photochem Photobiol* 87 (2011) 1427-1432.

T. Pinheiro, M.A. Barreiros, L.C. Alves, P.M. Felix, C. Franco, J. Sousa, S.M. Almeida, Particulate matter in exhaled breath condensate: A promising indicator of environmental conditions, *Nucl Instrum Methods B*, 269 (2011) 2404-2408.

Conference Proceedings

C. Ramos, P. Napoleão, T. Pinheiro, Cytokines and inflammatory cells in coronary artery disease, *FEBS Journal 2011*; 278 SI Supplement: 290-290.

Communications

Oral

T. Pinheiro, Metals and the human health, *International Workshop on Heavy Metals : from the environment to man*, 12 Dec. 2011, Lisbon, Portugal.

Poster

C. Ramos, P. Napoleão, T. Pinheiro, Cytokines and inflammatory cells in coronary artery disease. 36th FEBS Congress of the Biochemistry for Tomorrows Medicine, *FEBS Journal 2011*; 278 SI Supplement: 290-290, 25-30 June 2011, Torino, Italy.

B. Baptista, V. Dores, T. Pinheiro, M. L. Botelho, H. Canacsinh and L. M. Redondo Effect of pulsed Electric fields in human blood cells. 18th IEEE - *International Pulsed Power Conference*, 19-23 June 2011, Chicago, Illinois.

T. Pinheiro, M.D. Ynsa, J.P. Garcia Ruiz, F. Watt, Estudo da interação de nanopartículas com células utilizando técnicas de feixes de iões. *Encontro Nacional de Nanotoxicologia*, 7-8 Fev. 2011, Lisbon.

Elemental Characterization and Speciation CEEFI

Journals

A. Taborda, P.C. Chaves, M.A. Reis, Polynomial approximation to universal ionisation cross-sections of K and L shells induced by H and He ion beams, *X-ray Spectrometry*, 40 (2011) 127-134.

M.A. Reis, P.C. Chaves, A. Taborda, Radiative auger satellites observed by microcalorimeter-based energy-dispersive high-resolution PIXE *X-ray Spectrometry*, 40 (2011) 141-146.

M.A. Reis, N.P. Barradas, P.C. Chaves, A. Taborda, *PIXE analysis of multilayer targets, X-ray Spectrometry*, 40 (2011) 153-156.

A. Taborda, L.C. Alves, N.P. Barradas, P.C. Chaves, M.A. Reis, IBIXFIT: A Tool For The Analysis of Microcalorimeter PIXE Spectra, *Application of Accelerators in Research and Industry*, AIP Conf. Proc. 1336 (2011) 276-280.

A. Taborda, M. A. Reis, P. C. Chaves, A. Carvalho, L X-Rays RYIED Oscillations and Proton-NMRD of Gd₂O₃ Nanoparticles, *Physics Research*

International, 2011, Article ID 705686, 8 pages, (doi:10.1155/2011/705686).

V. Corregidor, L.C. Alves, N.P. Barradas, M.A. Reis, M.T. Marques, J.A. Ribeiro Characterization of mercury gilding art objects by external proton beam, *Nuclear Instruments and Methods in Physics Research B*, 269 (2011) 3049-3053 (doi:10.1016/j.nimb.2011.04.070)

Communications

Poster

A. Taborda, P.C. Chaves, M.A. Reis, L. Carvalho, New developments in X-ray yields simulation" 20th *Int. Conf. on Ion Beam Analysis*, 10-15 April 2011, Itapema, Brazil.

P.C. Chaves, A. Taborda, M.A. Reis, CdTe detector efficiency calibration using thick targets of pure and stable compounds, 20th *Int. Conf. on Ion Beam Analysis*, 10-15 April 2011, Itapema, Brazil.

Materials Characterization with Radioactive Nuclear Techniques

Journals

L.M.C. Pereira, U. Wahl, J.G. Correia, S. Decoster, M.R. da Silva, J.P. Araújo, and A. Vantomme: "Direct identification of interstitial Mn in heavily p-type doped GaAs and evidence of its high thermal stability", *Applied Physics Letters* 98 (2011) 201905/1-3.

L.M.C. Pereira, U. Wahl, S. Decoster, J.G. Correia, L.M. Amorim, M.R. da Silva, J.P. Araújo, and A. Vantomme: "Mixed Zn and O substitution of Co and Mn in ZnO", *Physical Review B* 84 (2011) 125204/1-6.

U. Wahl: "Materials science and biophysics applications at the ISOLDE radioactive ion beam facility", *Nuclear Instruments and Methods in Physics Research B* 269 (2011) 3014-3020.

T.M. Mendonça, P. Odier, P.B. Tavares, J.G. Correia, A.M.L. Lopes and J.P. Araújo, "The Urea Combustion Method in the Preparation of Precursors for High-TC Single Phase HgBa₂Ca₂Cu₃O_{8+δ} Superconductors". *Physica C* 471 (2011) 1643.

A.M.L. Lopes, G.N.P. Oliveira, T.M. Mendonça, J. Agostinho Moreira, A. Almeida, J.P. Araújo, V.S. Amaral, and J.G. Correia, "Local distortions in multiferroic AgCrO₂ triangular spin lattice", *Physical Review B* 84 (2011) 014434.

T.M. Mendonça, J.G. Correia, H. Haas, P. Odier, P.B. Tavares, M.R. da Silva, A.M.L. Lopes, C. Darie and J.P. Araujo, "Perturbed Angular Correlations Studies in the HgBa₂CaCu₂O_{6+δ} high-TC Superconductor", *Journal of Superconductivity and Novel Magnetism*: Volume 24, (2011) 1153.

T.M. Mendonça, J.G. Correia, H. Haas, P. Odier, P.B. Tavares, M.R. da Silva, A.M.L. Lopes, A.M. Pereira, J.N. Gonçalves, J.S. Amaral, C. Darie, and J.P. Araujo, "Oxygen ordering in the high-Tc superconductor HgBa₂CaCu₂O_{6+δ} as revealed by perturbed angular correlation", *Physical Review B* 84 (2011) 094524.

J.N. Gonçalves, V. S. Amaral, J. G. Correia and A.M.L. Lopes "Hyperfine interactions in MnAs studied by perturbed angular correlations of γ -rays

using the probe ⁷⁷Br/⁷⁷Se and first- principles calculations for MnAs and other Mn pnictides", *Physical Review B* 83 (2011) 104421.

P. Kessler, K. Lorenz and R. Vianden, "Implanted impurities in wide band gap semiconductors", *Defect and Diffusion Forum* Vol. 311 (2011) 167-179.

Communications

Invited Oral

U. Wahl, "Applications of radioactive ion beams for solid-state physics research", 1st International Conference on Advances in Radioactive Isotope Science (ARIS - 2011) Leuven, Belgium, 29.5.-3.6.2011.

U. Wahl, "Emission channeling lattice location experiments in semiconductors". 24th Nordic Semiconductor Meeting, Aarhus, Denmark, 20.-22.6.2011.

U. Wahl, "Applications of radioactive ion beams in materials science research", Workshop on Radioactive Ion Beam Project 2011, iThemba LABS (Laboratory for Accelerator-Based Science), Faure/Cape Town, South Africa, 15.-16.9.2011,

U. Wahl, "Emission channeling lattice location experiments using implanted radioactive probes in semiconductors", Workshop on Radioactive Ion Beam Project 2011, iThemba LABS (Laboratory for Accelerator-Based Science), Faure / Cape Town, South Africa, 15.-16.9.2011,

V. S. Amaral, A. M. L. Lopes, J. P. Araújo and J. G. Correia, "Hyperfine Studies on Magnetic and Multiferroic Materials Using Radioactive Isotopes at ISOLDE" ISOLDE Dublin Workshop, Dublin, Ireland, 9.9.2011.

J. N. Gonçalves, A. Stroppa, V. S. Amaral, J. G. Correia, T. Butz and S. Picozzi, "Ferroelectricity and Electric Field Gradients: an ab-initio study", 7th International Conference on Stripes and High Tc Superconductivity Stripes 11, Roma Sapienza University, Italy, 10-16.7.2011□.

PUBLICATIONS

J.G. Correia, "Applied Physics with Accelerators at ISOLDE", *CERN Lectures Divulgateion for Public Series*, 7 Sept. 2011.

Oral

L.M. Pereira, U. Wahl, A. Vantomme, and J.P. Araújo, "Lattice location of transition metals in dilute magnetic semiconductors", 56th Annual Conference on Magnetism and Magnetic Materials (MMM), Scottsdale, Arizona, 30.10.-3.11.2011, winner of the best student presentation award.

L. Amorim, U. Wahl, J.G. Correia, L. Pereira, S. Decoster, D. Silva, and M.R. da Silva, "Mg lattice location in group-III nitrides", 2011 ISOLDE Workshop and Users Meeting, CERN, Geneva, Switzerland, 5.-7.12.2011.

D.J. Silva, U. Wahl, J.G. Correia, L.M.C. Pereira, L.M. Amorim, E. Bosne, J.P. Araújo, M. R. da Silva, S. Decoster, and A. Vantomme: "Lattice location of the transition metals Co and Ni in Si", 2011 ISOLDE Workshop and Users Meeting, CERN, Geneva, Switzerland, 5.-7.12.2011.

J.N. Gonçalves, A. Stroppa, V. S. Amaral, J. G. Correia, T. Butz and S. Picozzi, "Ab-initio study of the correlation between electric field gradients and electric polarization in ferroelectric oxides", 2011 ISOLDE Workshop and Users Meeting, CERN, Geneva, Switzerland, 5.-7.12.2011.

P. Kessler, K. Lorenz, S.M.C. Miranda, R. Simon, J.G. Correia, K. Johnston, R. Vianden, "Cd doping of AlN via ion implantation studied with perturbed angular correlation", Spring Meeting of the European Materials Research Society (E- MRS), Nice, France,

8-13.5.2011, Symposium F: Group III nitrides and their heterostructures for electronics and photonics.

Poster

S.M.C. Miranda, E. S. M. C. Miranda, K. Lorenz, E. Alves, J.G. Correia, P. Kessler, R. Vianden, K. Johnston: "Ion implantation of In, Cd and Ag into AlN and GaN", Spring Meeting of the European Materials Research Society (E- MRS), Nice, France, 8-13.5.2011, Symposium F: Group III nitrides and their heterostructures for electronics and photonics".

S. Hamidi, P. Kessler, K. Lorenz, and R. Vianden: "A Stable In - Defect Complex Found in GaN, AlN and AlGaIn", 9th International Conference on Nitride Semiconductors, ICNS-9, Glasgow, U.K., July 10 - 15, 2011.

Thesis

Ph.D.

Célia Tavares de Sousa, "Development of Nanoporous Alumina Templates for Biotechnological Applications", Faculdade de Ciências da Universidade do Porto, Porto, 07 Dec. 2011. Supervisor: J.G. Correia.

João Nuno Santos Gonçalves, "Measurements and modeling of hyperfine properties in ferroics", Faculdade de Ciências da Universidade de Aveiro, Aveiro, 16. Dec. 2011. Supervisor: J.G. Correia.

Lino Pereira, "Structure and magnetism of transition-metal implanted dilute magnetic semiconductors", Instituut voor Kern- en Stralingsfysica, Katholieke Universiteit Leuven, Belgium, 20 Dec. 2011. Supervisor: U. Wahl.

Nuclear Reactions

Journals

M. Fonseca, H. Luis, N. Franco, M. A. Reis, P. C. Chaves, A. Taborada, J. Cruz, D. Galaviz, N. Fernandes, P. Vieira, J.P. Ribeiro, A.P. Jesus, Golden glazes analysis by PIGE and PIXE Techniques, *Nucl. Inst. and Meth. B* 269, (2011) 3060-3062.

Communications

M. Fonseca, N. Franco, H. Luís, J. Cruz, D. Galaviz, J.P. Ribeiro, "ERYA code for quantitative analysis of light elements by PIGE"

A.P. Jesus, 20th International Conference on Ion Beam Analysis (IBA2011), Itapema, Brasil, 10 - 15 Abril 2011.

J. Cruz, H. Luís, M. Fonseca, A.P. Jesus, "Improved depth profiling analysis of implanted samples using different analytical techniques - an example", 20th International Conference on Ion Beam Analysis (IBA2011), Itapema, Brasil, 10 - 15 Abril 2011.

J. Cruz, H. Luís, M. Fonseca, A.P. Jesus, and C. Rolfs, "Enhanced electron screening effects: still an unsolved problem", Nuclear Physics and Astrophysics V (NPA5), Eilat, Israel, 3 - 8 Abril 2011.

Oral

D. Galaviz, "Determination of (p,n) reaction cross sections of astrophysical interest", P-process Workshop; Istanbul, Turkey. May 25-27, 2011.

Thesis

PhD

Micaela Fonseca, "Light Element Analysis by Gamma-Producing Nuclear Reactions", FCT/UNL, Jul 2011; supervisor - A. P. Jesus.

MSc

Filipa Vaz Campos Lourenço, "Upgrade of the PIGE line of the UFA-ITN 3 MV Tandem Accelerator", (Mar-Dez 2011); supervisors - J. Cruz, M. Fonseca.

Condensed Matter Physics

Communications

Oral

J.J.H. Lancastre, N. Fernandes, F.M.A. Margaça, I.M. Miranda Salvado, L.M. Ferreira, M.H. Casimiro, "Study of PDMS conformation in PDMS-based hybrid materials prepared by gamma irradiation", *12th Tihany Symposium on Radiation Chemistry*, Aug.27 – Sept. 1st, 2011, Zalakaros, Hungary.

L.M. Ferreira, J.P. Leal, P.A. Rodrigues, L.C. Alves, A.N. Falcão, M.H. Gil, "Characterization of PE-g-HEMA films prepared by gamma irradiation through nuclear microprobe techniques", *12th Tihany Symposium on Radiation Chemistry*, Aug.27 – Sept. 1st, 2011, Zalakaros, Hungary. M.H. Casimiro, A.G. Silva, J.V. Pinto, A.M.Ramos, J. Vital and L.M. Ferreira, "Catalytic Poly(vinyl alcohol) functionalized membranes obtained by gamma irradiation", *12th Tihany Symposium on Radiation Chemistry*, Aug.27 – Sept. 1st, 2011, Zalakaros, Hungary.

Posters

M.S.M.S. Nabaça, A.M.B. Silva, I. M. Miranda Salvado, M. H. V. Fernandes, F. M. A. Margaça, L.

M. Ferreira, "Zirconium-containing organic-inorganic hybrids with potential applications as bone bonding materials", *Hyma 2011, 2nd Conference on Multifunctional Hybrid and Nanomaterials*, 6 – 10 March 2011, Strasbourg, France.

M.S.M.S. Nabaça, A.M.B. Silva, I. M. Miranda Salvado, M. H. V. Fernandes, F. M. A. Margaça, "Híbridos Orgânico-Inorgânicos com potencial aplicação como materiais para implantes ósseos", *CLME'2011, 6^o Congresso Luso-Moçambicano de Engenharia*, 29Aug – 2 Sept. 2011, Maputo, Mozambique.

H. Luís, J. Cruz, M. Fonseca, N. Franco, A.P. Jesus, J. Lancastre, E. Alves, "Study of nuclear reactions producing ³⁶Cl by AMS", *NPA5, 5th Nuclear Physics in Astrophysics Conference*, 3-8 April 2011, Eilat, Israel.

Internal Report

F.M.A. Margaça, I.M. Miranda Salvado and Anikó Meiszterics, SANS Study of Hybrid Materials Prepared by Gamma Irradiation, BRR_195, *Budapest Neutron Centre Experimental Report*, January 2011.

Radiation Technologies: Processes and Products

Journals

R.P. Melo, J.P. Leal, M.L. Botelho, Radiolytic degradation mechanism of gallic acid and its end-products, *Rapid Communications in mass spectrometry*, 25 (1) (2011) 218-222.

A.L. Antonio, A. Fernandes, J.C.M. Barreira, A. Bento, M.L. Botelho, I.C.F.R. Ferreira, Influence of gamma irradiation in the antioxidant potential of chestnuts (*Castanea sativa* Mill.) fruits and skins *Food and Chemical Toxicology* 49 (9) (2011) 1918-1923.

J.M. P. Coelho, C. Silva, A. Ruivo, M.L. Botelho, A. Pires de Matos. Local laser-decolorizing of gamma-ray irradiated silicate glass, *Optical Engineering*, 50 (6) (2011) Article Number: 064301.

A. Fernandes, J.C.M. Barreira, A.L. Antonio, A. Bento, M.L. Botelho, I.C.F.R. Ferreira, Assessing the effects of gamma irradiation and storage time in energetic value and in major individual nutrients of chestnuts, *Food and Chemical Toxicology*, 49 (9) (2011) 2429-2432.

Conference Proceedings

J Reis, C Frias, F Capela e Silva, JC Potes, CC Castro, ML Botelho, JA Simões, AT Marques (2011): *Estimulação mecânica na interface osso/implante por actuadores piezoelétricos*. Proceedings of 4^o Congresso Nacional de Biomecânica, Coimbra, Portugal, 4-5 Feb, 2011, pp. 381-385.

A. L.Antonio, E.Ramalhosa, M. L.Botelho, B.Quintana, M. J.Trigo, A.Ferreira, A.Bento, "Irradiação gama de castanhas calibradas provenientes de uma unidade industrial: cor e textura" VI Congresso Ibérico de Agro-Engenharia, ISBN: 978-972-778-113-3 Évora, 5 -7 September 2011.

A. L.Antonio, E.Ramalhosa, A.Fernandes, J.Barreira, M.L.Botelho, T.Günaydi, H.Alkan, B.Quintana, A. Bento, "Influência da dose de radiação gama na cor de castanhas de origem Portuguesa e Turca (*Castanea sativa* Mill.)" VI Congresso Ibérico de Agro-Engenharia, ISBN: 978-972-778-113-3 Évora, 5 - 7 September 2011

Communications

Oral

S. Cabo Verde, A. António, P. Santos, R. Melo, T. Silva, I. Nunes, M. J. Trigo, M.L. Botelho. "Ionization radiation treatment of fruits and vegetables for immuno-compromised patients: feasibility study". IAEA 2nd Technical Meeting on the Development of Irradiated Food for Immuno-compromised patients and other Potential Target Groups, 19 – 25 November, Manila, Philippines.

T.Silva, S. Cabo Verde, G. Cardoso, A.C.Fernandes, C.I.Burdidge, M.I.Dias, M.L.Botelho e M.I.Prudêncio "Microbial contamination and inactivation in ceramic tiles" IX Congresso Ibérico de Arqueometria (CIA) Fundação Calouste Gulbenkian, Lisboa 26-28 October 2011.

- T. Silva, S. Cabo Verde, V. Corregidor, M. Luisa Botelho, I. Prudêncio, "Portuguese case study on ionizing radiation" Regional Coordination Meeting IAEA TC Project RER/8/015 "Using Nuclear Techniques for the Characterization and Preservation of Cultural Heritage Artefacts in the European Region" 7-9 September 2011.
- P.M.P. Santos, A.J.S.C. Vieira, "Antioxidising Cascade Mechanisms of Protection Against Oxidative Stress" XXII Encontro Nacional da Sociedade Portuguesa de Química, Braga, 03-06 July 2011.
- A. Fernandes, A.L. Antonio, J.C.M. Barreira, A. Bento, M. L. Botelho, I.C.F.R. Ferreira "Aplicação de irradiação como método de conservação da castanha: análise de parâmetros nutricionais" XII Encontro Nacional da SPQ, Braga – Portugal, 3- 6 July 2011.
- T.Silva, S. Cabo Verde, M.L.Botelho e M.I.Prudêncio "Microbiological characterization and inactivation of ceramic tiles" Romania - Magurele, 9-13 May 2011.
- R. Melo, P.M.P. Santos, S. Cabo Verde, T. Silva, I. Nunes, V. Dores, M. Oliveira, J.P. Leal, M.L. Botelho "Application of ionizing radiation on the cork wastewater treatment", CRP 1539– F23029 'Radiation Treatment of Wastewater for Reuse with Particular Focus on Wastewaters Containing Organic Pollutants' IAEA Vienna 2 - 6 May 2011.
- Poster**
- A. Fernandes, J. C.M. Barreira, L. Barros, A. L. Antonio, A. Bento, M.L. Botelho, I. C.F.R. Ferreira, "Efeito protector da radiação nos níveis de vitamina E em *Castanea sativa*", V Jornadas de Análises Clínicas e Saúde Pública, ESSA IPB, Bragança-Portugal, 20 – 21 May 2011.
- I. Nunes; N. Mesquita; S. Videira; S. Cabo Verde; A. Portugal; M. L. Botelho. "Behind the air we breathe: characterization of the microbial population from the indoor air of the Archive of the University of Coimbra". XXXVI Jornadas Portuguesas de Genética, 30 May – 1 June 2011, Coimbra, Portugal.
- I. Nunes; N. Mesquita; S. Videira; S. Cabo Verde; A. Portugal; M. L. Botelho. "Fungal growth and inactivation patterns in parchment documents from the Archive of the University of Coimbra". 4th FEMS Congress of European Microbiologists, 26 – 30 June 2011, Switzerland.
- L. Barros, A. L. Antonio, J. C.M. Barreira, A. Fernandes, A. Bento, M. L. Botelho, I. C.F.R. Ferreira "Effects of gamma irradiation on sugars, fatty acids and tocopherols of chestnuts (*Castanea sativa* Miller)", XVI Euro Food Chem, Gdansk – Poland, 4 - 6 July 2011.
- J.C.M. Barreira, A.L. Antonio, A. Fernandes, A. Bento, B. Quintana, I.C.F.R. Ferreira, "Linear Discriminant Analysis as a tool to assess the effects of irradiation treatment and storage time on antioxidant activity of *Castanea sativa* Miller skins and fruits" XVI Euro Food Chem, Gdansk – Poland, 4 - 6 July 2011.
- M.Oliveira, M.G.Lima, V.Dores, S.C.Verde, H. Marcos, T.Silva, I. Nunes, R.Melo, A.António, M. L. Botelho, "Impacto reológico na descontaminação microbiológica de uma emulsão alimentar: Pasteurização vs Radiação gama", VI Congresso Ibérico de Agro-Engenharia, Évora, 5 - 7 September 2011.
- A.L. Antonio, E. Ramalhosa, A. Fernandes, J. Barreira, M. L. Botelho, T. Günaydi, H. Alkan, B. Quintana, A. Bento "Influência da dose de radiação gama na cor de castanhas de origem Portuguesa e Turca (*Castanea sativa* Mill.)" VI Congresso Ibérico de Agro-Engenharia, Évora, 5 - 7 September 2011.
- A.L. Antonio, A. Fernandes, L. Barros, J.C.M. Barreira, A. Bento, M.L. Botelho, I.C.F.R. Ferreira "Influence of gamma radiation in chestnut (*Castanea sativa* Mill.) vitamin E content" International Congress on Radiation Research, Varsóvia – Poland, 28 August - 1 September 2011.
- J.C.M. Barreira, A.L. Antonio, A. Fernandes, T. Günaydi, H. Alkan, A. Bento, M.L. Botelho, I.C.F.R. Ferreira "Chemometric Characterization of Gamma Irradiated Chestnuts from Turkey" 12th Symposium on Radiation Chemistry, Hungry, 27 August - 1 September 2011.
- T. Calado, A. Antonio, P. Rodrigues, A. Venâncio "Effect of γ -radiation in the survival of *Aspergillus parasiticus* in chestnuts" ISM Conference 2011 – Strategies to reduce the impact of mycotoxins in Latin merica n a global contexto" Mendoza – Argentina, 15 – 18 November 2011.
- M.Oliveira, M.G.Lima, V.Dores, S.C.Verde, H. Marcos, T.Silva, I. Nunes, R.Melo, A.António, M. L. Botelho, "Impacto reológico na descontaminação microbiológica de uma emulsão alimentar: Pasteurização vs Radiação gama", Fórum 4, Alimentação Tecnologia Qualidade Segurança Escola Superior Agraria de, Santarém, 16 November 2011.
- Internal Reports**
- S. Cabo Verde, J. Santos, "Monitorization of Microbial Indoor Air Quality: Luz Hospital". May 2011. pp. 1-17.
- S. Cabo Verde, J. Santos, "Monitorization of Microbial Indoor Air Quality: Clínica dos Poetas" September 2011, pp. 1-12.
- S. Cabo Verde, J. Santos, "Monitorization of Microbial Indoor Air Quality: Santiago Hospital", November 2011, pp.1 -13
- Thesis**
- MSc**
- Telma Silva: "Avaliação dos antioxidantes presentes nas águas de processo da indústria corticeira" Master in Food Safety and Technology, Faculty of Sciences and Technology – New University of Lisbon.

Inês Nunes, “Fungal isolates from the archive of the university of Coimbra: ionizing radiation response and genotypic fingerprinting”. Master in Applied Microbiology, Faculty of Sciences – University of Lisbon.

Joana Madureira: “Estudo do efeito da radiação ionizante na capacidade antioxidante dos compostos presentes na água de processo da indústria corticeira” Master in Chemical Engineering, Faculty of Sciences and Technology – New University of Lisbon.

Milene Bação, “Avaliação de um biodosímetro de radiação ionizante – comparação dosimétrica”. Master in Biomedical Engineering, Faculty of Sciences and Technology – New University of Lisbon.

Marina Oliveira, “Impacto da Utilização da Radiação Ionizante por Comparação com a Pasteurização nos Parâmetros Microbiológicos e Reológicos da Fase Aquosa de Emulsões Alimentares(Água/Óleo)” 20th of December 2011, Superior Agrarian School of Santarém, Polytechnic Institute of Santarém.

Nuclear Instruments and Methods

Journals

F. Belloni *et al.*, (the n_TOF Collaboration), Neutron-induced fission cross-section of ^{233}U in the energy range $0.5 < E_n < 20\text{MeV}$, *European Physical Journal A* (2011) 47, 2.

G. Tagliente, P. M. Milazzo, K. Fujii, *et al.*, $^{96}\text{Zr}(n, \gamma)$ measurement at the n_TOF facility at CERN, *Physical Review C* 84, (2011) 055802.

M. K. Pham *et al.*, A certified reference material for radionuclides in the water sample from Irish Sea (IAEA-443), *J. Radioanal. Nucl. Chem.* 288 (2011) 603-611.

M. Stano, N. Pinhão, D. Loffhagen, M. Kucera, Z. Donkó, and S. Matejčík, Effect of small admixtures of N_2 , H_2 or O_2 on the electron drift velocity in argon: experimental measurements and calculations, *European Phys. Journal D*, 65 (3) (2011) 489-498.

N. Colonna *et al.*, (the n_TOF Collaboration), Neutron measurements for advanced nuclear systems: the n_TOF project at CERN, *Nuclear Inst. and Methods in Physics Research B*, 269 (2011), 3251-3257.

N. R. Pinhão, A. Janeco, J. B. Branco, Influence of helium on the Conversion of Methane and Carbon dioxide in a Dielectric Barrier Discharge, *Plasma Chem. Plasma Process* 31, (2011) 427-439.

R. Sarmiento *et al.* (The n_TOF Collaboration), Measurement of the $^{236}\text{U}(n, f)$ cross section from 170 meV to 2 MeV at the CERN n_TOF facility, *Physical Review C* 84, (2011) 044618.

R. Luis, J. Bermudez J. C. David, D. Ene, I. F. Goncalves, Y. Kadi C. Kharoua, B. F. Negoita, D. R. Rocca, B. Y. Romanets, L. Tecchio, P. Vaz Eurisol Multimegawatt Target, Unit-Maff Configuration: *Dosimetry And Activation Studies Nuclear Technology* Vol. 175 Aug. 2011.

Communications

Invited

N. Pinhão, Improving the energy efficiency in the conversion of methane and carbon dioxide in DBD discharges, *Symposium on Plasma-assisted catalysis: recent advances and perspectives*, Antwerp, Belgium, Nov 28 (2011).