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NEWSLETTER

Centro de Recursos Naturais e Ambiente

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Participation in the 9th Seminar on Transports



Prof. Jaime Puna participated in the 9th Seminar on Transports, held at ISEL, Lisboa on the 25th June 2015 and presented a communication entitled: **“Novas tecnologias químicas aplicadas na produção de biocombustíveis para o sector dos transportes: oportunidades e desafios”**

Participation in RAD2015 – International Conference on Radiations and Applications in Various Fields of Research



Prof. Maria de Lurdes Dinis attended the RAD2015 – International Conference on Radiations and Applications in Various Fields of Research, June 8-12, 2015, Budva, Montenegro and presented two oral communications: i) A.C.M. Garrido, M.L. Dinis, OCCUPATIONAL EXPOSURE TO ELECTROMAGNETIC FIELDS (EMF) IN ARC AND RESISTANCE WELDING.; ii) A.S. Silva, M.L. Dinis, A.J.S.C. Pereira, A. Fiúza: RADON LEVELS IN PORTUGUESE THERMAL SPAS.

Participation in 6th European Bioremediation Conference



Cerena's Researcher M. Cristina Vila participated on the 6th European Bioremediation Conference – 29/6 – 3/7/2015, Crete – Greece with the following oral communication: M. Cristina Vila, M. Manuela Carvalho, J. Cardoso, M. Trelles, A. Fiúza, “The fugacity approach in modelling bioventing and enhanced bioremediation of contaminated soils”.

Award



Prof. João Gomes, was awarded the certificate of Outstanding Reviewer for his work for journal “Energy” edited by Elsevier.

UPCOMING EVENTS



European Study in OR/MS Education



The main purpose of this study is to contribute to an overview of good practices in OR/MS education at European level. A kick-off survey aims to learn from the most recent developments in the enrolment of students, the reduction in 1st year students' failure rates and the promotion of continuity, the value of OR/MS courses as perceived within HE programs, and the transition of graduates onto the Labour Market.

Thanks to the support of Springer-Verlag, 60 randomly chosen respondents will receive an electronic copy of the book from the series EURO Advanced Tutorials on Operational Research: Linear and Mixed Integer Programming for Portfolio Optimization.

Authors: Mansini, Renata, Ogryczak, Włodzimierz, Speranza, Grazia

Completion of the survey should take no more than 10 minutes. The survey will be open until 30-September-2015 through the EU's survey portal: <https://ec.europa.eu/eusurvey/runner/ORMSEducation>.

Paper Published

Solid Curing Agents for Polyurethane Foams: Proof of Concept of the Release Mechanism

The paper "Solid Curing Agents for Polyurethane Foams: Proof of Concept of the Release Mechanism" has been published and highlighted at the front cover of Macromolecular and Engineering magazine. Smart microporous GreenCaps organosilica microspheres functionalized with glycerol and sprayed from a pressurized aerosol can break apart and release their functional payload, dedicated to increase the rate and the extent of curing of polyurethane foams.

Link: <http://onlinelibrary.wiley.com/doi/10.1002/mame.201570020/abstract>

L-Histidine-based organoclays for the storage and release of therapeutic nitric oxide

Despite its toxicity, in low concentrations, nitric oxide (NO) is a small endogenous molecule with a particularly important role in the regulation of several biochemical pathways of the human body. The potential of L-histidine-modified clays (organoclays) for storage and therapeutic release of nitric oxide was assessed. Materials were characterized by powder X-ray diffraction, TG-DSC, IR spectroscopy, and nitrogen adsorption at $-196\text{ }^{\circ}\text{C}$. The NO storage and release kinetics was studied both in the gas and liquid phases. For some materials, improvement was observed for both the released amounts and the release profile for the organoclays in relation to the respective raw clays. Assays with HeLa cells indicated that the materials have low cytotoxicity.

Reference: A.C. Fernandes, M.L. Pinto, F. Antunes, J. Pires, L-Histidine-based organoclays for the storage and release of therapeutic nitric oxide, J. Mater. Chem. B. 3 (2015) 3556–3563.

Link: <http://dx.doi.org/10.1039/C4TB01913J>

Guerra, L.; Gomes, J.; Puna, J.; Rodrigues, J.; ***Preliminary study if synthesis gas production from water electrolysis using the ELECTROFUEL concept***, Energy, 88, 2015.