

**Excellence in Sustainable Chemistry Session**  
**(sponsored by SOLCHEMAR)**

**1/05/2014**

**14h15-15h45 – PyChem 2014 Session**

14h15 – **Luisa Neves (Loreal Prize 2014; FCT/UNL)**

*"Design and Characterization of Novel Membranes with Ionic Liquids for CO<sub>2</sub> Capture"*

14h40 – **M. Goretti Sales (ERC Grant; ISEP/IPP)**

*"Towards Cancer Diagnosis in Point-of-Care"*

15H05 – **Mara G. Freire (ERC Grant; CICECO/UA)**

*"Extraction and Purification of Value-Added Biomolecules using Ionic Liquids"*

15H30 – **Luis C. Branco (Solchemar)**

*"Solchemar: Innovative Sustainable Chemical Products"*



**Luísa Alexandra Graça Neves**

*Post-doc Researcher*

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**Research Interests:**

The main focus of the research is the design and characterization of novel membranes for different applications:

- Efficient removal of carbon dioxide (CO<sub>2</sub>) from anaesthetic gas circuits using liquid membranes with Task Specific Ionic Liquids (TSILs) and a very efficient enzyme, Carbonic Anhydrase;
- CO<sub>2</sub> capture from flue gas in post-combustion processes at high temperatures using mixed matrix membranes with ionic liquids (MMMs-ILs);
- Production and Characterization of Yeast Chitin-Glucan Complex Films using Biocompatible Ionic Liquids for Biomedical Applications.



**M. Goreti F. Sales**

*Professor Adjunto, Scientific coordinator of BioMark, Sensor Research.*  
Department of Chemical Engineering, ISEP/IPP, Porto.

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**Research Interests:**

Development of new sensing materials by molecularly-imprinting for a selective recognition of biomolecules acting as biomarker in health, food and environmental domains, and their integration into sensory surfaces for electrical/optical detection, in batch/flow methods. The resulting devices should require reduced sampling volume, high selectivity, quick response and low cost.



**Mara Guadalupe Freire Martins**

*Research Coordinator*

Departamento de Química, CICECO, Universidade de Aveiro, Aveiro.

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**Research Interests:**

The main interests and experience of Mara Freire cover colloids and surfaces and emulsions stability, aeration in multiphase biological reactors, extraction and purification of biomolecules (mainly biopharmaceuticals), concentration of cancer biomarkers from human fluids, phase equilibria, biomass dissolution and processing, treatment of contaminated aqueous streams, thermophysical properties, among others. Most of these research studies are carried out with a relatively new class of fluids - ionic liquids - which have shown to present outstanding properties.



**Luis C. Branco**

*Director of Solchemar Lda*

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Solchemar was founded in 2004 in Portugal, and relies on highly motivated experts committed to the development of high quality Ionic Liquids, useful key intermediates for chemical synthesis and metal catalysts, to ensure our customers the best R&D success.