Short course on electrochemical engineering and modelling

The FP7 project InFluENCE aims at improving the fundamental understanding and control of interfaces of a battery type based on Li-ion and Na-ion active materials:semi solid flow batteries (SSFB). The methods and techniques developed are however generic and could as well be implemented for conventional Li- and Na-ion systems for the techniques that do not focus on flow aspects.

A main objective is the investigation and optimization of the interfaces developing between the electrolyte and the electrochemically active material particles in fluid electrodes. The acquired knowledge would allow the chemical and morphological optimization of active materials as well as the design of optimized interfacial layers (also called artificial Solid Electrolyte Interfaces, art-SEI) capable of warrant stable interfaces.

A second main objective is the understanding and control the mechanical and conductive behaviours of the slurries. For this, it is necessary to determine the role of shape anisotropy and the overall nature (attractive or repulsive) of the short ranged interactions of the active materials besides the strength of the attractive forces for conductive nano-particles. The cross interaction should allow intimate contact between active material and the conductive particles.

More information and registration:
email: fp7-influence@vito.be
www.fp7-influence.eu

Organizer: VITO and 6TMIC Ingénieries
Location: VITO Berchem, Blauwe Zaal
Roderveldlaan 5, 2600 Antwerp Belgium)

This 2-day course will focus on electrochemical engineering and modelling, with special regards to battery systems.

Program

Day 1 (Thursday 27 th August) : Fundamentals

- Professor Philippe Barboux, Chimie Paristech
"Introduction to batteries - Technologies, applications, markets"

- Professor Theodore Tzedakis , Univ. Toulouse III Paul Sabatier
"Electrochemical Engineering"

- Dr. Xochitl Domínguez-Benetton , VITO
"Electrochemistry and electrochemical characterization of batteries of batteries"

Day 2 (Friday 28 th August) : Applications

- Professor Digby Maconald, UC Berkeley
"Interfaces phenomena (SEI/Corrosion)"

- Dr. Remy Lacroix, 6TMIC
"Electrochemical Modelling of Processes in Batteries"

-Professor Mirna Urquidi-Macdonald, PennState University
"Prediction of secondary battery life using Data Mining"

Registration fee:
InFluENCE participants – free
External students – 200€
Registration fee includes course attendance, course materials, lunch and refreshments.
Travelling and accomodation are not included in the registration fee.

This project has received funding from the European Union's Seventh Programme for research, technological development and demonstration under ***grant agreement No*** **608621**.

InFluENCE

REGISTRATION FORM

First Name	**Last Name**
Organization	**Position**
Address	
City Code	**City**
Country	**Nationality**
Phone	**E-mail**

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