

WORKSHOP ON UNDERSTANDING INTERFACES IN ELECTROCHEMICAL STORAGE SYSTEMS

OCTOBER 6TH AND 7TH, TOURS (FRANCE)

Hi-C project



Baccara project

PROGRAMME

TUESDAY 6 OCTOBER 2015

8:45-9:00	Registration
9:00-09:30	<i>Hi-C Project</i>
Project Presentation	Paul Norby (DTU, Hi-C coordinator)
9:30-10:00	<i>Baccara Project</i>
Project Presentation	Pascale Bayle-Guillemaud (CEA INAC Grenoble France, Baccara coordinator)
10:00-12:05	SESSION 1: SILICON ELECTRODE
10:00-10:25	<i>Silicon thin films as a tool for a better understanding of silicon electrode/electrolyte interactions in lithium-ion batteries</i>
Invited lecture	Frédéric Le Cras, CEA LETI Grenoble, France
10:25-10:50	<i>SEI characterization and failure mechanism of Si electrodes in full Li-ion cells</i>
Lecture	Philippe Moreau, IMN Nantes, France (Baccara project)
10:50-11:15	<i>Coffee break (posters)</i>
11:15-11:40	<i>Methylated silicon anodes with improved electrochemical performances for Li-ion batteries</i>
Invited Lecture	Michel Rosso, LPMC Palaiseau, France
11:40-12:05	<i>Development of silicon electrodes for Li-ion batteries</i>
Invited Lecture	Willy Porcher, CEA LITEN Grenoble, France
12:05-14:00	<i>Lunch</i>
14:00-14:50	SESSION 2: SYSTEMS
14:00-14:25	<i>A potential new generation of Li-ion batteries</i>
Invited Lecture	Erik Kelder, Delft University of technology, Netherlands
14:25-14:50	<i>High Energy Density Cells: Integration to Automotive Applications and Challenges</i>
Invited Lecture	Bruno Delobel, Renault, Technocentre Guyancourt, France
14:50-17:30	SESSION 3: CHARACTERIZATION TECHNIQUES
14:50-15:15	<i>In Situ Raman Microscopy Study for Li-ion Battery Electrode Materials</i>
Invited Lecture	Laura Cabo Fernandez, University of Liverpool, England
15:15-15:40	<i>SEI investigation by Synchrotron X-rays reflectivity</i>
Lecture	Sandrine Lyonnard, CEA INAC Grenoble, France (Baccara project)
15:40-16:15	<i>Coffee break (posters)</i>

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- 16:15-16:40
Lecture ToF-SIMS trends and potentialities as a complementary approach for the study of electrode materials
Eric De Vito, CEA LITEN Grenoble, France (Baccara project)
- 16:40-17:05
Lecture Materials and Diagnostic Tools for Advanced Li-ion and post Li-ion Batteries
Yair Ein-Eli, Technion, Israel (Baccara project)
- 17:05-17:30
Lecture Ionic and electronic transport properties in LiFeBO₃ from DFT
Tejs Vegge, Technical University of Denmark (Hi-C project)
- 17:30-17:55
Apparatus and methods for Non-intrusive and operando study of batteries and supercapacitors materials: acoustic emission and thermal analysis coupled to electrochemical characterization
Nicolas Guillet, CEA-INAC Grenoble, France (Hi-C project)
- 18:00-20:00
Wine yard visit
- 20:00-22:00
Diner near river Loire (Grotte de la Roche aux Fées, Rochecorbon)

WEDNESDAY 7 OCTOBER 2015

- 9:00-10:40**
9:00-9:25
Invited Lectures **SESSION 4: INTERFACES**
Modification of the interface properties using additives or fluorinated solvents
Fanny Alloin, Laboratoire LEPMI Grenoble, France
- 9:25-9:50
Invited Lecture *Intermetallic phases as efficient negative electrodes for Li-ion batteries: role of the interfaces*
Laure Mauconduit, Laboratoire AIME Montpellier, France
- 9h50-10:15
Invited Lecture *Modelling the electrochemical interface at ab initio level*
Jean Sébastien Filhol, Université de Montpellier, France
- 10:15-10:40
Lecture *Identifying an adsorption step in the SEI formation mechanism*
Daniel Lemordant, Université de Tours, France
- 10:40-11:10**
Coffee break
- 11:10-12:00**
11:10-11:35
Invited Lecture **SESSION 5: ELECTRODE AND ELECTROLYTE**
New insights about Solvent-free polymer electrolytes: from polymer/salt complexes to single-cation conducting polymers
Jean-Yves Sanchez, LEPMI Grenoble, France
- 11:35-12:00
Lecture Li distribution of half delithiated (Li)FePO₄ and Carbon coating on (Li)FeBO₃ measured by TEM
Xiaoke Mu, Karlsruhe Institute of Technology, Germany
- 12:00-14:00**
Lunch buffet (Buffet de la gare)
- 14:00-16:00**
Old town visit and end of the meeting