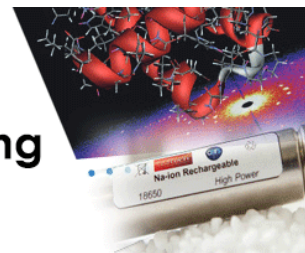




First workshop on
**Sustainable Energies
and Neutron Scattering**

May 30th–June 1st, 2016
Bordeaux - France



Program

Monday, the 30th of May

- 11 :00 Registration
- 12 :00 Lunch Buffet.
- 13:45 Welcome

Batteries 1. *Chairman tbd.*

- 14:00 **Keynote. Jean-Marie Tarascon** (UPMC-Collège de France, Paris, France)
« *Structure/property relationships of advanced electrode materials for better Li(Na)-ion batteries.* »
- 14:40 **Invited. Martin Mansson** (KTH, Stockholm, Sweden)
« *Towards Sodium-based Solid State Energy Storage* »
- 15:10 **Oral. Laurence Croguennec** (ICMCB, Bordeaux, France)
« *Key Insights into Mechanisms Involved in Li and Na Batteries using Operando X-ray and Neutron Diffraction* »
- 15 :30 *Coffee Break*

Gas storage. *Chairman tbd.*

- 16:10 **Keynote. Hervé Jobic** (IRCELYON, CRNS Lyon, France)
« *Diffusion in porous materials* »
- 16:50 **Invited. Nabil Sultan** (IFREMER, Brest, France)
« *Gas hydrate-bearing sediments and its potential associated hazards: from in situ observations to numerical modelling* »
- 17:20 **Invited. Bertrand Chazallon** (PhLAM, Univ. Lille 1, France)
« *Gas storage in clathrate hydrates: CO₂ separation from a binary gas mixture investigated by in-situ Raman spectroscopy* »
- 17:50 **Oral. Orsolya Czakkel** (ILL, Grenoble, France)
« *Carbon gels for future hydrogen storage systems* »
- 18:10 **Oral. Umbertoluca Ranieri** (EPFL, Lausanne, Switzerland)
« *Guest dynamics in methane and hydrogen hydrates under high pressure* »
- 18:30 **Oral. Claire Petuya** (ISM, Bordeaux, France)
« *Revealing preferential CO encapsulation in mixed CO/N₂ clathrate hydrate* »
- 18:50 **End of session**
- 19:30 *Welcome aperitif*
- 20:00 *Welcome buffet and posters session*

Tuesday, the 31st of May

Solar energy. *Chairman tbd.*

- 08:30 **Keynote. Jacky Even** (FOTON, INSA Rennes, France)
« *Plastic crystal behavior, molecular relaxations and low energy phonon spectroscopy in hybrid perovskites crystals.* »
- 09:10 **Invited. Lars Kloo** (KTH Royal Institute of Technology, Stockholm, Sweden)
« *Title to be announced – solar energy*»
- 09:40 **Invited. Guillaume Fleury** (LCPO, Bordeaux, France)
« *Structurally-driven Enhancement of Photovoltaic and Thermoelectric Properties within Semi-conducting Polymer thin Films*»
- 10 :10 *Coffee Break*

Energy-related materials. *Chairman tbd.*

- 10:50 **Invited. Marc De Boissieu** (SIMaP, Grenoble, France)
« *Lattice dynamics and thermal conductivity of the Ba₈Ge_{40.6}Au_{5.25} clathrate.* »
- 11:20 **Oral. Frédéric Ott** (LLB, Saclay, France)
« *IMAGINE: A new cold neutron imaging station at the Laboratoire Léon Brillouin* »
- 11:40 **Oral. Xueying Hai** (Institut Néel, Grenoble, France).
« *Hydrogen sorption kinetics investigation with in-situ neutron powder diffraction for magnetocaloric alloy (La,Ce)(Fe,Si)13Hx*»
- 12:00 *Lunch*

Batteries 2. *Chairman tbd.*

- 13:20 **Keynote. Teofilo Rojo** (CIC-Energigune, Spain)
« *Sodium-ion batteries: An emerging technology* »
- 14:00 **Invited. Claire Villevielle** (PSI, Villigen, Switzerland)
« *Advances in operando neutron diffraction measurements applied to batteries* »
- 14:30 **Oral. Filippo Ferdeghini** (LLB, Saclay, France)
« *Ionic liquids under nanometric unidimensional confinement: a route for a better electrolyte?* »
- 14:50 **Oral. Coraline Millot** (CEA/SPRAM, Grenoble, France)
« *Ex-Situ SANS Investigation Of Core-Shell Carbon-Coated Silicon Nanoparticles For Lithium-Ion Anodes* »
- 15:10 **Oral. Charles Munson** (GATECH, Atlanta, USA)
« *Development of a High-Efficiency, GaN-based Betavoltaic Battery* »
- 15:30 **End of session**
- 15:45 *Departure to Saint-Emilion*
- 17:00 *Guided visit of Saint-Emilion*
- 19:00 *Vineyard visit, wine tasting and conference diner at the château « La Couspaude »*

Wednesday, the 1st of June

Fuel cells and Electrolysers. *Chairman tbd.*

- 09:00 **Keynote. Gérard Gebel** (LITEN/DTNM, CEA Grenoble, France)
« *Proton exchange membrane fuel cells and neutron scattering* »
- 09:40 **Oral. Malgorzata Makowska** (DTU, Risø, Denmark)
« *In-situ neutron imaging of the coupling between creep and redox behavior in Ni-YSZ for solid oxide cells* »
- 10:00 **Oral. Sourav Marik** (ICMCB, Bordeaux, France)
« *SrCo_{1-x}FexO_{3-d}: Structure Property Relation* »
- 10:20 *Coffee Break*

- 11:00 **Invited. Neal Sullivan** (Colorado School of Mines, USA).
« *Proton-Conducting Ceramics for Energy Generation, Energy Storage, and Fuels Synthesis* »
- 11:30 **Oral. Marina Khanef** (JCNS at MLZ, Garching, Germany)
« *Proton dynamics of phosphoric acid in the catalytic layer for HT-PEFC* »
- 11:50 **End of session**
- 12:00 *Lunch*
- 14:00 **End of Workshop**

Posters

Fuel cells and Electrolysers

- « *Polymer Electrolyte Membranes for Fuel Cells: Structural Properties* »
Oxana Ivanova, Bernhard Hopfenmüller, Marina Khanef, Kirill Nemkovski, Noemi K. Szekely, Vitaliy Pipich, Wim Pyckout-Hitzen, Marie-Sousai Appavou, Wiebke Lüke, Michael Monkenbusch, Reiner Zorn, Werner Lehnert and Olaf Holderer
- « *Structural investigation of a strong acid clathrate hydrate by Raman spectroscopy : toward fuel cell application* »
Sarah Desplanche, David Talaga, Arnaud Desmedt, Lydie Bourgeois

Gas Storage

- « *Neutron diffraction investigation of hydrogen storage alloy $TiFe_{0.7}Mn_{0.3} + 4wt.\% Zr$* »
Volatiana razafindramanana, Pragya Jain, Jacques HUOT, Jean-Louis BOBET
- « *Characterization of HKUST-1 metal organic framework for methane storage* »
Orsolya Czakkel, Lionel Porcar, Dániel Ábrahám, Geissler Erik, Krisztina László

Batteries

- « *Development of in-situ neutron cells to investigate fundamental structural mechanisms involved in Li-ion (Na-ion) batteries* »
Tatiana Renzi, Matteo Bianchini, Christian Masquelier, Laurence Croguennec, Emmanuelle Suard
- « *Structural and Electrochemical Study of a New Tavorite Compound $LiVPO_4OH$* »
Edouard Boivin, Jean-Noël Chotard, Michel Menetrier, Lydie Bourgeois, Dany Carlier, Tahya Bamine, François Fauth, Emmanuelle Suard, Christian Masquelier, Laurence Croguennec