



11th JAPAN - FRANCE
JOINT SEMINAR ON
BATTERIES

Sept. 20 - 22, 2016 - Nantes, France



Program of oral presentations



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Tuesday, September 20th, 2016

19:00

**Registration & Welcome party
Château des Ducs de Bretagne**

Wednesday, September 21st, 2016

08:45 **Introduction** by the director of the IMN and D. Guyomard

SESSION 1	Next Battery Generation	Chairperson : Naoaki KUMAGAI
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| 09:00 | O1 | <i>In-situ FT-IR analysis of deposition and dissolution of Mg in tetrahydrofuran containing Grignard reagents</i>
Kiyoshi KANAMURA , Tokyo Metropolitan University, Japan |
| 09:25 | O2 | <i>Si anode failure mechanism in full Li-ion cells using advanced characterization tools</i>
Dominique GUYOMARD , IMN Nantes, France |
| 09:45 | O3 | <i>Lithium insertion properties of α'-NaV_2O_5 prepared by electrochemistry</i>
Jean-Pierre PEREIRA-RAMOS , GESMAT Thiais, France |
| 10:05 | O4 | <i>All-solid polymer lithium ion battery at higher temperatures</i>
Masataka WAKIHARA , Tokyo Institute of Technology, Japan |

10:30 COFFEE BREAK

SESSION 2	Li and Na-Based Materials	Chairperson : Jean-Pierre PEREIRA-RAMOS
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| 11:00 | O5 | <i>A detailed analysis of methylated silicon as an improved electrode material for lithium batteries</i>
Michel ROSSO , LPMC Palaiseau, France |
| 11:20 | O6 | <i>High capacity layered oxides as positive electrode materials for Na-ion batteries</i>
Patrick ROZIER , CIRIMAT Toulouse, France |
| 11:40 | O7 | <i>Production and characterization of FePO_4 electrode material from sewage sludge incineration ash and Iron ion-containing acidic wastewater</i>
Naoaki KUMAGAI , Iwate University, Japan |
| 12:05 | O8 | <i>New Tavorite-type compositions as positive electrode materials for lithium-ion batteries</i>
Laurence CROGUENNEC , ICMCB Bordeaux, France |

12:25 LUNCH & POSTER SESSION 1



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SESSION 3	Characterization	Chairperson : Thierry BROUSSE
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- 14:20 **O9** *The contribution of the dielectric spectroscopy to the study of the electrode materials*
Jean-Claude BADOT, ENSCP Paris, France
- 14:40 **O10** *Contribution of XPS (X-Ray Photoelectron Spectroscopy) and AES (Auger Electron Spectroscopy) to the knowledge of solid electrode/electrolyte interfaces (SEI)*
Hervé MARTINEZ, IPREM Pau, France
- 15:05 **O11** *Full characterization of all-solid-state lithium microbatteries by Electrochemical Impedance Spectroscopy*
Sylvain FRANGER, ICMMO Orsay, France
- 15:25 **O12** *Nuclear Magnetic Resonance for the characterization of battery materials*
Michaël DESCHAMPS, CEMHTI Orléans, France

15:45 **COFFEE BREAK**

SESSION 4	Electrolytes and Negatives	Chairperson : Kiyoshi KANAMURA
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- 16:15 **O13** *Transport phenomena of high concentrated nonaqueous electrolyte solutions : a comparison between Li- and Na-system*
Kentarou KURATANI, National Institute of Advanced Industrial Science and Technology, Japan
- 16:40 **O14** *Lithium imidazolid (LiTDI) as a challenger for LiPF₆ in lithium batteries*
Daniel LEMORDANT, PCM2E-Université de Tours, France
- 17:00 **O15** *Relaxation effects of the negative electrode TiSnSb using ¹¹⁹Sn Mössbauer and ⁷Li MAS NMR spectroscopies*
Nicolas DUPRE, IMN Nantes, France
- 17:20 **O16** *Superconcentrated electrolytes for electrochemically stable and fast-charging lithium-ion batteries : first-principles molecular dynamics study*
Keitarou SODEYAMA, National Institute for Materials Science, Japan

20:00

Cruise Banquet Dinner on the Erdre river



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SESSION 5	Beyond Li-ion	Chairperson : Masataka WAKIHARA
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- 09:00 **O17** *Hard carbons for Li-, Na-, and K-ion batteries*
Shinichi KOMABA, Tokyo University of Science, Japan
- 09:25 **O18** *Solid state electrochemistry : a tool for synthesis and characterization of solids*
Claude DELMAS, ICMCB Bordeaux, France
- 09:45 **O19** *A new high performance V₂O₅- based cathode for sodium-ion batteries*
Rita BADDOUR-HADJEAN, GESMAT Thiais, France
- 10:05 **O20** *Role of cationic vacancies on the electrochemical storage properties of hydroxy-fluorinated TiO₂ Anatase*
Damien DAMBOURNET, UPMC Paris, France

10:30 COFFEE BREAK

SESSION 6	Solid State Batteries	Chairperson : Laurence CROGUENEC
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- 11:00 **O21** *Fabrication of LiCoO₂ composite electrode on Li_{6.25}Al_{0.25}La₃Zr₂O₁₂ solid electrolyte by aerosol deposition method*
Hirokazu MUNAKATA, Tokyo Metropolitan University, Japan
- 11:20 **O22** *High-throughput cathode materials exploration by combinatorial technology*
Kenjiro FUJIMOTO, Tokyo University of Science, Japan
- 11:40 **O23** *Solid-state redox reaction of oxide ions for rechargeable batteries*
Naoaki YABUUCHI, Tokyo Denki University, Japan
- 12:05 **O24** *Atomic layer deposition of thin films materials for 3D solid state Li-ion microbattery*
Christophe LETHIEN, IEMN-IRCICA Lille, France

12:25 LUNCH & POSTER SESSION 2



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SESSION 7	Next Battery Generation	Chairperson : Shinichi KOMABA
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- 14:20 **O25** *Spark Plasma Sintering : an efficient route to design energy storage devices*
Vincent SEZNEC, LRCS Amiens, France
- 14:40 **O26** *All-solid-state lithium-ion batteries using oxide solid electrolyte assembled by Spark Plasma Sintering*
Toyoki OKUMURA, National Institute of Advanced Industrial Science and Technology, Japan
- 15:05 **O27** *Electrochemical mechanism of M_xSb ($0 \leq x \leq 0.5$, $M=Sn, Bi, Fe$) phases in Na batteries*
Laure MONCONDUIT, ICG Montpellier, France
- 15:25 **O28** *Lithium/Sulfur batteries upon cycling : application of electrochemical impedance spectroscopy, in situ X-Ray Diffraction and tomography*
Fanny ALLOIN, LEPMI Grenoble, France
- 15:45 **O29** *Highlights on latest battery technology achievements & challenges*
Sébastien PATOUX, LITEN-CEA Grenoble, France
- 16:05 **Closing remarks**

16:25 COFFEE BREAK

18:00 GET TOGETHER DOWNTOWN

19:00

Dinner at Nantes downtown