**Scientific Program**

**Sunday, June 11**

18.00-20.00  
Registration (“Palais des congrès” – Arcachon)

19:00-21:30  
Welcome party

**Monday, June 12**

8:30-9:00  
Opening - C. Delmas, Chairman

9.00-9:40  
**INV1**  
“Li Transport Limitations and Opportunities in the Layered Mn-rich, Li excess Cathodes”  
**K. Persson** - Berkeley University of California (USA)

9:40-10:20  
**INV2**  
“Li-ion transport in Li-ion and solid state batteries, direct observations from Neutron Depth Profiling and solid state NMR”  
**M. Wagemaker** - Delft University of Technology (The Netherlands)

10:20-10:50  
Coffee Break

10:50-12:30  
Poster session

12:30-14:30  
Lunch break

14:30-16:30  
**Li Layered**

**O01** Versatile Approach Combining Theoretical and Experimental Aspects of Raman Spectroscopy To Investigate Battery Materials: The Case of the LiNi_{0.5}Mn_{1.5}O_{4} Spinel  
**M. Ben Yahia** - Institut Charles Gerhardt, Montpellier (France)

**O02** Comparative study of additives improving the safety and electrochemical performance of lithium ion batteries  
**T. Dagger** - MEET Battery Research Center and Institute of Physical Chemistry, University of Münster (Germany)

**O03** Measuring the Parasitic and Entropic Heat Flow in Coated and Uncoated Li(Ni_{1-x-y}Mn_{x}Co_{y})O_{2}/graphite Pouch Cells  
**S. L. Glazier** - Department of Physics and Atmospheric Science, Dalhousie University (Canada)

**O04** Dilution of Concentrated Electrolyte Solutions for High Voltage Cathode Materials  
**M. Inaba** - Doshisha University (Japan)

**O05** Inhomogeneous fading reactions of electrode material in 4 Ah-class commercial pouch-type battery by in-situ X-ray diffraction measurement  
**T. Kobayashi** - Central Research Institute of Electric Power Industry, Yokosuka (Japan)

**O06** Comparison of Single Crystal and Polycrystalline LiNi_{0.5}Mn_{0.3}Co_{0.2}O_{2} Positive Electrode Materials for High Voltage Li-ion Cells  
**J. Li** - Department of Physics and Atmospheric Science, Dalhousie University (Canada)
LiBD-8 2017 – “Electrode materials” Arcachon, France - June 11-16, 2017

O07  Current distribution in Li-ion batteries probed in operando
A. Senyshyn - Heinz Maier-Leibnitz Zentrum, Technische Universität München (Germany)

>>  General discussion

16:30-17:00  Coffee Break

17:00-17:30  Keynote  Design Strategies for Multivalent Energy Dense Cathode Materials
G. Ceder - Lawrence Berkeley National Laboratory (USA)

17:30-19:00  Poster Session

19:00  Welcome Cocktail

Tuesday, June 13th

8:30-9:10  INV3  Towards safe solid state Li metal rechargeable batteries with ionogel electrolytes
D. Guyomard – Institut des Matériaux Jean ROUXEL, Nantes (France)

9:10-10:20  OLIVINE

O08  Toward Enhanced Electronic and Ionic Conductivity in Olivine-type Electrode Materials for 5V Lithium Ion Batteries
G. Cherkashinin - Institute of Materials Science, Surface Science Division, Technische Universität Darmstadt (Germany)

O09  Ionic conductivity and thermodynamic properties of LiMn$_{1-x}$Fe$_x$PO$_4$ and LiMn$_{1-x}$Ni$_x$PO$_4$ single-crystals
R. Klingeler - Kirchhoff Institute of Physics, University of Heidelberg (Germany)

O10  Atomic-Scale Analysis of Surfaces of Chemically Delithiated Li$_{1-x}$FePO$_4$ Single Crystals using Electron Microscopy and Computer Simulation
A. Kuwabara - Japan Fine Ceramics Center, Nagoya (Japan)

O11  Electrochemical activity of olivine MgMnSiO$_4$ towards an application for Li-ion Batteries
G. Lefèvre - Université Grenoble Alpes, CEA, LITEN, DEHT (France)

O12  Advanced Phase Transition Analysis of LiFePO$_4$ at Various Temperatures and Improvement of Rate Capability
Y. Orikasa - Ritsumeikan University, Shiga (Japan)

>>  General discussion

10:20-10:50  Coffee Break

10:50-12:30  Na NEGATIVE

O13  Size Dependent Ion Diffusion in Na$_2$Ti$_3$O$_7$ and Na$_2$Ti$_6$O$_{13}$
Y. Fukuzumi - Graduate School of Pure and Applied Sciences, University of Tsukuba (Japan)

O14  Electrochemical Lithiation and Sodiation of Nb-Doped Rutile TiO$_2$
H. Sakaguchi – Department of Chemistry and Biotechnology, Graduate School of Engineering, Tottori University (Japan)
O15  Pioneering study of phosphosilicides as negative electrode for Li- and Na-ion batteries
   L. Monconduit - Institut Charles Gerhardt, Montpellier (France)

O16  On the stability of interphases in Na batteries
   A. Ponrouch - Institut de Ciència de Materials de Barcelona (Spain)

O17  The mechanism of sodium uptake into hard carbon elucidated by operando PXRD and SAXS
   D. Saurel - CIC Energigune, Miñano (Spain)

O18  The intriguing mechanism of phosphorus anodes for sodium ion batteries revealed by operando pair distribution function and X-ray diffraction computed tomography
   D. Wragg - Department of Chemistry, University of Oslo (Norway)

>> General discussion

12:30-14:30  Lunch break

14:30-15:10  INV4  The Fading Promise of High-Energy Cathodes
   J. Croy - Argonne National Laboratory, Chicago (USA)

15:10-16:20  Poster session and Coffee Break

16:20-17:20  SOLID STATE

O20  Further insight in sputtered LiMn$_{1.5}$Ni$_{0.5}$O$_4$ thin film for solid state Li-ion microbattery
   M. Hallot - Institut d'électronique, de microélectronique et de nanotechnologie, Université de Lille (France)

O21  Local Structures and Li Ion Dynamics in Oxidic and Sulfidic Solid Electrolytes Investigated by Solid-State NMR Spectroscopy
   S. Indris - Karlsruhe Institute of Technology (Germany)

O22  Towards All Solid State Batteries using perovskite solid electrolytes
   M. Lachal - Université de Montréal (Canada)

O23  Discussion on the effects of state of electrolyte (solid or liquid) on battery reaction kinetics
   Y. Kato - Toyota Motor Europe NV/SA (Belgium)

>> General discussion

20:00  Banquet in Arcachon “Tir au Vol” (by bus)
**Wednesday, June 14th**

<table>
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<tr>
<th>Time</th>
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| 8:30-9:10     | **INVS** Several routes for tuning the redox shuttle effect in Li/S batteries  
**M. Morcrette** – Laboratoire de Réactivité et Chimie des Solides, Université de Picardie Jules Verne, Amiens (France) |
| 9:10-10:10    | **POLYANION**                                                                 |
| O24           | Crystal chemistry of LiVPO₄₅ₓF₁₋ₓOₓ, Tavorite-type compositions: Influence of the concentration of vanadyle-type defects on the electrochemical performances.  
**E. Boivin** - Institut de Chimie de la Matière Condensée de Bordeaux (France) |
| O25           | Structural and electrochemical studies of new NaₓV₆₋ₓAlₓ(P₂O₇)ₓ(PO₄) (x = 1, 2) high-potential cathode materials  
**V. M. Kovrugin** - Laboratoire de Réactivité et Chimie des Solides, Université de Picardie Jules Verne, Amiens (France) |
| O26           | Combining Ex Situ Na-23 Solid-State NMR and DFT to Study Polyanionic Cathode Materials for Sodium Ion Batteries  
**D. L. Smiley** - Department of Chemistry & Chemical Biology, McMaster University (Canada) |
| O27           | Polyanionic solid-solution cathodes for rechargeable batteries  
**A. Yamada** - University of Tokyo (Japan) |
|               | **General discussion**                                                   |
| 10:10-11:00   | **Coffee Break and Poster session**                                      |
| 11:00-12:30   | **Li₂MnO₃**                                                                 |
| O28           | From stacking disorder to random stacking in Li₂MnO₃  
**M. Casas-Cabanas** - CIC Energigune, Miñano (Spain) |
| O29           | Nanostructured Li₂MnO₃ : a Disordered Rock Salt type structure for High Energy Density Li ion batteries  
**M. Freire** – CRISMAT, Université de Caen (France) |
| O30           | Singlet oxygen in non-aqueous battery chemistries  
**S. A. Freunberger** - Graz University of Technology (Austria) |
| O31           | Screening the rich crystal structure of Li₃MO₄ rocksalt (M = Ru, Nb, Sb): Towards rationalization of cation ordering  
**Q. Jacquet** – Collège de France, Paris (France) |
| O32           | ¹⁷O NMR Investigations into the Oxygen Local Environment in Pristine and Charged Li-excess Cathode Materials  
**P. J. Reeves** - Department of Chemistry, University of Cambridge (United Kingdom) |
| O33           | Oxygen Redox in Li-Ion Battery Chemistries  
**A. Sobkowiak** - Department of Materials, University of Oxford (United Kingdom) |
|               | **General discussion**                                                   |
| 12:30         | **FREE AFTERNOON**                                                       |
Friday, June 15th

8:30-9:10  INV6

Solid-state lithium metal batteries: electrochemistry, materials and prospects
Y.-G. Guo - Institute of Chemistry, Chinese Academy of Sciences, Beijing (China)

9:10-10:20  Li-RICH

O34  Charge compensation and electrochemical kinetics in Li-rich layered cathodes using operando-XAS and hard-XPS? From practical to model systems
G. Assat - Collège de France, Paris (France)

O35  Combined X-ray diffraction studies and X-ray ptychography tomography to study ageing mechanisms of Li-rich Ni, Mn, Co oxides
J. Billaud - Paul Scherrer Institut, Villigen (Switzerland)

O36  Enhancement and Stabilization of Li-rich Cathode Materials
D. Aurbach - Department of Chemistry, Bar Ilan University (Israel)

O37  Capacity Loss/Fading of Li-Rich Layered Cathode Based on Structural/Electrochemical Analyses
K.-Z. Fung - National Cheng Kung University (Taiwan)

O38  Charge compensation mechanism in lithium-rich cathode materials with different ionic or covalent character
K. Yamamoto - Graduate School of Human and Environmental Studies, Kyoto University (Japan)

>>  General discussion

10:20-10:40  Coffee Break

10:40-12:30  Li NEGATIVE

O39  Rapid, non-invasive method for quantifying particle orientation distributions in graphite anodes
P. Baade - Department of Information Technology and Electrical Engineering, ETH Zurich (Switzerland)

O40  High-capacity Si-Ti-Ni and Si-Ti-C nanocomposites with long cycle-life as anodes for Li-ion batteries
F. Cuevas - Institut de Chimie et des Matériaux Paris-Est, Thiais (France)

O41  Application of TEM and EELS to the study of solid electrolyte interphase on graphite anode
C. Davoisne - Laboratoire de Réactivité et Chimie des Solides, Université de Picardie Jules Verne, Amiens (France)

O42  The superiority of the EMI-FSI ionic liquid for cycling a Si/Sn composite anode
D. Lemordant - Université François Rabelais de Tours (France)
O43  Generation and evolution of materials in the anode Solid Electrolyte Interphase (SEI) of lithium ion batteries  
B. Lucht - University of Rhode Island (USA)

O44  Combining Alloying and Conversion Reactions in Sb-based Transition Metal Oxohalides  
V. Renman - Department of Chemistry - Ångström Laboratory, Structural Chemistry, Uppsala University (Sweden)

O45  Understanding the anomalously high capacity of electrode materials for Li-ion batteries  
W.-S. Yoon - Department of Energy Science, Sungkyunkwan University (South Korea)

>> General discussion

12:30-14:30  Lunch break

14:30-15:10  Layered Sodium Manganese Oxides for Na-ion Batteries  
INV7  R. Armstrong - School of Chemistry, University of St. Andrews (United Kingdom)

15:10-16:20  Na LAYERED

O46  Na\(^+\) transport and effect of transition metal layers in P2-type: atomistic modeling and neutron scattering study  
M. Avdeev – Australian Centre for Neutron Scattering, Kirrooe (Australia)

O47  Enhancing the structural stability and electrochemical performance of Li- and Na-ion battery cathode materials: Insights from NMR spectroscopy and DFT computations  
R. Clément - University of Cambridge (United Kingdom) and Berkeley University of California (USA)

O48  Electrochemical thermoelectric effects in several intercalation compounds  
W. Kobayashi - Graduate School of Pure and Applied Sciences, University of Tsukuba (Japan)

O49  High Voltage Mg-Doped Na-Ion Cathodes with Enhanced Stability and Rate Capability  
U. Maitra - Department of Materials, University of Oxford (United Kingdom)

O50  Improving the stability of Fe rich layered oxides for Sodium Ion Batteries  
B. Silvàn - CIC Energigune, Miñano (Spain)

>> General discussion

16:20-16:50  Coffee break

16:50-18:00  Li SULFUR

O51  Performance enhancement of Lithium-Sulfur Batteries by Atomic Layer Deposition of Lithium Tantalate at the Solid-State Electrolyte : Electrode interface  
S. Adams - Department of Materials Science and Engineering, National University of Singapore (Singapore)

O52  Towards thorough characterization of lithium/sulfur batteries by coupling operando X-ray diffraction and absorption tomography techniques  
G. Tonin - French Atomic Energy and Alternative Energy Agency, Laboratory of Innovation for New Energy Technologies and Nanomaterials (France)
OS3  Metal hydride nanocomposites as anode material for sulfur Li-ion all-solid-state batteries  
P. López-Aranguren – Saft, Bordeaux (France)

OS4  Elucidation of Mg-S electrochemical mechanism  
A. Robba - National institute of chemistry, Ljubljana (Slovenia)

OS5  In Situ AFM Investigation of Electrochemical Processes at Electrode/Electrolyte Interface in Li-S Battery  
R. Wen - Institute of Chemistry, Chinese Academy of Sciences, Beijing (China)

>>  General discussion

Friday, June 16th

8:30-9:10  INV8  The long and winding road towards Ca-based batteries  
M. R. Palacin – ICMAB-CSIC, Barcelona (Spain)

9:10-9:50  INV9  Fast phase transitions in biphasic systems  
H. Arai - Tokyo Institute of Technology (Japan)

9:50-10:10  Coffee break

10:10-12:00  Discussions on transverse topics  
Conclusion