**Sunday, September 15**

18.00-20.00  Registration (“Palais des congrès” – Arcachon)
19:00-21:30  Welcome party

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**Monday, September 16**

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

9:00-9:40  INV1  “Future Perspectives of All-Solid-State Batteries: synthesis, interfacial engineering and recycling”
*Prof. Shirley Meng (University of California San Diego - USA)*

9:40-10:20  INV2  "High-Nickel Layered Oxide Cathodes for Lithium-ion Batteries: Complexities and Prospects"
*Prof. Arumugam Manthiram (University of Texas at Austin - USA)*

10:20-10:50  Coffee Break

10:50-12:30  Poster session

12:30-14:30  Lunch break

14:30-16:40  NMC

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<tr>
<th>Session</th>
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<th>Presenter/Institution</th>
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<tr>
<td>O01</td>
<td>Effect of salts and solvent composition on NCA cathode cyclability with temperature</td>
<td>Joseph Chidiac - Université de Tours (France)</td>
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<td>O02</td>
<td>Atomic layer fluorination: influence of the surface fluorination on electrochemical properties of Li-ion positive electrodes</td>
<td>Nicolas Louvain - Université de Montpellier (France)</td>
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<td>O03</td>
<td>Elucidating the degradation of Ni-rich layered oxide in humid environment</td>
<td>Leiting Zhang - Paul Scherrer Institute (Switzerland)</td>
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<td>O04</td>
<td>Evolution of structure and lithium dynamics in LiNi0.8Mn0.1Co0.1O2 (NMC811) cathodes during electrochemical cycling probed by solid-state NMR</td>
<td>Katharina Märker - University of Cambridge (UK)</td>
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<td>O05</td>
<td>Facile dry coating method of a high nickel NMC cathode material by nanostructured fumed Al2O3 to improve the performance of lithium-ion Batteries</td>
<td>Marcel Herzog - Justus-Liebig-University Giessen (Germany)</td>
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<tr>
<td>O06</td>
<td>Lithium Silicate Inclusion for Mitigating Crack Formation of Ni-rich NCM Cathode Materials</td>
<td>Minoru Inaba - Doshisha University (Japan)</td>
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<tr>
<td>O07</td>
<td>Structural, Electronic, and Li Diffusion Properties of the LiNi0.8Mn0.1Co0.1O2 (NMC811) Cathode Material</td>
<td>Mazharul M. Islam - University of Bath (UK)</td>
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</table>
O08 Transition metal dissolution in NMC811, graphite, lithium-ion cells
Zachary Ruff - University of Cambridge (UK)

>> General discussion

16:40-17:10 Coffee Break

17:10-18:10 LI AIR

Nanoscale phase evolution in Li-O₂ batteries as seen by operando small angle X-ray scattering
Christian Prehal - Graz University of Technology (Austria)

Singlet oxygen in non-aqueous batteries: origins, consequences and mitigation
Yahn Petit - ICTM, TU Graz (Austria)

LI SULFUR

Double-shelled nanocages as efficient sulfur hosts for advanced lithium-sulfur batteries
Lei Zhou - Eindhoven University of Technology (The Netherlands)

Metal oxides and nitrides for efficient sulfur composite cathodes in Li-S batteries
Carlotta Francia - DISAT - Dept. of Applied Science and Technology (Italy)

18:10-19:00 Poster Session

19:00 Welcome Cocktail

Tuesday, September 17

8:30-9:10 INV3 “K-Ion Batteries: Electrodes and Electrolyte”
Prof. Shinichi Komaba – Tokyo University of Science (Japan)

9:10-10:20 NA-K LAYERED

O13 Advances in Faradion’s High Energy Density Sodium-ion Batteries
Ashish Rudola - Faradion Limited (UK)

O14 Electrochemical cycling of the P2-Na₂-Co₂/₃Mn₁/₃Ni₁/₆O₂ electrode material for sodium-ion batteries
Ismaël Saadoune - Mohammed VI Polytechnic University (Morocco)

O15 In situ diffraction of pristine and cobalt-doped potassium layered oxide K,MnO₂
Christophe Didier - University of Wollongong (Australia)

O16 Sodium and Potassium Insertion Mechanism into Manganese Hexacyanoferrate
Tomooki Hosaka - Tokyo University of Science (Japan)

O17 Structural insights into O3-type Na-ion layered oxide cathodes: establishing correlations between local structure and electrochemistry
Abhinav Tripathi - National University of Singapore (Singapore)
**LiBD-9 2019 – “Electrode materials” Arcachon, France September 15-20, 2019**

**>> General discussion**

10:20-10:50  **Coffee Break**

10:50-12:30  **SOLID STATE**

**O18** Advanced insights into a “simple” system: the Na$_3$PS$_4$ ion conductor  
*Theodosios Famprikis - Université de Picardie Jules Verne (France)*

**O19** Behavior of Lithium Cobalt Oxide in Two- and Three-Electrode All-Solid-State Cells  
*Hajime Arai - Tokyo Institute of Technology (Japan)*

**O20** Lithium-Ion Transport in Halogen-Enriched Argyrodite Solid-State Electrolytes  
*David Bazak - McMaster University (Canada)*

**O21** Reversible capacity and decomposition mechanism in argyrodite Li$_6$PS$_5$Cl solid electrolyte for all solid state Li-ion batteries  
*Violetta Arszelewska - Delft University of Technology (The Netherlands)*

**O22** The stabilization of the Lithium Metal Anode via an artificial Solid Electrolyte Interphase  
*Katharina M. T. Thanner - Helmholtz Institute Ulm (Germany)*

**O23** Towards improved solid state batteries with hybrid electrolytes: insights on PEO interfaces using a surface science approach  
*Thimo H. Ferber - Technical University of Darmstadt (Germany)*

**>> General discussion**

12:30-14:30  **Lunch break**

14:30-15:10  **INV4**  
“Structural disorder in battery materials”  
*Prof. Montse Casas-Cabanasa - CIC EnergiGUNE (Spain)*

15:10-16:20  **INTERFACE**

**O24** An Effective Electrolyte Additive for High-Voltage Graphite || NMC111 Cells with Excellent Cycling Performance  
*Jan-Patrick Schmiegel - University of Münster (Germany)*

**O25** Chemistry of Lithium Metal Battery vs. Anode Free Lithium Metal battery  
*Bing-Joe Hwang - National Taiwan University of Science and Technology (Taiwan)*

**O26** Stable cycling of Si Nanowire electrodes enabled by fluorine free ionic liquids electrolytes  
*Niyousha Karimi - Helmholtz Institute Ulm (Germany)*

**O27** The Mechanism of Interfacial Processes on Intermetallic Li-ion Anodes  
*Robert Kostecki - Lawrence Berkeley National Laboratory (USA)*

**O28** The Study of Solid Electrolyte Interphase for Electrochemically Plated Lithium Metal Anodes on Copper Current Collector  
*Svetlana Menkin - University of Cambridge (UK)*
O29  Using synergistic effects by tailoring electrolyte additives for lithium ion batteries with silicon-based anodes
Roman Nölle - University of Münster (Germany)

>> General discussion

16:20-17:00
Poster session
Coffee Break

18:00
Departure by bus to the banquet

19:00
Banquet in Bordeaux – Martillac “Château Smith Haut Lafitte”

Wednesday, September 18

8:30-9:10

INV5  Insights from High Resolution Transmission Electron Microscopy and Spectroscopy Study of Electrode Materials for Lithium Ion Batteries
Prof. Chongmin Wang - Pacific Northwest National Laboratory (USA)

9:10-10:25

CHARACTERIZATION 1

O30  In-situ magic-angle spinning NMR analysis of a full graphite/LiCoO$_2$ electrochemical cell
Annica I. Freytag - McMaster University (Canada)

O31  Interfacial atomic and electronic structures between delithiated and pristine regions in Li$_2$MnO$_3$
Kei Nakayama - University of Tokyo (Japan)

O32  Linking Li-ion Batteries Cathodes’ Performances to Their Microstructural Properties Using Nano Imaging and Multi Physics Modeling
Youcef Kerdja - Université Grenoble Alpes (France)

O33  Operando Neutron Depth Profiling, Recent Insights gained for Li-ion Batteries
Tomas Verhallen - Delft University of Technology [[DELFT] (Netherlands)

O34  Operando XPS for a direct monitoring of the solid electrolyte stability and (de-) lithiation reactions of SnO$_2$ in all solid-state batteries
Mario El Kazzi - Paul Scherrer Institut (Switzerland)

>> General discussion

10:25-11:15  Coffee Break and Poster session

11:15-12:30

CHARACTERIZATION 2

O35  Operando XPS: a new approach for lithium/electrolyte interface study
Anass Benayad – Univ. Grenoble Alpes, CEA, LITEN (France)

O36  SEI Formation in Li-ion batteries studied by EIS/EQCM-D
Petr Novak - Paul Scherrer Institut (Switzerland)

O37  The ALBA synchrotron: a well suited large scale facility for various In Situ synchrotron techniques on Operando batteries
François Fauth - ALBA Synchrotron light source [Barcelone] (Spain)
O38  The degradation origin of Si-based all-solid-state thin-film Li-ion micro-batteries  
Chunguang Chen - Forschungszentrum Jülich (IEK-9) (Germany)

O39  What about neutron diffraction to characterize your Li-ion batteries?  
Emmanuelle Suard - Institut Laue-Langevin (France)

>>  General discussion

12:30     FREE AFTERNOON

Thursday, September 19

8:30-9:10  INV6  Oxygen redox reaction mechanism in Na layered oxides of Na_x[Li_{x/3}Mn_{1-x/3}]O_2  
Prof. Yong-Sheng Hu - Inst. of Chem., Chinese Academy of Sciences (China)

9:10-10:20  POSITIVES OTHER 1

O40  Ceramic Synthesis of Disordered Lithium Rich Oxyfluorides Materials and the Their Performances in Li-ion Batteries  
V. Bracamonte - National Institute of Chemistry (Slovenia)

O41  Electronic structure of layered cathode materials and interfaces: experimental results and implications  
R. Hausbrand - Technical University of Darmstadt, Institute of Materials Science (Germany)

O42  In Situ X-ray diffraction on Operando lithium battery: solvent co-intercalation in TiS_2  
R. Houdeville - ALBA Synchrotron light source [Barcelona] (Spain)

O43  Insights into delithiation and oxygen loss in the disordered rock salt cathode Li_xMn_2O_5  
Oriol Lamiel - University of Bath [Bath] (United Kingdom)

O44  Multi-anionic and -cationic compounds: New high entropy materials for advanced Li-ion batteries  
Qingsong Wang - Institute of Nanotechnology, Karlsruhe Institute of Technology (KIT) (Germany)

>>  General discussion

10:20-10:40  Coffee Break

10:40-12:30  POSITIVES OTHER 2

O45  New Lithium-rich layered titanium sulfide positive electrode materials with high and fully reversible capacity  
Brigitte Pecquenard - ICMCB Université de Bordeaux (France)
On the Transport Properties of LiNi_{0.5}Mn_{1.5}O_4 for Fast Charged Li-Ion Batteries  
Ilia Belharouak - Oak Ridge National Laboratory (USA)

Predicting the long term stability upon anionic redox by modeling the coupling between electronic and atomic structures  
Jean Vergnet - Collège de France, Chimie du Solide et de l’Énergie (France)

Redox Chemistry and Local Structures of Lithium Manganese Oxyfluoride as a New Cathode Material  
Ryan Sharpe - University of Bath (UK)

Searching for High Potential Organic Cathode Materials for High Energy Green and Sustainable Batteries  
Nicolas Dupré - Institut des Matériaux Jean Rouxel (France)

Crystal Chemistry of NASICON-type positive electrodes for Na-ion Batteries  
Christian Masquelier - LRCS, Université de Picardie Jules Verne (France)

A comparative study of the diffusion kinetics of Li and Na in olivine (triphylite) (Li,Na)FePO_4  
Damien Saurel - CIC Energigune (Spain)

Novel oxalates as positive electrodes for lithium and sodium-ion batteries  
A. Robert Armstrong - University of St Andrews (France)

Stability in water and electrochemical properties of the Na_3V_2(PO_4)_2F_3 – Na_3(VO)_2(PO_4)_2F solid solution  
Long H. B. Nguyen – ICMCB, CNRS, Univ. Bordeaux (France)

Structure impact on electrochemical properties of polyanion-type cathode materials  
Nellie.R. Khasanova - Lomonosov Moscow State University (Russia)

Development of high potential negative electrode for Li-Ion batteries  
Mercier-Guyon Benjamin - Université Grenoble Alpes, CEA, LITEN (France)

Study aging of conversion electrode materials: case of NbSnSb  
Coquil Gaël - Institut de Chimie Moléculaire et des Matériaux de Montpellier (France)

First-principles calculations of fluorine-ion migration in graphite  
Moriwake Hiroki - Japan Fine Ceramics Center (Japan)
O57  High order free energy models for the numerical investigation of staging in multi-layered compounds  
*Chandesris Marion - CEA-LITEN, DEHT (France)*

O58  Modulated LixC structural transformation with x naturally enables lithium diffusion along the c-axis direction  
*Matsunaga Toshiyuki - CEA-LITEN, DEHT (France)*

O59  Understanding the Na Storage Mechanism in Disordered Carbon via Density Functional Theory Calculations  
*Vasileiadis Alexandros - TU Delft (The Netherlands)*

>>  *General discussion*

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**Friday, September 20**

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<tr>
<td>8:30-9:10</td>
<td>INV8</td>
<td>“Pre-Lithiation Approaches for Boosting High-Energy Lithium Ion Cells”</td>
<td><em>Tobias Placke</em> - MEET Battery Research Center (Germany)</td>
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<tr>
<td>9:10-9:50</td>
<td>INV9</td>
<td>“Operando Analysis for Charge/Discharge Reaction Mechanism of Graphite Anode of Li Ion Battery”</td>
<td><em>Prof. Hiroyuki Fujimoto</em> – Office of Society-Academia Collaboration for Innovation, Kyoto University (Japan)</td>
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<tr>
<td>9:50-10:10</td>
<td>RECYCLING</td>
<td>Circular Economy: when todays Li-ion batteries surge can become tomorrow’s solution</td>
<td><em>Mickael Dollé</em> - Departement de Chimie, Université de Montreal (Canada)</td>
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<td>10:10-10:30</td>
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<td>Coffee break</td>
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<td>10:30-12:00</td>
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<td>Discussions on transverse topics</td>
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<td>Conclusion</td>
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