<table>
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<tr>
<th>Time</th>
<th>Session 1: Opening Presentation &amp; Mechanism Keynote</th>
<th>Speakers</th>
<th>Affiliation</th>
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<tr>
<td>0830</td>
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<tr>
<td>0900</td>
<td>Opening Presentation: Introduction, basics of Li-S, key challenges</td>
<td>Greg Offer, George Crabtree &amp; David Ainsworth</td>
<td>Imperial/JCESR/OXIS</td>
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<tr>
<td>1000</td>
<td>Mechanism Keynote: Towards thorough characterization of lithium/sulfur batteries using tomography techniques</td>
<td>Céline Barchasz</td>
<td>French Atomic Energy and Alternative Energies Agency (CEA)</td>
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<tr>
<td>1030</td>
<td>Tea Break</td>
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<tr>
<td>1100</td>
<td>Session 2a: Mechanism Panels</td>
<td>Elizabeth Miller</td>
<td>Stanford Synchotron Radiation Lightsource</td>
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<tr>
<td>1120</td>
<td>Investigation of the Sulfur Redox Reaction Mechanism by the Quantitative and Qualitative Measurement of Dissolved Polysulfide Ions</td>
<td>Deyang Qu</td>
<td>University of Wisconsin Milwaukee</td>
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<tr>
<td>1140</td>
<td>Multidimensional Operando Analysis of Lithium Sulfur Cells with X-Ray Radiography</td>
<td>Sebastian Risse</td>
<td>Helmholtz-Zentrum Berlin</td>
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<tr>
<td>1200</td>
<td>Effective Barriers for the Polysulfide Shuttle</td>
<td>Diana Golodnitsky</td>
<td>Tel Aviv University</td>
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<tr>
<td>1220</td>
<td>Electrolyte decomposition in Li-S cells</td>
<td>Markus Hagen</td>
<td>Fraunhofer ICT</td>
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<tr>
<td>1240</td>
<td>Polysulfide-Mediating Redox Reactions in Li-S Battery</td>
<td>Nae-Lih Wu</td>
<td>National Taiwan University</td>
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<tr>
<td>1300</td>
<td>Lunch</td>
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<tr>
<td>Time</td>
<td>Modelling Plenary Keynote</td>
<td>Speaker</td>
<td>Affiliation</td>
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<tr>
<td>1400</td>
<td>Improving performance of Li-S cells in real conditions, a model-informed approach</td>
<td>Monica Marinescu</td>
<td>Imperial College London</td>
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<td>1430</td>
<td>Room Split for Panel Sessions</td>
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<td></td>
<td>Session 4a: Modelling Panel</td>
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<tr>
<td>1435</td>
<td>Embeddable state-estimation algorithms for lithium-sulfur battery management</td>
<td>Daniel Auger</td>
<td>Cranfield University</td>
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<tr>
<td>1455</td>
<td>Minutiae of Thermodynamics and Transport Phenomena in Li-S Battery Electrolytes</td>
<td>Mohammadhosein Safari</td>
<td>Hasselt University</td>
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<tr>
<td>1515</td>
<td>Solvation and solubility effects in lithium-sulfur batteries</td>
<td>Jessica Lück</td>
<td>German Aerospace Centre (DLR)</td>
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<td>1535</td>
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<tr>
<td>1600</td>
<td>Reaction kinetics and diffusion-migration processes in an idealised lithium-sulfur cell</td>
<td>Geraint Minton</td>
<td>OXIS Energy</td>
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<tr>
<td>1620</td>
<td>Microstructurally resolved multiscale models – to study the effects of C/S cathode microstructures used in Li-S batteries</td>
<td>Vigneshwaran Thangavel</td>
<td>Laboratoire de Réactivité et Chimie des Solides (LRCS)</td>
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<td>1640</td>
<td>Development of Safe Rechargeable Li-S Battery Chemistries</td>
<td>Clifford Cook</td>
<td>U.S. Army RDECOM CERDEC CP&amp;I</td>
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<td>Session 4b: Materials Panel</td>
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<td></td>
<td>Fiber-Based Sulfur/Poly(acrylonitrile) Cathode Materials: Cycle-Stable High-Performance Lithium-Sulfur Batteries</td>
<td>Michael Buchmeiser</td>
<td>University of Stuttgart</td>
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<td>Nitrogen doped carbon materials in Lithium-Sulfur batteries for low electrolyte contents</td>
<td>Susanne Doerfler</td>
<td>Fraunhofer IWS</td>
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<td>Li-S cathode materials: from nanosize effect and polysulfide trapping to in-situ wrapping</td>
<td>Liwei Chen</td>
<td>Chinese Academy of Sciences, Suzhou</td>
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<td>Return to main hall for Session 4a</td>
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<tr>
<td>1640</td>
<td>Development of Safe Rechargeable Li-S Battery Chemistries</td>
<td>Clifford Cook</td>
<td>U.S. Army RDECOM CERDEC CP&amp;I</td>
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**Session 5: Posters**

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<tr>
<th>Time</th>
<th>Poster Session with drinks sponsored by MACCON</th>
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**Session 6: Dinner**

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<tr>
<th>Time</th>
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<td>1830</td>
<td>Pre-dinner drinks</td>
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<tr>
<td>1900</td>
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### Li-SM³ Conference Day 2 Morning Agenda: 27 April 2017

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<tr>
<th>Time</th>
<th>Session 6: Materials Plenary Keynote</th>
<th>Speaker</th>
<th>Affiliation</th>
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<tbody>
<tr>
<td>0900</td>
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<tr>
<td>0930</td>
<td>Rational Design of Polymeric Materials for Ion and Electron Transport in Lithium–Sulfur Batteries</td>
<td>Brett Helms</td>
<td>Lawrence Berkeley National Laboratory</td>
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<td>Room Split for Panel Sessions</td>
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<table>
<thead>
<tr>
<th>Time</th>
<th>Session 7a: Materials Panel</th>
<th>Speakers</th>
<th>Affiliation</th>
<th>Session 7b: Mechanism Panel</th>
<th>Speakers</th>
<th>Affiliation</th>
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<tr>
<td>1005</td>
<td>Li Metal Anode Protection to Inhibit Dendrite Growth in Safe Lithium-Sulfur Batteries</td>
<td>Qiang Zhang</td>
<td>Tsinghua University</td>
<td>Lithium/Sulfur Battery Assembled in the Discharged State. The Effects of Binders and Cycling on Cell-Impedance Parameters and Fading</td>
<td>Emanuel Peled</td>
<td>Tel Aviv University</td>
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<tr>
<td>1025</td>
<td>Sulfur Nanoparticles Coated with Polyelectrolyte Nanomembranes for Sulfur Cathode</td>
<td>John Muldoon</td>
<td>Toyota Research Institute of North America</td>
<td>Viscosity Depending Ion Transport in High Energy Lithium-Sulfur Batteries</td>
<td>Brigitta Sievert (née Pascucci)</td>
<td>German Aerospace Center (DLR)</td>
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<tr>
<td>1045</td>
<td>Li$_2$S particle size influence on the first charge working mechanism of Li$_2$S-based Li-ion batteries analyzed by operando X-ray Absorption and Emission spectroscopies coupled with operando X-ray Diffraction</td>
<td>Alice Robba</td>
<td>CEA</td>
<td>Solid-Phase Cycling of Sulfur Cathodes using Coulombic Charging under Convective Flow</td>
<td>Donald Dornbusch</td>
<td>University of Missouri-Columbia</td>
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<table>
<thead>
<tr>
<th>Time</th>
<th>Tea break</th>
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<tbody>
<tr>
<td>1105</td>
<td>A Materials-Based Redesign of the Lithium-Sulfur Battery</td>
<td>Kevin Zavadil</td>
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<tr>
<td>1150</td>
<td>Enhanced specific energy for Li-S cells through a new cathode concept based on dryfilm electrodes and perforated current collectors</td>
<td>Holger Altheus</td>
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<tr>
<td>1210</td>
<td>X-Ray and Raman studies on all-solid-state Li-S batteries built around LiBH4 solid electrolyte</td>
<td>Jessica LeFevre</td>
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<tr>
<td>1230</td>
<td>Advances in Suppressing the Polysulfide Shuttle in Lithium-Sulfur Batteries</td>
<td>Sri Narayan</td>
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<td>1250</td>
<td>Lunch</td>
<td>Sponsored by:</td>
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<tr>
<td>Time</td>
<td>Session 8: Applications</td>
<td>Speakers</td>
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<tr>
<td>1350</td>
<td>Keynote: High Energy Density Lithium-Sulfur Batteries for NASA and</td>
<td>Ratnakumar Bugga</td>
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<td></td>
<td>applications</td>
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<td>1420</td>
<td>Lithium Sulfur Application in Automotive</td>
<td>Nikita Hall</td>
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<tr>
<td>1450</td>
<td>Airbus Zephyr – Using Lithium Sulfur Batteries to Revolutionise Communications</td>
<td>Sarah Bassett</td>
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<tr>
<td>1520</td>
<td>Closing remarks</td>
<td>Greg Offer, George Crabtree &amp; David Ainsworth</td>
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Exhibitor and Poster Session Drinks Sponsor:

![Maccor Logo](Maccor_Logo.png)

Exhibiting Sponsors:

![Graphenea Logo](Graphenea_Logo.png)
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<th>Mechanism Posters</th>
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<th>Affiliation</th>
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<tr>
<td>1. The mechanism of Li2S conversion into sulphur</td>
<td>Alen Vizintin</td>
<td>National Institute of Chemistry, Slovenia</td>
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<tr>
<td>2. Current inhomogeneity in Lithium Sulfur batteries</td>
<td>Ian Hunt</td>
<td>Imperial College London</td>
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<tr>
<td>3. Graphene-based cathodes for next generation lithium-sulfur batteries</td>
<td>Iñigo Charola</td>
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<tr>
<td>4. Behavior of Lithium Polysulfides in Different Solvents</td>
<td>Kirsi Jalkanen</td>
<td>University of Muenster</td>
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<tr>
<td>5. EIS investigation of polysulfide electrochemistry on carbon and lithium surfaces</td>
<td>Sara Drvārič Talian</td>
<td>National Institute of Chemistry, Slovenia</td>
</tr>
<tr>
<td>6. Volumetric expansion of Lithium-Sulfur cell during operation</td>
<td>Sylwia Waluś</td>
<td>OXIS Energy Ltd</td>
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<tr>
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<tr>
<td>1. Study of electrolyte structure and dynamics in Li-S batteries using molecular dynamics simulations with charge-scaling</td>
<td>Chanbum Park</td>
<td>Helmholtz-Zentrum Berlin for Materials and Energy</td>
</tr>
<tr>
<td>2. Tab design in Lithium Sulfur cells: A modelling approach</td>
<td>Raj Purkayastha</td>
<td>OXIS Energy Ltd</td>
</tr>
<tr>
<td>3. Improving the performance of Li-S cells, a model-informed approach</td>
<td>Teng Zhang</td>
<td>Imperial College London</td>
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<table>
<thead>
<tr>
<th>Materials Posters</th>
<th>Presenter</th>
<th>Affiliation</th>
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<tbody>
<tr>
<td>1. 2D and 3D nanostructured graphenes as electrode matrices in Li-S batteries</td>
<td>Almudena Benítez</td>
<td>Universidad de Córdoba</td>
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<tr>
<td>2. PANi wrapped Ketjen Black Carbon/Sulphur composites for Li-S batteries</td>
<td>Carlotta Francia</td>
<td>Politecnico di Torino</td>
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<tr>
<td>3. Exploring 3D microstructural evolution in Li-Sulphur battery electrodes using in-situ X-ray tomography</td>
<td>Chun Tan</td>
<td>University College London</td>
</tr>
<tr>
<td>4. A LiNO3 free electrolyte applicable for the Li-S battery</td>
<td>Christine Weller</td>
<td>Dresden University of Technology</td>
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<tr>
<td>5. Solid-state lithium sulfur batteries using nanoconfined complex hydrides as solid electrolytes</td>
<td>Didier Blanchard</td>
<td>Technical University of Denmark</td>
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<tr>
<td>6. Application of Freestanding Metal Oxide Containing Bacterial Cellulose Interlayers as Polysulfide Adsorbers in Li2S Based Lithium-Sulfur Batteries</td>
<td>Elif Ceylan Cengiz</td>
<td>Gebze Technical University</td>
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<td>7. The Use of Multilayer Graphene Coated Separators as a Shuttle Inhibitor Interlayer for Li-S Batteries</td>
<td>Elif Ceylan Cengiz</td>
<td>Gebze Technical University</td>
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<td>8. Application of Poly(3,4-ethylenedioxythiophene) Polystyrene Sulfonate (PEDOT-PSS) to Cathode for Improvement of Charge-discharge Property of Lithium Sulfur Battery</td>
<td>Hiroki Nara</td>
<td>Waseda University</td>
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<td>9</td>
<td>Enhancement of energy capacity of lithium sulphur battery by modification of carbon host</td>
<td>Jin Won Kim</td>
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<td>10</td>
<td>New route to higher energy Li-S batteries</td>
<td>Marco Agostini</td>
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<td>11</td>
<td>A Mechanism Study of MOF-based Separator with Enhanced Stability in Li-S Battery</td>
<td>Mengliu Li</td>
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<td>12</td>
<td>Bio-waste derived carbon: Scaffold for sulfur cathode and interlayer for Li-S batteries</td>
<td>N Kalaiselvi</td>
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<td>13</td>
<td>High Performance LiS Batteries using as Mould a Disordered Carbon with Dual Porosity Derived from Cherry Pits</td>
<td>Noelia Moreno Villegas</td>
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<td>14</td>
<td>Different function of electrolyte salt in high-performance Li-S coin cells and pouch cells</td>
<td>Peter Kovacik</td>
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<td>Covalently Bonded Lithium Sulfide on Polyacrylonitrile Composite Cathode Material</td>
<td>Tzu-Ching Liu</td>
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<td>16</td>
<td>A microporous carbon as long cycle performance cathode materials for lithium sulfur batteries</td>
<td>Shuangke Liu</td>
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<td>17</td>
<td>Chitosan/Expanded Graphite (C/EG) coated separators: A dual physical/chemical route to inhibit polysulfide shuttle</td>
<td>Syed Ali Abbas</td>
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<td>18</td>
<td>Critical Coupling of Binders and Electrolytes for Flexible Freestanding Li-S Battery Electrode with High Performance</td>
<td>Wandi Wahyudi</td>
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<td>Synthesis of Novel Multifunctional Polyimide-Cl Ionic Liquid/polyacrylonitrile Binder to Improve Capacity and Stability for Lithium-Sulfur Batteries</td>
<td>Yu-Wei Huang</td>
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<td>Hardware-in-the-loop (HIL) test of a Li-S battery module</td>
<td>Abbas Fotouhi</td>
<td>Cranfield University</td>
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<td>2</td>
<td>Ultra-Low Temperature Battery (ULTB) Project</td>
<td>Jacob Locke</td>
<td>OXIS Energy Ltd</td>
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<td>3</td>
<td>Battery Management Controller for Li-S batteries</td>
<td>Jordi Pegueroles</td>
<td>Ficosa</td>
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<td>4</td>
<td>Test rig for a dynamic cell temperature control based on cycle parameters</td>
<td>Karsten Propp</td>
<td>Cranfield University</td>
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<td>5</td>
<td>Self-Balancing Feature of Lithium-Sulfur Batteries Based on Self-discharge due to Polysulfide Shuttle</td>
<td>Vaclav Knap</td>
<td>Aalborg University</td>
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