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Area E

Symposium E2

Title: Battery materials – from fundamentals to cell development		
Organizer	Institution	Contact email
Dr. Ilie Hanzu	Graz University of Technology, Austria	hanzu@tugraz.at
Dr. Nicolas Louvain	Université de Montpellier, France	nicolas.louvain@umontpellier.fr
Dr. Nuria Tapia Ruiz	Lancaster University, UK	n.tapiaruiz@lancaster.ac.uk
Abstract		
<p>This symposium will communicate recent progress in advanced batteries for electrochemical energy storage. Storage technologies require new concepts in materials design to overcome current limitations in performance, lifetime, and cost. The symposium will encompass both the fundamental and applied research, advanced battery characterization techniques, that have enabled recent improvements in Li-based battery materials, as well as alternative chemistries for post Li-ion batteries.</p> <p>Session topics include:</p> <ul style="list-style-type: none">▪ Li-ion and post Li-ion batteries, <i>e.g.</i> Na-ion, K-ion and multivalent ions▪ Metal-based batteries, <i>e.g.</i>, Li , Na , Ca and Mg batteries▪ Metal-air batteries▪ Lithium (and post-Li)-sulfur batteries▪ Redox flow batteries▪ Aging processes and failure mechanisms▪ Electrode/electrolyte interface chemistry▪ SEI at the cathode (<i>i.e.</i> cathode electrolyte interphase, CEI)▪ Advanced characterization techniques▪ Fundamentals of battery materials and processes▪ Electrode and electrolyte formulations▪ Battery prototyping		