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Area E

Symposium E4

Title Solid State Batteries and components		
Organizer	Institution	Contact email
Prof. Dr. Wolfgang Zeier	University of Münster	wzeier@uni-muenster.de
Dr. Nella M. Vargas-Barbosa	Helmholtz Institute Münster	n.vargas-barbosa@fz-juelich.de
Abstract		
<p>From portable electronics to electric vehicles and smart grids, electrochemical energy storage devices (e.g., batteries, electrochemical capacitors) continue to become more prominent in our daily life and industrial uses. Along with the required improvement of the energy density and power density of these devices, safety and lifetime characteristics become increasingly critical. Since the electrochemical activity of novel electrode materials and the design of larger scale storage systems is key, reliability is the first concern. In the past few years, solid state batteries have shown to be a promising route for next-generation battery devices.</p> <p>This symposium will cover recent advances in materials science and chemistry on solid electrolyte engineering and solid state batteries for energy storage. Reports on the synthesis and characterization of solid state electrolytes and the interfacial chemistry in solid state batteries (e.g., lithium-ion, lithium-sulfur, sodium-ion) are of particular interest. Submissions that report on new materials synthesis and design, advanced mechanism study related to new materials and device engineering that aim for safer and/or longer life energy storage are encouraged.</p> <p>Topics will include (but will not be limited to):</p> <ul style="list-style-type: none">• Design and synthesis of solid ionic conductors• Interface investigations of solid-state batteries (theory & experiment)• New device structure design and engineering safe and/or long-life operation• Fundamental studies of new materials and mechanisms in solid-state batteries (theory & experiment)		