

Einladung zum Vortrag von

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**„New trends in energy storage materials @PoliTO“**

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Electrochemical energy storage devices (secondary/rechargeable batteries) are the most conventional technology for storing electricity. Their operation during charge and discharge is due to electrochemical oxidation-reduction reactions. The always increasing role of smart technology in modern society requires the development of advanced energy storage systems, which can be used in portable electronic devices as well as in electric and hybrid/electric vehicles and in large stationary storage systems. In this scenario, lithium-ion batteries represent the mostly efficient and widely exploited technology at present. However, especially for applications where safety and low cost are essential requirements, alternative technologies such as sodium-ion batteries and/or alternative post-Li systems, such as lithium sulfur batteries, are being intensively investigated.

This seminar will provide an overview of the recent developments of our Group for Applied Materials and Electrochemistry – GAME Lab at Politecnico di Torino regarding the development of high energy density nanostructured electrode materials and, in particular, highly ionic conductive crosslinked polymer electrolytes with wide electrochemical stability, mechanical properties for safe and aging resistant lithium- and/or sodium-based cells. Noteworthy, the GAME Lab focuses its research activity on the study and development of innovative, high performance and low environmental impact materials through the use and optimization of original, clean, simple, low cost preparation procedures easily scalable at an industrial level.

References: J. Power Sources 365 (2017) 293; ACS Energy Lett. 1 (2016) 678; Scientific Reports 6 (2016) 19892; Energy Storage Mater. 3 (2016) 69; ChemSusChem 8 (2015) 3668; ACS Appl. Mater. Interfaces 7 (2015) 12961; Nano Energy 2 (2013) 1279; J. Mater. Chem. 22 (2012) 3227.

Freitag, 1. Dezember 2017, 15:00 Uhr

Seminarraum 2

Währinger Straße 42, 1090 Wien

Freddy Kleitz

Institut für Anorganische Chemie – funktionelle Materialien

Bernhard Keppler  
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