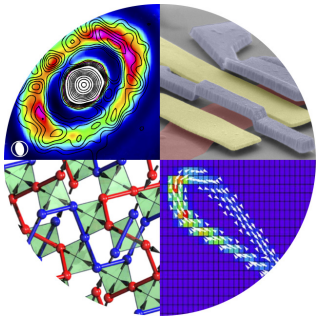

Münchner Physik-Kolloquium

Winter 2016/17

What's going on in a battery and how far can we go?

Prof. Dr. Helmut Ehrenberg, *Institut für Angewandte Materialien-Energiespeichersysteme (IAM-ESS), Karlsruher Institut für Technologie (KIT)*

Monday, 30 January 2017, 17:15 h
Hörsaal 2, Physik-Department der TUM, Garching

Electrochemical energy storage is a key component for electromobility and the efficient use of renewable energy sources. Pushing batteries to higher energy and power densities is full of challenges. This talk will compile the different points of view from physicists, chemists and engineers. Selected examples are shown to demonstrate how modern characterisation techniques can bridge fundamental physics with the development of new materials for a sustainable energy technology. The high level of complexity and the huge number of structural and chemical degrees of freedom in the design of electrochemical cells require a solid understanding of the most relevant underlying working and degradation mechanisms for a systematic optimization of such energy storage devices. Most of the lessons learned from Li-ion batteries also apply for the so-called "post-Li" battery concepts and are discussed.

Student event: Meet the speaker

*We invite you to a **student-only** discussion-round with Prof. Dr. Helmut Ehrenberg before his Munich Physics Colloquium talk.*

Be curious and feel free to ask any question.

Monday, 30 January 2017, 16:00 h
Seminar room PH 3076 (upper floor), Physik-Department der TUM, Garching