

Vabilo na Forum40 / Invitation to the Forum40

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Velika predavalnica Kemijskega inštituta/ Great Lecture Hall, National Institute of Chemistry, Hajdrihova 19, Ljubljana

Understanding the mechanisms of battery electrochemistry and how that can help us improve their performance

Battery performance is influenced by a multitude of variables (both material properties as well as parameters of use) making its improvement a difficult task. In the lecture, examples of progress on Lisulfur batteries will be given. In order to determine the most restrictive processes, the mechanism of battery operation first needs to be understood. This is usually achieved through system simplification and coupling of the usual electrochemical techniques with other analytical approaches. In this sense electrochemical impedance spectroscopy is an invaluable tool, since it is the only one available that enables decoupling of different processes (diffusion, migration, redox reaction, passivation) taking place.

