KEMIJSKI INŠTITUT

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

Organic cathode materials for a new generation of batteries

Increasing demands for electrochemical energy storage, and especially Li-ion batteries are pushing some elements and materials towards the limits of environmental sustainability. Hence, the development of new generation of batteries based on the abundant materials, like Mg and Al is needed. However, lack of suitable cathodes that can intercalate multivalent ions impedes the development of Mg and Al batteries. Organic cathode materials offer an opportunity to circumvent the limitations connected with poor intercalation and slow solid state diffusion in inorganic hosts. In our work we applied various organic materials as cathodes in Mg battery. Lack of analytical techniques suitable for monitoring the activity organic materials incited us to develop novel, *operando* ATR-IR method. This methods allows us simple and efficient monitoring of the electrochemical activity during battery operation.

Vljudno vabljeni / Kindly invited