

Energy Colloquium

Cathodes for Li-Ion Batteries: Challenges and Prospects

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ABSTRACT:

Cathode (positive electrode) is the most crucial component of the Li-ion battery, largely determining its energy density, power, life time and safety. Various energy storage applications (portable electronics, automotive, electric grids etc.) require the cathode materials with a dedicated combination of the chemical and physical properties assuring optimal performance in every particular field. In this talk different classes of the inorganic cathodes will be discussed with regard to their crystal structures, redox properties, microstructural features, Li-ion diffusion, degradation mechanisms, resistance to the oxygen release and key parameters defining their prospective applications. The expectations and approaches will be formulated for further development of the cathode materials and related improvements of the battery's performance.

Non-Skoltech attendees should request access to the building in advance by sending their passport details to energy.colloquium@skoltech.ru

Colloquium schedule and information on how to get to the colloquium can be found at <http://www.skoltech.ru/en/energy-colloquium/>