



TECHNISCHE UNIVERSITÄT
BERGAKADEMIE FREIBERG

Die Ressourcenuniversität. Seit 1765.

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11:30 – 12:15 Uhr

Electrolytes – Technology Review

Dr. Markus Vogt

BASF SE, Ludwigshafen, Germany



Abstract. BASF has entered the LiB market as a supplier of cathode materials and electrolyte formulations. In addition, BASF also provides solvents, binders and other auxiliary chemicals to the LiB industry.

The first part of the presentation will give an overview on BASF's growing activities in the field of LiB covering the current portfolio of NCM, LFP and electrolytes provided by BASF.

The second part will focus on the demanding automotive applications of LiB, especially in view of safety, lifetime, energy density and costs. All these factors generate a strong pull for improved batteries and new, advanced battery materials. BASF is intensively developing new cathode materials and electrolyte compositions for future LiB cells to further reduce costs and to increase power and energy content. The presentation will summarize recent developments in the field of High-Energy (HE)-NCM as well as High Voltage (HV) Manganese Spinel. Both cathode materials – in combination with adequate electrolyte formulations will allow higher energy densities in LiB cells at lower specific costs per kWh due to markedly reduced Cobalt and Nickel content of the cathode materials. In addition, in the field of electrolytes new additives and compositions of electrolytes are necessary to enable cell operation with such new materials and at conditions emerging from new applications.