



LMNO; high-voltage spinel as Li-ion battery cathode. Status and battery properties

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Abstract:

The positive electrode active material for Li-ion batteries LNMO ($\text{LiNi}_0.5\text{Mn}_1.5\text{O}_4$) has numerous advantages. The high working potential and high energy density pave the way to either longer operating ranges or a smaller battery package, whilst the three-dimensional spinel structure makes it possible to achieve high discharge rates and fast battery charging. The absence of the critical metal cobalt and the relatively low nickel content make this a cost-effective alternative to today's mainstream lithium-ion battery chemistries. The talk will present the properties and challenges of LNMO batteries. Furthermore, the technical status and market perspective will be given.

Curriculum Vitae:



Søren Dahl has more than 20 years of experience in development, production, and use of advanced materials from working at Topsoe and the Technical University of Denmark. Application of the materials have been for batteries and catalysts for reactions important within sustainable energy production and storage, petrochemicals and for environmental protection. The last 10 years at Topsoe has been devoted to developing cobalt free positive electrode active materials for Li-ion and Na-ion batteries.

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