

Field-assisted sintering technique as a crucial element in the thin-film Li-ion production chain

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The development of thin-film lithium-ion batteries represents a critical area of research for specific applications, including miniature electronics. The increased safety of these batteries can be attributed to the application of solid-state LiPON electrolytes, which serve to limit leakage risk and enable operation at elevated temperatures.

The study focuses on demonstrating the potential of the field-assisted sintering technique (FAST) in the development of a novel generation of Li₃PO₄-based target. The primary objective is the implementation of this technology throughout the entire technological chain that has been developed within the DEPOION consortium, which comprises Łukasiewicz-PIT, BFH, EMPA and The Batteries. The presentation will provide insight into the different designs from the targets' materials (taking into consideration Li₃PO₄ allotropic forms and the influence of additives such as Al) and construction perspective. This will result in different microstructures, properties of targets and various deposition effects with magnetron sputtering techniques.

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Professional Status of the Speaker

Postdoc

Interest in submitting a paper in a special issue of

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Invitation letter for visa

No

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