

ELECTROCHEMICAL STUDIES OF PVdF-HFP-BASED GEL ELECTROLYTES

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ABSTRACT

The electrochemical properties of PVdF-HFP-based gel electrolytes formed by immobilizing of commercial battery electrolytes in a copolymer poly(vinylidene fluoride-co-hexafluoropropylene) (PVdF-HFP) have been determined. The ionic conductivity, interaction with lithium metal and Li^+ ion transference number of gel electrolytes, which are examined by the impedance spectroscopy and the dc polarization of cells are evaluated and discussed. Particular attention is devoted to the phenomena occurring at the interface between this gel and the lithium metal electrode.

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