

ELECTRICAL PROPERTIES OF PEO-LiCF₃SO₃-SiO₂ NANOCOMPOSITE POLYMER ELECTROLYTES

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ABSTRACT

Nanocomposite polymer electrolytes using PEO-LiCF₃SO₃ incorporated with nanosized SiO₂ fillers have been prepared by the solution cast technique. The effects of concentration of filler on the dielectric properties of the electrolytes were studied. Conductivity is observed to increase with filler concentration with two maximas in conductivity observed at 6 wt % and 10 wt % SiO₂ concentration after which the conductivity decreases. Temperature effects on the dielectric properties revealed that the electrolytes to be of the non-Debye type.

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