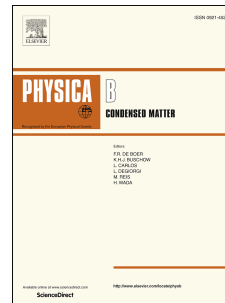


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Conductivity spectra of Lithium Ion Conducting Glassy Ceramics

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Abstract

Study of ac conductivity spectra of Li₂O doped different glassy ceramics in wide frequency and temperature regime using Jonscher's power law model and Almond-West formalism reveals that Li⁺ migration depends upon nature of doping reagent. It also points that the ratio of power law pre-factor to the exponent ($-\log_{10} A/S$) indicates temperature and composition dependency of present conductors. Motion of Li⁺ may predict that the process of conduction is percolation or pseudo three dimensional types. These glassy ceramics should be suitable candidates for lithium ion battery application. **Improvements in the capacity of modern lithium (Li) batteries can be made by enhancing conductivities and ionic**

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