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POLYMER BLEND ELECTROLYTES FOR EDLC APPLICATIONS

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Polymer blend electrolytes are prepared using two different polymers and an inorganic salt by solution casting technique. The complexation between polymers and salt is confirmed by XRD and FTIR studies. The ionic conductivity increases with respect to salt concentration. The highest ionic conductivity is 4.2×10^{-3} S/cm. Electrical double layer capacitors (EDLCs) are fabricated using the most conducting polymer electrolyte and carbon-based electrodes. The electrochemical performances of fabricated EDLCs are studied through cyclic voltammetry (CV) and galvanostatic charge-discharge studies. EDLC comprising polymer electrolyte shows the specific capacitance of 20.1 F/g with excellent electrochemical stability.

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