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Morphological and Electrical Studies Of Plasticized Biopolymer Electrolytes Based On Potato Starch : NH₄Cl

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Abstract : Plasticized biopolymer electrolytes based on the “Potato Starch have been prepared using distilled water as solvent by Solution Casting Technique. 40 PS: 60 NH₄Cl: 20PC biopolymer electrolyte has the maximum ionic conductivity 9.27×10^{-4} S/cm at 303 K. Modulus spectroscopy studies are important to bring out the electrode-electrolyte interfacial behavior and its bulk properties. The SEM images evidenced the presence of numerous pores in the 40 PS: 60 NH₄Cl: 20PC biopolymer electrolyte resulting in high ionic mobility that leads to high ionic conductivity at ambient temperature.

Keywords : Biopolymer, Potato Starch, PC, SEM, Cole-Cole, Modulus.

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