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Preparation and Ionic Conductivity Study of the Plasticized Polymer Electrolytes based on P(VdF-co-HFP)/PMMA Ionomer Blend

PVdF 공중합체와 PMMA 이오노머의 블렌드를 기초로한
가소화된 고분자 전해질의 제조 및 이온전도특성 연구

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The plasticized polymer electrolytes composed of the blend of poly(vinylidene fluoride-co-hexafluoropropylene), [P(Vdf-co-HFP)] and poly(methyl methacrylate-co-lithium methacrylate), [P(MMA-co-LiMA)] ionomer, the mixed solvents, and lithium salts have been prepared. The introduction of the ionomer into P(VdF-co-HFP) matrix was found to enhance the compatibility of porous polymer matrix with the liquid electrolyte through their ion-dipole interactions between the ion groups in the ionomer and the polar groups in the liquid electrolyte. The increase of compatibility could lead to the increase in uptake amount of the liquid electrolyte into the porous matrix and the ionic conductivities with temperature were also enhanced.