Preparation of microporous poly(vinyl chloride)/poly(methyl methacrylate) fibrous polymer electrolyte membranes

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Microporous poly(vinyl chloride)/poly(methyl methacrylate) fibrous membranes was prepared by an electrospinning technique. The fibrous electrolytes for lithium battery were prepared by immersing poly(vinyl chloride)/poly(methyl methacrylate) fibrous membranes into 1 Mol LiPF6/EC/DMC(1:1vol%). The ion conductivity of microporous fibrous blended polymer electrolyte membranes was increased with the increase in the PMMA content. The electrochemical properties of the polymer electrolytes based on poly(vinyl chloride)/poly (methyl methacrylate) fibrous membranes have been investigated by impedance analysis, cycle performance, charge-discharge test. Also, the morphology of the fibrous membranes was analyzed by SEM, TGA, DSC, AFM.