

The Effect of Polymer Blending on the characterization of membrane for PEMFC at high temperature

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The membrane for PEMFC at high temperature was prepared from the blends of 2,5-polybenzimidazole(PBI) and Celanese polybenzimidazole(PBI). We investigated effects of the blending of the polymers and the proton conductivity. 2,5-polybenzimidazole(PBI) are synthesized from 3,3'-diaminobenzidine and pyridine-2,5-dicarboxylic acid, and Celanese polybenzimidazole(PBI) are synthesized from 3,3'-diaminobenzidine and isophthalic acid. The synthesis of 2,5-PBI and Celanese PBI was confirmed by a Fourier Transform Infrared Spectroscopy (FT-IR, DIGILAB Co.).