

## Synthesis and Characterization of Polyimide PEM for High Temperature PEMFC

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The polyimide(PI) membranes have good thermal stability and good mechanical strength. In this work, to use PI membrane for PEMFC at high-temperature, new composited PI membrane was preparation. The PI membranes are synthesized from 4,4'-oxydiphtalic dianhydride, adipic dihydrazide and azelaic dihydrazide. And inorganic filler introduced as proton conductor. Chemical imidization introduced as imidization method and inorganic filler dispersed with ultra sonification.