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Polybenzimidazole (PBI-OO) based composite membranes using sulfophenylated TiO₂ as both filler and crosslinker, and their use in the HT-PEM fuel cell

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Abstract

Crosslinked metal oxide containing nanocomposite membranes, in which the filler also acts as crosslinker, were prepared by blending polybenzimidazole (PBI-OO) and phenylsulfonated TiO₂ particles (s-TiO₂). Thermal curing changes the ionically crosslinked system into a covalently crosslinked system. The synthesized s-TiO₂ nanoparticles were analysed by thermal gravimetric

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