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Abstract

We report the preparation of solid-state facilitated olefin transport membranes based on a low-cost, one-pot, room-temperature synthesized graft copolymer, i.e., poly(ethylene-alt-maleic anhydride)-g-O-(2-aminopropyl)-O'-(2-methoxyethyl) polypropylene glycol (PEMA-g-PPG). An electron acceptor, 7,7,8,8-tetracyanoquinodimethane (TCNQ), was employed to activate the surface of the silver nanoparticles (AgNPs), leading to partial polarization. The AgNPs interacted with TCNQ as well as the PEMA-g-PPG graft copolymer to form

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