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Anti-fouling polyimide/Ag nanofiber membranes prepared by using silver (I) carbamate

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Polyimide/Ag nanofiber membranes were made by electrospinning poly (amic acid) containing a dash of silver (I) carbamate, followed by simply thermal reduction and imidization of poly (amic acid). Poly (amic acid) solutions were prepared from 3,3',4,4'-benzophenone tetracarboxylic dianhydride (BTDA) and 4,4'-oxydianiline (ODA) into dimethylformamide (DMF). Through thermal curing cycle, the silver-doped polyimide nanofiber membranes progress silver reduction. These process leads to high thermal stability, abrasion resistant and antifouling property. The polyimide/Ag nanofiber membranes were characterized by using scanning electron microscopy (SEM), X-ray diffraction (XRD), energy dispersive X-ray spectroscopy (EDS), UV-Vis, FT-IR and thermo gravimetric analysis (TGA).

Biography

Hyuck-Jin Kwon is currently pursuing his Master's degree from the College of Pharmacy at Dankook University and majoring in bio-nano fields. His research interest is in a wide range of nanomaterials and research.

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