

ABSTRACT SUBMISSION



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Multi-Functional Nanofibrous Membrane by subsurface initiated polymerization

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ABSTRACT (NO MORE THAN 500 WORDS:)

Electrospun nanofibrous membrane has the advantages of small pore size, large specific surface area, high porosity, large flux, adjustable surface properties and easy preparation in large area, which has potential application prospects in air particulate filtration, pollutant adsorption, oil-water separation, membrane separation, catalysis and biomedical application filed. In recent years, electrospun nanofibrous materials are gradually becoming industrialized. Here, we prepared a multi-functional electrospun nanofibrous membrane grafted polyelectrolyte brush and its composite by sub-surface initiated atom transfer radical polymerization. It is found that it not only can catalyze the degradation of organic pollutants and dyes in water, but also can achieve the function of oil-water separation, and also has antimicrobial activity. These indicate that this novel membrane has broad and good application prospects in water treatment and other fields.