

## Super-Hydrophilic TFC Membrane with High Stability in Oil

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**Abstract :** Low stability in oil media and the hydrophobicity problems of the polysulfone electrospun membranes could be overcome in the present study. Synthesis of super-hydrophilic and highly stable in oil polysulfone electrospun nanofiber membrane was achieved by electrospinning of polysulfone solution containing NaOH salt followed by activation of the dried electrospun membrane by deposition of polyamide layer on the surface using m-phenylenediamine and 1,3,5-benzenetricarbonyl chloride. The introduced membrane has super-hydrophilicity characteristic (contact angle=30), excellent stability in oil media and distinct performance in oil-water separation process.

**Keywords :** electrospinning, oil-degradability, membrane, nanofibers

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