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Superhydrophilic and underwater superoleophobic poly (acrylonitrile-co-methyl acrylate) membrane for highly efficient separation of oil-in-water emulsions

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ABSTRACT

A novel superhydrophilic and underwater superoleophobic poly (acrylonitrile-co -methyl acrylate) (P(AN-MA)) microfiltration membrane (MF) was processed. In order to create micro/nanostructured roughness surface and improve the hydrophilicity of the membranes, the thermally induced phase separation (TIPS) method combined with surface hydrolysis reaction method were adopted. The obtained membrane is noted for symmetrical and hierarchical micro/nano-structure

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