A method of producing a hollow fiber membrane

ABSTRACT

Described herein is a method of producing a hollow fiber membrane having an outside coating with a thin film composite (TFC) layer comprising a transmembrane protein, said method comprising the steps of: preparing an aqueous solution comprising a self-assembled nanostructure comprising polyalkyleneimine (PAI) and a detergent solubilized transmembrane protein and a di- or triamine, preparing an apolar solution comprising a di- or triacyl halide in an apolar organic solvent, contacting a hollow fiber membrane with the either the solution according to step a) or the solution according to step b), removing excess solution if any, contacting the hollow fiber membrane with the other solution, allowing an interfacial polymerization reaction to take place, and rinsing the hollow fiber membrane with an aqueous solvent. The hollow fiber is applicable e.g. for extracting water from the product solution.