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Abstract

A novel mussel-inspired sticky catechol-functionalized poly (ethylene glycol) (Cate-PEG) was synthesized and deployed as an additive to modify the hydrophobic poly (vinylidene fluoride) (PVDF) ultrafiltration (UF) membrane for reducing the leakage of poly (ethylene glycol) (PEG) from membrane matrix towards practical water treatment applications. By the interesting surface segregation, the sticky Cate-PEG polymer could migrate from matrix onto the membrane surface and internal pores, endowing the modified membrane with excellent hydrophilicity. In addition,