

Hybrid water treatment process of alumina ceramic ultrafiltration and PP beads with air back-fushing: Effect of pH and polypropylene beads

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For advanced water treatment, effects of pH and pure PP beads packing concentration on membrane fouling and treatment efficiency were observed in a hybrid process of alumina ceramic MF and pure PP beads. The tubular UF membrane (NCMT-5231) with pore size 0.05 μm was manufactured by γ -alumina in nanopore materials. The diameter of PP beads was 4-6 mm, and the synthetic feed was prepared with humic acid and kaolin. The synthetic feed was allowed to flow inside the MF membrane and the permeated contacted the PP beads fluidized in the gap of the membrane and the acrylic module case