Supporting Information

Antifouling and antibacterial behavior of polyethersulfone membrane incorporating polyaniline@silver nanocomposites

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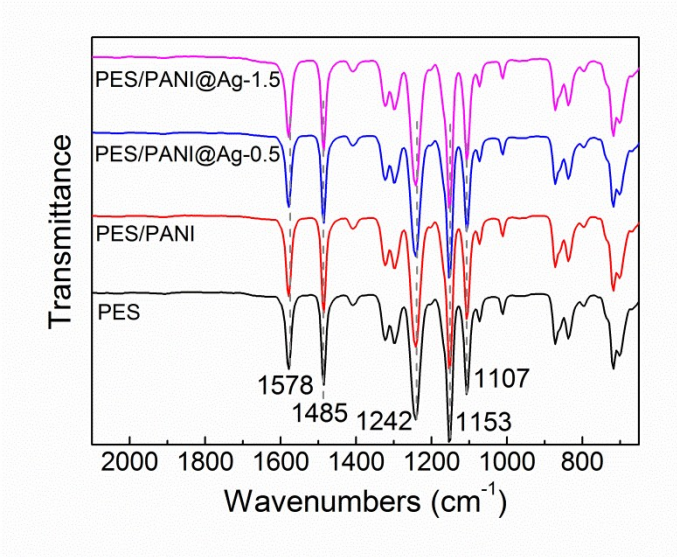

Fig. S1 ATR-FTIR spectra of PES, PES/PANI and PES/PANI@Ag composite membranes.

Fig. S1 shows ATR-FTIR spectra of PES, PES/PANI and PES/PANI@Ag composite membranes. For all the membranes, the characteristic absorption bands corresponding to PES are observed at 1578 cm^{-1} (benzene ring stretching), 1485 cm^{-1} (C–C bond stretching), 1242 cm^{-1} (aromatic ether stretching), 1153 cm^{-1} (sulfonyl stretching) and 1107 cm^{-1} (C–O bond stretching), respectively. After blending modification, there is no obvious difference observed between the spectra of PES, PES/PANI and PES/PANI@Ag membranes, probably because of the strong absorption bands of sulfones and secondary aromatic amines.

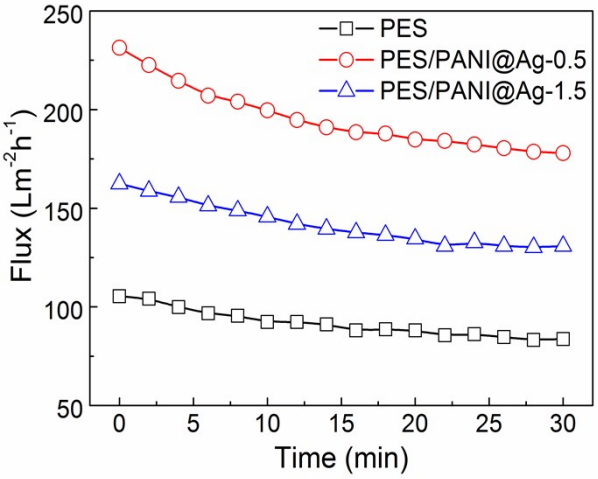

Fig. S2 The time-dependent pure water fluxes of the membranes during membrane compaction at 0.30 MPa TMP.

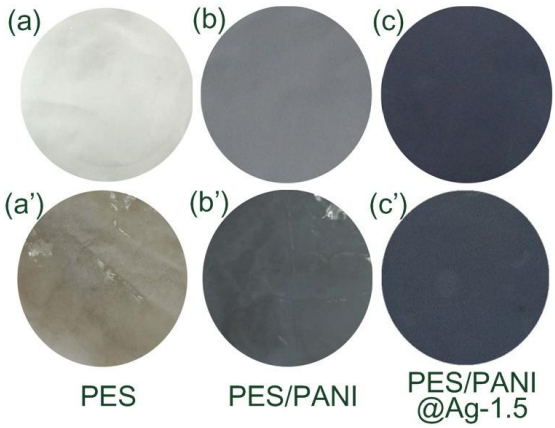

Fig. S3 The digital photos of membranes before biofouling (a-c), and after biofouling (a'-c').