

In-situ polymerized superhydrophobic and superoleophilic nanofibrous membranes for gravity driven oil–water separation

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Supporting Information

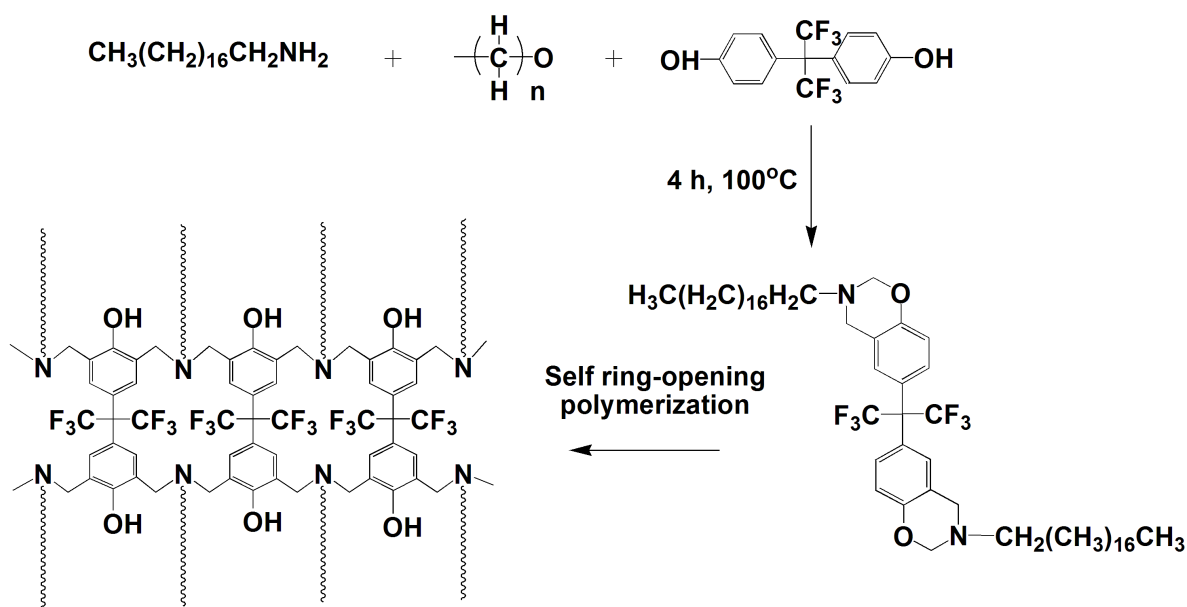


Fig. S1 Chemical synthetic and polymerization route of BAF-oda.

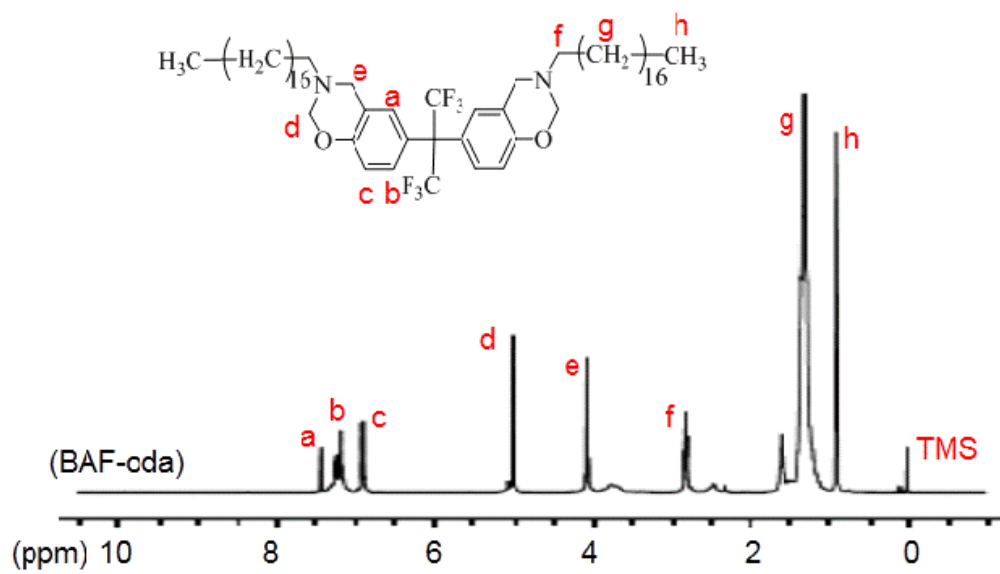


Fig. S2 ¹H NMR spectrograph of BAF-oda

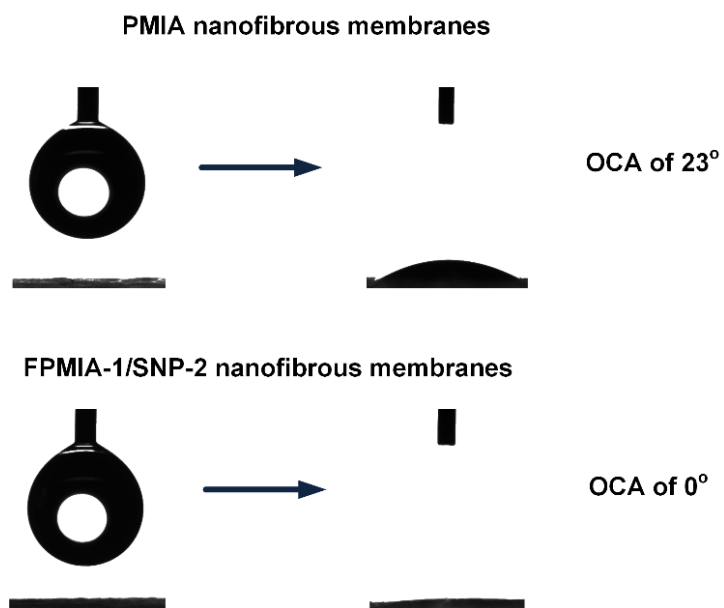


Fig. S3 Photographs showing the OCAs of PMIA and FPMIA-1/SNP2 nanofibrous membranes.

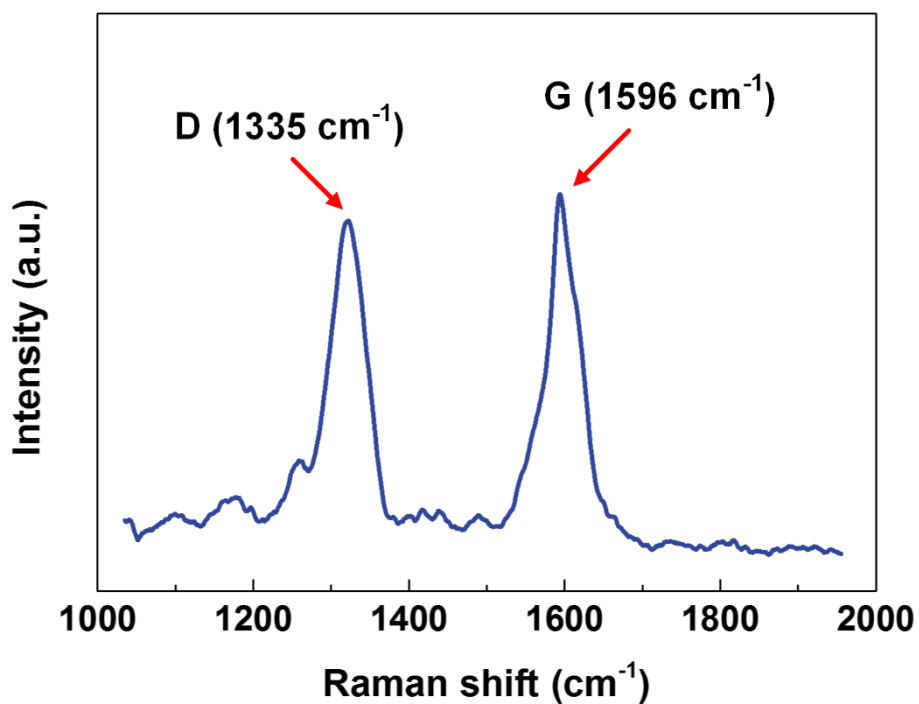


Fig. S4 Raman spectrum of as-prepared FPMIA-1/SNP-2 membranes. The two characteristic peaks at 1335 and 1596 cm⁻¹ indicated the disorder induced mode (D band) and tangential mode (G band) of CNTs.

Supplementary Discussion

The determination of liquid retention force was based on the previous study (C. G. L. Furmidge, J. Colloid Sci., 1962, 17, 309 and T. S. Wong et al., Nature, 2011, 477, 443.). The liquid retention force F could be estimated according to the equation: $F = \theta_M [\gamma_{AL}(\cos\theta_R - \cos\theta_A)/\rho]^{0.5}$, where θ_A is the advancing contact angle, θ_R is the receding contact angle; θ_M is the arithmetic mean of θ_A and θ_R ; γ_{AL} is the air/liquid surface tension; and ρ is the density of the spray liquid.