Supporting Information for:

Microporous Polysulfones with Enhanced Separation Performance via Integration of the Triptycene Moiety

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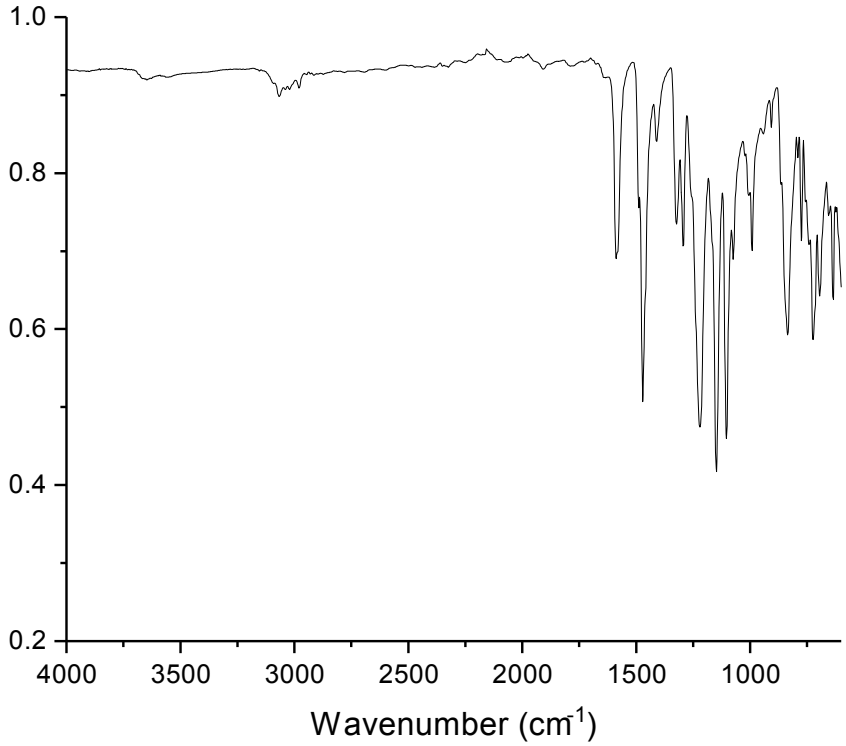

Figure S1. IR spectrum for Trip-PSf. Relevant peaks at 1221 (C-O stretch) and 1323 (S=O stretch).

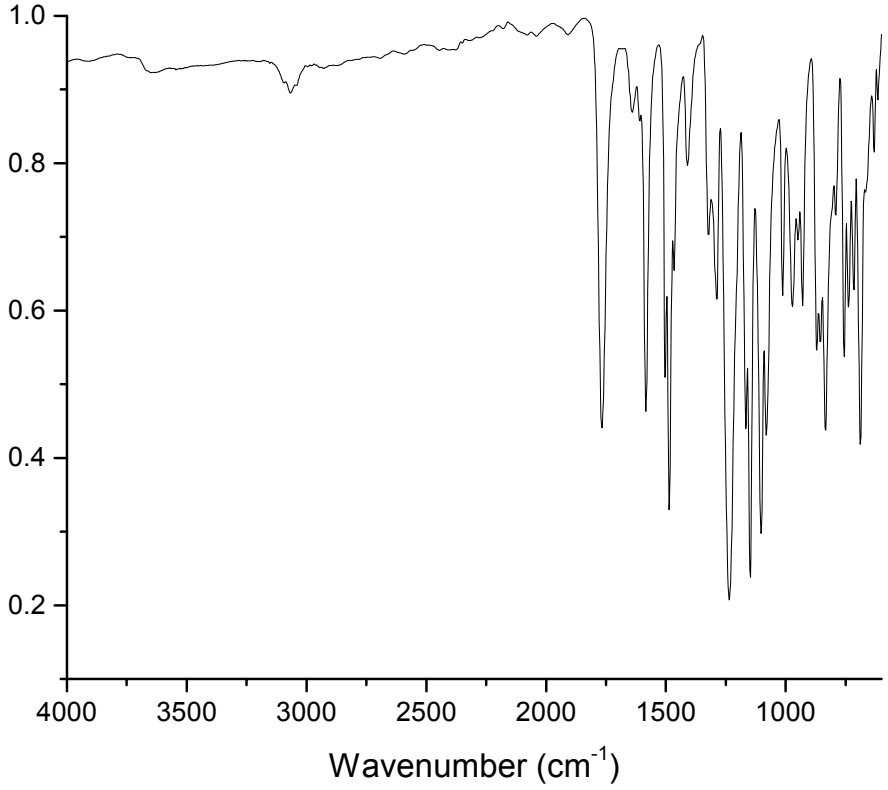

Figure S2. IR spectrum for PHPHT-PSf. Relevant peaks at 1767 (C=O stretch), 1236, 1148, 1101 (C-O stretches), 1323 (S=O stretch).

Table S1. Mechanical properties of Trip-PSf and PHPHT-PSf polymer films

Polymer	Tensile Strength (MPa)	Young's Modulus (MPa)	Elongation at Break (%)
Trip-PSf	31 ± 8	1550 ± 282	2.0 ± 0.2
PHPHT-PSf	69 ± 10	717 ± 52	17.7 ± 2.2
Commercial PSf	3.33 ± 0.28[1] 54.2[2]	187 ± 11[1] 2000[2]	- 48[2]

References:

(1) Ionita, M.; Pandele, A. M.; Crica, L.; Pilan, L. Improving the Thermal and Mechanical Properties of Polysulfone by Incorporation of Graphene Oxide. *Compos. Part B Eng.* **2014**, *59*, 133–139.

(2) Sur, G. .; Sun, H. .; Lyu, S. .; Mark, J. . Synthesis, Structure, Mechanical Properties, and Thermal Stability of Some Polysulfone/Organoclay Nanocomposites. *Polymer.* **2001**, *42*, 9783–9789.