Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics
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Supporting Information for

A chiroptical switch based on supramolecular chirality transfer through alkyl chain entanglement and dynamic covalent bonding

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Synthesis of the Schiff base OMP

Octadecylamine ($C_{18}H_{37}NH_2$, 1.9g, 7.1mmol), and salicylaldehyde (1mL, 9mmol) were mixed in a 100mL flask and ethanol (60mL) was added. The mixture was stirred at the temperature 60℃ for about 5h. The compound was filtered and then recrystallized from ethanol to obtain the green-yellow product, and the target product was obtained.

^{1}H NMR (400MHz, $CDCl_3$, ppm): δ =8.32 (s, 1H, CH), 7.29-7.31(t, 1H, Ar H), 7.23(s, 1H, Ar H), 6.91-6.99(t, 1H, Ar H), 6.84-6.88(t, 1H, Ar H), 5.29(s, 1H, OH), 3.56-3.60(t, 2H, CH_2), 1.67-1.70(t, 2H, CH_2), 1.25(br, 30H, CH_2), 0.86-0.89(t, 3H, CH_3). MALDI-TOF-MS Calcd for $C_{25}H_{43}NO$: 373.3. Found: 374.2 (M^++H). Anal. Calcd for $C_{25}H_{43}NO$: C 80.25, H 11.46, N 3.76, found: C 80.15, H 11.23, N 3.76.

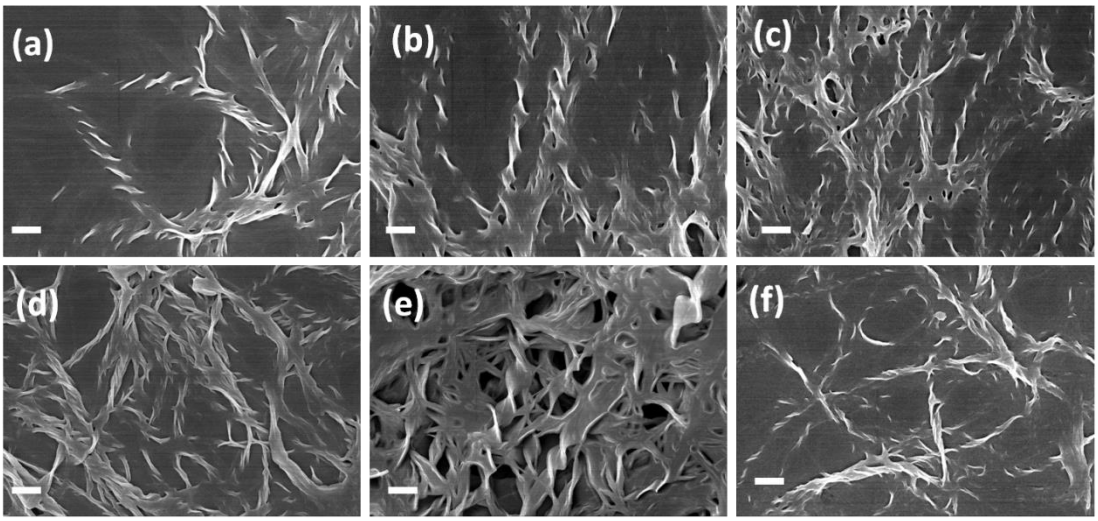

Figure S1. SEM images of OMP/LBG xerogels at OMP molar fraction at a) 9%, b) 18%, c) 40%, d) 60%, e) 68%, f) OMP/DBG (the OMP molar fracrion is 18%). The scale bar is 1μm.