Supplementary Information

Thermo-reversible Gelation of Rod-Coil and Coil-Rod-Coil Molecules Based

on Poly (Dimethyl Siloxane) and Perylene Imides and Self-Sorting of the

Homologous Pair

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Fig. S1. DSC curves for the Di-PDMS based gel (with propylamine), during heating, cooling and heating cycles, showing thermo-reversibility of gelation. (a) The sample was kept at 45 °C during the cooling cycle for 30 minutes before the second heating. (b) Without such waiting period during cooling. The endotherm in the second heating cycle is shallow.



Fig. S2. (a) - (f): Thermo-reversibility of Di-PDMS/propylamine gel by slow-cooling; (g) and (h) Irreversibility and crystallization by quenching. The thermal sequences are marked by arrows.



Fig. S3. The Mono-PDMS gel (with propylamine) is not reversible if the sample is quenched from the hot solution. Crystals are formed instead. Slow cooling leads to thermo-reversible gel.



Fig. S4. Morphology of Di-PDMS gels with hexane/water (95/5) mixture with water added at different rates.



Det: SE View field: 50.00 µm

10 µm WD: 7.299 mm Date(m/d/y): 01/20/14



Instant Addition SEM MAG: 3.00 kx Det: SE View field: 50.00 µm SEM HV: 20.00 kV WD: 7.299 mm Date(m/d/y): 01/20/14 VEGA\\ TESCAN L____ 10 μm Ń

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View field: 50.00 µm

Fig. S5. Morphology of Mono-PDMS gels with hexane/water (95/5) mixture with water added at different rates. Insert shows a fractured sphere.



Fig. S6. X-Ray diffraction traces from the xerogels of (a) Mono-PDMS and (b) Di-PDMS. The PDMS $M_w = 1500$.



Fig. S7. Absorption spectra of xerogels of Mono- and Di-PDMS (propylamine was the solvent used)



Fig. S8. Absorption spectra of (a) Mono-PDMS gel and (b) Di-PDMS gel in hexane/ water: 95/5 mixtures, with different concentrations. The curve corresponding to 1 mM is the spectrum from solution.



Fig. S9. Storage and loss moduli of the gels (a) Di-PDMS/propylamine (b) Di-PDMS/ (hexane/water: 95/5) (c) Mono-PDMS/propylamine (d) Mono-PDMS/ (hexane/water: 95/5)