## Supplementary information For

## Tunable mechano-responsive organogels by ring-opening copolymerizations of *N*-carboxyanhydrides

Jingwei Fan, Jiong Zou,<sup>\*</sup> Xun He, Fuwu Zhang, Shiyi Zhang, Jeffery E. Raymond and Karen L. Wooley<sup>\*</sup>

Departments of Chemistry and Chemical Engineering, Laboratory for Synthetic-Biologic Interactions, Texas A&M University, P.O. BOX 30012, 3255 TAMU, College Station, TX 77842 (USA).

\* Corresponding author: Email: jiong.zou@chem.tamu.edu, Wooley@chem.tamu.edu Tel: (979) 845-4077



Fig. S1 Images of organogels from polymers 6, 7, 8, 9, 10, 11 and 12 in DMF (2.5 wt %).



Fig. S2 (a) Second derivative and (b) ATR-FTIR spectra (black), fitting curve (red), baseline (blue) and fitting peaks (green) for polymer 7 in the solid state.



Fig. S3 WAXS patterns for polymers 7, 10, 11 and 12 in the solid state.



**Fig. S4** DSC traces of polymers (a) **11** and (b) **12** in the solid state. The samples were heated from -100 °C to 200 °C and cooled back to -100 °C, each with a rate of 10 °C /min. The second heating and cooling traces are shown here.



**Fig. S5** Moduli of organogels from polymer **11** in DMF (5 wt %) before and after sonication as a function of frequency conducted by DMA. E' and E'' indicate storage and loss modulus, respectively.



Fig. S6 Tan ( $\delta$ ) of organogels from polymers 7, 10, 11 and 12 in DMF (5 wt %) as a function of frequency, conducted by DMA.