Electronic Supplementary Information

Hydrogelation with a Water-Insoluble Organogelator - Surfactant Mediated Gelation (SMG)

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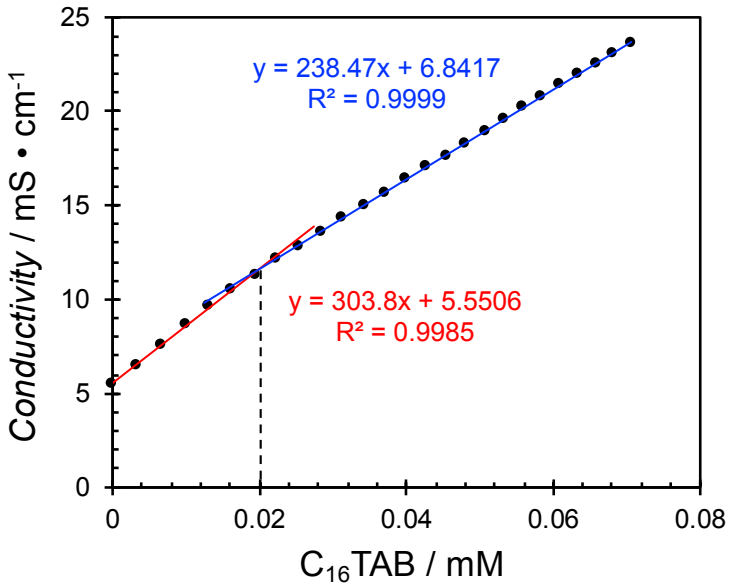

Fig. S1 Conductivity of C_{16}TAB-NaSal aqueous solution (C_{16}TAB/NaSal = 1/1 [mol/mol]) as a function of C_{16}TAB concentration.

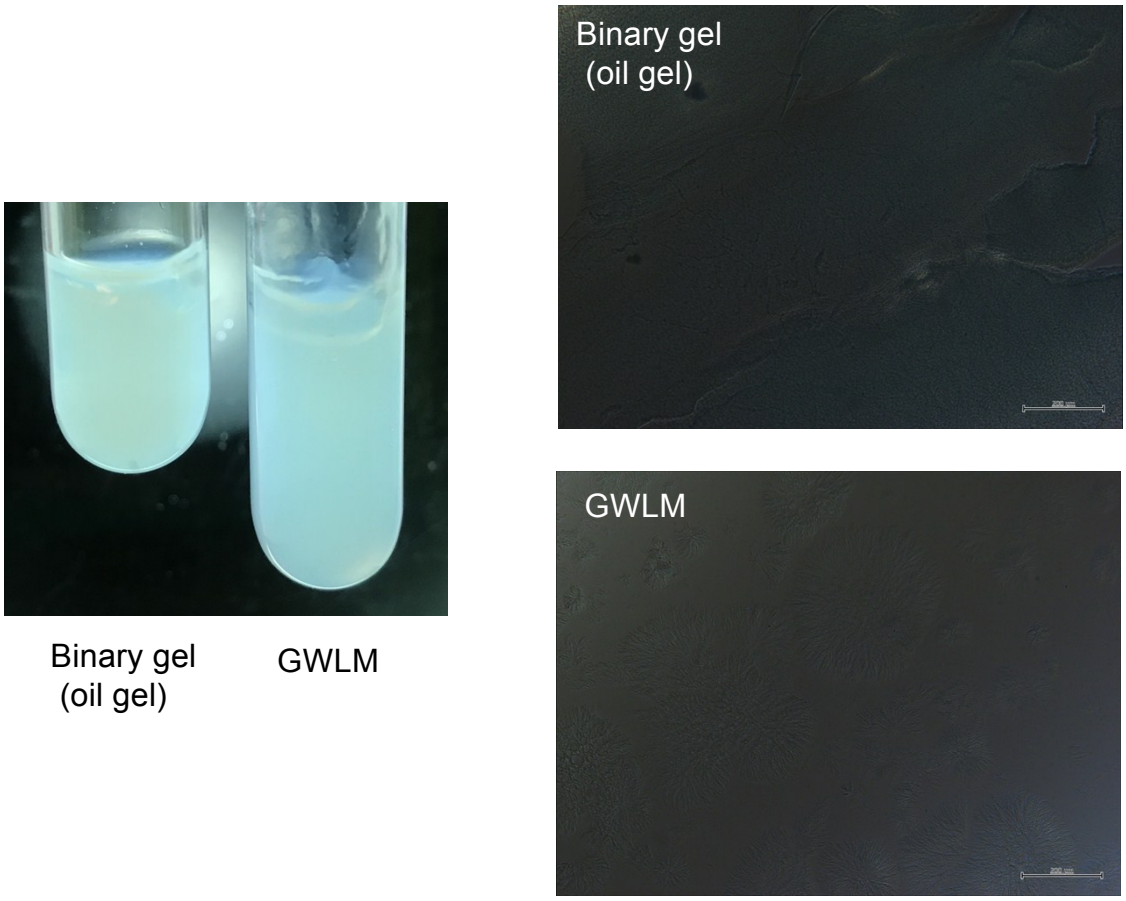

Fig. S2 Sample photos under crossed nicols (left) and polarized micrographs (right) for a binary gel (oil gel) sample in 12-HOA/n-decane ($C_{12\text{-HOA}}$ = 0.033 mol L^{-1}) and a GWLM sample in CTAB/NaSal/H_2O (C_S, C_{NaSal} = 0.15 mol L^{-1}, $C_{12\text{-HOA}}$ = 0.033 mol L^{-1}). Scale bar indicates 200 microns.

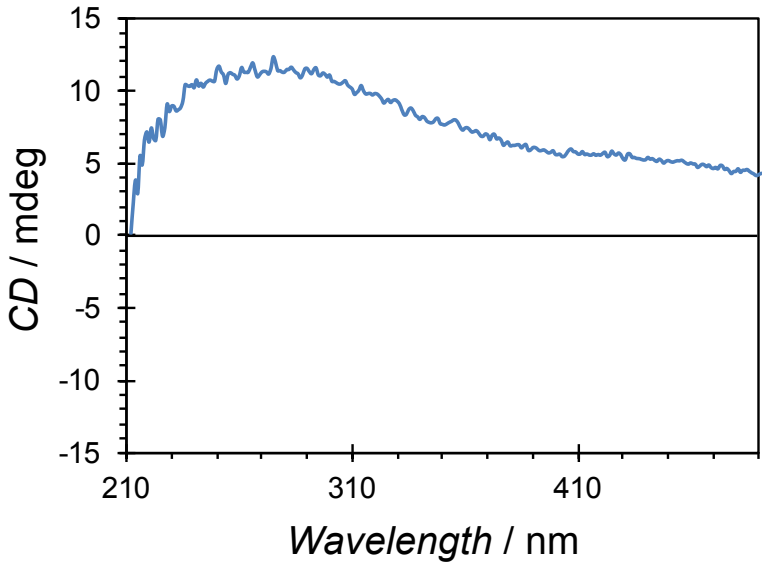

Fig. S3 CD spectrum of GM sample (c) (C_S, C_{NaSal} = 0.15 mol L^{-1}, $C_{12\text{-}HOA}$ = 0.099 mol L^{-1}) at 25°C.

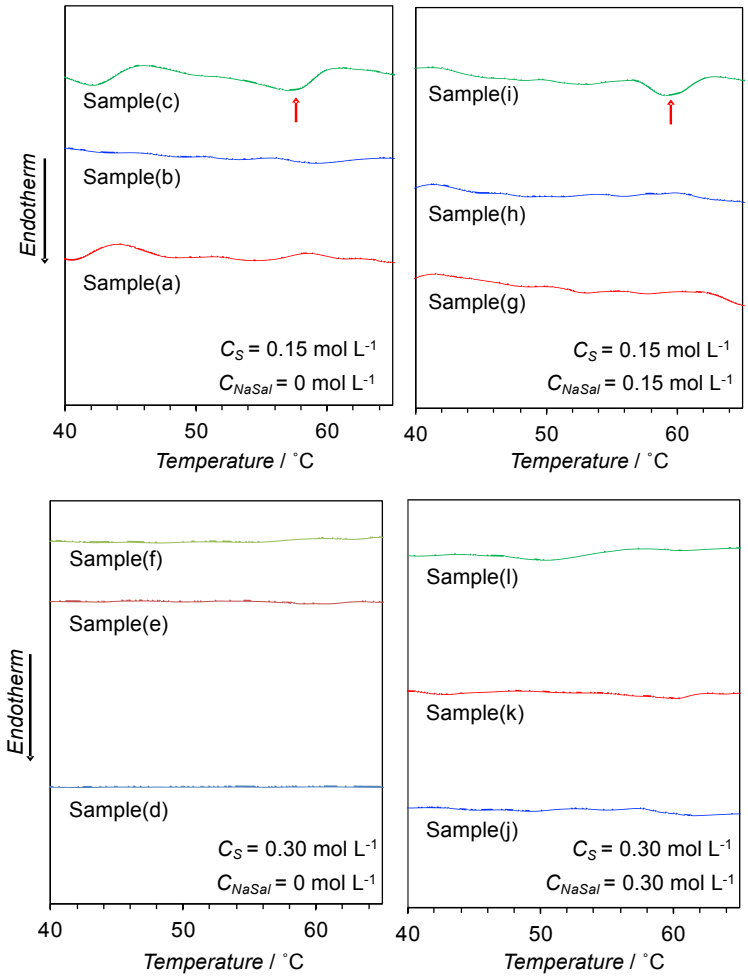

Fig. S4 DSC curves for CTAB/H_2O (C_S = 0.15 mol L^{-1}) (top-left), CTAB/NaSal/H_2O (C_S, C_{NaSal} = 0.15 mol L^{-1}) (top-right), CTAB/H_2O (C_S = 0.3 mol L^{-1}) (bottom-left), and CTAB/NaSal/H_2O (C_S, C_{NaSal} = 0.3 mol L^{-1}) (bottom-right).

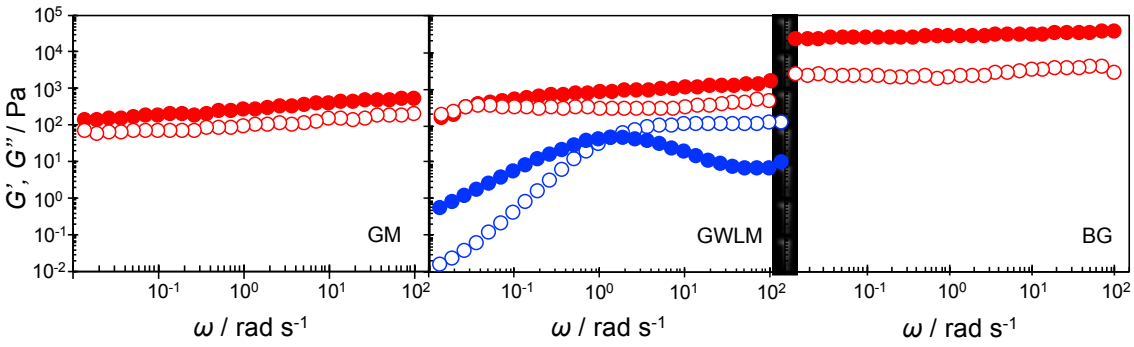

Fig. S5 Storage modulus *G'* (filled symbols) and loss modulus *G''* (open symbols) as a function of the oscillatory shear frequency (ω) for the GM sample (c, C_S = 0.15 mol · L^{-1}, $C_{12\text{-}HOA}$ = 0.099 mol · L^{-1}), the GWLM sample (i, C_S = 0.15 mol · L^{-1}, $C_{12\text{-}HOA}$ = 0.099 mol · L^{-1}, $C_{Na\text{-}Sal}$ = 0.15 mol · L^{-1}), and the BG sample (12-HOA/*n*-decane, $C_{12\text{-HOA}}$ = 0.099 mol L^{-1}) at 25 °C. The results for the WLM solution, sample (g), are also presented as blue symbols for comparison.

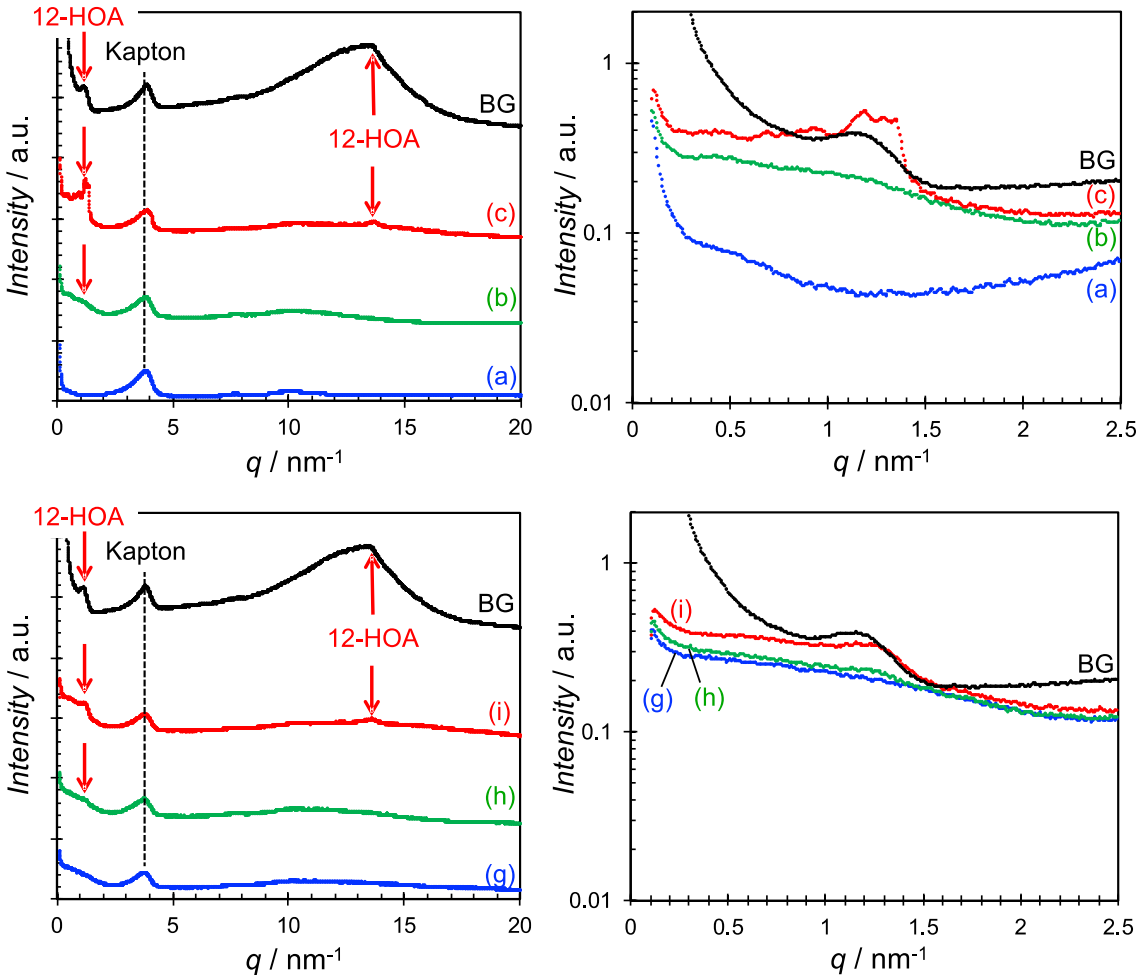

Fig. S6 SWAXS spectra of the micellar solutions (a) and (g), GM samples (b) and (c), GWLM samples (h) and (i), and BG sample (12-HOA/*n*-decane, $C_{12\text{-HOA}} = 0.099$ mol L^{-1}) at 25 °C. Note that the peak at around $q = 3.8$ nm^{-1} originates from the Kapton windows of the sample cell.

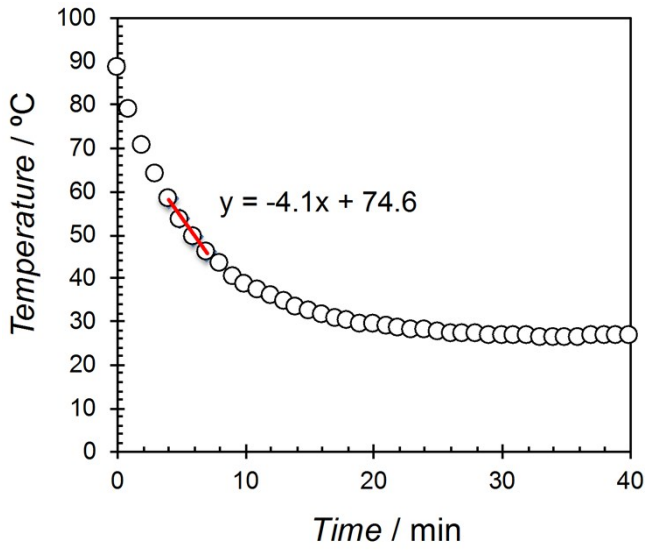

Fig. S7 Cooling curve of samples investigated in this study with an indication of the slope (-4.1 °C min^{-1}) around $T_{sol\text{-}gel}$.