Electronic Supplementary Material (ESI) for RSC Advances.

Self-assembled structural transition in L-Arg/H-AOT mixtures driven by double hydrogen bonding

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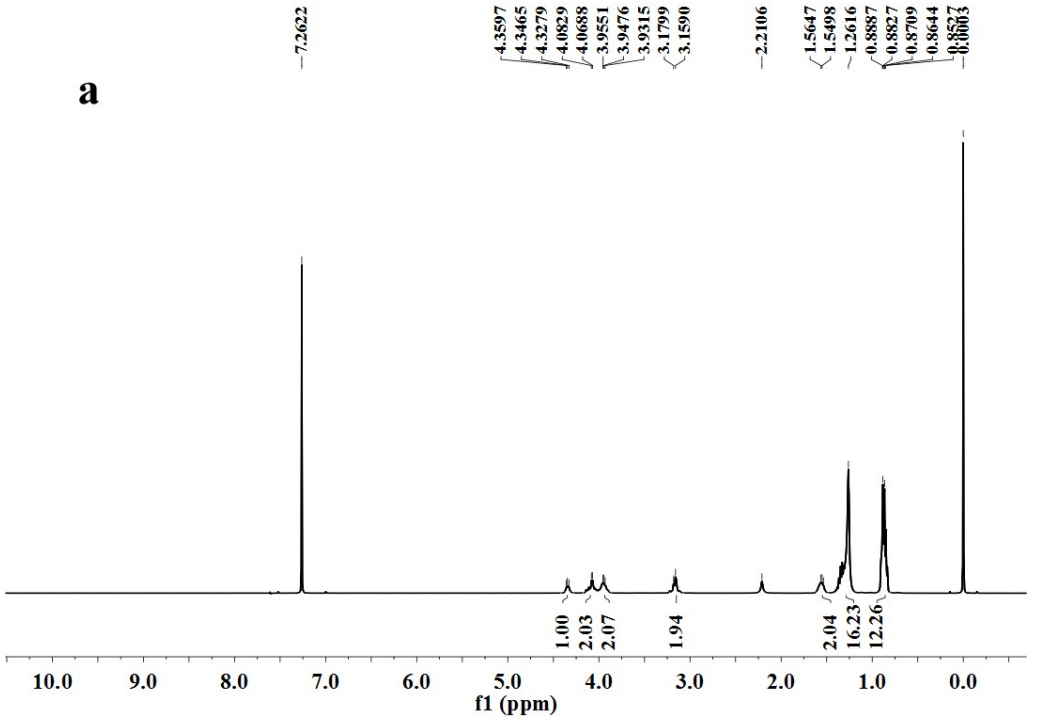
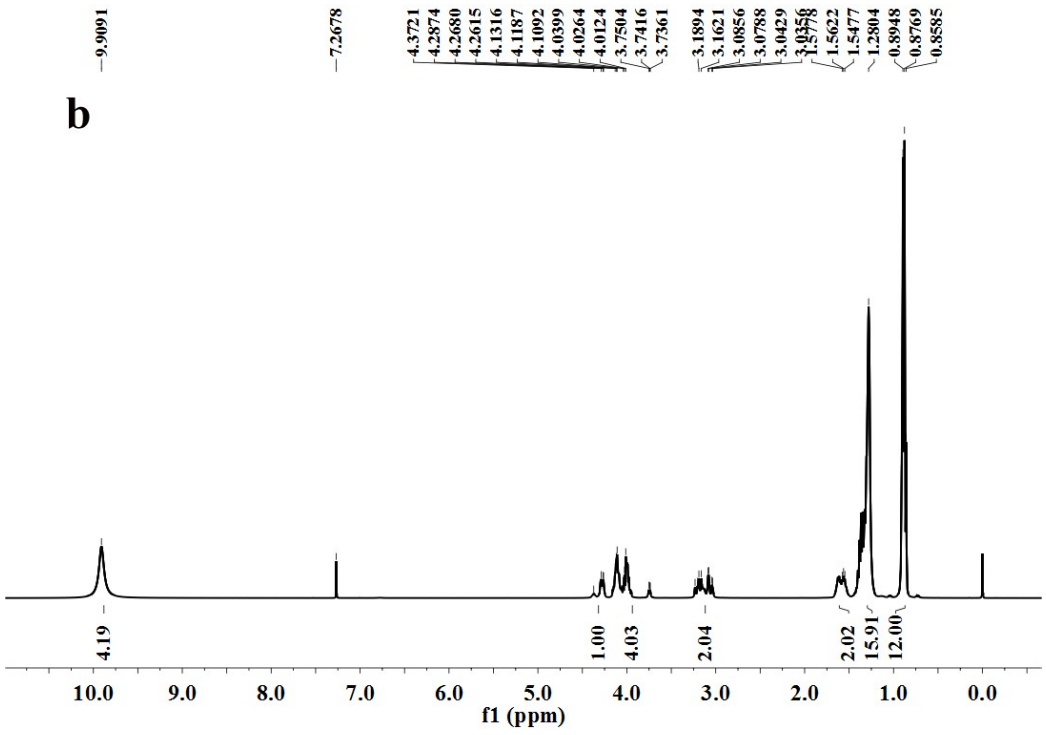
Supporting Information





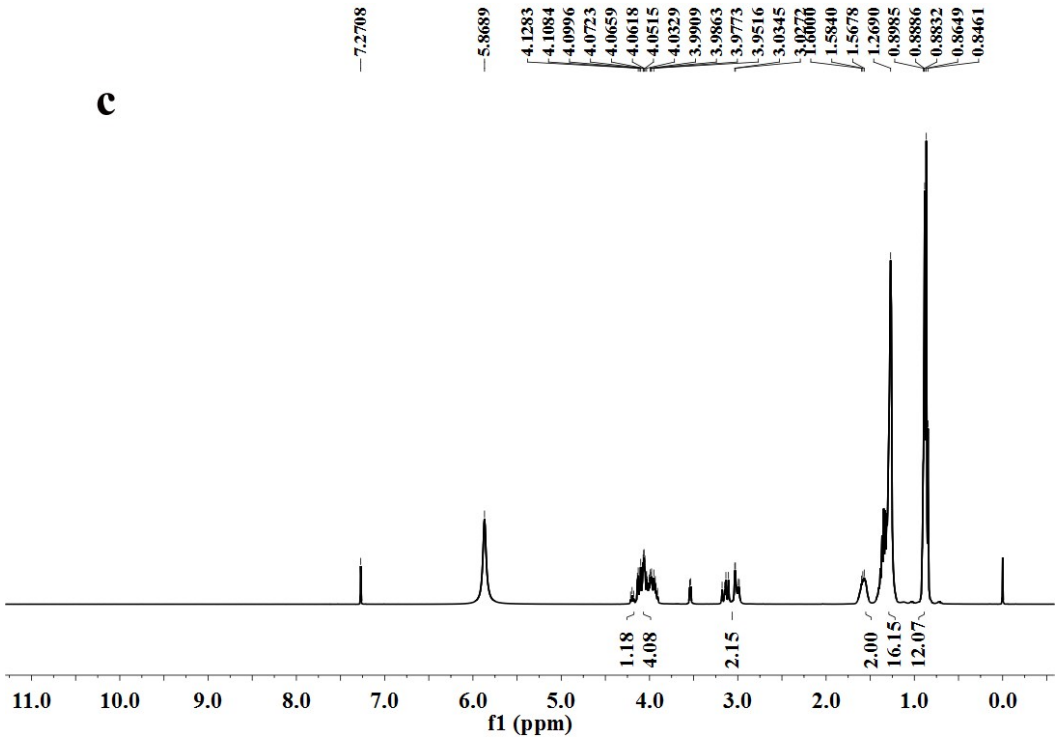


Fig. S1 The ^{1}H NMR spectra of (a) AOT in $CDCl_3$, (b) H-AOT in $CDCl_3$, and (c) H-AOT in $CDCl_3$ with the addition of two drops of D_2O.

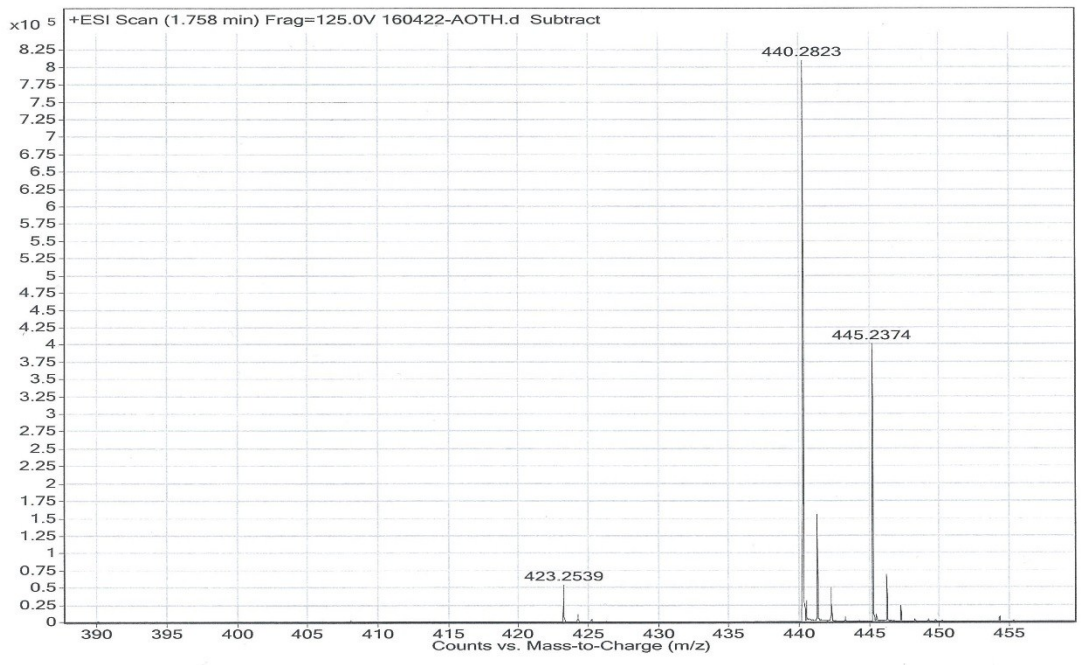


Fig. S2 EI-MS spectrum (positive ion mode) of H-AOT. H-AOT ($C_{20}H_{38}O_7S$): 422.2338; Found: 423.2539 $[M+H]^+$, 440.2832 $[M+NH_4]^+$, 445.2374 $[M+Na]^+$.

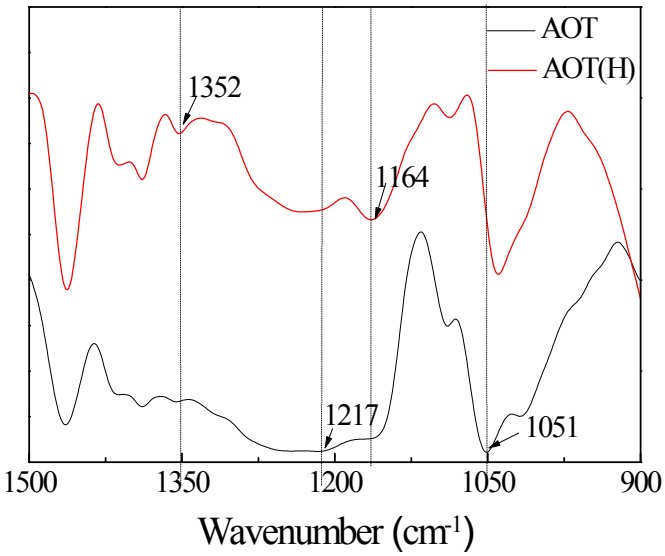


Fig. S3 FT-IR spectra of AOT and H-AOT. Only the sulfonic acid stretching band at 1164 and 1352 cm^{-1} can be observed in FT-IR spectrum of H-AOT instead of the sulfonate stretching band at 1051 and 1217 cm^{-1} in that of AOT.

Fig. S4 Photos of samples of 300 mmol L^{-1}L-Arg (left) and 300 mmol L^{-1} L-Arg/5 mmol $L^{-1}c_{H\text{-}AOT}$ (right) with the addition of a small amount of hydrophobic dye, Sudan II. It can be found that the dye cannot be dissolved in L-Arg solution, while can be easily solubilized in 300 mmol L^{-1} L-Arg/5 mmol $L^{-1}c_{H\text{-}AOT}$ solution.