

Supporting Information

Synergistic mechanism between laurel alkanolamide and hydrophobically associating polyacrylamide in solutions with high salinity

**Quanhua Deng^a, Haiping Li^b, Ying Li^{a*}, Xulong Cao^c, Yong Yang^c,
Xinwang Song^c**

*^aKey Laboratory for Colloid and Interface Chemistry of Education
Ministry, Shandong University, Jinan 250100, P.R. China;*

*^bNational Engineering Technology Research Center for Colloidal
Materials, Shandong University, Jinan 250100, P.R. China;*

*^cGeological Scientific Research Institute, Shengli Oilfield, Dongying
257015, P.R. China.*

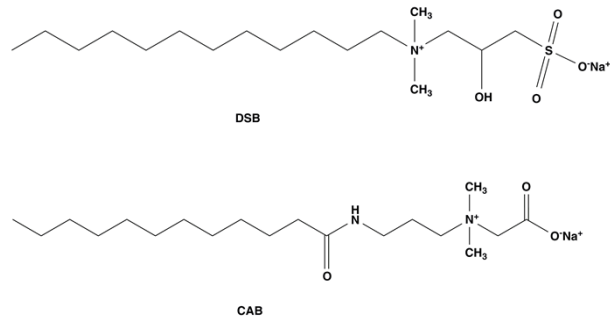
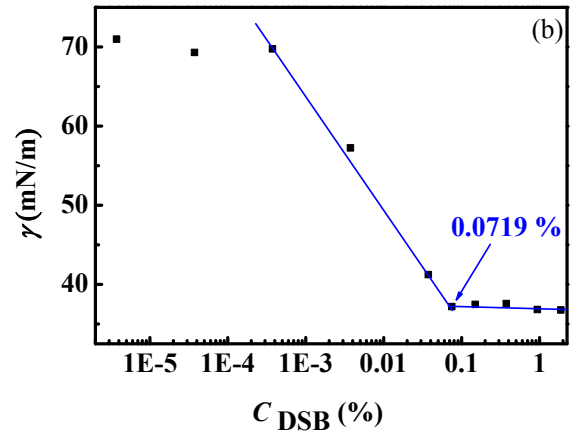
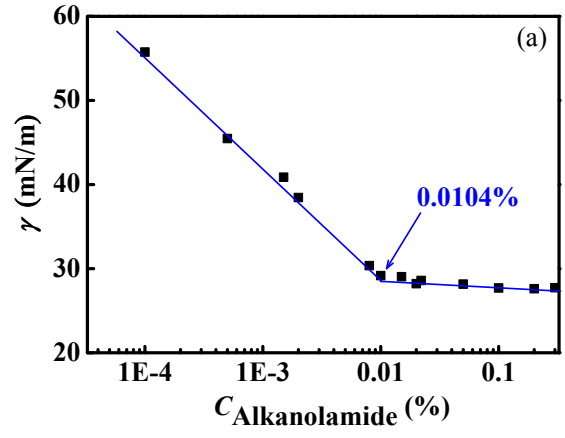


Fig. S1 Chemical structures of DSB and CAB.



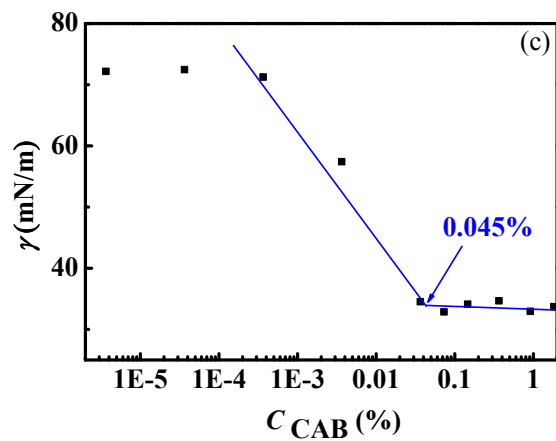


Fig. S2 Surface tension of (a) laurel alkanolamide, (b) DSB and (c) CAB solutions.

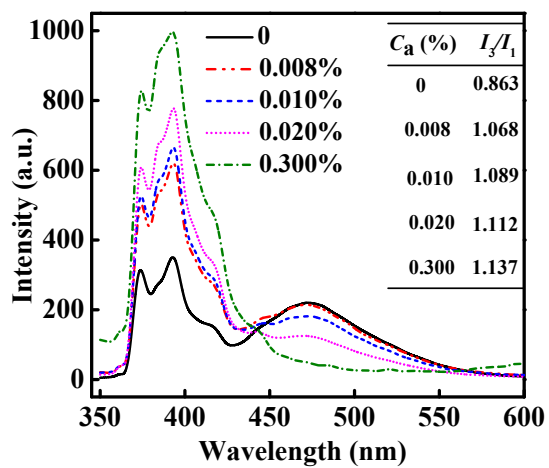


Fig. S3 Fluorescence spectra of 0.1% H/L solutions at various concentrations of alkanolamide.

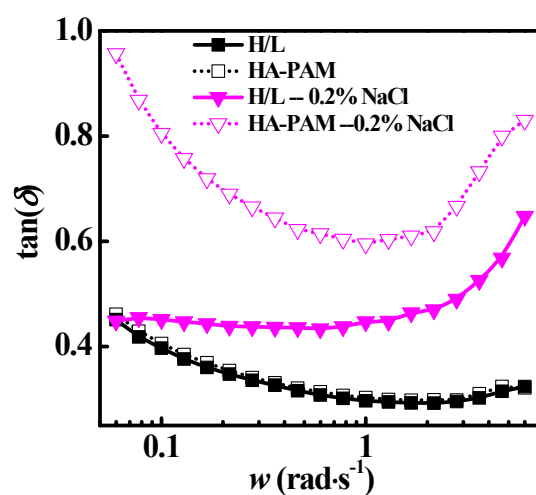


Fig. S4 $\tan(\delta)$ of HA-PAM and H/L solutions with and without 0.2% NaCl.

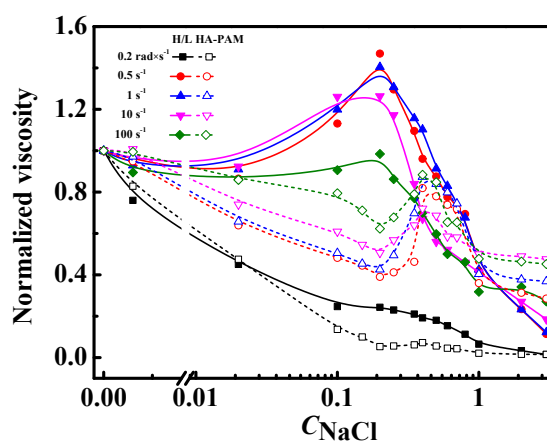


Fig. S5 Variation of normalized viscosity by the initial viscosity with NaCl concentration¹ at various shear rates for 0.1% H/L solutions with 0.02% laurel alkanolamide and 0.1% HA-PAM solutions.

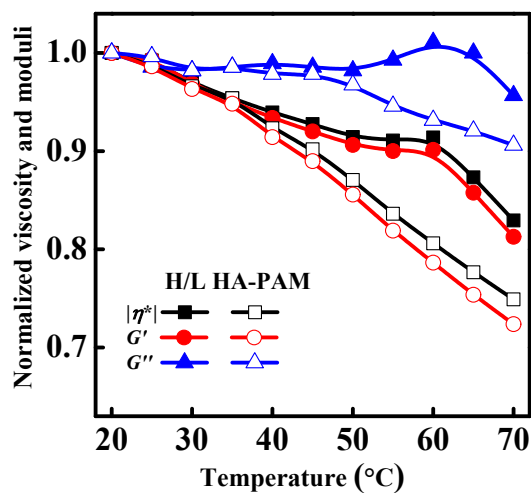


Fig. S6 Normalized viscosity and moduli by initial values for 0.1% HA-PAM and H/L solutions.

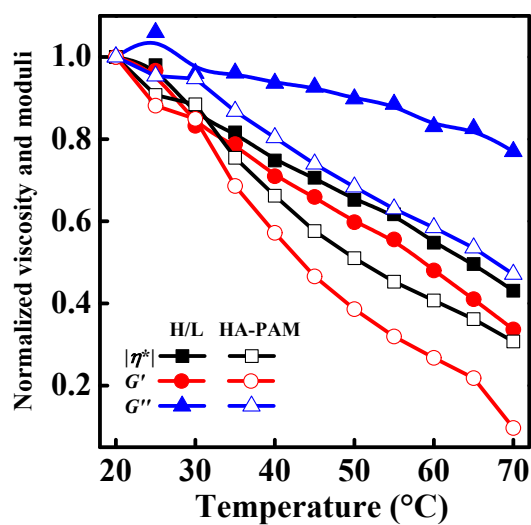


Fig. S7 Normalized viscosity and moduli by initial values for 0.1% HA-PAM and H/L solutions at NaCl concentration of 0.2%.

1. Q. Deng, H. Li, Y. Li, X. Cao, Y. Yang and X. Song, *Aust. J. Chem.*, 2014, **67** (10), 1396-1402.