

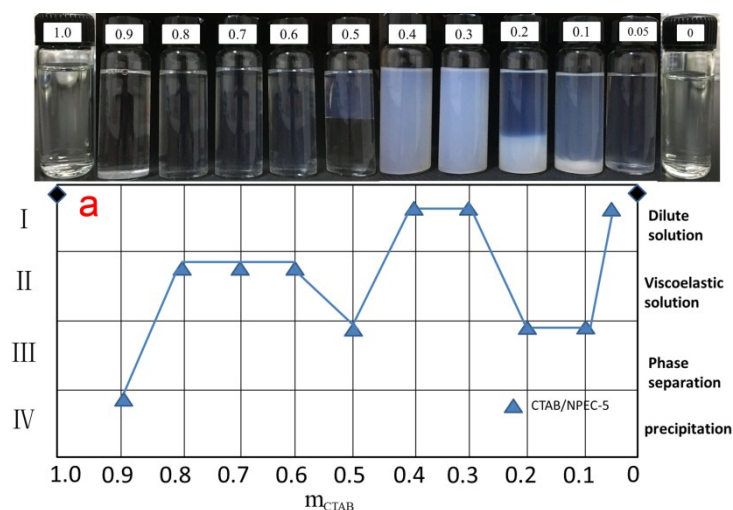
## Supporting Information

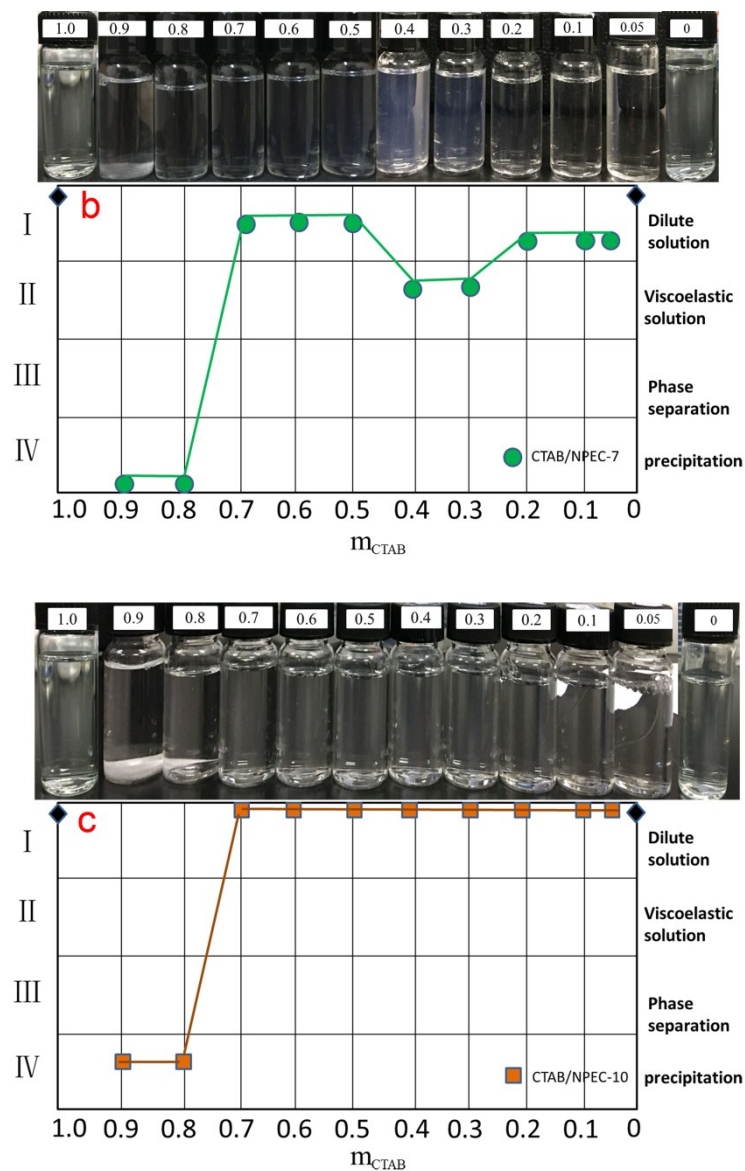
### The rheological characteristics for mixtures of cationic surfactant and anionic-nonionic surfactants: the role of ethylene oxide moieties

Liming Zhang,<sup>a</sup> Wanli Kang,<sup>\*a,b</sup> Derong Xu,<sup>a</sup> Haishun Feng,<sup>a</sup> Pengyi Zhang,<sup>a</sup> Zhe Li,<sup>a</sup> Yao Lu<sup>a</sup> and Hairong Wu<sup>\*a</sup>

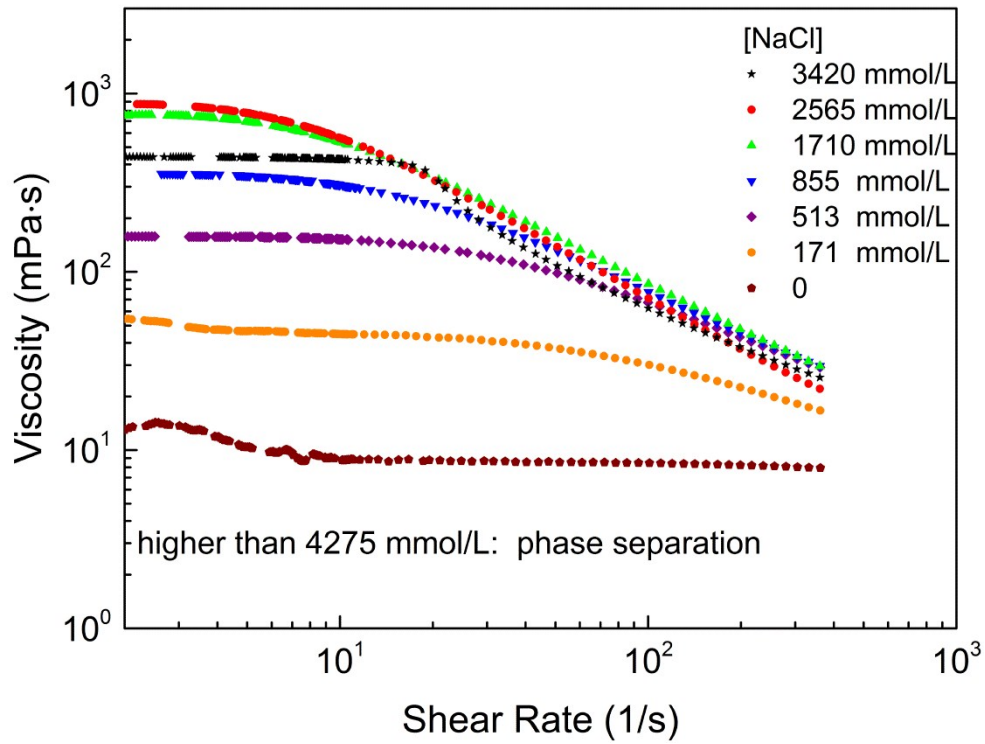
<sup>a</sup>Institute of Enhanced Oil Recovery, China University of Petroleum (Beijing), Beijing, 102249, P.R. China

<sup>b</sup>School of Petroleum Engineering, China University of Petroleum (East China), Qingdao 266580, P.R. China.

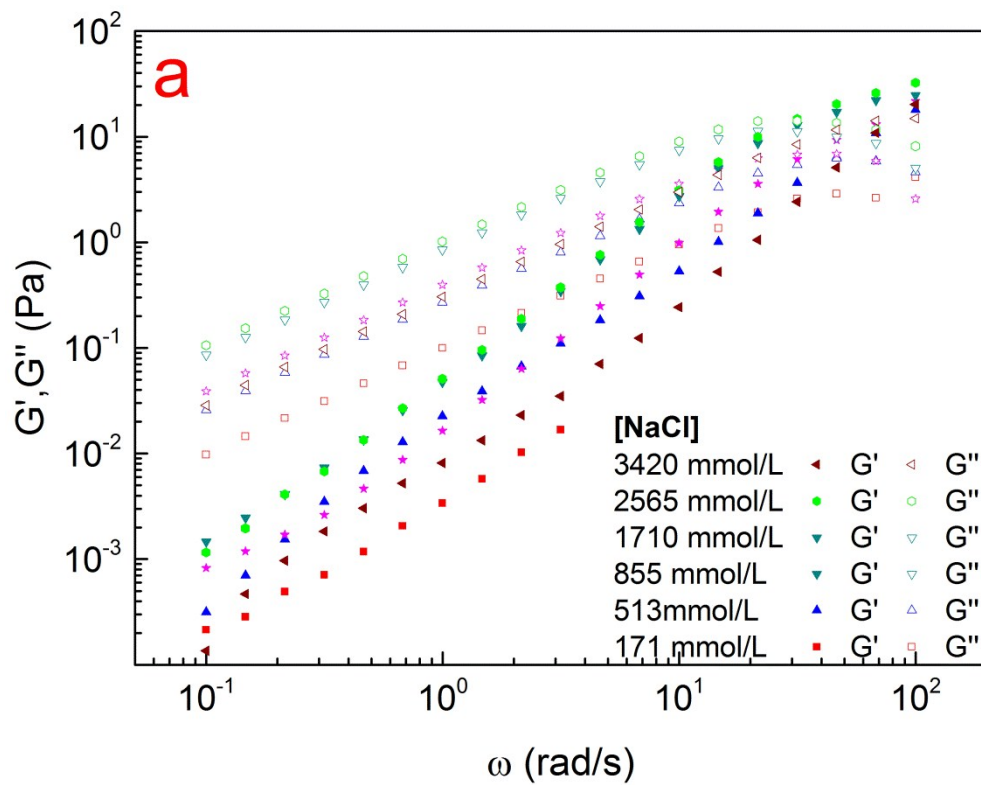


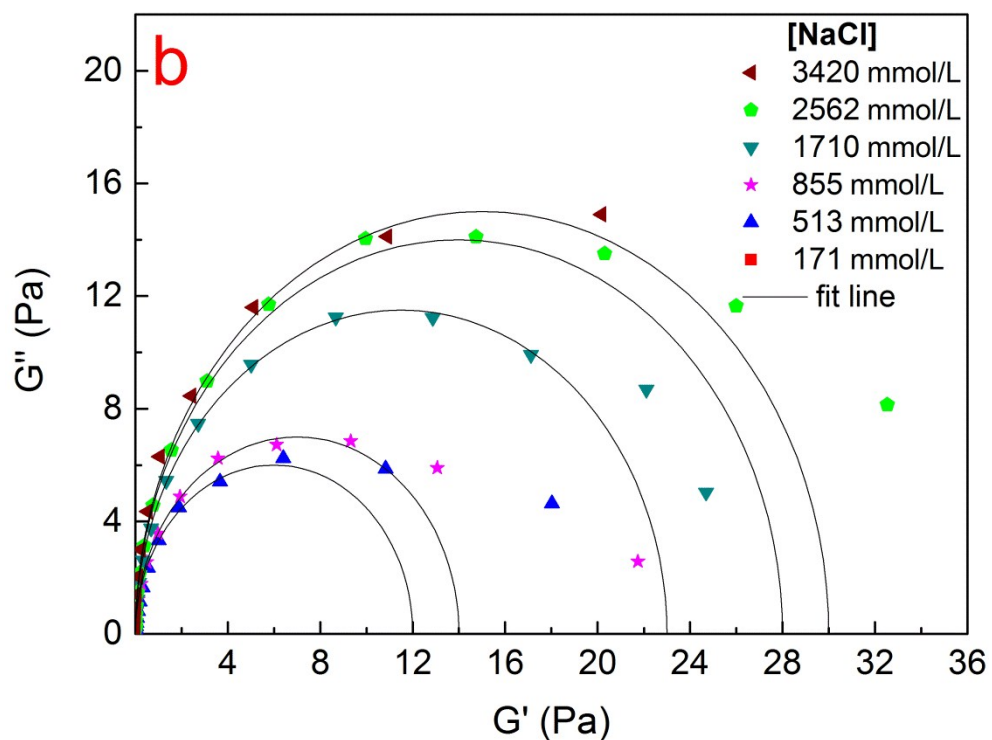


**Fig. S1** Phase behaviors of the CTAB/NPEC-5 (a), CTAB/NPEC-7 (b) and CTAB/NPEC-10 (c) solutions at various mass ratios ( I , II , III and IV represent the regions of the dilute solution, viscoelastic solution, phase separation and precipitation, respectively. 25 °C).

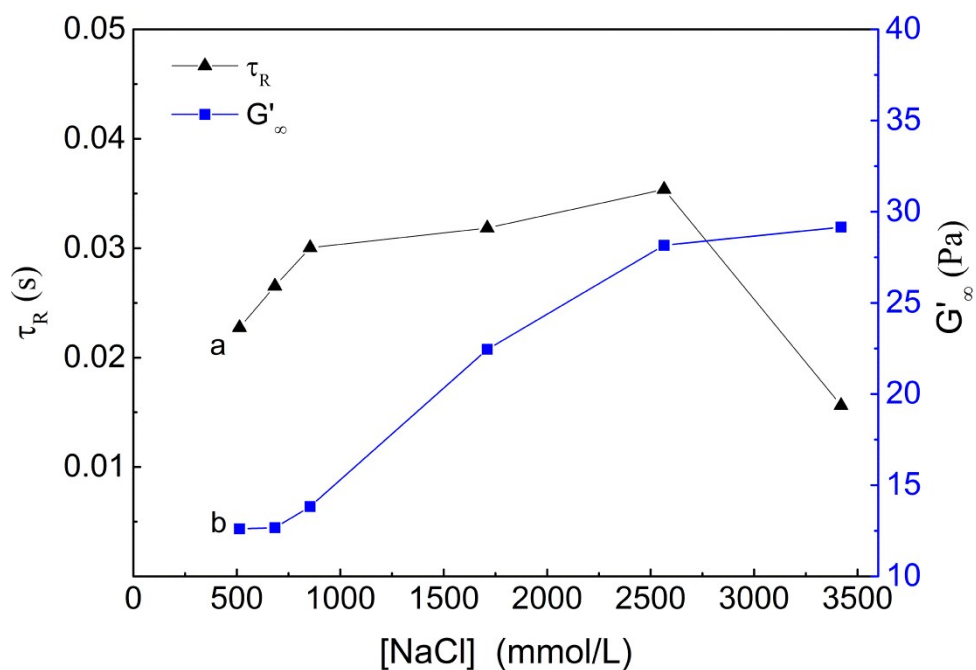


**Fig. S2** Steady rheological curves of CTAB/NPEC-5 at various NaCl concentrations (total concentration is 75 mmol/L)





**Fig. S3** (a) Dynamic rheology curves of CTAB/NPEC-5 with NaCl and (b) Cole-Cole curves at different concentrations of NaCl (total concentration is 75 mmol/L).



**Fig. S4** The relaxation time and the plateau modulus vary with the concentration of NaCl for CTAB/NPEC-5 solutions.