Universal character of breaking of wormlike surfactant micelles by additives of different hydrophobicity

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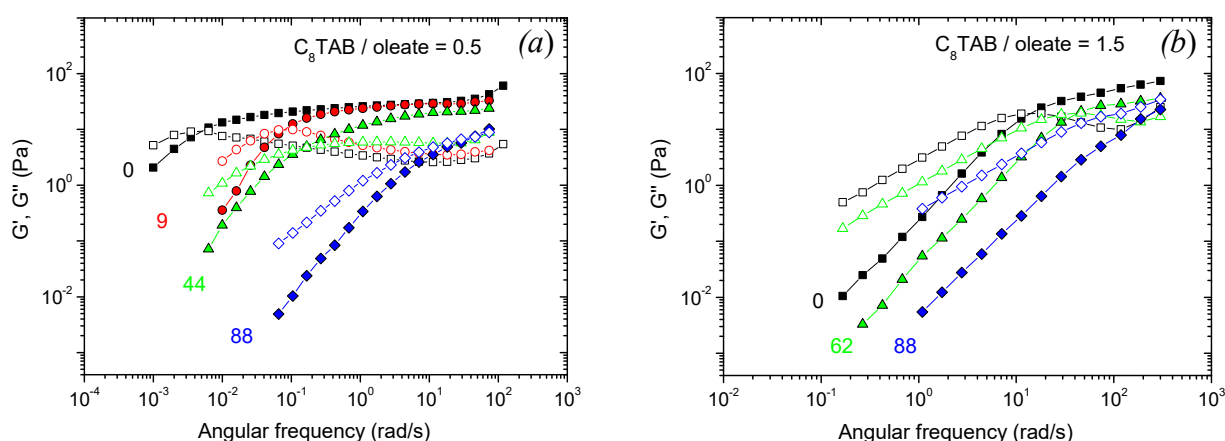
Supplementary materials

Figure S1. Frequency dependences of the storage modulus G′ (filled symbols) and loss modulus G′′ (open symbols) for aqueous solutions containing 78 mM potassium oleate, 39 mM (a) or 117 mM (b) C8TAB, and different concentrations of NIPA indicated in the Figure: 0 mM (squares), 9 mM (circles), 44 or 62 mM (tiangles), 88 mM (diamonds). Temperature: 20^0C, pH 11.
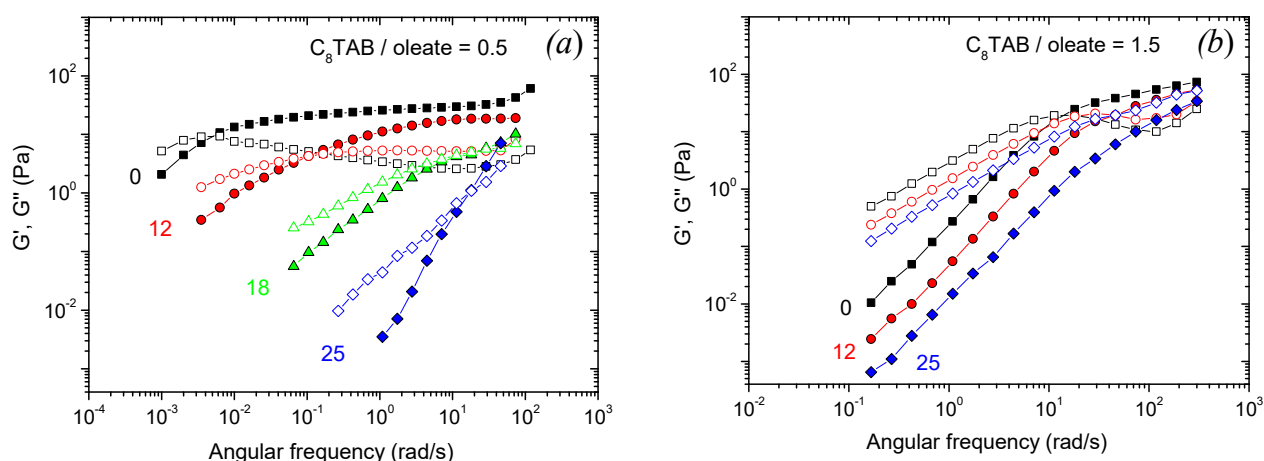
Figure S2. Frequency dependences of the storage modulus G' (filled symbols) and loss modulus G''
(open symbols) for aqueous solutions containing 78 mM potassium oleate, 39 mM (a) or 117 mM (b)
C8TAB and different concentrations of 1-phenylhexane indicated in the Figure: 0 mM (squares), 12
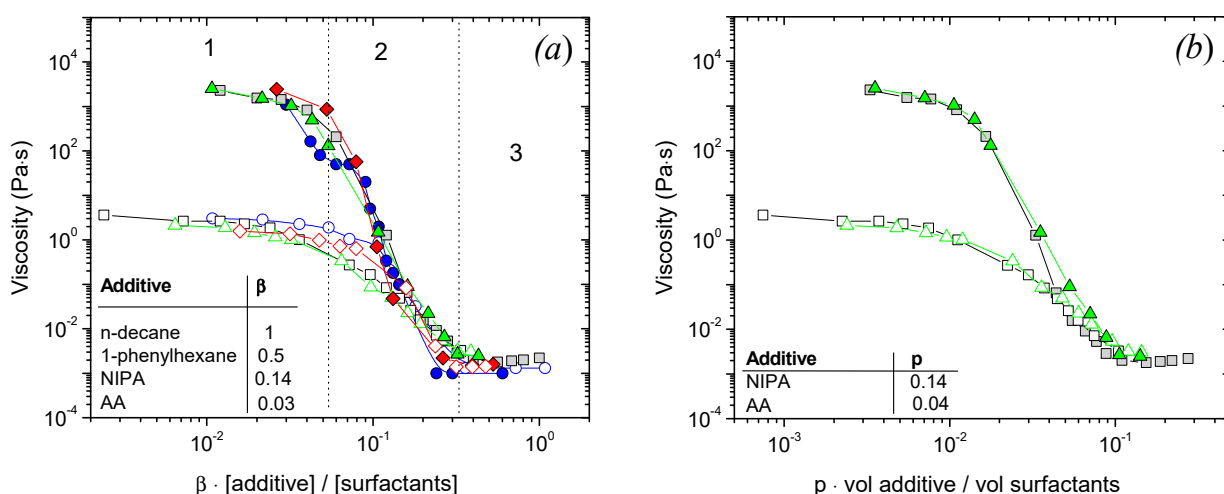mM (circles), 18 mM (tiangles), 25 mM (diamonds). Temperature: 20°C, pH 11.

Figure S3. Dependences of zero-shear viscosity on the molar ratio β·[additive]/[surfactant] (a) or on
the volume ratio p·(vol. additive)/(vol. surfactant) (b) for aqueous solutions containing 78 mM po-
tassium oleate, 39 mM (filled symbols) or 117 mM (open symbols) C8TAB and different additives:
AA (squares), NIPA (triangles), 1-phenylhexane (diamonds), n-decane (circles). β are arbitrary shift
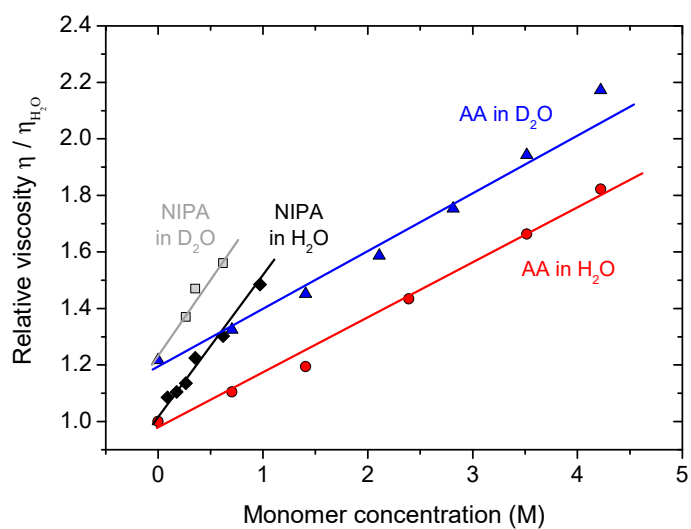factors, and p are partitining coefficients determined form DOSY data (Table 2).

Figure S4. Dependences of relative viscosity on monomer concentration for solutions of AA in H_2O (circles), AA in D_2O (triangles), NIPA in H_2O (diamonds), NIPA in D_2O (squares). Temperature 20^0C.
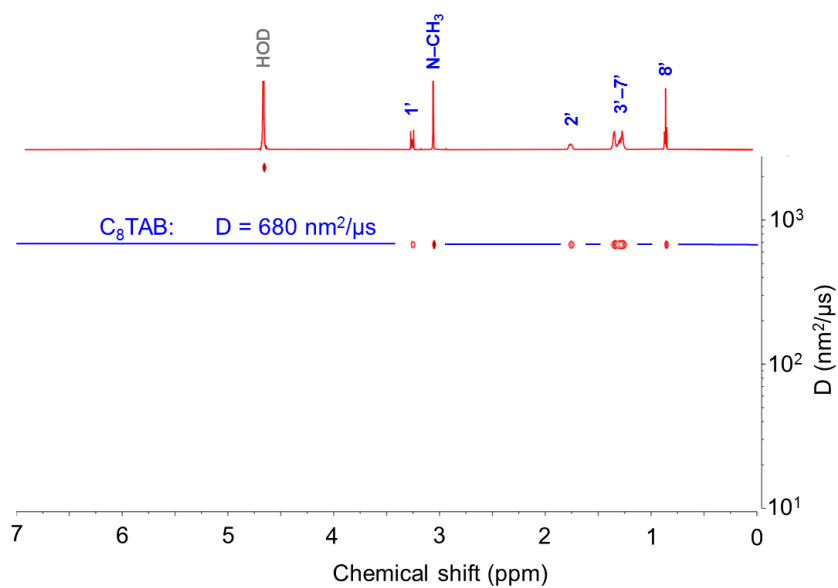

Figure S5. Pseudo-2D DOSY spectrum for 39 mM C8TAB solution in D_2O, pH 11.