

Supplementary Material

Controlling aggregation of sodium dodecylsulphate in aqueous poly (ethylene glycol) solutions.

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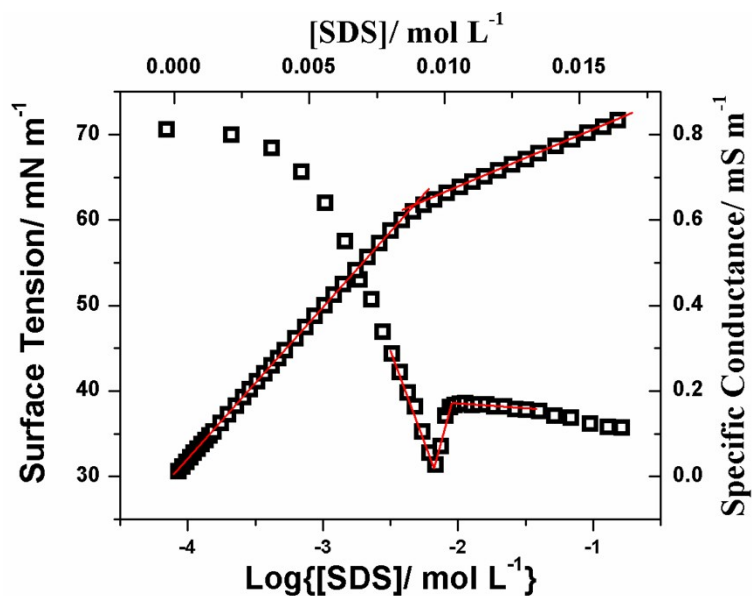


Fig. S1. Plots of variation of γ and specific conductance of SDS in water at 25 °C.

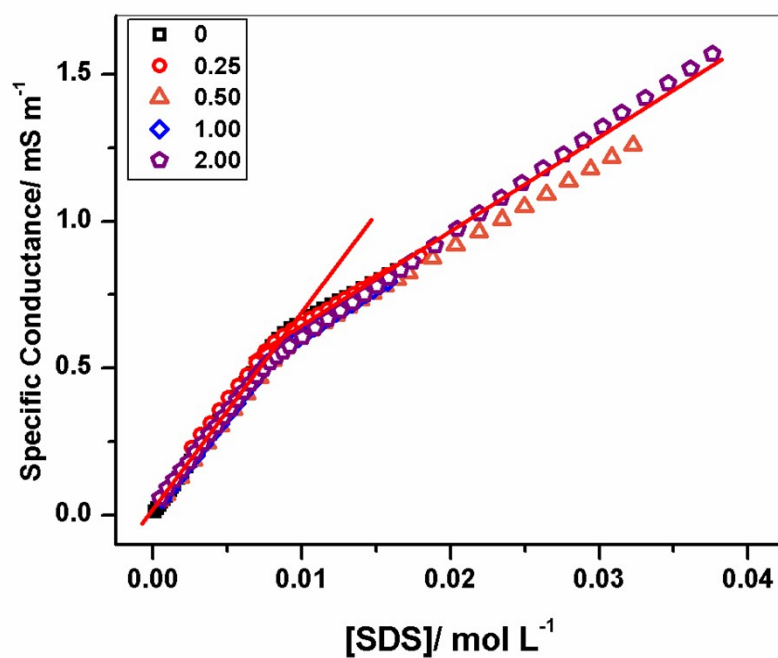


Fig. S2. Variation of specific conductance of SDS with SDS concentration at 25 °C in the presence of PEG-400. Each plot corresponds to a particular composition of PEG-400 (w/w) as indicated in the insets.

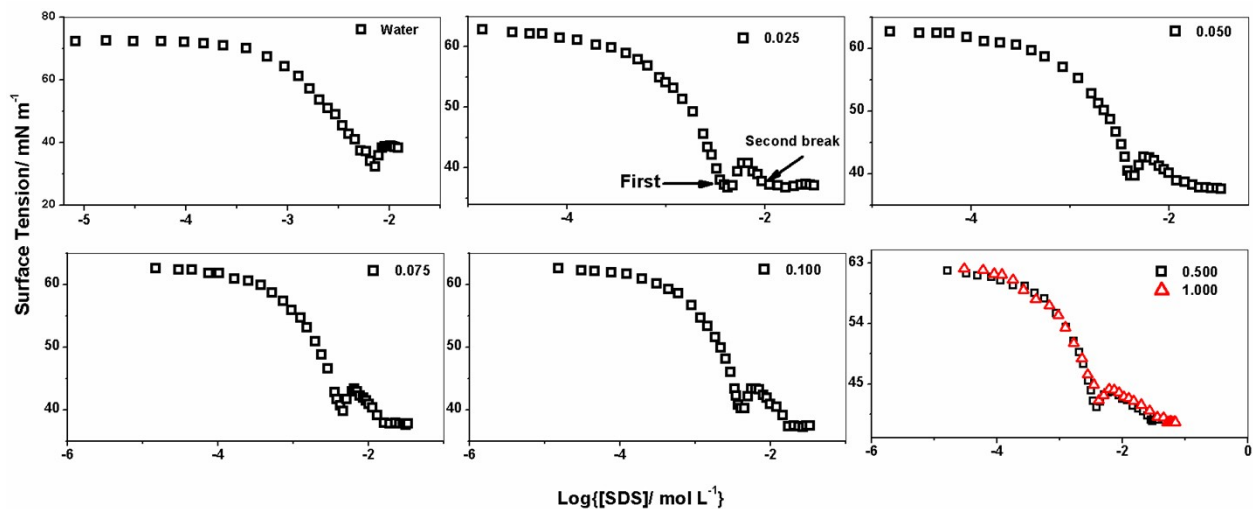


Fig. S3. Plots of variation of γ of SDS in PEG-10000 at 25 °C. The concentrations of PEG as wt % are shown in the inset.

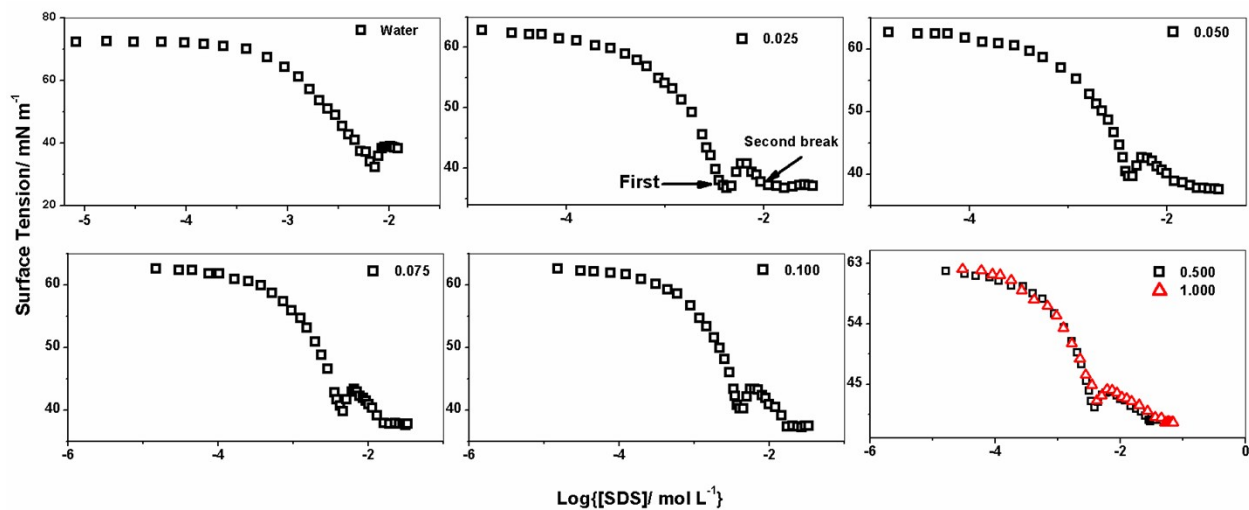


Fig. S4. Plots of variation of γ of SDS in PEG-20000 at 25 °C. The concentrations of PEG as wt % are shown in the inset.

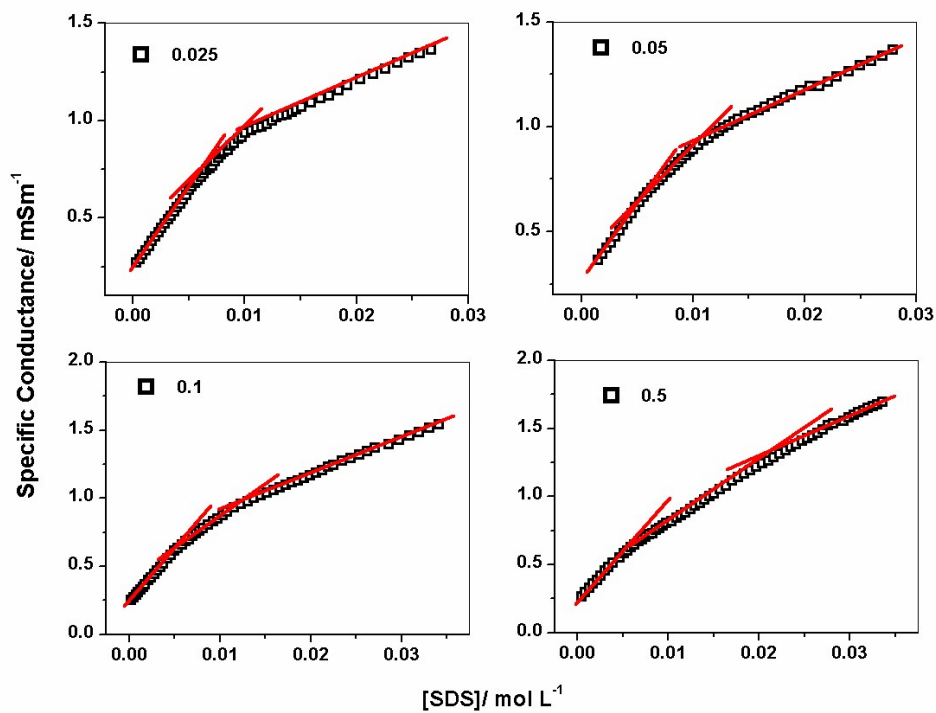


Fig. S5. Variation of specific conductance of SDS in varying amounts of PEG-20000 with SDS concentration at 25 °C. Each plot corresponds to a particular composition of PEG-20000 (w/w %) as indicated in the insets.

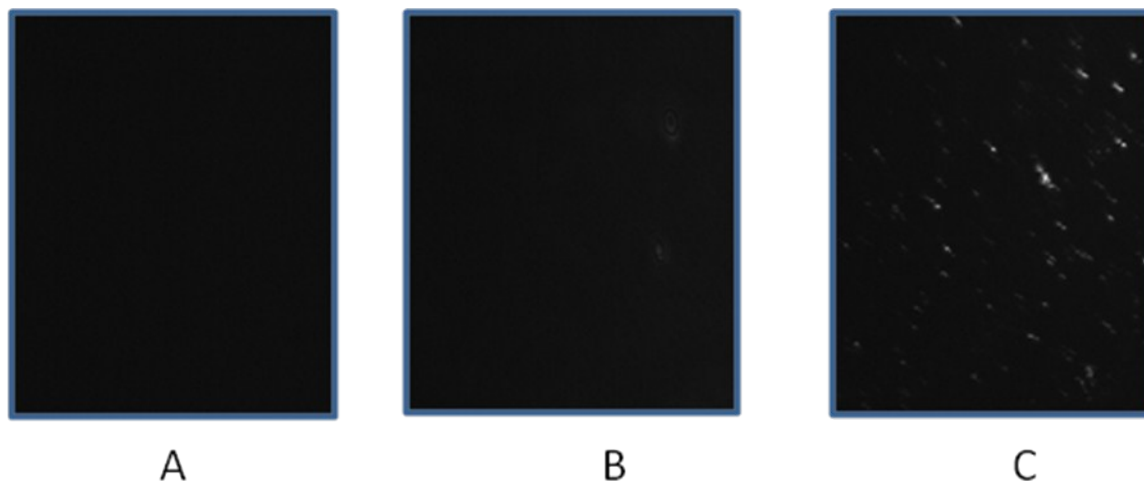


Fig. S6. BAM images of SDS in 0.05 % PEG-10000. (A) 0.05 % PEG-10000 (B) SDS (0.001 mol L⁻¹) + 0.05% PEG-10000 and (C) SDS (0.0075 mol L⁻¹) + 0.05% PEG-10000.

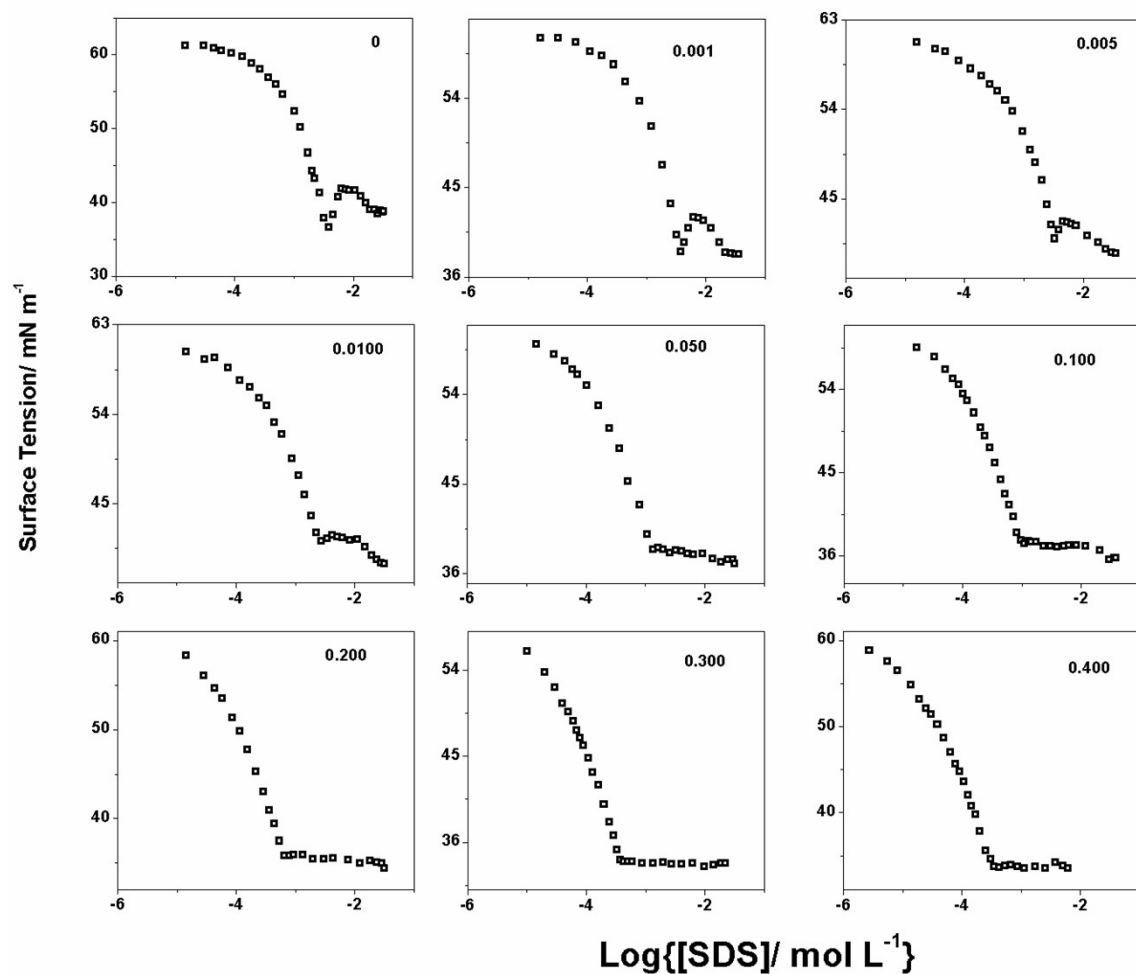


Fig. S7. Plots of variation of γ of SDS in PEG-20000 at 25 °C as a function of [NaCl]. The concentration of PEG-20000 is 0.5 % w/w and the [NaCl] are shown in the inset.

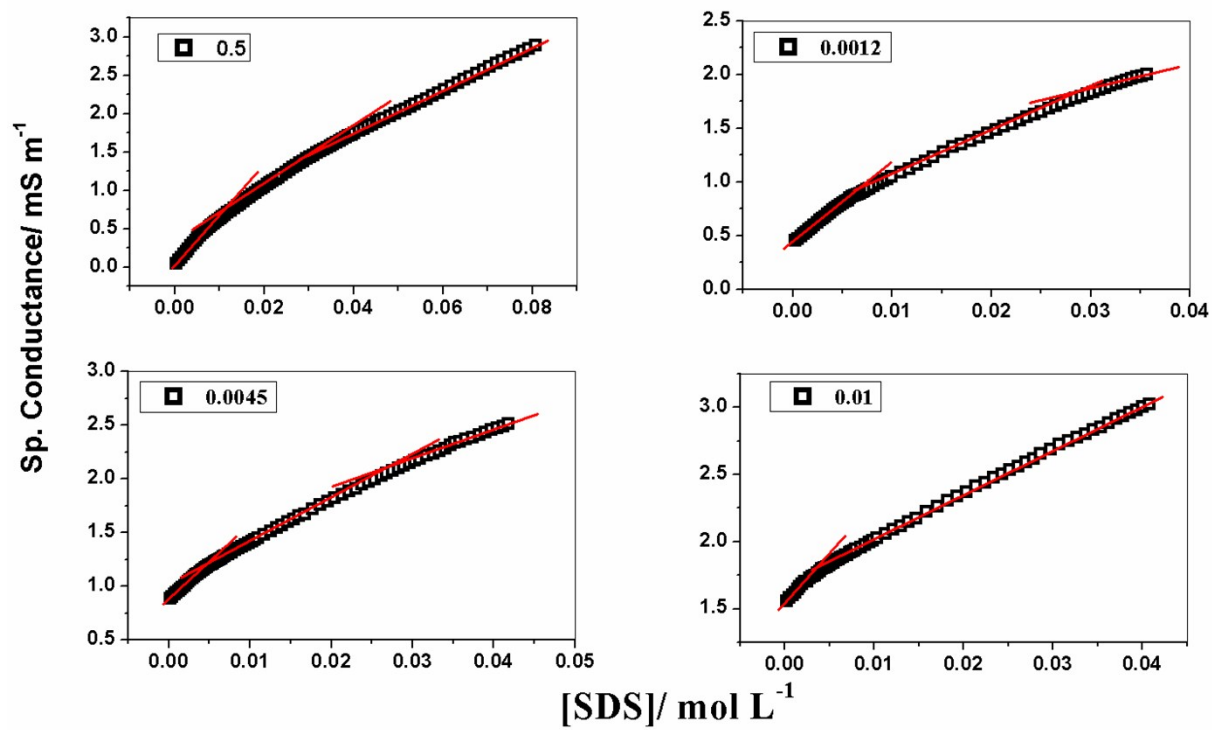


Fig. S8. Variation of specific conductance of SDS in 0.5 % w/w of PEG-6000 containing varying amounts of NaCl at 25 °C. Each plot corresponds to a particular [NaCl] as indicated in the insets.

Table S1. Critical micelle concentrations (cmc) of SDS in varying amounts of PEG-400

PEG-400 (% w/w)	cmc \pm 0.0002 / mol L⁻¹ (from S. T.)	cmc \pm 0.0002 / mol L⁻¹ (from Cond.)
0	0.0086	0.0088
0.25	0.0087	0.0084
0.50	0.0087	0.0084
1.00	0.0097	0.0090
2.00	0.0100	0.0092

Table S2. Values of CAC and CMC for SDS in varying amounts of PEG-6000 obtained from surface tension and conductance measurements.

[PEG] / % w/w	cac \pm 0.0002 / mol L⁻¹		cmc \pm 0.0002 / mol L⁻¹	
	From S.T.	From Cond.	From S.T.	From Cond.
0.025	0.0050	0.0062	0.0096	0.0100
0.050	0.0051	0.0063	0.0155	0.0120
0.075	0.0048	0.0063	0.0190	0.0130
0.100	0.0040	0.0056	0.0198	0.0152
0.500	0.0047	0.0068	0.0600	-

Table S3. Values of CAC and CMC for SDS in varying amounts of PEG-10000 obtained from surface tension.

[PEG] / % w/w	cac \pm 0.0002 / mol L ⁻¹	cmc \pm 0.0002 / mol L ⁻¹
0.025	0.0043	0.0103
0.050	0.0043	0.0133
0.075	0.0045	0.0157
0.100	0.0041	0.0173
0.500	0.0038	0.0299
1.000	0.0041	0.0516

Table S4. Values of CAC and CMC for SDS in varying amounts of PEG-20000 obtained from surface tension and conductance measurements.

[PEG] / % w/w	cac \pm 0.0002 / mol L ⁻¹		cmc \pm 0.0002 / mol L ⁻¹	
	From S.T.	From Cond.	From S.T.	From Cond.
0.025	0.0042	0.0062	0.0105	0.0100
0.050	0.0043	0.0058	0.0130	0.013
0.075	0.0037	—	0.0144	—
0.100	0.0038	0.0060	0.0170	0.0145
0.500	0.0039	0.0065	0.0201	0.0200
1.000	0.0023	—	0.0249	—

Table S5. Values of CAC and CMC for SDS in 0.5 % w/w of PEG-6000 containing varying amounts of NaCl obtained from surface tension and conductance measurements.

[NaCl] / mol L ⁻¹	cac ± 0.0002 / mol L ⁻¹		cmc ± 0.0002 / mol L ⁻¹	
	From S.T.	From Cond.	From S.T.	From Cond.
0	0.0047	0.0068	0.0340	0.0300
0.0012	0.0055	0.0054	0.0270	0.0240
0.0050	0.0062	0.0058	0.0230	0.0220
0.0100	0.0043	–	0.0184	0.0300
0.0500	0.0035	–	0.0135	–
0.1000	–	–	0.0010	–
0.3000	–	–	0.0005	–
0.5000	–	–	0.0003	–

Table S6. Values of CAC and CMC for SDS in 0.5 % w/w of PEG-20000 containing varying amounts of NaCl obtained from surface tension and conductance measurements.

[NaCl] / mol L ⁻¹	cac ± 0.0002 / mol L ⁻¹		cmc ± 0.0002 / mol L ⁻¹	
	From S.T.	From Cond.	From S.T.	From Cond.
0	0.0063	0.0065	0.0190	0.0200
0.0010	0.0061	–	0.0200	–
0.0050	0.0045	–	0.0270	–
0.0100	–	–	0.0250	–
0.0500	–	–	0.0134	–
0.1000	–	–	0.0009	–
0.2000	–	–	0.0006	–
0.3000	–	–	0.0003	–
0.4000	–	–	0.0003	–