## Interfacial properties of binary surfactants at oil-water interface

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1 Tables

5 Figures

Initial Conditions	Parameter settings
Physics	Compass II
Initial Speed	Random
Calculation of Electrostatic Actions	Atom Based
Calculation of van der Waals action	Ewald
Truncation radius	12.5Å
Time step	1 fs
Simulation time	500ps
Synthesize	NPT, NVT
Temperature Controller	Andersen
Frequency of trajectory information	X=2000
output	

Table S1 Calculated parameters for molecular dynamics simulations



**Fig.S1** Interface thickness diagram. (toil, twater and ttotal indicate the thickness of oil layer at the interface, the thickness of water layer at the interface, and the total interface thickness, respectively.)



Fig. S2 Reduction of IFT (a) Experimental value; (b) Simulated value



**Fig.S3** Different concentrations of PS were distributed at the oil-water interface. (a)5, (b)10, (c)15, (d)20, (e)25.



**Fig. S4** Density distribution of PS, BS, GS with different concentrations along Z direction as a function of concentration.



Fig. S5 MSD of different surfactants. (a)BS, (b)GS