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Supplementary Information

Amphiphilic Nanosheets Self-assembly at the Water/Oil Interface: Computer Simulations

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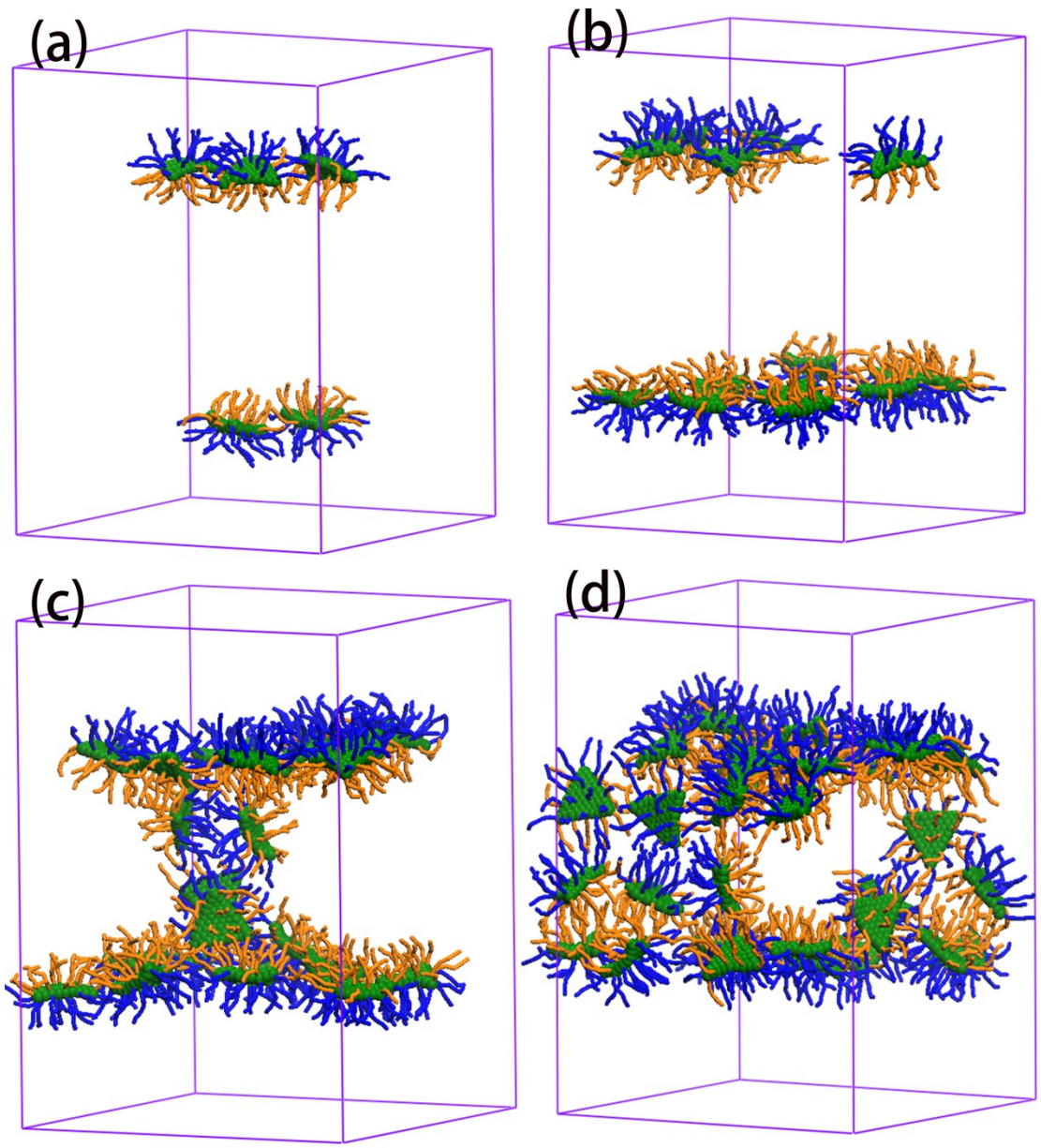


Figure S1. Adsorption morphologies of AJNs at O/W interface with different concentrations: (a) 0.06% AJNs, (b) 0.17% AJNs, (c) 0.28% AJNs, (d) 0.43% AJNs. The AJNs concentration is described by the number ratio of AJNs molecules to total molecules of aqueous phase. The simulated system is case B: the interaction parameter $a_{W\text{-}HL}$ =100, $a_{W\text{-}HB}$ =125.

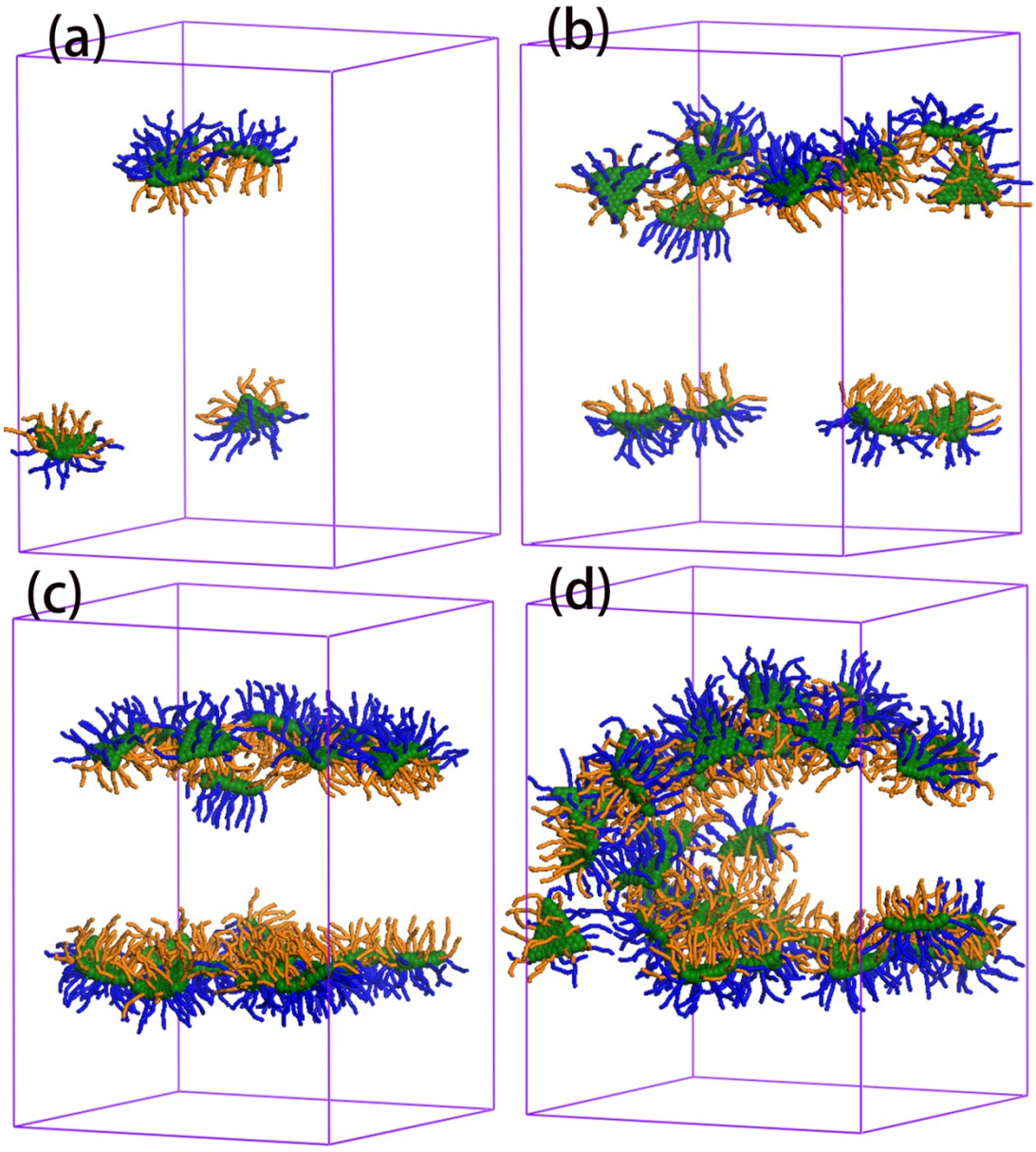
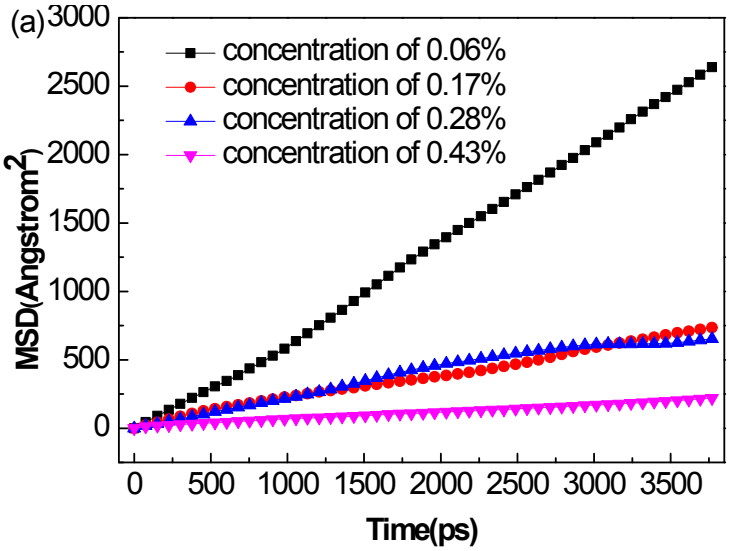
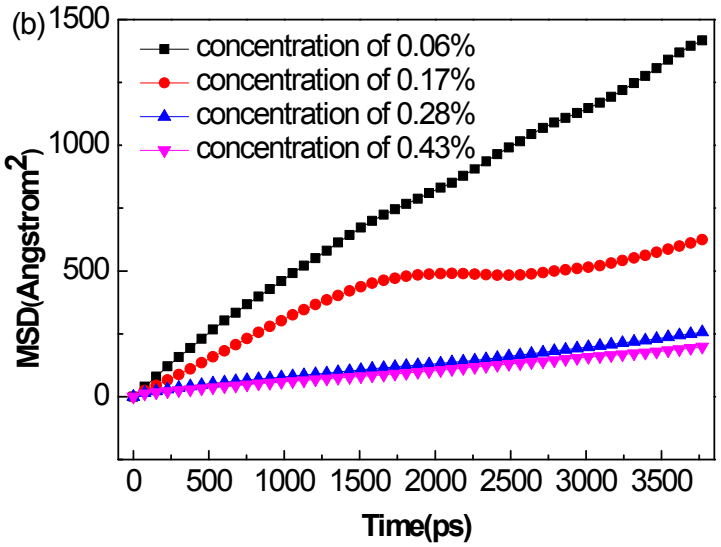


Figure S2. Adsorption morphologies of AJNs at O/W interface with different concentrations: (a) 0.06% AJNs, (b) 0.17% AJNs, (c) 0.28% AJNs, (d) 0.43% AJNs. The AJNs concentration is described by the number ratio of AJNs molecules to total molecules of aqueous phase. The simulated system is case C: the interaction parameter $a_{W\text{-}HL}$ =110, $a_{W\text{-}HB}$ =115.





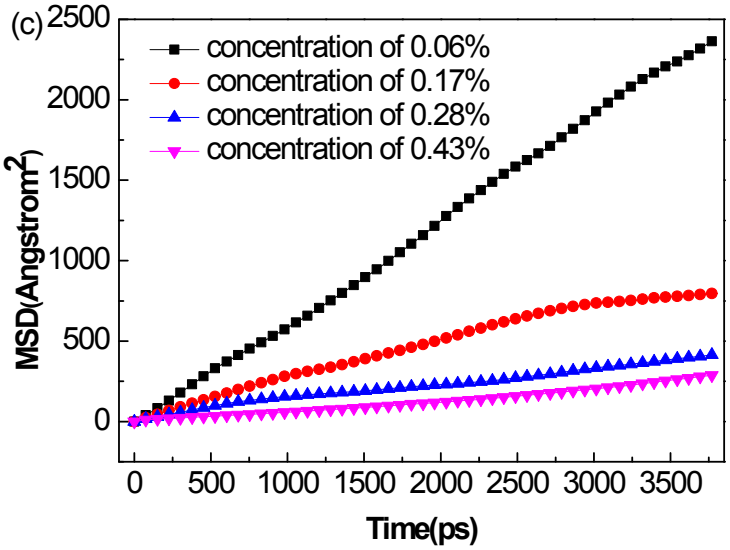


Figure S3. The MSD of AJNs at different concentrations for different simulated systems: (a) the interaction parameter $a_{W\text{-}HL}$ =80, $a_{W\text{-}HB}$ =150; (b) the interaction

parameter $a_{W\text{-}HL}$ =100, $a_{W\text{-}HB}$ =125; (c) the interaction parameter $a_{W\text{-}HL}$ =110, $a_{W\text{-}HB}$ =115.

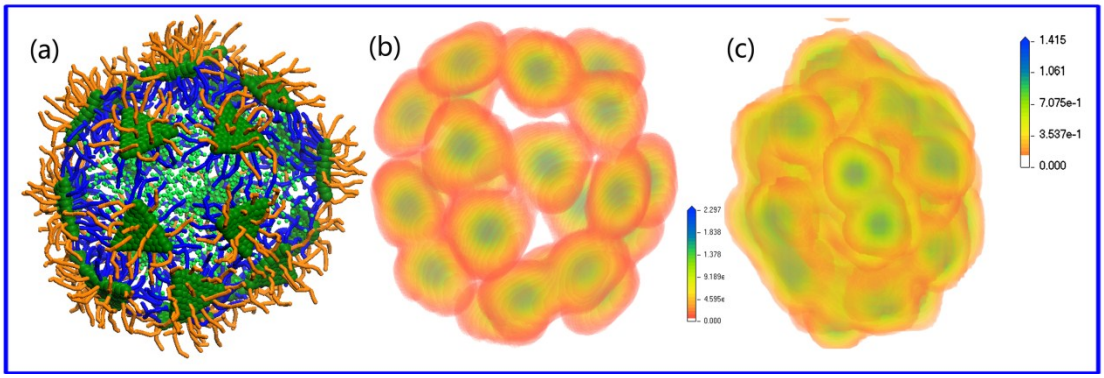


Figure S4. (a) Morphologies of water-in-oil emulsions, (b) the density field of triangular-nanosheets of AJNs, (c) the density field of AJNs for case A simulated system.

Table S1. Interfacial tension (γ) as function of surface coverage.

number of JANs	surface coverage	Interfacial tension(γ/DPD units)		
5	0.1	6.999126	7.006602	7.017679
8	0.167	6.927859	6.907504	6.954463
14	0.3	6.681593	6.882193	6.199311
23	0.5	6.286384	5.686764	6.232753
33	0.7	2.961284	3.037463	3.015898