Supporting information for [Self-assembly of Janus Ellipsoids: a Brownian Dynamics Simulation with a Quantitative Nonspherical-Particle Model]



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Fig.S1 Phase diagram of final aggregates of oblate Janus ellipsoid in the λ_o - x plane at $T^* = 0.08$. Typical self-assembled structures are shown: (a) columnar aggregate; (b) lamella; (c) vesicle; (d) random aggregation structure; (e) wormlike structure.



Fig.S2 Phase diagram of final aggregates of prolate Janus ellipsoid in the $\lambda_p - x$ plane at $T^* = 0.08$. Typical self-assembled structures are shown: (a) liquid crystal; (b) spherical micelle; (c) wormlike micelle; (d) random aggregation structure.



Fig.S3 The potential profiles depending on dihedral angle β_{IJ} and distance r_{IJ} of Janus ellipsoid ($\lambda_p = 0.33$, x = 0.50) at fixed α_I and α_J : (a) $\alpha_I = 0.3\pi$, $\alpha_J = 0.6\pi$; (b) $\alpha_I = 0.5\pi$, $\alpha_J = 0.5\pi$; (c) $\alpha_I = 0.75\pi$, $\alpha_J = 0.25\pi$.



Fig.S4 Typical self-assembled structures of oblate Janus ellipsoids for larger system size of 200 particles in a 28.6×28.6 nm³ cubic box. (a)-(h) represent self-assembled structures in Fig.2ah.



(a)

(b)

(d) **(e) (f)**

Fig.S5 Typical self-assembled structures of prolate Janus ellipsoids for larger system size of 200 particles in a 28.6×28.6×28.6 nm³ cubic box. (a)-(f) represent self-assembled structures in Fig.3a-f.