Electronic Supplementary Material (ESI) for Soft Matter.

Supporting Information

Patchy colloidal particles at the fluid-fluid interface

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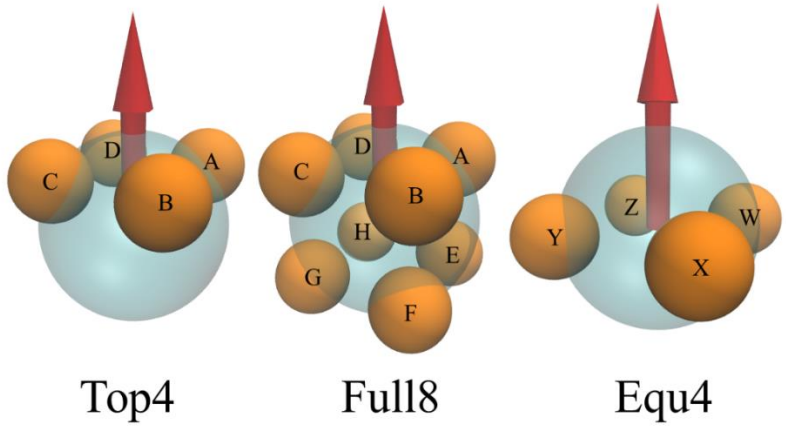

Fig. S1 Rough particle models. The patches, which are shown as orange spheres, were centered at the colloidal particle surface. The radius of the patches was 1.0σ. Exact coordinates of the labelled patches are provided in table S1. Each red arrow indicates the orientation vector of the colloidal particle.

Patch	*x*	*y*	*z*
A	1.49094	1.49094	1.34321
B	−1.49094	1.49094	1.34321
C	−1.49094	−1.49094	1.34321
D	1.49094	−1.49094	1.34321
E	1.49094	1.49094	−1.34321
F	−1.49094	1.49094	−1.34321
G	−1.49094	−1.49094	−1.34321
H	1.49094	−1.49094	−1.34321
W	1.76777	1.76777	0
X	−1.76777	1.76777	0
Y	−1.76777	−1.76777	0
Z	1.76777	−1.76777	0

Table S1 Exact coordinates (in σ) of patches from the center of colloidal particle with the orientation vector (red arrow in Fig. S1) pointing towards the *z*-axis.

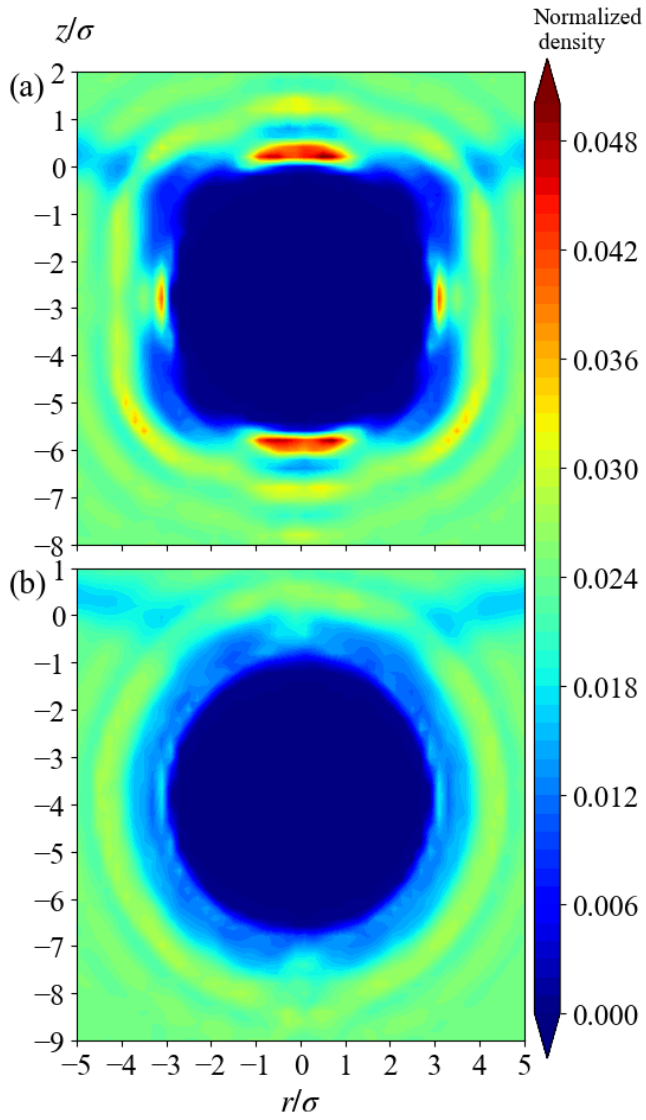

Fig. S2 a) Plot of normalized number density of fluid particles as a function of *z* coordinate and radial distance *r* from Full8 rough particle with patch radius 1.5σ center at $\langle z_p \rangle = -3\sigma$. *r* had a circular symmetry, and the density was divided by *r* so that it was constant for large distances. b) Same as a), but $\langle z_p \rangle = -4\sigma$.

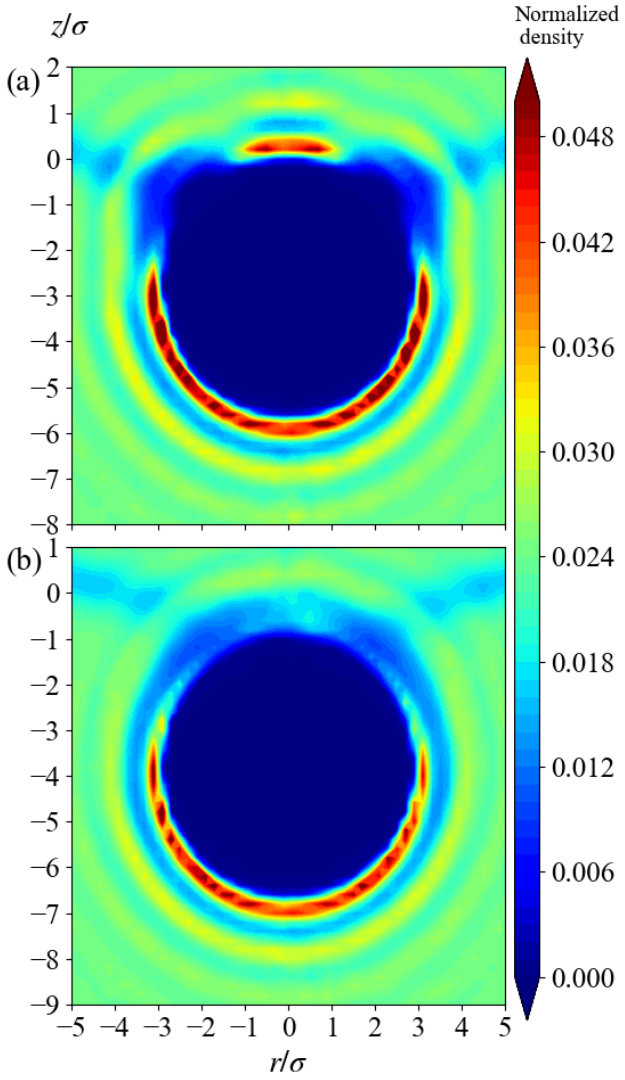

Fig. S3 a) Plot of normalized number density of fluid particles as a function of *z* coordinate and radial distance *r* from Top4 rough particle with patch radius 1.5σ center at $\langle z_p \rangle = -3\sigma$. *r* had a circular symmetry, and the density was divided by *r* so that it was constant for large distances. b) Same as a), but $\langle z_p \rangle = -4\sigma$.

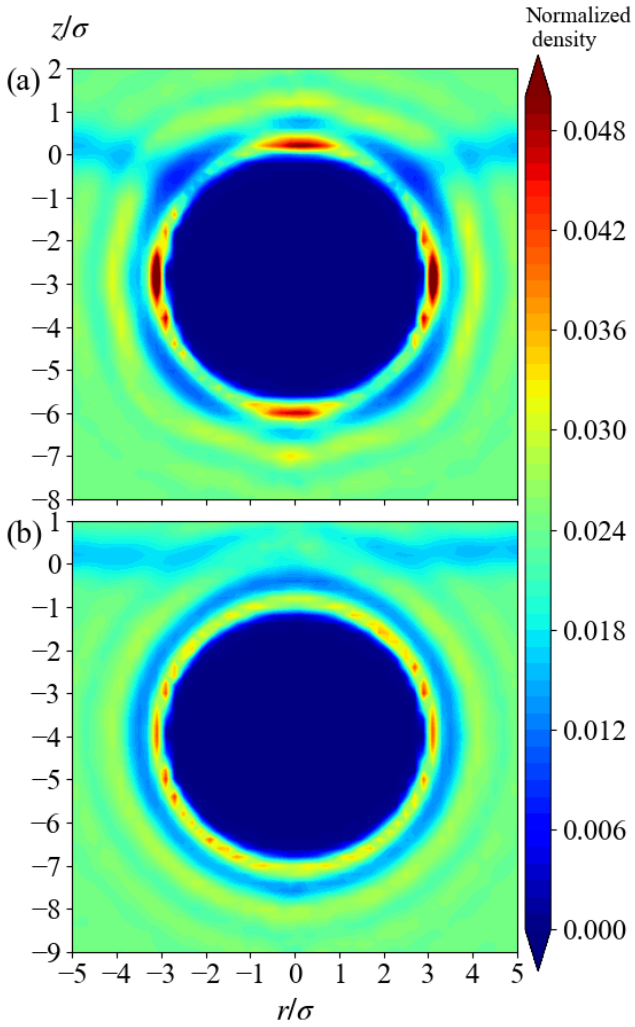

Fig. S4 a) Plot of normalized number density of fluid particles as a function of *z* coordinate and radial distance *r* from Equ4 rough particle with patch radius 1.5σ center at $\langle z_p \rangle = -3\sigma$. *r* had a circular symmetry, and the density was divided by *r* so that it was constant for large distances. b) Same as a), but $\langle z_p \rangle = -4\sigma$.