**Supplementary Material**

**Sheet-like assemblies of spherical particles with point-symmetrical patches**

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Sheet

Fluid

SM FIG. 1. Phase diagram of POM showing fluid to sheet transition in the - δ parameters space at a density of 0.1.  is the non-dimensional temperature defined as , where *k*B is the Boltzmann constant and T is the temperature, *ε* is the strength of attraction as defined in the potential (Eq. 1 in the article), and δ is the parameter that defines the size of the patch, as defined in Eq. 2 in the article.



Fluid

Sheet

SM FIG. 2. Phase diagram of apoferritin showing fluid to sheet transition in the - δ parameters space at a density of 0.06. and δ are defined as in Fig. 1.