

Abstract Submitted
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Guided Assemblies of Ferritin Nanocages: Highly Ordered Arrays of Monodisperse Nanoscopic Elements¹ YUNXIA HU, DIAN CHEN, SOOJIN PARK, TODD EMRICK, THOMAS RUSSELL, UNIVERSITY OF MASSACHUSETTS-AMHERST TEAM — Protein nanocages, like horse spleen ferritin (HSF, 12 nm in diameter) with magnetic cores (8 nm in diameter), have the distinct advantage over synthetic nanoparticles of being truly monodisperse in size and shape. Provided planar, ordered arrays of nanocages can be achieved, these attributes can be used to generate two-dimensional arrays of nanoscopic elements, in which each element is exactly the same size and shape, and the areal density and lateral packing can be manipulated by the charge on the nanocage surface. This strategy is shown to be viable, providing a unique pathway to overcome some of the current technological limitations in generating addressable media.

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