

Abstract Submitted
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Structural **Characterization**
of supramolecule/nanoparticle nanocomposites¹ YIHAN XIAO, TING XU,
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cular nanocomposites offer great opportunities toward functional materials. However,
these systems also challenge our basic understanding in self-assembly in multiple
component systems. The multicomponent nature of the supramolecular system in-
troduces significant complexity in mapping out the hierarchical spatial distribution
of each building block. To this end, various techniques have been adopted to decou-
ple the convoluted structures. Transmission electron microscopy (TEM), scanning
transmission electron microscopy tomography (STEMT) and small-angle X-ray scat-
tering (SAXS) collaboratively determined the hexagonal structure of nanoparticle
superlattice. Resonant X-ray scattering (RSoXS) provides a novel opportunity to
selectively characterize the lamellar arrangement of supramolecular matrix. Finally,
a model is proposed for the nanocomposite morphology based on these results that
is critical toward delineation of energetic contribution from individual component.

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