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Confinement of Block Copolymer Nanocomposites within Nanoporous Templates SEYEDALI MONEMIAN, LASHANDA KORLEY, Department of Macromolecular Science and Engineering, Case Western Reserve University — This research investigates the impact of surface-functionalized nanoparticles (NPs) on self-assembly of confined block copolymer (BCP) systems. Lamellar and cylindrical BCP morphologies were explored with variations in NP diameters and functional groups. The bulk and templated microphase-separated structures were characterized. The addition of addition of NPs resulted in a variety of morphological transitions due to a combination of selective localization of NPs and confinement.

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