Thermodynamics of Layered-Silicate/Block Copolymeric Nanocomposites via Self-Assembly

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Block copolymer brushes grown from the montmorillonite surface self assemble into a fascinating array of structures with large length scales, governed by the clay particle stiffness, dense confinement of chain ends to particle surface, as well as traditional chain stretching and segment-segment interactions.

We have developed a comprehensive understanding of how molecular design parameters influence the morphology of the material.