

Abstract Submitted  
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**Elastic Properties of Ordered Block Copolymer / Nanoparticle Composites** RUSSELL THOMPSON, University of Waterloo, KIM RASMUSSEN, TURAB LOOKMAN, Los Alamos National Laboratory — A hybrid self-consistent field/density functional theory has been used to predict the elastic moduli of a diblock copolymer melt with added spherical nanoparticles with an affinity for one block. It was found that the addition of nanoparticles lowers the tensile modulus of the composite material, while the shear modulus was unaffected. Explanations for the physical origins of these results will be given.

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