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Abstract for an Invited Paper
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Colloid-in-liquid crystal gels

NICHOLAS ABBOTT, University of Wisconsin-Madison

This presentation will describe investigations of the collective properties of colloidal particles that are dispersed in liquid crystalline solvents. A focus will be directed to recent observations of the gelation of particles dispersed in thermotropic liquid crystals. While a series of studies over the past decade have revealed two distinct mechanisms leading to gelation of particles in liquid crystalline solvents, our recent observations are inconsistent with both and hint at a third mechanism of gelation. These observations will be described along with examples of how the unique mechanical and optical properties of colloid-in-liquid crystal gels enable the design of biotic-abiotic interfaces.