

Abstract Submitted
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Study on the mesophase development of pressure-responsive ABC triblock copolymers¹ JUNHAN CHO, dankook university — Here we focus on the revelation of new nanoscale morphologies for a molten compressible polymeric surfactant through a compressible self-consistent field approach. A linear ABC block copolymer is set to allow a disparity in the propensities for curved interfaces and in pressure responses of ij-pairs. Under these conditions, the copolymer evolves into noble morphologies at selected segregation levels such as networks with tetrapod connections, rectangularly packed cylinders in a 2-dimensional array, and also body-centered cubic phases. Those new structures are considered to turn up by interplay between disparity in the densities of block domains and packing frustration. Comparison with the classical mesophase structures is also given.

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