

Abstract Submitted
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Blends of Diblock Copolymers with Attempt to Achieve Triblock Morphologies ERIC ANDERSON, UMass Amherst Department of Polymer Science and Engineering, VIKRAM DAGA, UMass Amherst Department of Chemical Engineering, JAMES WATKINS, SAM GIDO, UMass Amherst Department of Polymer Science and Engineering — Morphological behavior of hydrogen-bonded self-assembled structures of blends of two diblock copolymers Poly(styrene-*b*-ethylene oxide) and poly(butadiene-*b*-acrylic acid) were studied by small angle x-ray scattering and transmission electron microscopy with a goal to obtain morphologies equivalent to triblock copolymers. Depending on the ratio of the block copolymers and the solvent casting condition, macrophase or microphase separation was observed. Commercially available triblock Pluronic® surfactants poly((ethylene oxide)_{*x*}-*b*-(propylene oxide)_{*y*}-*b*-(ethylene oxide)_{*x*}) were also blended with diblock copolymers including poly(butadiene-*b*-acrylic acid) to obtain unique morphologies.

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