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Co-nonsolvency in thermo-responsive block copolymer thin films

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Description: PMMA-b-PNIPAM and PMMA-b-PNIPMAM show a reversible shell collapse transition at the lower critical solution temperature (LCST), which can be moderated by gradually introducing organic solvents. As thin films, this co-nonsolvency behavior makes them promising materials for nanosensors and actuators. We prepare and examine thin films of various block ratios and perform swelling experiments in mixed vapor atmospheres. Morphological changes, diffusion kinetics, concentration gradients and the development of thickness and refractive index are investigated with a focus on white light interferometry and in-situ TOF neutron reflectometry experiments.

Title

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Session Classification: User session