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Chi effect on Transition Behaviors of BCP Films on PS-brushe Substrate EUNHYE KIM, HYUNGJU AHN , DU YEOL RYU¹, Yonsei University, JEHAN KIM , Beamline Department, Pohang Accelerator Laboratory, JUNHAN CHO, Dankook University — The order-to-disorder transitions (ODTs) for the films of symmetric block copolymers on a modified surface, in the weak segregation regime, were investigated by in-situ grazing incidence small angle x-ray scattering (GISAXS). The selective interactions at the modified substrate that favors the preferential interactions with the one component of the block copolymer enhance the parallel orientation of the lamellar microdomains to the film surface. We discuss the thickness dependences of transition temperatures for the films of symmetric polystyrene-*b*-poly(methyl methacrylate) (PS-*b*-PMMA) and polystyrene-*b*-polyisoprene (PS-*b*-PI) on preferential surfaces in terms of the temperature dependence of Chi between two block components.

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