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Interfacial Density Profiles of Poly(methyl Methacrylate) with Liquids KEIJI TANAKA, YOSHIHISA FUJII, HIRONORI ATARASHI, Kyushu University, MASAHIRO HINO, Kyoto University, TOSHIHIKO NAGAMURA, Kyushu University — Density profiles of a perdeuterated poly(methyl methacrylate) (dPMMA) film in water and hexane, which were ‘non-solvents’ for dPMMA, along the direction normal to the interface were examined by neutron reflectivity. Interfaces of dPMMA with liquids were diffused in comparison with the dPMMA/air interface; the interfacial width with water was thicker than that with hexane. Interestingly, in water, the dPMMA film was composed of the strongly swollen layer and the interior region, which also contained water, in addition to the diffused layer. In contrast, such a strongly swollen layer was not observed at all in hexane.

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