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Diblock copolymer-incorporation onto Polystyrene Colloidal Beads[1] JONG-MAN LEE, KWANWOO SHIN, Dept. of Materials Science and Engineering, Gwangju Institute of Science and Technology, Gwangju 500-712, Korea — Modification of colloidal particles is particularly interesting, since they can be used for colloidal crystal for optical devices, and biological modeling system due to their well-defined periodic structure and biological similarity from spherical nanostructures, like lipoprotein and phases. We provide various applicable functions onto colloidal beads by incorporation of various functionalized diblock copolymers. Interpenetration of the proximal diblock chains into the beads and instant quenching were performed, as developed by Ou-Yang et al.(J. Poly. Sci, 58, 265, 1995), and tightly bounded diblock-bead complexes were accomplished. In this study, various copolymers, PS-based ferrocenylsilane and polyelectrolytes were used, and their modified structures were characterized by scattering and microscopic techniques. These beads were further used for a template for adsorption of biological molecules, where demonstrates various functional activities

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