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**Influence of Annealing and Solvent Treatment on Surface Structure of Diblock Copolymer Brushes** AKIRA OTAKA, GOKCE UGUR, BULENT AKGUN, MARK FOSTER, Maurice Morton Institute of Polymer Science, The University of Akron, Akron, OH 44325 — A polymer brush is an assembly of polymer chains in which each chain is tethered to a surface or an interface. Diblock copolymer brushes have attracted enormous interest due to their stimuli-responsive behavior. Although diblock copolymer brush chemistry has been studied widely, the surface structure of the diblock copolymer brushes and how it is affected by annealing and contact with solvents have been studied little. We have studied how the surface structure of diblock copolymer brushes changes with annealing and treatment with different solvents. The brushes were synthesized on Si substrates using atom transfer radical polymerization (ATRP). The surface structure was investigated by atomic force microscopy (AFM) in tapping mode. Power spectral density (PSD) analysis of the AFM images provides information that is complementary to that from X-ray and neutron scattering studies.

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