Highlight Narrative

We demonstrate the ability of dually-reactive, well-defined diblock copolymers incorporating the chemoselective/functional monomer, 4,4-dimethyl-2-vinylazlactone (VDMA) and the surface-reactive monomer glycidyl methacrylate (GMA) (PGMA-b-PVDMA) to generate thin films of controlled thickness with chemoselectivity for tailoring the surface properties of a wide array of substrates. Neutron reflectivity was used to determine the layer structure and provides strong evidence that the polymer films are PVDMA-rich at the air/film interface and PGMA-rich at the film/silicon interface, but do not completely phase separate even after annealing at temperatures above $T_g$ for both components. These materials represent a platform for a variety of applications including purification membranes, drug delivery, and mimics for biological membranes.

Reference:

“Manipulating Interfaces through Surface Confinement of Poly(glycidyl methacrylate)-block-poly(vinylidimethylazlactone), a Dually Reactive Block Copolymer”,

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