

Materials List for:

# Fabricating Reactive Surfaces with Brush-like and Crosslinked Films of Azlactone-Functionalized Block Co-Polymers

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## Materials

Name	Company	Catalog Number	Comments
<b>Material</b>			
Ethanol, ≥ 99.5%	Sigma-Aldrich	459844	-
HCL, 1.019 N in H2O	Fluka Analytical	318949	-
Acetone, ≥ 99.5%	Sigma-Aldrich	320110	-
Benzene, ≥ 99.9%	Sigma-Aldrich	270709	-
Isopropanol, ACS reagent, ≥99.5%	Sigma-Aldrich	190764	
Hexane	Fisher Chemical	H292-4	-
Argon	Matheson Gas	G1901175	-
Tetrahydrofuran (THF), ≥ 99.9%	Sigma-Aldrich	401757	-
Pluronic F-127	Sigma-Aldrich	P2443	-
Polydimethyl Siloxane (PDMS) Slygard 184	Dow Corning	4019862	-
Trichloro (1H,1H,2H,2H-perfluorooctyl) silane (TPS), 97%	Sigma-Aldrich	448931	It is toxic. Work with it under hood
Anhydrous Chloroform, ≥ 99%	Sigma-Aldrich	372978	-
Positive Photoresist AZ1512	MicroChemicals	AZ 1512	amber-red liquid, density 1.083 g/cm <sup>3</sup> , spin coating step should be done under the hood
Developer AZ 300 MIF	MicroChemicals	AZ300 MIF	clear colourless liquid with slight amine odor and density of 1 g/cm <sup>3</sup>
1,2-Vinyl-4,4- dimethyl azlactone (VDMA)	Isochem North America, LLC	VDMA	-
2-cyano-2-propyl dodecyl trithiocarbonate (CPDT)	Sigma-Aldrich	723037	-
2,2'-Azobis (4methoxy-2,4-dimethyl valeronitrile) (V-70)	Wako Specialty Chemicals	CAS NO. 15545-97-8, EINECS No. 239-593-8	-
Parylene N	Specialty Coating Systems	15B10004	-
<b>Name</b>	<b>Company</b>	<b>Catalog Number</b>	<b>Comments</b>
<b>Equipment</b>			
Parylene Coater	Specialty Coating Systems	SCS Labcoater (PDS 2010)	-
Mask alignment system	Neutronix Quintel	NXQ8000	-
Oxygen Plasma Etcher	Oxford Instruments	Plasma Lab System 100	-
Surface Profilometer	Veeco	Dektak 150	Scan type was standard hill. Scan duration and force were 120 s and 1 mg, respectively.
Brightfield Upright Microscope	Olympus Corporation	BX51	-

Oxygen Plasma Cleaner	Harrick Plasma	PDC-001-HP	-
Attenuated Total Reflectance Fourier Transform Infrared Spectroscopy (ATR-FTIR)	Perkin Elmer	ATR-FTIR 100	-
Atomic Force Microscopy (AFM)	PicoPlus	Picoplus atomic force microscope	Veeco MLCT-E cantilevers with a 0.5 N/m spring constant. Scan speeds varied between 0.25 and 1 Hz.
Scanning Electron Microscopy (SEM)	Hitachi Science Systems Ltd., Tokyo, Japan	-	-
Rotary Tool Workstation	Dremel	Model 220-01	-
Spin Coater	Smart Coater	SC100	-
Vacuum Oven	Yamato Scientific Co.	PCD-C6(5)000)	-
Size Exclusion Chromatography (SEC)	Waters Alliance 2695 Separations Module	720004547EN	-
Refractive Index (RI) detector	Waters	Model 2414	-
Photodiode Array Detector	Waters	Model 2996, 716001286	-
Multi-angle Light Scattering (MALS) Detector	Wyatt Technology	miniDAWN TREOS II	-
Viscometer	Wyatt Technology	Viscostar	-
PLgel 5 $\mu$ m mixed-C columns (300 x 7.5 mm)	Agilent	5 $\mu$ m mixed-C columns	-
Ellipsometer	J. A. Woollam	alpha-SE	Cauchy model, PGMA and PVDMA layers had refractive indices of 1.50 and 1.52 at 632 nm
Ultrasonic Sonicator	Fischer Scientific	FS-110H	-