

Materials List for:

Creating Sub-50 Nm Nanofluidic Junctions in PDMS Microfluidic Chip via Self-Assembly Process of Colloidal Particles

Xi Wei^{1,2}, Abeer Syed¹, Pan Mao³, Jongyoon Han⁴, Yong-Ak Song^{1,2}

¹Division of Engineering, New York University Abu Dhabi (NYUAD)

²Department of Chemical and Biomolecular Engineering, New York University Tandon School of Engineering

³Newomics, Inc.

⁴Department of Electrical Engineering and Computer Science, Department of Biological Engineering, MIT

Correspondence to: Yong-Ak Song at rafael.song@nyu.edu

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Materials

Name	Company	Catalog Number	Comments
Poly(Styrenesulfonic Acid) Sodium Salt	Polysciences	08772	
Poly(allylamine) Solution	Sigma Aldrich	479144-5G	
Silica Microsphere - 300 nm	Polysciences	24321	
Silica Microsphere - 500 nm	Polysciences	24323	
Silica Microsphere Carboxyl Functional - 500 nm	Polysciences	24753	
Silica Microsphere Amine Functional - 500 nm	Polysciences	24756	
Sylgard 184 Silicone Elastomer kit	Dow Corning		
Trichlorosilane	Sigma Aldrich	175552	
Ultrasonic Cleaner	Branson	3510	
Tube Rotator	VWR	10136-084	
Vortex Mixer	WiseMix	VM-10	
Microcentrifuge	VWR	Micro 1207	
Plasma Cleaner	Harrick Plasma	PDC-001-HP	
PDMS Mixer	Thinky	ARE-250	
Oven	Thermo Scientific	PR305220M	
Epi-fluorescence Microscope	Nikon	Eclipse Ti	
CCD Camera	Andor	Clara	
Platinum Electrodes	Alfa Aesar	43014	
Source Meter	Keithley	2400	
Digital Multimeter	Extech	410	
Microscopy Glass Slides	Thermo Scientific	2951-001	
Tween 20	Merck Millipore	822184	
Sodium chloride	Fisher Scientific	7646-14-5	
Sodium phosphate monobasic	Sigma Aldrich	71505	
Sodium phosphate dibasic	Sigma Aldrich	S3264	
DNA	IDT		CAA CCG ATG CCA CAT CAT TAG CTA C
B-Phycoerythrin	Life Technologies	P-800	
Dynamic light scattering system for Zeta Potential Measurement	Malvern	Zetasizer Nano S	

Photoresist	Shipley	SPR700-1.0	
Projection lithography	Nikon	NSR2005i9	
Reactive Ion Etcher	Applied Materials	AME P5000	
ICP deep reactive ion etcher	STS	STS-6"	
Contact lithography	Electronic Visions	EV620	
Photoresist Coater Developer	SSI	SSI 150	
Non-contact surface profiler	Wyko	NT 9800	