

Materials List for:

Synthesis of Poly(*N*-isopropylacrylamide) Janus Microhydrogels for Anisotropic Thermo-responsiveness and Organophilic/Hydrophilic Loading Capability

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Materials

Name	Company	Catalog Number	Comments
Silicon wafer	LG Siltron	4", Test grade	Wafer for master mold fabrication
Acetone	Samchun Pure Chemical	A0097	Cleaning silicon wafer
Isopropyl alcohol (IPA)	Daejung Chemicals & Metals	5035-4404	Cleaning silicon wafer
Water purification system	Merck Millipore	EMD Millipore R10s Essential 5	Prepering deionized water
O ₂ plasma machine	Femto Science	VITA-A	Cleaning silicon wafer
SU-8 2150 negative photoresist	MicroChem	Y111077 0500L1GL	Photoresist for master mold fabrication
Hot plate	Misung Scientific	HP330D, HP150D	Baking SU-8
SU-8 developer	Microchem	Y020100 4000L1PE	Developing SU-8
Mask aligner system for photolithograpy	Shinu Mst Co.	CA-6M	Photolithography
Sylgard 184 silicone elastomer kit	Dow Corning	1064891	PDMS casting
Laboratory Corona Treater	Electro-technic Products Inc.	Model BD-20AC	PDMS air plasma treatment
<i>N</i> -isopropylacrylamide (NIPAAm)	Sigma-Aldrich	415324-50G	Monomer
<i>N,N'</i> -methylenebisacrylamide (MBAAm)	Sigma-Aldrich	146072-100G	Crosslinker of NIPAAm
4-(2-hydroxyethoxy)phenyl-(2-hydroxy-2-propyl)ketone, Irgacure 2959	BASF	55047962	Photoinitiator of NIPAAm
ABIL EM 90	Evonik Industries	201109	Surfactant for oil
Vortex mixer	Scientific Industries Inc.	Vortex-Genie 2	Mixing
Tygon tubing	Saint-Gobain	I.D. 1/32", O.D. 3/32", Wall 1/32"	Connecting tube between syringes and HFMD
UV light source	Hamamatsu	Spot light source LC8	Polymerization from NIPAAm to PNIPAAm
Syringes, NORM-JECT (3 ml)	Henke-Sass Wolf GmbH	22767	Loading of materials
Syringe pump	KD Scientific	KDS model 200	Perfusion of materials
Tegitol Type NP-10	Sigma-Aldrich	NP10-500ML	Surfactant for water
Oil red O	Sigma-Aldrich	O0625-25G	Dye for N-rich phase
Oil Blue N	Sigma-Aldrich	391557-5G	Dye for N-rich phase
Yellow food dye	Edentown F&B	NA	Dye for N-poor phase
Green food dye	Edentown F&B	NA	Dye for N-poor phase
Power supply	Agilent	E3649A	Power source for thermoelectric module
Thermoelectric module	Peltier	FALC1-12710T125	Temperature control

Centrifuge machine	Labogene	1248R	Settling down microhydrogels
24-well plate	SPL Life Sciences	32024	Reservoir for observation
Optical microscope	Nikon	ECLIPSE 80i	Optical observation
Image analysis software	IMT i-Solution Inc.	iSolutions DT	Measurement of radius