

Materials List for:

Cell Patterning on Photolithographically Defined Parylene-C: SiO₂ Substrates

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URL: <https://www.jove.com/video/50929>

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Materials

Name	Company	Catalog Number	Comments
Layout editor software package	CleWin 5.0 from WieWeb		Capable of reading/writing CIF or GDS-II files. Used to create parylene design for photo mask manufacture. http://www.wieweb.com/ns6/index.html
Bespoke photo mask	Compugraphics International Ltd, Glenrothes, Scotland		Either fabricate in-house of facilities exist or commission. www.compugraphics-photomasks.com
3 in Silicon wafers	Siltronix, Archamps, France		http://www.siltronix.com
Atmospheric horizontal furnace	Sandvik		For oxidizing silicon wafer. http://www.mrlind.com
Small spot spectroscopic reflectometer	Nanometrics		To measure depth of silicon dioxide layer. www.nanometrics.com/
Silane adhesion promoter	Merck Chemicals	1076730050	Preapplied to wafer to encourage parylene deposition. www.merck-chemicals.de/
Parylene-C	Ultra Electronics		www.ultra-cems.com
SCS Labcoter 2 deposition Unit, Model PDS2010	SCS Equipment, Surrey, UK	Model PDS2010	www.scscoatings.com/
Hexamethyldisilazane (HMDS) adhesion promoter	SpiChem		www.2spi.com
Automated track system for dispensing photoresist on wafers; 3 in photo-resist track	SVG (silicon Valley Group)		Automated track system for dispensing photoresist on wafers. A prime oven bakes the wafer and dispenses the adhesion promoter, HMDS. A combination spinner dispenses photoresist. Prebake oven cures the resist.
Photo-resist	Rohm & Haas	SPR350-1.2 positive photo-resist	www.rohmhaas.com/
MA/BA8 photo-mask aligner	Suss Microtech		www.suss.com
Microchem MF-26A developer	Microchem		Removes exposed regions of photoresist. www.microchem.com
JLS RIE80 plasma etch system	JLS Designs		Removes exposed regions of parylene. www.jlsdesigns.co.uk
Name	Company	Catalog Number	Comments
DISCO DAD 680 Wafer dicing saw	DISCO Corporation, Japan		www.disco.co.jp
Acetone	Fisher Scientific	A929-4	To wash off residual photoresist.
30% Hydrogen Peroxide	Sigma-Aldrich	H1009	www.sigmaaldrich.com
98% Sulfuric Acid	Sigma-Aldrich	435589	www.sigmaaldrich.com

Fetal Bovine Serum	Gibco-Invitrogen	10437	Standard chip activation. www.invitrogen.com
Hank's Balanced Salt Solution	Gibco-Invitrogen	14170	www.invitrogen.com