

Materials List for:

# Fabrication of Carbon Nanotube High-Frequency Nanoelectronic Biosensor for Sensing in High Ionic Strength Solutions

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## Materials

Name	Company	Catalog Number	Comments
<b>REAGENTS</b>			
Reagents which were provided within Lurie Nanofabrication Facility (University of Michigan) are marked as LNF in the catalogue column. Chemicals which require protective equipment (gloves, safety goggles, face mask, apron) and/or fume hood are denoted with PPE in comments section.			
Silicon wafers (P-type, <100>, 500-550 µm thick)	Silicon Valley Microelectronics		
SPR 220 3.0	Dow (Rohm and Haas)	Megaposit SPR	PPE
AZ 300MIF	AZ Electronic Material Corporation		PPE
Acetone	J T Baker	9005-05	PPE
Isopropanol (IPA)	J T Baker	9079-05	
Buffered Hydrofluoric Acid	Transene		PPE
1-Pyrene Butanoic Acid, succinimidyl ester	Molecular Probes	P130	PPE
Biotin PEO Amine	Thermo Scientific	EZ- Link PEG2 Biotin, # 21346	PPE
Streptavidin	Invitrogen	S 888	PPE
Dimethylformamide	MP Biomedicals	0219514791	PPE
Polydimethylsiloxane Elastomer Base and Curing Agent	Dow Corning	Sylgard 184 Elastomer Kit	PPE
SU-8 2015	Microchem	Y111064	PPE
SU-8 Developer	Microchem	Y020100	PPE
Silanizing agent	Sigma Aldrich	452807	PPE
Hydrogen	Purity Plus	LNF	
Ethylene	Purity Plus	LNF	
Argon	Purity Plus	LNF	
Phosphate Buffer Saline System	Sigma Aldrich	PBS1	
<b>EQUIPMENT</b>			
Equipment provided by Lurie Nanofabrication Facility (University of Michigan) is denoted as LNF in Catalogue column.			
GCA 200 Autostepper	GCA	LNF	
Low Pressure Chemical Vapor Deposition Tool	Tempress	LNF	
e-beam Evaporator	Enerjet	LNF	
CNT growth Furnace	First Nano	Easy Tube 3000 (LNF)	
Photomasks	Nanofilm	LNF	
Petri dish (150mm)		LNF	
Desiccator	Bel-Art	F420100000	
Biopsy Punch	Ted Pella	15071/78	

Scalpel	Ted Pella	548	
Polyethylene Tubing PE-50	VWR	20903-414	
Syringe Pump	New Era Pump Systems	NE-1000	
Syringe	Fisher Scientific	BD Safety-Lok Syringes	
Syringe Needles	Fisher Scientific	14-821-13A	
DAQ card	National Instruments	779111-01	
GPB connector	National Instruments	778032-51	
Lock-in Amplifier	Stanford Research Systems	SR 830	
Frequency Generator	HP Agilent	8648B, 9kHz -2GHz	
Bias Tee	Picosecond	5575A-104	
Current Preamplifier	DL Instruments, LLC	DL 1211	
BNC cables	Allied Electronics	665-xxxx	
SMA cables	Sentro Tech Corp	SCF65141	