Materials List for:

A Novel Method for *In Situ* Electromechanical Characterization of Nanoscale Specimens

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Materials

Name	Company	Catalog Number	Comments
Silicon wafers			Any high-quality polished wafers of the correct thickness will work
Photoresist	Dow	SR220-7	
Photoresist developer	Shipley	MF 24A	
Photoresist developer	Rohm and Haas	MF 319	
Temporary wafer adhesive		Crystalbond 509	Available from a variety of sources
Iductively Coupled Plasma Reactive Ion Etching (CP-RIE) system	Oxford	Plasmalab system 100 ICP RIE	
Profilometer	Veeco	Dektak 150	
Plasma-Enhanced Chemical Vapor Deposition (PECVD) system	Oxford	Plasmalab system 100 PECVD	
Thin specimen sheet	Surepure Chemetals	3702, 3703, 3704 or 2236	13 μm and 25 μm-thick copper, 99.99% 4N Pure
Photoresist	Shipley	1818	
355 nm, 10 W, solid-state, frequency tripled Nd:YVO_4 pulsed laser	JDSU	Q301-HD	
Liquid ferric chloride	Sigma-Aldrich	157740	
Conductive silver epoxy	Chemtronics	CW2400	
Silver wires			Any highly conductive metallic wires will work (<100 μm in diameter)
Focused Ion Beam (FIB)	FEI	Nova 600	
Single tilt straining TEM holder	Gatan	654	
Displacement controller	Gatan	902 Accutroller	May be sold with the TEM holder
CO_2 laser cutter	Universal Laser Systems	VLS 3.50	Use 50% power and 15% speed
Electrical insulation sheet		0.5 mm-thick Hard Fiber Electrical Grade Sheet (Fishpaper)	Available from a variety of sources
Transmission Electron Microscope (TEM)	FEI	Tecnai G2	
External power supply	Keithley	2400 SourceMeter	