PROCESS BATCH SHEET (Photo Rework) **Issue 9** **Page____of____**

ENSC Batch No.____________________Wafers Started_____________Date___________________
Material________________Orientation____________Size____________Thickness_____________
Resistivity______________________________Type____
Wafer Vendor______________________Vendor Batch #_________________SFU P.O._____________

Process Step	Process Conditions	Oper & Wafer #	Comments
_____A	**Photoresist Strip** Soak wafer in room temp acetone for 5 minutes. Rinse in fresh acetone 2 minutes. Inspect for completion at step D.		
_____B	**DI Water Rinse** > 3 minutes in running DI water		
_____C	**Dry** Spin at max RPM until dry (false colours disappear). Check for water on back. Repeat and/or blow dry with dry N2 if needed		Alternate: blow dry with N2 and soft bake.
_____D	**Inspection** Microscope. Check for remnant resist.		Remnant resist may appear as films or as hair like structures
_____E	**Prebake** 100C/20 min (oven) OR 110C/1 min hot plate. Cool before spinning photoresist		
_____F	**Spin Primer, Back Side (Optional)** Shipley Microposit. Flood surface. 4000 RPM. 30 seconds. Be sure chuck is clean, to avoid contaminating the front of the wafer.		Optional Steps, Back Side Processing: Back side processing, consisting of steps F (optional), G and H, is normally performed only for micromachining applications where the back side of the wafer is to be processed or protected. Optional Step: HMDS (hexamethyldisilizane) is an adhesion promoter. Normally used only on wafers that have already been processed in EDP. Occasionally used on other wafers if unresolved resist adhesion problems encountered.
_____G	**Spin photoresist, Back Side (Optional)** Rohm & Haas S1813. Flood surface (2-3 droppers). 4000 RPM. 30 seconds As above, chuck must be clean.		Optional Step, Back Side Processing
_____H	**Soft Bake, Back Side (Optional)** 100C/5 min (oven) OR 110C/1 min (hot plate)		Optional Step, Back Side Processing
_____I	**Spin Primer, Front Side (Optional)** Shipley Microposit. Flood surface. 4000 RPM. 30 seconds.		Optional Step: As in Step F, primer is used only if required. Be careful not to scratch coating on back side, if present.
_____J	**Spin photoresist, Front Side** Rohm & Haas S1813. Flood surface. 4000 RPM. 30 seconds		Be careful not to scratch resist on back side, if present.
____K	**Soft Bake** 100C/20 min (oven) OR 110C/1 min (hot plate)		
_____L	**Inspect** Microscope with yellow light		Look for obvious resist faults
____M	**Exposure Tests** If correct exposure not known		Exposure varies with surface and mask type. An Al surface might require 8 seconds with a chrome mask and about 15 seconds with an emulsion mask. An oxide surface might require about 30 seconds with an

			emulsion mask.
____N	**Align and Expose** Use test results or experience.		
_____O	**Develop** MF319, undiluted. Room temp. Slight agitation. Develop until no more resist is being removed. Typical time about 60 seconds.		
_____P	**Rinse** Running DI H2O for > 3 min		
____Q	**Dry** Do not spin dry unless instructor so directs. Resist contaminates chuck. Blow dry with N2, and bake in soft bake oven briefly if necessary.		
____R	**Inspect** Microscope with yellow light. Look for complete development. Be sure there is no damage.		
____S	**Hard Bake** 120C/20 min (oven) OR 110C/90 sec (hot plate)		
____T	**Inspect and Measure** Microscope with measurement capability		