1. Purpose

This procedure describes how to apply, expose, and develop 10um thick photo resist using AZ4620.

2. Scope

This procedure provides processing information on how to Apply, Expose, and Develop photo resist. The use of this process procedure is for faculty, staff, and outside companies that need access and use of the shared equipment in the OPF laboratory. Internet connection is required to view process procedures.

3. Definitions

N/A

4. Responsibilities

It is the responsibility of the Laboratory Manager to ensure that any users of this process procedure have been trained and understand the use of the mask aligner, resist spinner, chemical hood, and chemical safety protocol.

5. Equipment/Material

813 Hood
Suss Mask Aligner MA6
Headway Resist Spinner
Hot Plates or Convection Ovens
Nikon Microscope
AZ4620 Resist
AZ400K 4:1 Developer
Pyrex Glass Beakers
Wafer Dipper
Stainless Steel Wafer Tweezer
Silicon wafer or substrates
Clean room wipes
Disposable Pipets

6. Procedure

Step No.	Description	Equipment	Conditions	Remarks
1	PHOTOLITHOGRAPHY			
1.1	Dehydrate Wafers	813 Hood, Hot Plate or Ovens	115°C for 5 min or 120°C for 20 min	
1.2	Spin on HMDS	Headway Spinner	3000 rpm for 30 sec	
1.3	Spin on AZ4620	Headway Spinner	Step 1 1500rpm; 9 sec Step 2 2000rpm; 60 sec Step 3 500rpm; 10 sec	
1.4	Soft Bake	Oven	90°C for 20 min	
1.5	Exposure	MA6	Ch for 23 sec	
1.6	Develop	813 Hood	AZ400K 4:1 until clear	Agitate gently back and forth
1.7	Rinse in DI H2O	813 Hood	1 min	
1.8	Dry with N2	813 Hood	Blow dry both side on top of cleanroom wipe	
1.9	Hard Bake	Oven	90°C for 30 min	
1.10	Inspection	Nikon Microscope	Resolution	
1.11	Descum (if necessary)	Tepla M4L	300W, O2, 5 min	

7. Record Retention

N/A

8. Reference Documents

N/A