



## AZ 5214 PHOTO RESIST

### 1. OVERVIEW

This protocol is developed as a ~1.5 $\mu$ m thick resist recipe for use by NanoFab users. This process results in a negative pattern transfer and negatively sloped sidewalls. The negatively sloped sidewalls can be beneficial to lift-off processes. This recipe has a minimum feature size of 5 $\mu$ m.

### 2. PROCEDURE

1. Use AZ 5214 found in bottle in lithography or from the fridge. Label a cleanroom wipe with chemical name, user name and date. Pour into a small beaker, with a larger beaker inverted over top of the smaller beaker and place on the cleanroom wipe.  
If taking the bottle from the fridge, let stand for 30mins to reach room temperature
2. Pour 5-10mL resist into the center of the wafer and spin the resist at the following settings:  
Spread
  - 10 seconds @ 500RPMSpin
  - 40 seconds @ 4000RPM
3. Use the hotplate (CEE) in lithography STATION 1.  
Set to 90°C. This takes ~30minutes to warm up.  
Soft-bake for 50sec.
4. After soft-baking of wafers, increase hotplate temperature to 130°C.
5. The pattern transfer exposure is 0.3secs at 60.7mW/sec<sup>2</sup>
6. A post exposure bake needs to be done for 2minutes at 130°C. The temperature/time of this step is critical and only the CEE hotplate can be used.
7. A flood exposure of 8sec at 60.7mW/sec<sup>2</sup> is next.
8. The sample is developed in MF CD 319 for ~30sec.

### 3. TECHNICAL DATA

The resist works well for patterning features down to 5 $\mu$ m. The negatively sloped sidewalls improve lift-off processes, and the AZ5214 resist is easily removed by an Acetone wash and IPA rinse

### 4. APPROVAL

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