[Recipes of Photoresist]

**[nLof 2035]** for lift-off process  
a. Solvent clean (Acetone & IPA)  
b. O2 plasma, rec.11, 1min (optional)  
c. Bake at 120C for 5min (if rinse with water)  
d. Spin nLof 2035, 3000 rpm (0-500 rpm, 500 rpm/sec, 5 sec; 0-3000 rpm, 1000 rpm/sec, 60 sec; 3000-0 rpm, 500 rpm/sec)  
e. Pre-bake at 110C for 1 min, cooling down for 1 min  
f. MLA exp, 375 nm (close to i-line 365 nm), 450mJ/cm2, defoc 0  
g. Post Exposure Bake (PEB) at 110C for 1 min, cooling down for 1 min  
h. Dev: AZ 300 MIF, 30 sec, DI rinse  
i. O2 plasma, rec.11, 1 min  
Layer thickness: 3.35um (Measured by Dektak after O2 plasma)

**[SU-8 2025]** for PDMS Stamp Pattern

a. Solvent clean (Acetone & IPA)

b. O2 plasma, rec.11, 1min (optional)  
c. HDMS prime (optional) or Bake at 120C for 5min (if rinse with water)  
d. Spin SU-8 2025, 4000 rpm (0-500 rpm, 500 rpm/sec, 5 sec; 0-4000 rpm, 1000 rpm/sec, 60 sec; 4000-0 rpm, 500 rpm/sec)  
e. Pre-bake at 110C for 5 min, cooling down for 1 min  
f. MLA exp, 375 nm (close to i-line 365 nm), 450mJ/cm2, defoc 0

g. Wait 15-30 min after UV exposure (photoresist is still sensitive and reactive)  
h. Post Exposure Bake (PEB) at 120C for 15 min, cooling down for 1 min  
i. Dev: PGMEA, 3 min, strong agitation but no ultrasonic, IPA rinse (No DI water)  
j. O2 plasma, rec.11, 1 min (optional)  
Layer thickness: 8.7-8.9 um at 4000 rpm (Measured by Dektak)

Bi-layer: **[PMGI-SF7/S1811]** for lift-off process

a. Solvent clean (Acetone & IPA)  
b. O2 plasma, rec.11, 1 min (optional)  
c. Bake at 120C for 5 min (if rinse with water)  
d. Spin PMGI-SF7 (lift-off resist), 3000 rpm (0-500 rpm, 500 rpm/sec, 5 sec; 0-3000 rpm, 1000 rpm/sec, 60 sec; 3000-0 rpm, 500 rpm/sec)

e. Pre-bake at 180C for 5 min, cooling down for 1 min

[PMGI-SF7 Layer thickness: 600-800 nm]

f. Spin S1811 (image resist), 5000 rpm (0-500 rpm, 500 rpm/sec, 5 sec; 0-5000 rpm, 1000 rpm/sec, 60 sec; 5000-0 rpm, 500 rpm/sec)

g. Pre-bake at 120C for 90 sec, cooling down for 1 min

[S1811 Layer thickness: 1100-1400 nm]

h. MLA exp, 405 nm (h-line), 100 mJ/cm2, defoc -2  
i. Dev: MF 319, 45 sec, DI rinse  
j. O2 plasma, rec.11, 1 min  
Layer thickness: ~ 2.2 um

**AZP 4620**

a. Solvent clean (Acetone & IPA)  
b. O2 plasma, rec.11, 1 min (optional)  
c. Bake at 120C for 5 min (if rinse with water)  
d. Spin AZP 4620, 8000 rpm (0-500 rpm, 500 rpm/sec, 5 sec; 0-8000 rpm, 1000 rpm/sec, 60 sec; 8000-0 rpm, 500 rpm/sec)

e. Pre-bake at 120C for 2 min, cooling down for 1 min

f. MLA exp, 405 nm (h-line), 800 mJ/cm2, defoc 0  
g. Dev: AZ-400K, 5 min, DI rinse  
h. O2 plasma, rec.10, 30 sec  
Layer thickness: ~ 5 um at 8000 rpm