FOM Institute AMOLF

ZEP 520A + Espacer 300Z recipe for non-conductive substrates
draft version July 22nd 2010

changes: *streamlined process, now dH2O rinse removal of Espacer, much shorter airdry time for Espacer*

Preparation:

Base Piranha clean samples. Get ZEP 520A & Espacer 300Z syringe batches from fridge 15 minutes prior to processing and return them A.S.A.P. after use (limited shelf life , €€€) These are very expensive polymers, please be frugal with them!

ZEP520A: High resolution EBL resist, suitable for lift-off & RIE

Espacer 300Z: Polythiophene; conductive polymer compound, prevents charging of surface during EBL.

- dry bake substrates @ 150° C^+ for 5 minutes
- Transfer substrate to spincoater in a timely fashion and cool it down with N2
- Apply HMDS solution (MP primer) and wait 10+ seconds!
- Spin @ 3k rpm for 30 seconds
- bake substrate @ 150° C^+ for 1 minute
- Transfer substrate to spincoater and cool it down with N2
- Apply ZEP 520a
- Instant acceleration to final rpm for 45 seconds
- bake substrate @ 180° C for 5 minutes
- Transfer substrate to spincoater and cool it down with N2
- Apply Espacer 300Z
- Spin @ 3k rpm with a 5 seconds ramp, for 45 seconds
- Air dry @ RT for 2 minutes, before baking for 5 minutes @ 110° C
- Expose your substrate
- Espacer 300Z removal: rinse in dH2O for 60 seconds, followed by a dip in a second beaker of dH2O
- Thoroughly blow dry with N2
- Develop in N-amyl acetate for 1-2 minutes
- Rinse in MIBK:IPA 9:1 for 15 seconds
- Rinse in IPA for 15 seconds
- Blow dry with N2