**Soft-Stamp Fabrication from Rigid Mold**

1. PDMS Substrate
   1. Order silicone membranes from <http://www.sspinc.com/ssp_store/> or other supplier and cut to proper size. Or
   2. Make your own PDMS substrate by mixing/pouring/degassing/curing PDMS on a silicon wafer. Contact Dave Bothman in the Microfluidics Lab at CNSI for this.
2. Substrate Preparation:
   1. Solvent Clean PDMS: Ace/Iso/Dry
   2. 10" O2 Plasma Treatment, 100W, 300mT in PEII
   3. Spin on OrmoPrime08 at 4000 rpm for 60 sec with 1000 rpm/sec acceleration
   4. Hardbake at 150°C for 5 min (Note: high temperatures can be troublesome for PDMS)
3. Master Prep (Silicon, fused silica, or other material):
   1. Solvent Clean (ACE/ISO/Dry)
   2. Fresh Anti-Stick Layer:
      1. Oxygen plasma 30” in PEII at 100W, 300mT
      2. Use FDTS program using MVD tool.
      3. Bake sample at 100C for 2 minutes.
4. Ormostamp Layer:
   1. Pipet a small amount of Ormostamp (1-2 drops for 1cm x 1cm area) directly onto Master
   2. Carefully place PDMS sheet onto the Master coated with Ormostamp
   3. Wait until pressure from the PDMS sheet causes the Ormostamp to spread over the master
   4. Make Sure there are no Air Pockets, Gently Press the substrate to help spread Ormostamp
   5. Flood Expose Ormostamp with UV Light to Cure (10 min DUV flood exposure works well)
   6. De-mold the PDMS, pattern should be successfully transferred into Ormostamp Layer
   7. Flood Expose for an additional 5 min to harden Ormostamp Layer
   8. Hardbake PDMS Stamp at 130°C for 30 min
   9. Apply FDTS Anti-Stick Treatment with MVD.
      1. O2 plasma 50W, 30seconds in PEII
      2. FDTS program on MVD
      3. 120C, 15min hot plate bake

**Soft-Stamp Fabrication from Rigid Mold**

1. Substrate Preparation
   1. Solvent Clean + Dehydration Bake
   2. Spin Omnicoat on sample at 3000 rpm for 30 sec with an acceleration of 300rpm/s
   3. Bake at 200°C for 1 min
   4. Spin on MR-UVCur21 at 3000rpm for 60 sec (300nm thickness) If you need different resist thickness for your process, please consult datasheet.
   5. Softbake at 80°C for 1 min
   6. Edge Bead Removal recommended, not necessary for flexible PDMS stamps
2. Imprinting:
   1. Place transparent stamp on top of sample under clean hood
   2. Transfer into Nanonex 2000 system.
   3. Use a 2 minute pumping step.
   4. Imprint at 25C, 5psi, for 2 min with 20 sec UV exposure
   5. Demould
   6. Clean stamp: Ace/Iso/Dry.