

Experiment 7

Soft Lithography: Polymer Microstructures by Self Assembly

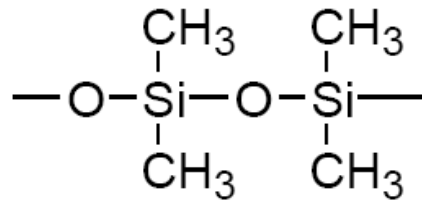
Purpose: to make a PDMS stamp.

Procedure:

1. mix 10:1 PDMS:curing agent in a beaker (weight)
2. remove air bubbles by vacuum. (store beaker in desiccator)
3. pour into Petri dish contains master mold.
4. bake at 80~90 °C for 1.5 ~ 2 h.
5. peel.

PDMS:

poly(dimethylsiloxane)



Stamp replication process:

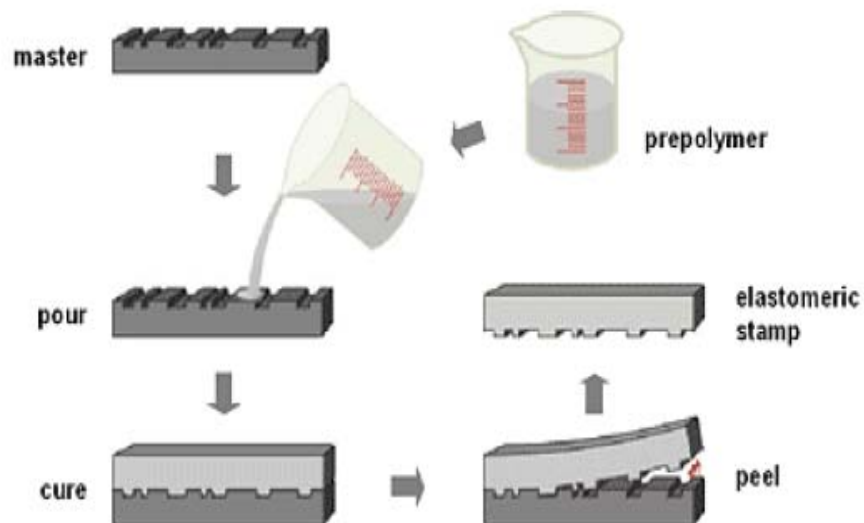


Fig.2 The stamp replication process: A master with a negative of the desired pattern is cast with a pre-polymer. After curing the polymer, the elastomeric stamp is peeled off the master and ready for microcontact printing.