Master: Multilayer – Thin Chambers device)

This fabrication is a bit more complicated since we will have to produce two the layer for the master texture and therefore we will employ two different masks. We also need to align between formed layer and subsequent masks.

The **Layer 1** is is the texture that will build the Thin Chambers, while **Layer 2** is the texture for the Main channel

Clean :

* ddH2O
* Acetone
* (Sonication, 10 min)
* Dehydration ( ***15*** *min* @ **120**°C )

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Spin 1 :

* ***Hlayer*** **1** = ***1.2 μm or 2.2 μm***
* Photoresistor: negative **Su-2002**

|  |  |  |  |
| --- | --- | --- | --- |
|  | *Speed* | *ramp* | *Time* |
| 0° | 500 rpm | 1 | ***10*** *s* |
| 1° | 5000 rpm (1.2 um)  3000 rpm (2.2 um) | 8 | ***30*** *s* |

Soft Bake 1 : 1 min @ 65°C **+** ***1*** *min* @ **95°**C

Mask 1 Exposure 1 : E1.2 = 2.2 = **60** [mJ/cm^2]  ≈  ***2.7*** *s*

Post Bake 1 :

|  |  |  |
| --- | --- | --- |
| ***65****°C* | *ramp* | ***95****°C* |
| ***1*** *min* | ***1*** *min* |

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* ***Hlayer*** **2** = about ***20 μm***
* Photoresistor: negative **Su-3050**

|  |  |  |  |
| --- | --- | --- | --- |
|  | *Speed* | *ramp* | *Time* |
| 0° | 500 rpm | 1 | ***10*** *s* |
| 1° | 1000 rpm | 1 | ***30*** *s* |

Soft Bake 2 : 1 min @ 65°C **+** ***3*** *min* @ **95°**C

-------------- Allignment -----------------

Mask 2 Exposure 2 : E20 = 200 [mJ/cm^2]  ≈  ***7.5*** *s*

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Post Bake 2 :

|  |  |  |
| --- | --- | --- |
| ***65****°C* | *ramp* | ***95****°C* |
| ***1*** *min* | ***3.5*** *min* |

Develop 2 : t = ***4*** *min*

Hard Baking : about ***15*** *min*  @ ***200°***C