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| Objective |
| Batch name: Process template |
| This process flows is a guideline on how to spin coat, expose, and develop AZ nLOF 2020 on 4” substrates such as Si, SiO2 and Borofloat, using automatic spin coater, maskless aligner and automatic developer.  |

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| Step Heading | Equipment |  | Comments |
| 1. Pretreatment
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| * 1. Pretreatment
 | BHF dip*or*Oven: HMDS – 2 | BHF dip for Si substrates (30 s, H2O 5 min)HMDS treatment for Si, SiO2, and Borofloat**Recipe:** 01 | For Si, choose BHF or HMDS.HMDS priming can also be performed on Gamma spin coater. |
| 1. Spin coat of AZ nLOF 2020
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| * 1. Coat wafers
 | Spin Coater: Gamma UV | **Resist:** AZ nLOF 2020 (line 2)**Spin:** 30 s @ 3300 rpm (for 2µm)**Softbake:** 60 s @ 110 °C**Sequence:**(2420) DCH 100mm AZ5214E 1.5um | Use (2421) for in-line HMDS priming.Resist thickness can be measured on FilmTek |
| 1. UV Exposure
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| * 1. Exposure
 | Aligner: Maskless 01orAligner: Maskless 02 | **Design:** your design file**Exposure dose:**220 mJ/cm2 for MLA1500 mJ/cm2 for MLA2 (375nm)**Defocus:**0 for MLA10 for MLA2 (optical) | Information on exposure dose for other thickness or aligner: http://labadviser.danchip.dtu.dk/index.php/Specific\_Process\_Knowledge/Lithography/UVExposure\_Dose |
| 1. Post Exposure Bake
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| * 1. Post Exposure Bake
 | Developer: TMAH UV-lithography | **Post Exposure Bake:** 60 s @ 110 °C**Sequences:** (2001) DCH PEB 110C 60s or(3005) DCH 100mm PEB60s@110C+SP30s(3001) DCH 100mm PEB60s@110C+SP60s | 120 s PEB is better for Borofloat. May require lower exposure dose.PEB and development is typically done simultaneously |
| 1. Development, Rinse, and Dry
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| * 1. Develop
 | Developer: TMAH UV-lithography | **Development in TMAH (AZ 726 MIF):** single puddle, 30 s or 60 s**Sequences:**(1001) DCH 100mm SP 30s (1002) DCH 100mm SP 60s or(3005) DCH 100mm PEB60s@110C+SP30s(3001) DCH 100mm PEB60s@110C+SP60s | Choose 60 s development for extra undercut (lift-off).PEB and development is typically done simultaneously |
| 1. Inspection
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| * 1. Inspection
 | Optical microscope | Inspect pattern / alignment mark / process monitor |  |