

**Minutes from OpenPICs WP 4 meeting 26-06-2017**

Present: Longfei, Rui, Rob, Steven, Rene, Robert, Kevin

**Discussion/action points**

Nr.	Description	Responsible
1.	<p><b>Al-MQW</b></p> <ul style="list-style-type: none"> <li>The design is delayed by another 2 weeks. It would be helpful to discuss with Peter (Smart) to see if their model can be used to get an initial numbers of the composition and strain.</li> <li>The Al-Q will be calibrated in both Nanolab and Smart reactors.</li> </ul>	Weiming,  Longfei
2.	<p><b>Zn diffusion tests</b></p> <ul style="list-style-type: none"> <li>Quick diffusion test on a SiO<sub>2</sub> mask covered sample.</li> <li>Get an empirical model based on more data points with the standard MPW layerstack.</li> <li>4 samples will be shipped to UK for SIMS measurement (including the new one grown with lower PH<sub>3</sub> flow).</li> <li>Test with mask opening. Longfei will follow up on the fabrication.</li> </ul>	Rene    Longfei
3.	<p><b>BCB planarization</b></p> <ul style="list-style-type: none"> <li>Planarization test has been done on the sample from Smart. Tencor is back from supplier, needs to be set up and calibrated (this week by Barry).</li> <li>Several samples coated with BCB are used for the test with metal adhesion. Partial cured BCB shows poor adhesion to the sample. Samples with different surface treatments to BCB will be tested in 2 weeks.</li> <li>Lithography parameters have to be re-optimized for BCB.</li> </ul>	Tjibbe
4.	<p><b>Stepper process</b></p> <ul style="list-style-type: none"> <li>First FEM tests with AZ resist done. Optimal focus range found. Next test with MaN resist.</li> <li>Overlay test using Scanner patterned samples is planned together with Jeroen.</li> </ul>	Robert
5.	<p><b>Etching process</b></p> <ul style="list-style-type: none"> <li>The new CH<sub>4</sub>-H<sub>2</sub> recipe (optimized for ~3 degree side-wall angle in Smart's ICP) will be transferred to Nanolab after a few more fine-tuning.</li> <li>Regarding the Cl<sub>2</sub>-CH<sub>4</sub>-H<sub>2</sub> recipe, Oxford suggested to increase the H<sub>2</sub> flow and RF power. Longfei will prepare a new batch of wafers for the next test.</li> </ul>	Rui  Longfei
6.	<p><b>Planning and milestone list</b></p> <p>Milestones due by the end of June are summarized in a document for the first project review.</p> <p>Upcoming due dates for milestones:</p> <p>M 6.1 (end of August) Process developed for AZ and MaN based lithography.</p> <p>M 4.1 (end of September) BCB insulation and metal plating tested: ready for joint MPW validation</p>	Robert Tjibbe

Next meeting: 13:30-15:00, 10-7-2017, Flux 10.177