Minutes from OpenPICs WP 4 meeting 16-01-2017

Present: Longfei (chairing), Luc, Rui, Steven, Huub, Tjibbe, Rene

Agenda points	**Responsible**	**Updates?**
New epitaxy integration (Al-MQW, Zn diffusion)	Longfei, Rene	
Insulation and high-speed RF lines	Tjibbe, Longfei	
DUV process optimization	Roel	No updates
CMP and Stepper process development	Robert	No updates
MPW test structures design	Weiming, Longfei	No updates

Discussion/action points

Nr.	Description	Responsible
1.	**Al-MQW based BBs** A design choice needs to be made between P- and Al- based SCH layers, based on simulations or literatures for both modulators and lasers. The Al-SCH layers will require new etching recipes, and the whole flow for etching has to be re-thought through. The P-SCH layers require switching of growing temperature between P-SCH and Al-MQW, which may lead to performance degradations. For SOAs, the broad-area gain-guided method may be used first to quickly compare the difference between P- and Al- SCH designs, and also between P- and Al- MQW designs.	Longfei, Weiming
2.	**P-MQW for modulators** Smart has been advised by Ewit that the Effect modulator design can be used in this project.	
3.	**Zn diffusion tests** A systematic experiment needs to be designed for Zn diffusion tests, studying the influence and tolerances with regard to multiple variables i.e. pressure, temperature, and InGaAs layer thickness. Phosphine will be first tested, while TBP is an alternative. 3 inch SI wafers with epitaxies grown by smart will be used in the tests.	Longfei, Rene
4.	**BCB planarization** We want to see the SEM photos of Arezou's tests with 4-5 µm BCB. A few tests should be considered in the next wafer-scale test: Adhesion: tape test, wire-bonding, current injection; be careful of narrow lines. BCB thickness profile over the wafer: find the border of the uniform thickness.	Longfei, Tjibbe, Weiming
5.	**Milestone list** Design related specifications should be added to the milestone list to ensure a better check of the work progress.	Longfei, Weiming

Next meeting: 13:30-15:00, 06-02-2017, Flux 10.177