Wafer scale conformality using Lateral High Aspect Ratio test structures

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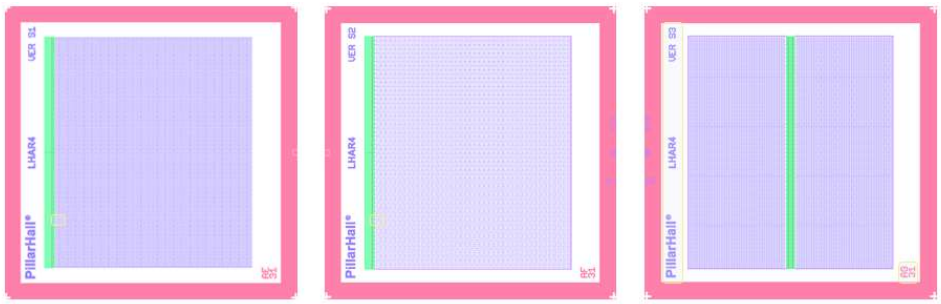
a)



b)

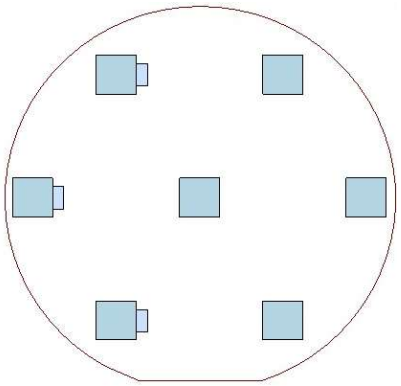


Figure 1. a) Three different PillarHall® LHAR4 small chip designs S1, S2 and S3, where pillar matrix design (S1 and S2), and the place of the cavity opening on the chip (S3) was varied. The chip dimensions were 3x3 mm, and gap height 500 nm. b) 150-mm silicon based chip holder design. The chip holder enables placement of the seven normal sized LHAR chip on a single run.

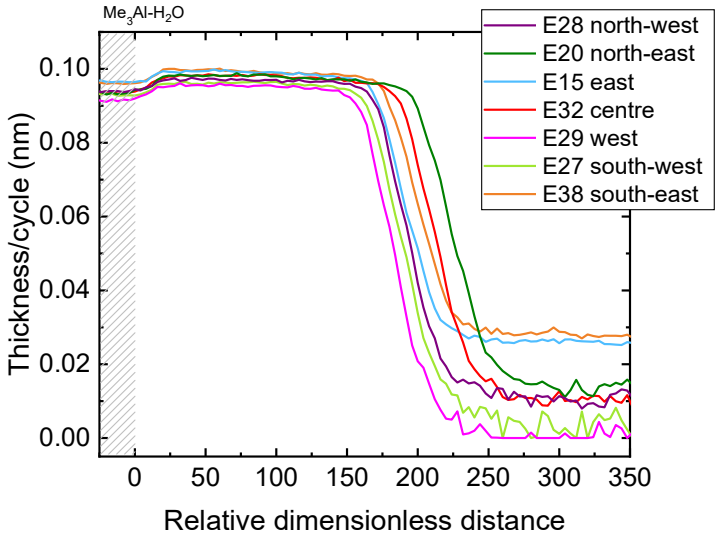


Figure 2. Thickness per cycle (nm) in relation to relative dimensionless distance analysed for seven small LHAR S1 chips placed in different places in the ALD chamber using a chip holder presented in Figure 1b. The $PD^{50\%}$ varied from 184 to 232 in a single ALD Al_2O_3 run at 300 °C for 500 cycles.