

Fig. 1. Experimental GPC vs. precursor pulse shows that at 50 °C, 100 °C and 150 °C the self-limiting, surface saturated GPC is achieved. However, at 300 °C a much lower GPC is observed indicating that the reaction is not self-limiting.

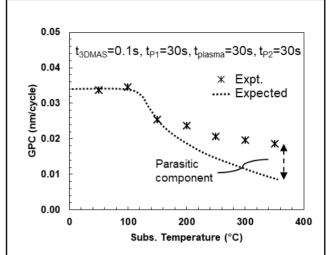


Fig. 2. Experimental GPC vs. T_{SUB} compared to the expected GPC. The discrepancy between the experimental and expected results are attributed to parasitic components resulting in parasitic growth.

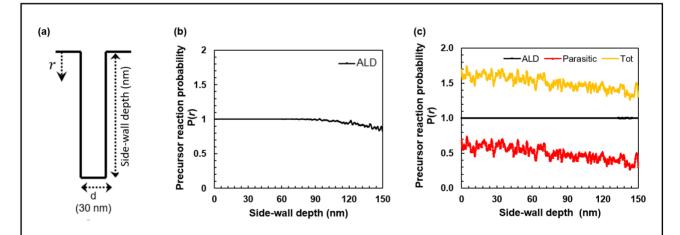


Fig. 3. Simulation of non-ideal ALD growth effects on the side-wall depth of a (a) high aspect-ratio structure. In this simulation, the reaction probability P(r) of parasitic effects are not present in (b) an ideal-ALD case representing growth within the ALD temperature window. In contrast, (c) for a case representing non-ideal-ALD growth at temperatures above the ALD window, the total reaction probability P(r) can be decomposed into the ALD-reaction component and a parasitic reaction component leading to P(r) > 1.