

New ALD process with simultaneous deposition and etch

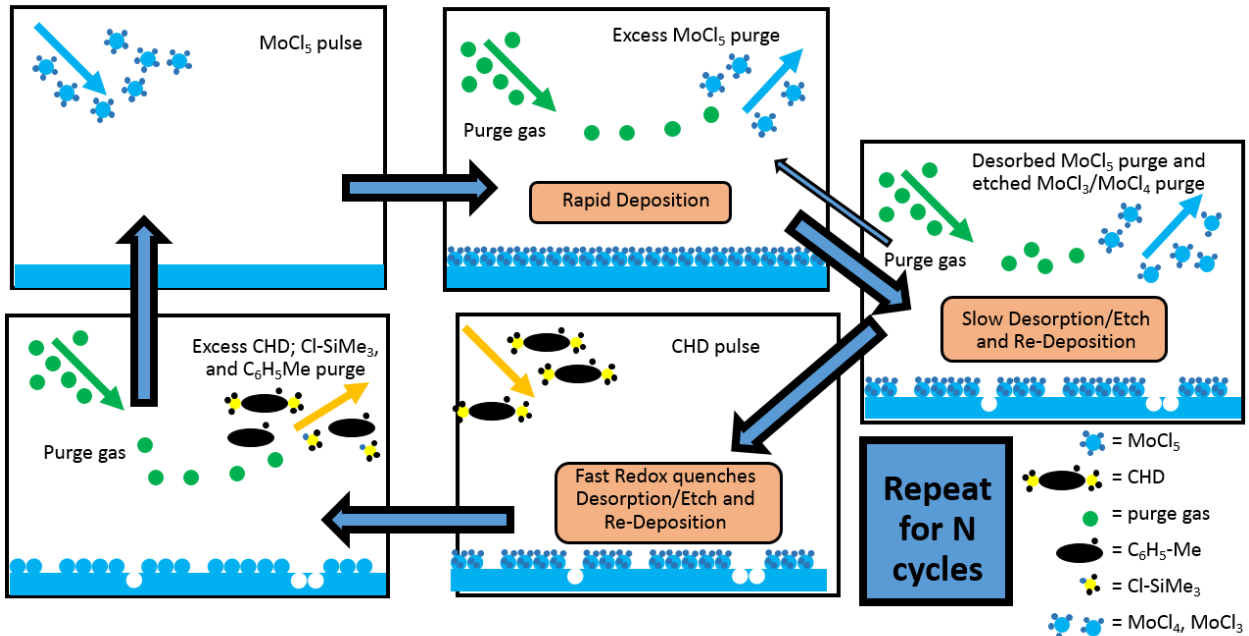
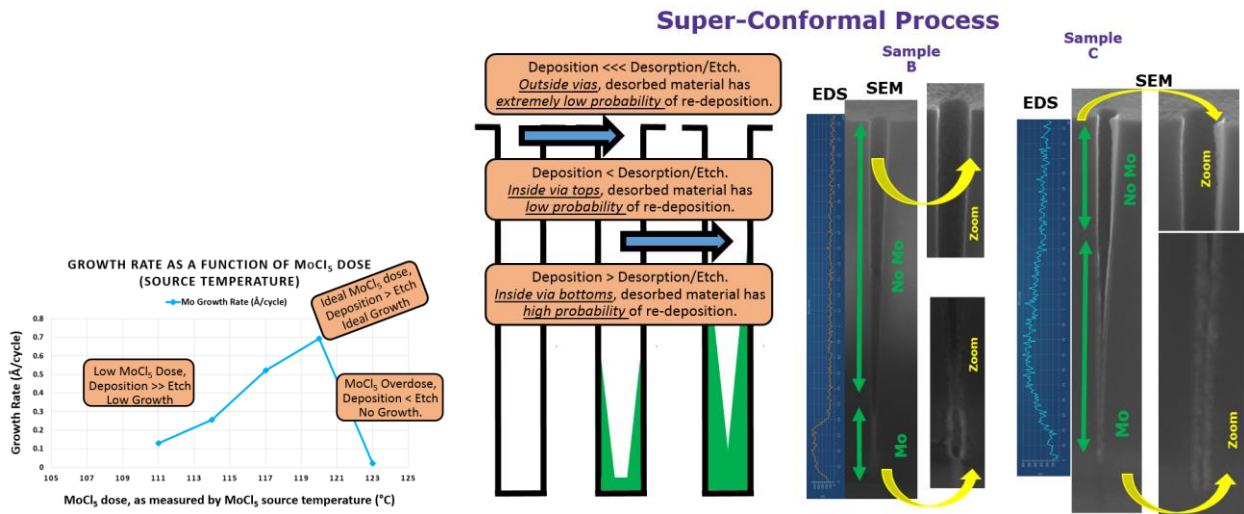


Figure 1: Proposed mechanism of the deposition/etch process.



Figures 2a (left) and 2b (middle) and 2c (right): molybdenum growth/cycle as a function of MoCl₅ dose (left), displaying a maximum when the deposition/etch ratio is chosen to favor deposition; scheme describing mechanism through which super-conformal deposition is possible (middle); SEM and EDS analysis of vias where Mo was deposited selectively at bottom of vias (right).