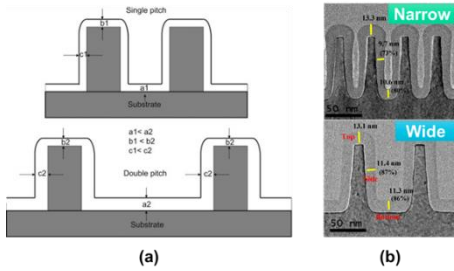
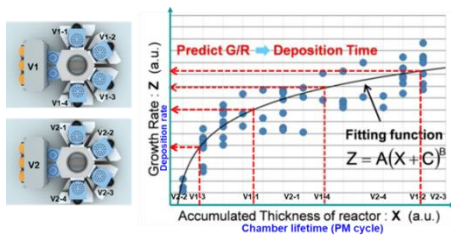


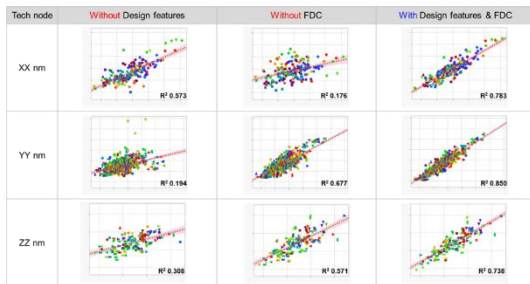
High product mix manufacturing in semiconductor foundry



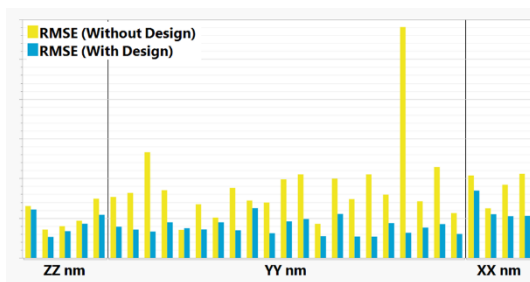
(a) schematic of the difference in film thickness for a single and double pitch (b) TEM images of silicon nitride film thickness differences between a wide and a narrow pattern



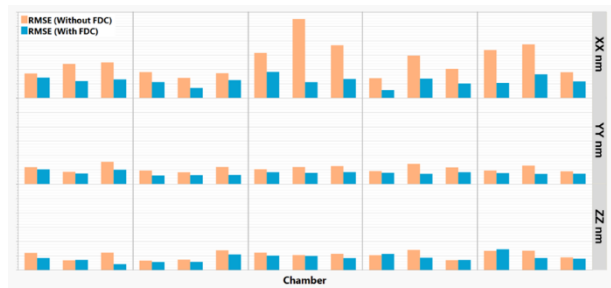
PM cycle and chamber-to-chamber film growth rate variations



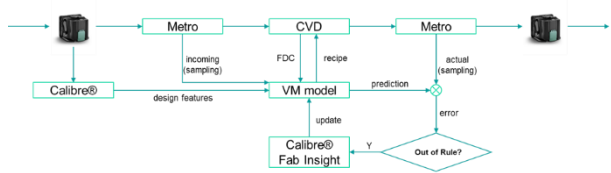
VM modeling with and without incorporating design features and FDC data



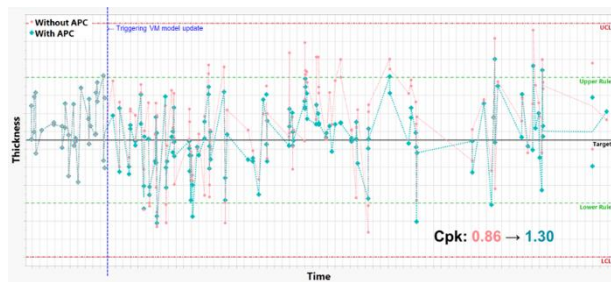
Segmented comparison of the VM model with and without design features by product



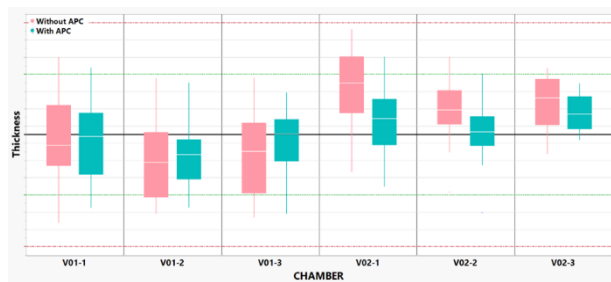
Segmented comparison of the VM model with and without FDC by chamber



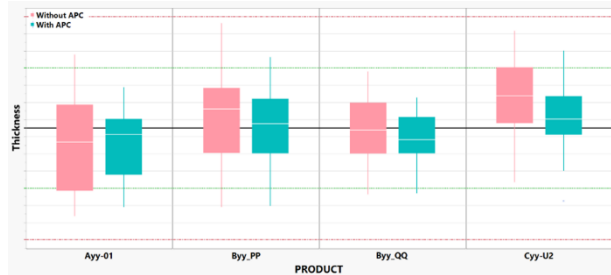
Schematic diagram of APC system



Control simulation result of APC system



Control simulation result of APC system by chamber



Control simulation result of APC system by product