

Figure 1. Schematic of thermal Co ALE surface chemistry based on sequential exposures to  $\text{SO}_2\text{Cl}_2$  and  $\text{PMe}_3$ .

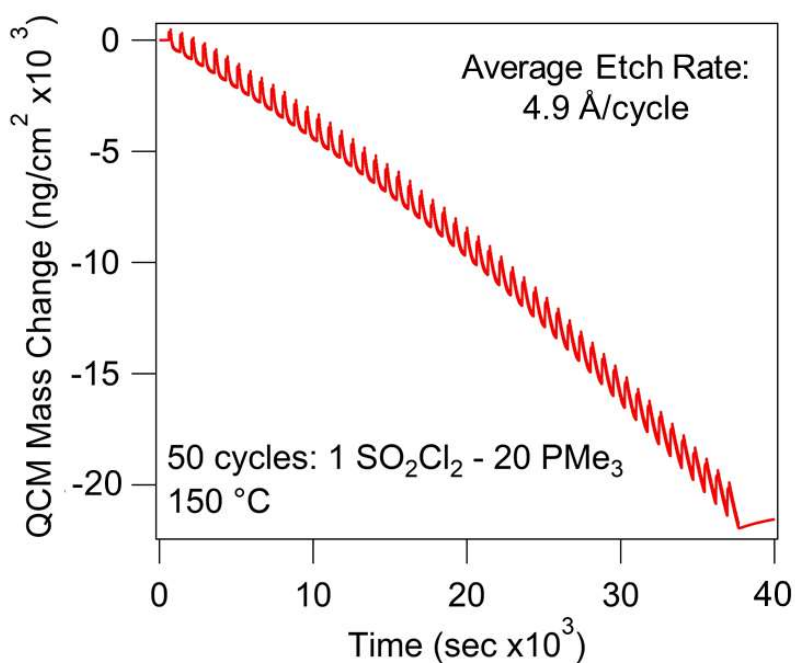


Figure 2. In situ QCM measurement of 50 cycles of Co ALE at  $150 \text{ }^\circ\text{C}$  using  $\text{SO}_2\text{Cl}_2$  and  $\text{PMe}_3$  as the reactants.