

Figure 1. (a) EE-ALD process using alternating precursor and electron exposures with continuous reactive background gas exposure. (b) EE-CVD process using repeating precursor doses with continuous electron and reactive background gas exposure.

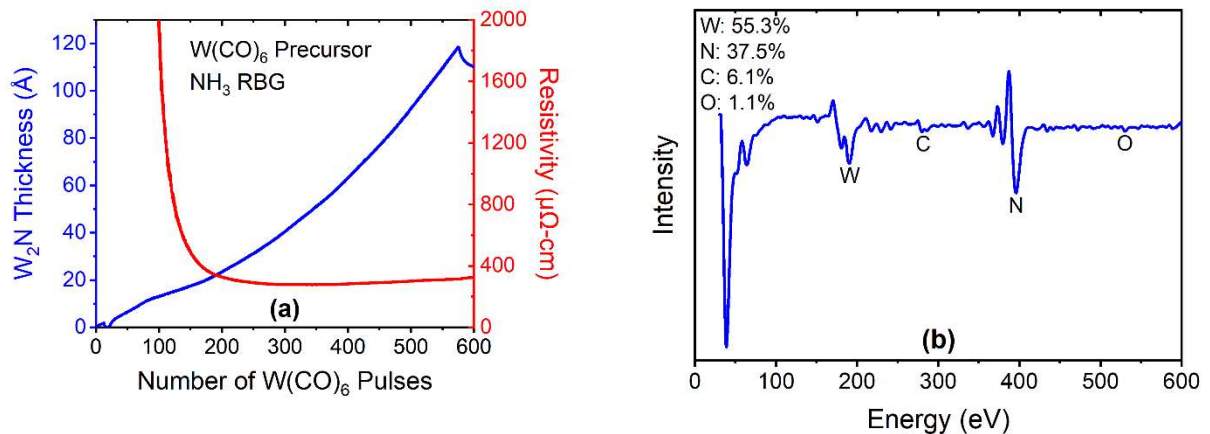


Figure 2. (a) In situ real time ellipsometry of W_2N nucleation and growth on a Si native oxide coupon. W_2N EE-CVD growth rate was 0.17 \AA per $W(CO)_6$ pulse. (b) In vacuo AES showing W, C, N, and O AES signals for W_2N EE-CVD films grown on a Si native oxide coupon for a thickness of $\sim 115 \text{ \AA}$.