

Plasma-Enhanced Atomic Layer Deposition of Cobalt and Cobalt Nitride: what controls the incorporation of nitrogen?

Supplementary Information

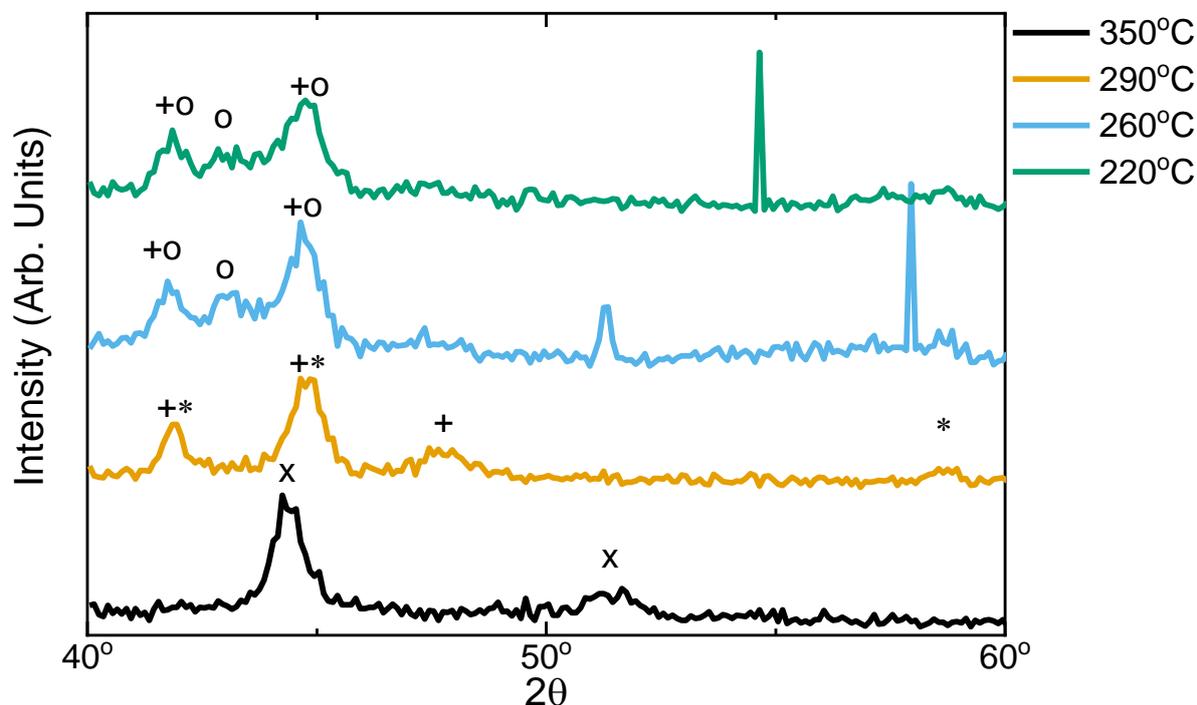


Figure 1: Effect of deposition temperature on the crystal structure of ALD Co and Co_xN thin films, as determined by grazing incidence x-ray diffraction using Cu K α radiation. Peaks indicated with x and + can be assigned to the FCC and HCP phase of Co respectively, while peaks indicated with * and o can be assigned to Co₃N and Co₂N respectively.

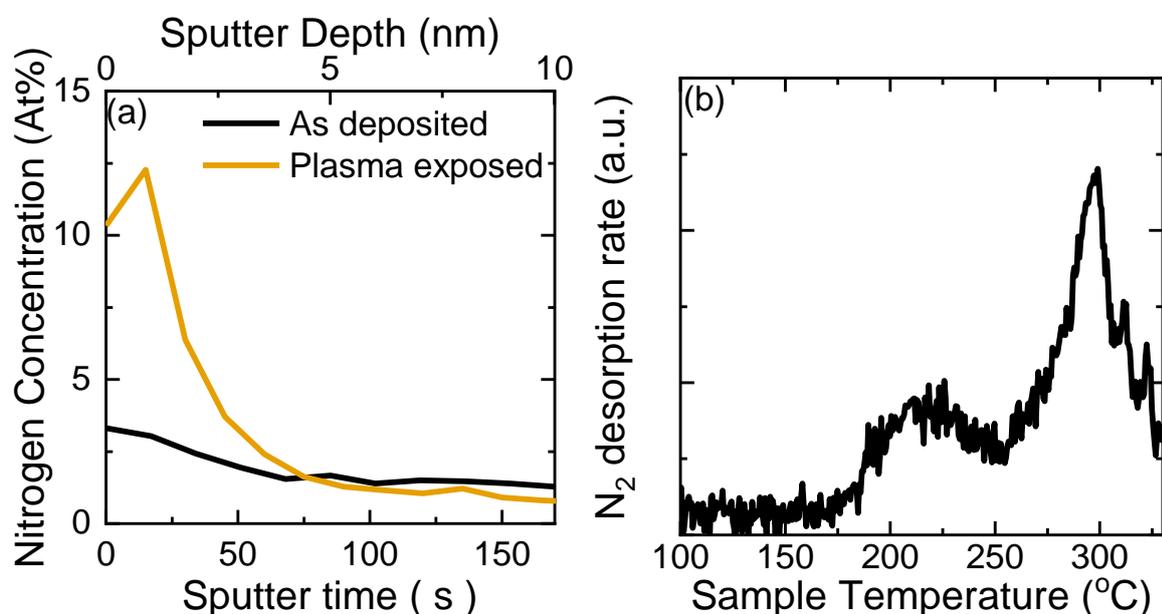


Figure 2: a.) Nitrogen distribution inside an ALD Co thin film exposed to NH₃ plasma as determined by X-ray photoelectron spectroscopy depth profiling. b.) N₂ temperature programmed desorption spectrum of a Co thin film after plasma exposure