ALD of SnO₂ thin films using tin(IV) acetate as a novel precursor

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Figure 1: (a) Growth rate as a function of $Sn(OAc)_4$ pulse time, (b) growth rate as a function of H_2O pulse time, (c) thickness mapping over 5x5 cm² Si substrate, (d) film thickness as a function of the number of ALD cycles, (e) growth rate and refractive index of SnO_2 thin films deposited at different temperatures, (f) Sn 3d high-resolution XPS spectra, (g) HT-GIXRD contour plot measured in air and (h) in N₂ environment, (i) transmission spectra of SnO_2 thin films grown at different temperatures, (j) TOF-ERDA elemental depth profiles of a SnO_2 thin film grown at 200°C and (k) after annealing in air at 500°C.