

Supplemental Information to: Scale-Up of Atomic Layer Deposition on Powders in Fixed Bed Reactors

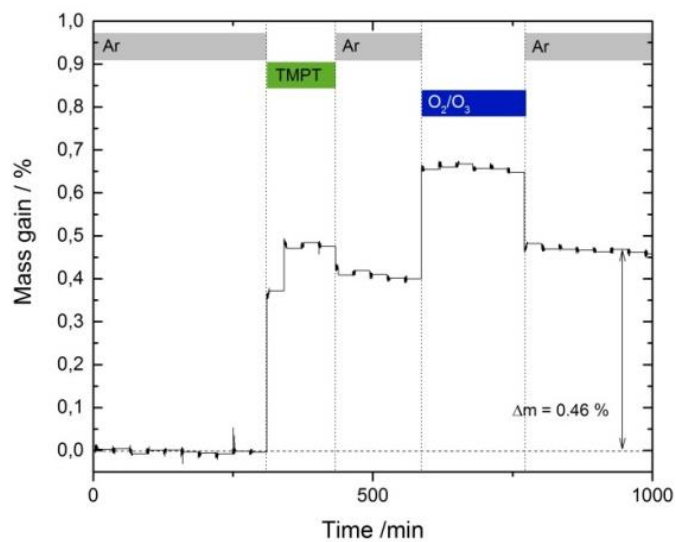


Fig. 1: Mass gain as function of time for depositing PO_x on V₂O₅ powder at 150 °C with P(OMe)₃ as precursor and O₂/O₃ as reactant. The experiment was performed in a magnetic suspension balance and N₂ was used as carrier gas. Shown is the first ALD cycle. The small mass gain can be measured by the balance due to its resolution of 0.01 mg.

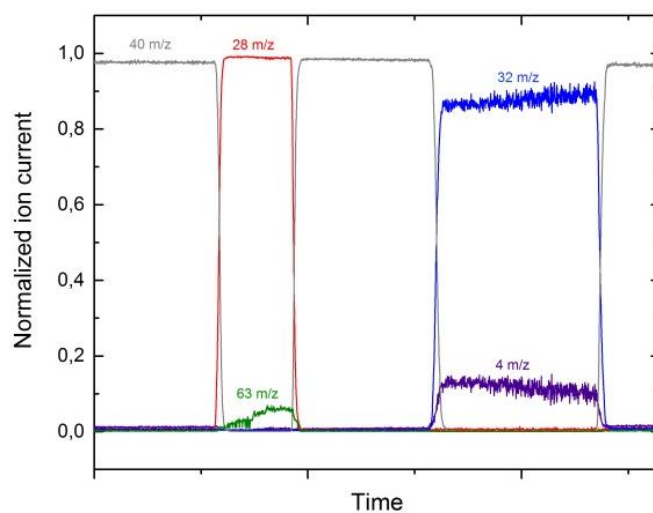


Fig. 2: Mass spectrometric monitoring for the first ALD cycle of PO_x on V₂O₅ powder at 150 °C with P(OMe)₃ as precursor and O₂/O₃ as reactant. Shown are the normalized ion currents as function of time for the following mass to charge ratios: 40 (Ar, grey), 28 (N₂, red), 63 (TMPT, green), 32 (O₂, blue), 4 (He, purple).