

Supplementary File

Inherently Area-Selective Atomic Layer Deposition of Manganese Oxide through Electronegativity-induced Adsorption

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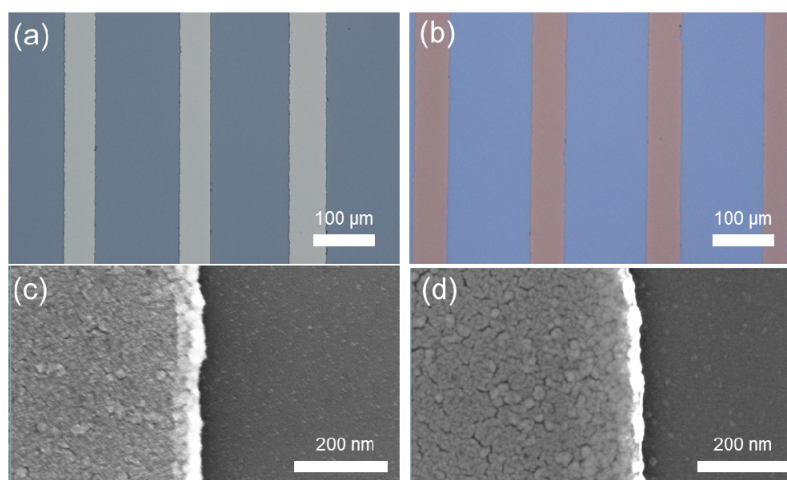


Figure S1. Confocal microscope images of patterned (a) Pt/SiO₂ and (b) Cu/SiO₂ substrate, SEM images of amplified (c) Pt/SiO₂ and (d) Cu/SiO₂ patterns after 50 ALD cycles

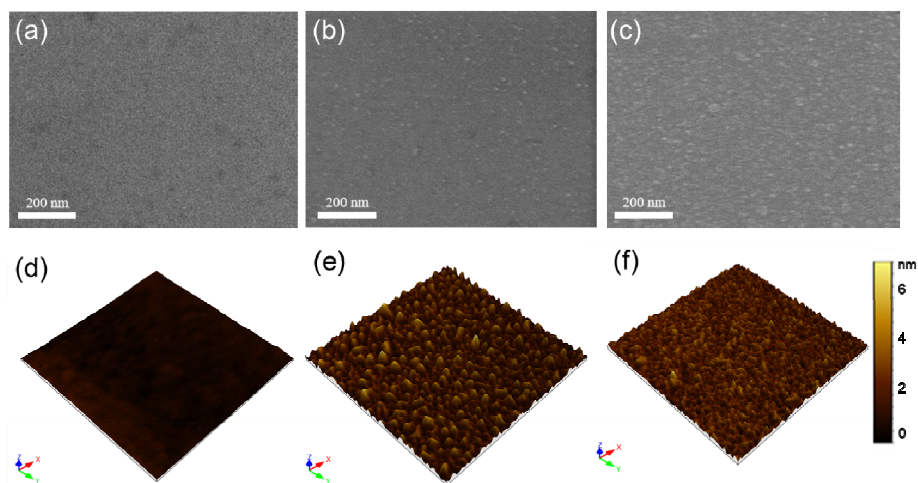


Figure S2. SEM images of (a) bare Si substrate; (b) 50 MnO_x ALD cycles; (c) 400 MnO_x ALD cycles; AFM images of (d) bare Si substrate; (e) 50 MnO_x ALD cycles; (f) 400 MnO_x ALD cycles

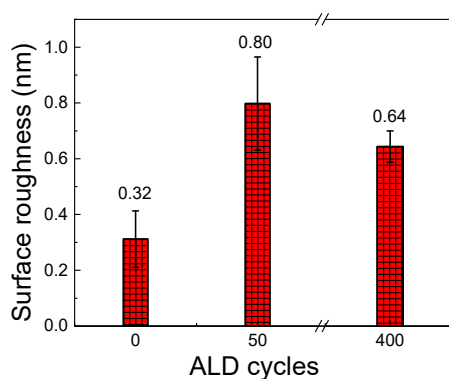


Figure S3. Surface roughness as a function of MnO_x ALD cycles

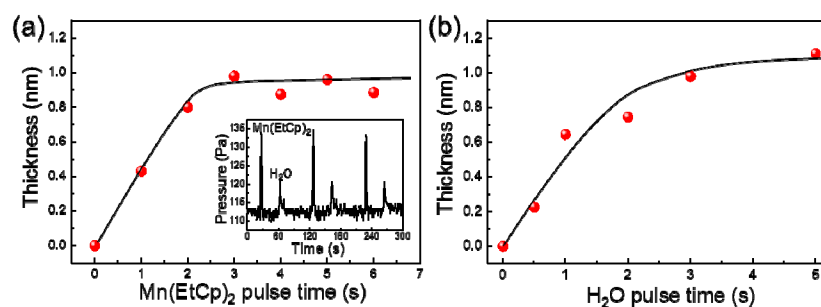


Figure S4. Film thickness with respect to (a) Mn(EtCp)₂ pulse time and (b) H₂O pulse time. The inset in (a) is the pressure of dosing Mn(EtCp)₂ and H₂O as a function of time. The deposition temperature is 125 °C for (a) and (b).