Governing metal-insulator transition in ultra-thin VO_2 films by surface engineering

SUPPLEMENTAL

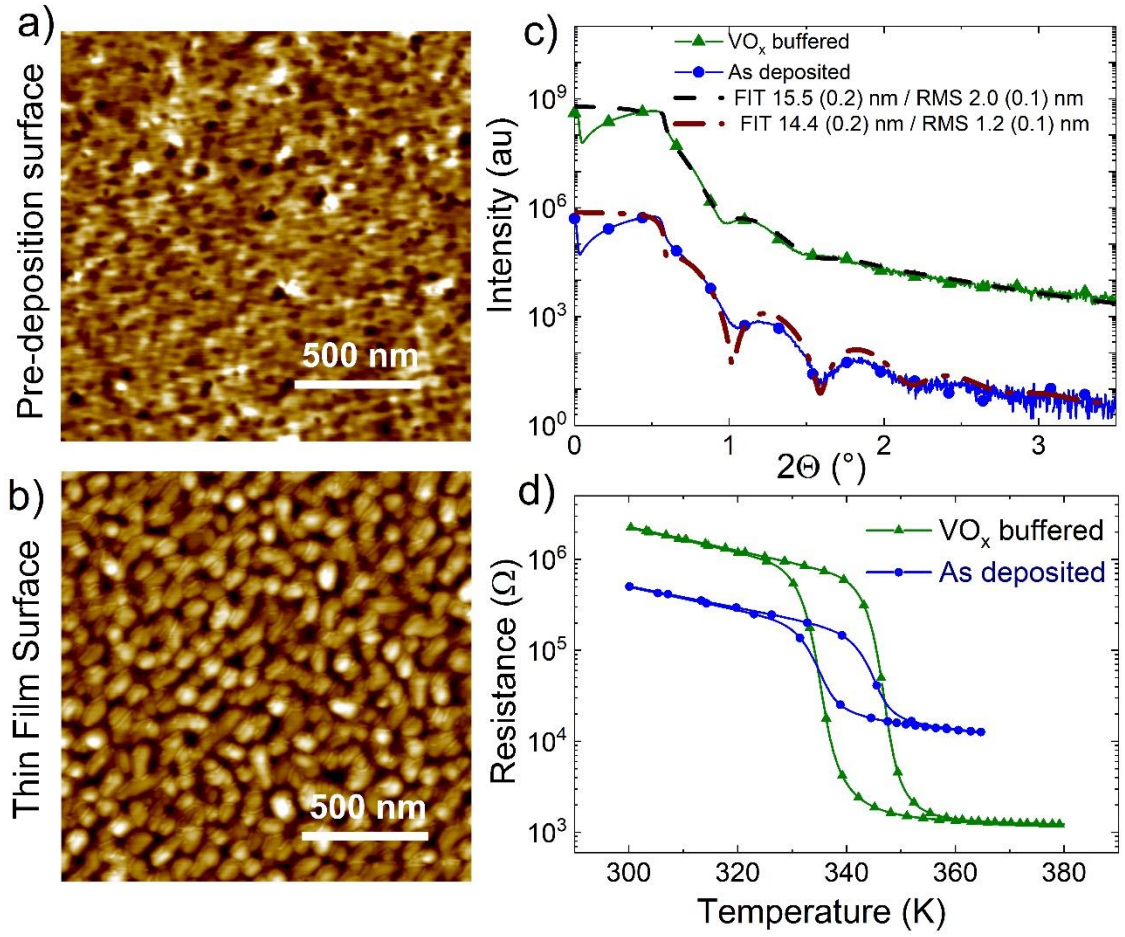

Figure 1. Morphology and transport measurements of the 15 nm thick VO_2 films grown as-deposited and with a 1.5 nm vanadium oxide buffer layer (VO_x buffered) on r-cut sapphire substrates. a, b) 1.0 μm^2 scan AFM height image of the buffer layer and after 15 nm VO_2 film grown on the buffer layer, respectively. c) XRR measurements for as-deposited and VO_x-buffered 15 nm samples. d) Resistance vs temperature for corresponding as-deposited 15 nm thick VO_2 (blue, round symbols) and with a 1.5 nm vanadium oxide buffer layer (green, triangles).

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