

Supporting information

Energy-adaptive resistive switching with controllable thresholds in insulator-metal transition

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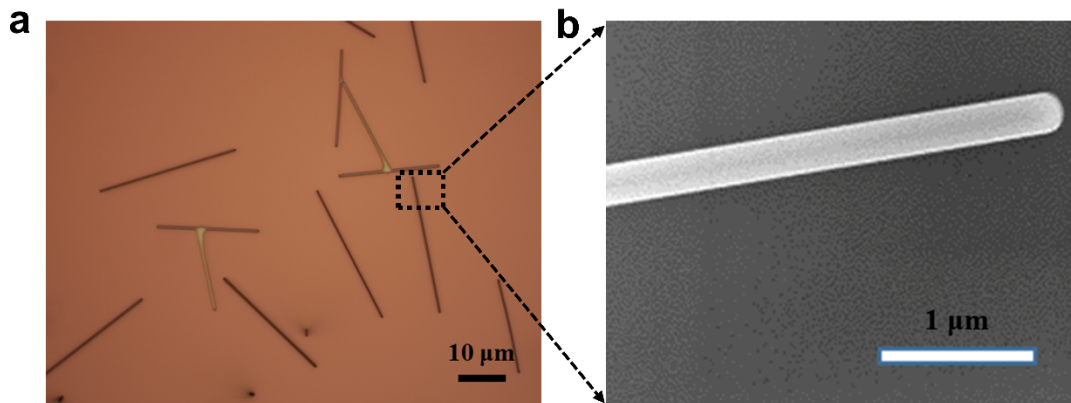


Figure S1 a) Optical microscopy photograph and b) SEM image of the deposited VO₂ nanowires.

Amorphous SiO₂ was chosen as the substrate to reduce the influence of lattice mismatch during deposition process. The optical microscopy photographs clearly revealed the random distribution directions of the grown VO₂ nanowires. The length was in the range of 30~60 μm and the width was around 200~500 nm.

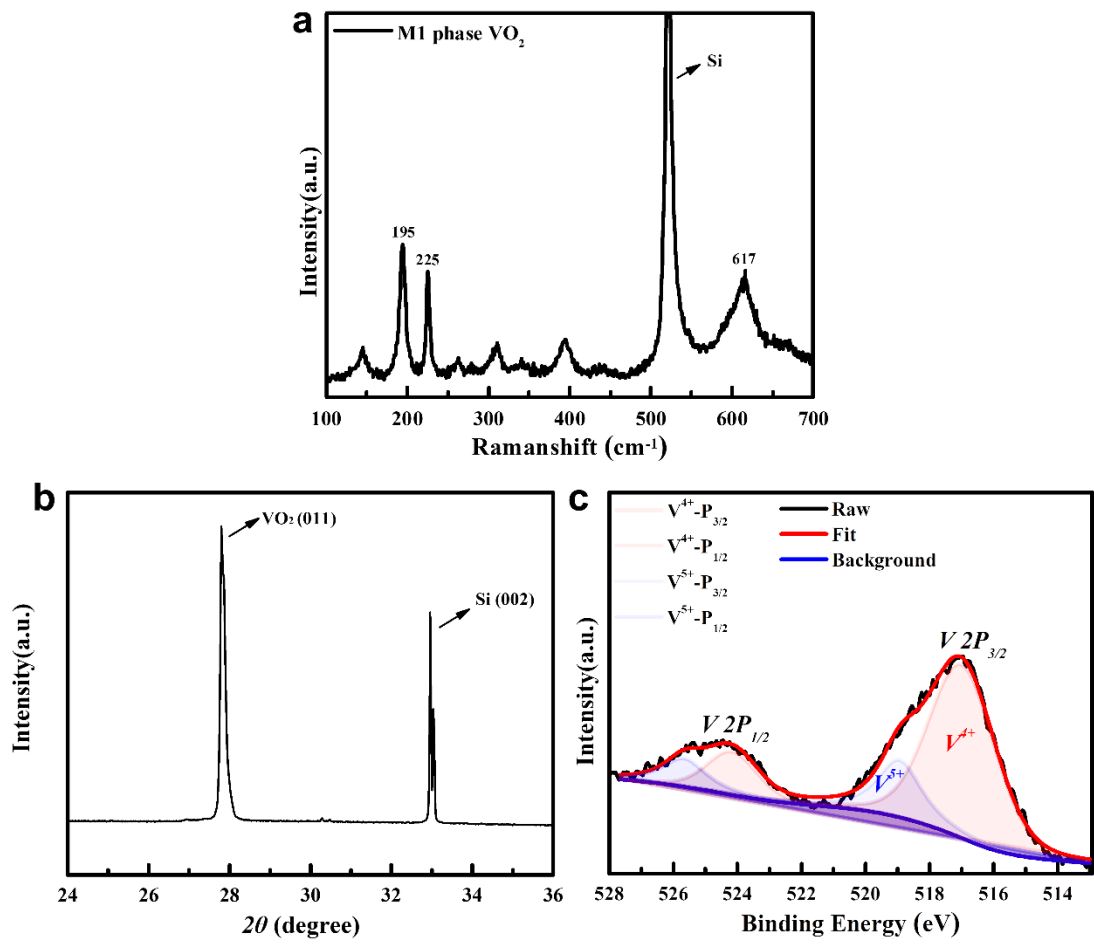


Figure S2. a) Raman spectrum of the selected VO₂ nanowire. b) XRD pattern and c) XPS spectrum of the VO₂ nanowires.

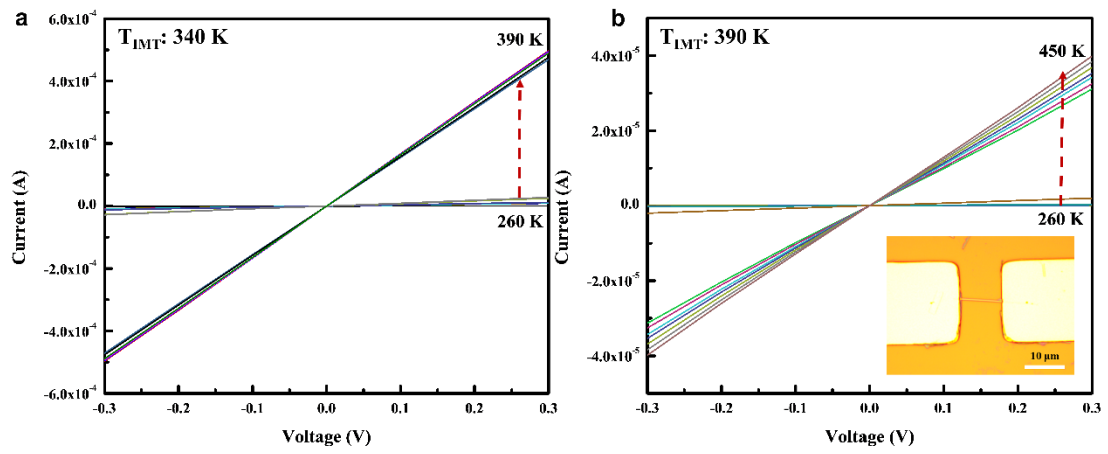


Figure S3 I-V curves based on VO₂ nanowire with the transition temperature (T_{IMT}) a) 340 K and b) 390 K at different temperatures.