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**Abstract Details**

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**Abstract**

**TITLE:** Fabrication and Spectral Properties of Textured Phase Change VO<sub>2</sub> Nanostructures Obtained via Oxidation of Thermally Evaporated Metallic Vanadium Films

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**ABSTRACT BODY:**

**Abstract Body:** We demonstrate the growth of highly textured VO<sub>2</sub> nanocrystals via annealing of amorphous e-beam deposited metallic V. Temperature dependent ellipsometry results reveal the pronounced reflection near the IR spectrum above the transition and an almost temperature independent weak reflection in the visible spectrum. The infrared reflection displays a strong hysteresis during heating and cooling near the transition temperature at 68°C, indicating a first order transition and a strain-free structure. Our work demonstrates the feasibility to obtain high quality phase change nanostructures that transmit the visible spectrum but reflect infrared and is suitable for large scale fabrication.