Correlation between optical, electrical and structural properties of vanadium dioxide thin film

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Abstract

VO_2 films have been prepared on normal microscope glass slides by reactive rf magnetron sputtering of vanadium target in a mixture of argon and oxygen. Optical properties of the films were investigated by the UV/Vis/NIR Perkin–Elmer Lamda 9. Transmission electron microscope and atomic force microscope were used to investigate the structure of the films. Correlation between structural and optical properties of VO_2 thin films is investigated with respect to the dependence of both to substrate temperature.