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Comparative Study of Nanostructures VO2 nanoplates: Annealing effect and Structural Properties

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Abstract content
 (Max 300 words)

Significant changes in optical and transport properties of vanadium dioxide nanomaterials induced by the metal to semi conductor phase transformation make vanadium dioxide a well technological material with many applications as gas sensing, smart materials, solar cells, optical limiting, infrared modulators, and light polarizer. Here we present the synthesis of nanoplatelets VO2 (A) by the hydrothermolysis approach. The composition and nanostructure was analysed by Raman spectroscopy. The annealing treatment in argon gas at 500° C for 3hrs was applied to study the effect of heat catalyst upon the atomic structure and vibrational modes of the material. Crystallization temperature is shifted to around 67 ° C critical temperature of VO2 (M). The final product is well crystallized and the surface structure presents small amount of V2O5.

Apply to be
 consider for a student
 award (Yes / No)?

yes

Level for award
 (Hons, MSc,
 PhD)?

PhD

Main supervisor (name and email)
and his / her institution

Prof Malik Maaza/maaza@tlabs.ac.za/iThemba LABS

Would you like to
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Yes

Primary author: Ms SIMO, Aline (PHD Student)

Co-authors: Prof. MAAZA, Malik (iThemba LABS); Prof. MADJOE, Reginald (University of Western cape)

Presenter: Ms SIMO, Aline (PHD Student)

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