



Contribution ID: 139

Type: Poster Presentation

The effect of silver (Ag) dopant on the structural properties of cadmium oxide (CdO) nanoparticles

Tuesday, 8 July 2014 17:10 (1h 50m)

**Abstract content
 (Max 300 words)
Formatting &
Special chars**

The samples of undoped CdO and 5% Ag doped CdO nanoparticles have been prepared by sol-gel method and they have been annealed at 400°C and between 100°C - 600°C respectively for 1 hour. The prepared samples have been characterized by XRD and SEM. The XRD results showed that for 5% Ag doped CdO nanoparticles the CdO nanoparticles were completely crystallized at the annealing temperature of 400°C. The lattice parameters for the undoped and 5% Ag doped CdO nanoparticles have been found to be similar to the recorded values of CdO in the JCPDS cards. The grain sizes for the 5% Ag doped CdO nanoparticles increased as the annealing temperature was increasing. The grain size of the 5% Ag doped CdO nanoparticles decreased as compared to the grain size of the undoped CdO nanoparticles. The strains for the 5% Ag doped CdO nanoparticles decreased as the annealing temperature was increasing. The SEM results showed that as the annealing temperature was increasing the grain sizes increased. The optical studies of the samples are currently under way.

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

yes

**Level for award
 (Hons, MSc,
 PhD)?**

Hons

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

Prof K.E Rammutla, erasmus.rammutla@ul.ac.za, University of Limpopo.

**Would you like to
 submit a short paper
 for the Conference
 Proceedings (Yes / No)?**

Yes

Primary author: Mr MASWANGANYE, Mpho (University of Limpopo)

Co-authors: Prof. RAMMUTLA, Erasmus (University of Limpopo); Dr MOSUANG, Thuto (University of Limpopo)

Presenter: Mr MASWANGANYE, Mpho (University of Limpopo)

Session Classification: Poster1

Track Classification: Track A - Division for Physics of Condensed Matter and Materials