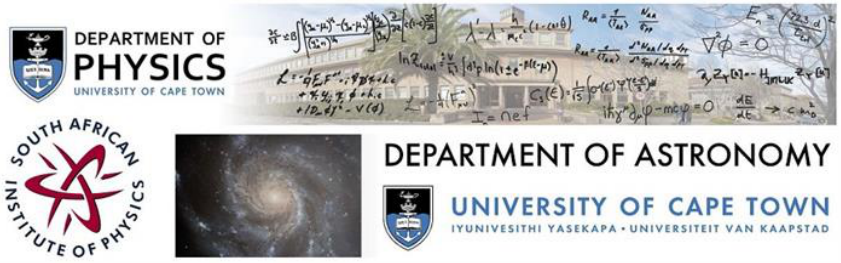

Contribution ID: **396** Type: **Poster Presentation**

Microwave-assisted method derived ZnO nanostructures with various morphologies: Effect of pH on PL, magnetic and sensing properties.

Tuesday, 5 July 2016 16:10 (1h 50m)

Abstract content
   (Max 300 words)
Formatting &
Special chars

Zinc oxide (ZnO) nanostructures with different morphologies induced by variation of pH were successfully synthesized using the microwave-assisted hydrothermal method. Based on scanning electron microscopy (SEM), photoluminescence (PL) and electron paramagnetic resonance (EPR) studies, variation of pH have substantial effect on the morphology, surface defects, magnetic properties, and surface area of the ZnO nanostructures. The sensing performance of the ZnO nanostructures to different concentrations of methane (CH₄), and ammonia (NH₃) at 300deg;C was investigated.

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

yes

Level for award
 (Hons, MSc,
   PhD, N/A)?

MSc

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

Gugu H. Mhlongo,gmhlongo@csir.co.za, CSIR

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

Yes

Please indicate whether
this abstract may be
published online
(Yes / No)

yes

Primary author: Ms SHINGANGE, Katekani (CSIR and UFS)

Co-authors: Dr MOTAUNG, David (CSIR); Ms MHLONGO, Gugu (CSIR/UFS); Prof. NTWAEABORWA, Martin (UFS)

Presenter: Ms SHINGANGE, Katekani (CSIR and UFS)

Session Classification: Poster Session (1)

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