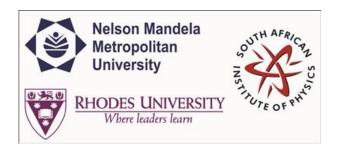
## **SAIP2015**



Contribution ID: 160

Type: Poster Presentation

## Synthesis and magnetic properties of Sn-doped CoFe2O4 nanoferrites

Tuesday, 30 June 2015 16:10 (1h 50m)

Abstract content <br/> &nbsp; (Max 300 words)<br/> dry-<a href="http://events.saip.org.za/getFile.py/starget="\_blank">Formatting &<br/> &classed chars</a>

CoSnxFe2-xO4 (x = 0.5 and 1.0) nanoparticles have been synthesized by glycol-thermal route. The compounds have been characterized by X-ray diffraction, transmission electron microscopy, FTIR, Mössbauer spectroscopy and SQUID measurements. XRD data confirm single phase formation and particle size of about 10 nm. The Mössbauer spectra recorded at about 300 K is indicative of ordered magnetic spin phase. Magnetization data show superparamagnetic nature of the compounds. The evolution of the properties as a function of grain size and sample measuring temperature is also presented. The magnetic properties have been explained on the basis of particle size and Sn concentration.

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Primary author: Ms NGEMA, Nokwanda (University of KwaZulu-Natal)

Co-authors: Dr MSOMI, Justice (University of KwaZulu-Natal); Dr MOYO, Thomas (University of KwaZulu-

Natal)

Presenters: Dr MSOMI, Justice (University of KwaZulu-Natal); Ms NGEMA, Nokwanda (University of KwaZulu-Natal);

lu-Natal); Dr MOYO, Thomas (University of KwaZulu-Natal)

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