Contribution ID: **302** Type: **Oral Presentation**

Fabrication of MWCNT/NiO nanocomposite thin films for optically selective solar absorbers

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<p>Carbon nanoparticles embedded in thin NiO layers have shown an increasing interest for application in spectrally selective solar absorbers that can be used for low temperature photothermal applications. It is expected that the size and shape of carbon nanoparticles in the NiO matrix is extremely important in tuning the selectivity of the coatings. In this work, multiwall carbon nanotubes (MWCNT)/NiO composite films of different CNT contents were prepared by sol-gel technique, and their structural and optical properties were investigated by scanning electron microscopy, x-ray diffraction, Raman spectroscopy, UV-Vis spectroscopy and emissometer. Preliminary durability study on these coatings will also be presented. The results demonstrate promising spectrally selective properties indicating that the CNT/NiO composite is an excellent choice for solar water heating applications.

Level (Hons, MSc,
   PhD, other)?

PhD

Consider for a student
   award (Yes / No)?

No

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

Yes

Primary author: Dr RORO, Kittessa (NLC-CSIR)

Co-authors: Prof. FORBES, Andrew (NLC-CSIR); Dr MWAKIKUNGA, Bonex (3DST/CSIR-National Centre for Nano-Structured Materials); Mr YALISI, Brian (CSIR-NLC); Mr TILE, Ngali (CSIR-NLC); Dr ROBERTS, Ted (NLC-CSIR)

Presenter: Dr RORO, Kittessa (NLC-CSIR)

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