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DESIGN OF NiO-Co₃O₄ HETEROSTRUCTURES LOADED WITH Pr AND Er RARE EARTH ELEMENTS FOR DETECTION OF HAZARDOUS AIR POLLUTANTS.

Mothiba Joy¹, Solethu Nkosi¹¹Department of Physics, University of Limpopo, Private bag x 1106, Sovenga, 0727, Polokwane, South Africa²Next Generation Enterprises and Institutions, Council for Scientific and Industrial Research, P.O. Box 395, Pretoria, 0001, South Africa³National Institute for Theoretical and Computational Sciences, NITheCS, Gauteng, 2000, South Africa

Developing high performance gas sensors that are less complicated is a challenge. In this work, a simple-architecture and high performance gas sensors will be designed and fabricated on inter digital electrodes. These gas sensors are made of Co₃O₄ and NiO inter-interfaces that are loaded with Er and Pr rare earth metals. These rare earths will bring in their electronic charge dynamics and different ionic radius into the mix. These inter-interfaces mixtures that are both p-type charge carriers are expected to display superior interplay properties that are beneficial to the gas sensing performance for extremely sensitive, selective and stable at affordable temperatures.

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Primary author: MOTHIBA, Mathabo Joy**Co-author:** Dr NKOSI, Solethu**Presenter:** MOTHIBA, Mathabo Joy**Session Classification:** Poster Session**Track Classification:** Track A - Physics of Condensed Matter and Materials