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Pd doped ZnO nanostructures: Structural, luminescence and gas sensing properties

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Undoped and Pd (0.5 and 0.75 mol%) doped ZnO nanostructures were synthesized by a sol-gel method and annealed at 350 oC. An increase in the particle size with Pd doping was observed. Room-temperature PL measurements showed that both oxygen and zinc related defects played a role in the defect emission process. PL and sensing analyses revealed that there is a correlation between the sensing properties and the relative concentration of the oxygen vacancies, zinc vacancies and zinc interstitials present on the surface of the ZnO-nanostructures.

Are you currently a postgraduate student? (Yes/No)

No

Primary author: Dr MHLONGO, Gugu (CSIR)

Presenter: Dr MHLONGO, Gugu (CSIR)

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