

## Morphostructural Characterization of Zinc and Manganese Nano-Oxides

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**Abstract :** The interest in the unique properties associated with materials having structures on a nanometer scale has been increasing at an exponential rate in last decade. Among the functional mineral compounds such as perovskite (CaTiO<sub>3</sub>), rutile (TiO<sub>2</sub>), CaF<sub>2</sub>, spinel (MgAl<sub>2</sub>O<sub>4</sub>), wurtzite (ZnS), zincite (ZnO) and the cupric oxide (CuO) has been used in numerous applications such as catalysis, semiconductors, batteries, gas sensors, biosensors, field transistors and medicine. The Solar Physical Vapor Deposition (SPVD) presented in the paper as elaboration method is an original process to prepare nanopowders working under concentrated sunlight in 2kW solar furnaces. The influence of the synthesis parameters on the chemical and microstructural characteristics of zinc and manganese oxides synthesized nanophases has been systematically studied using XRD, TEM and SEM.

**Keywords :** characterization, morphological, nano-oxides, structural

**Conference Title :** ICMCTT 2018 : International Conference on Materials Characterization Techniques and Testing

**Conference Location :** Dublin, Ireland

**Conference Dates :** January 30-31, 2018