

2019

Characterization of The Structure, Microstructure of ZnO Powder Nanostructures as Transparent Ceramic for Optical Applications

Salah OUDJERTLI

Abstract : ZnO powder nanoparticles have been studied to investigate their structural and microstructural properties using X-ray diffraction (XRD) and optical microscope for examined ZnO pure powder. The ZnO powder exhibited a hexagonal crystal structure with space group $P6_3mc$ of ZnO, XRD patterns of powder ZnO were obtained from the full pattern XRD using the MATCH program. For the applications of Zinc oxide as transparent ceramic for optical applications, ZnO is a potential candidate material for optics applications, which has attracted considerable attention over past decades due to its wide potential applications.

Keywords : ZnO, microstructure, XRD, Optical Microscope.