

Contemporary Dielectric Materials

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This book deals with experimental results of the physical characterization of several important, dielectric materials of great current interest. The experimental tools used for the analysis of these materials include X-ray diffraction, dielectric measurements, magnetic measurements using a vibrating sample magnetometer, optical measurements using a UV-Visible spectrometer etc.

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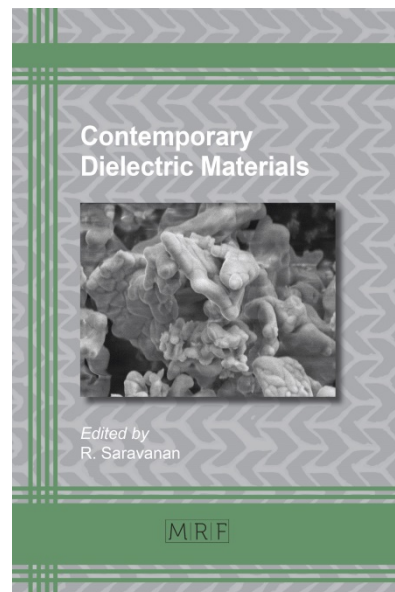
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The materials studied and reported in this book are as follows; the impedance analysis of nanocrystalline NiO prepared using the combustion method; PL (photoluminescence, IR (Infra-red, Raman, and X-ray characterization of GaO powders prepared using the chemical method; X-ray, SEM (Scanning Electron Microscopy), VSM (Vibrating Sample Magnetometer), UV-Vis (UltraViolet-Visible) characterization of the multiferroic material $\text{Ga}_{2-x}\text{Fe}_x\text{O}_3$ prepared using the SSR (Solid State Reaction) method; XRD and optical studies on sol-gel prepared samarium and manganese substituted calcium hydroxyapatite; defect studies and positron annihilation studies on ZnO nano particles prepared using the sol-gel and combustion methods; Bonding in $\text{La}_{0.9}\text{Zn}_{0.1}\text{FeO}_3$ multiferroic material prepared using the chemical method; effect of temperature on the magnetic phase transition in $\text{Co}_{0.5}\text{Zn}_{0.5}\text{Fe}_2\text{O}_4$ prepared using the mechanical alloying method; effect of sintering temperature on the micro structure and optical properties of ZnO ceramics.