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Titolo	EMR/ESR/EPR Spectroscopy for Characterization of Nanomaterials [[electronic resource] /] / edited by Ashutosh Kumar Shukla
Pubbl/distr/stampa	New Delhi : , : Springer India : , : Imprint : Springer, , 2017
ISBN	81-322-3655-6
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (XI, 179 p. 96 illus., 35 illus. in color.)
Collana	Advanced Structured Materials, , 1869-8433 ; ; 62
Disciplina	620.115
Soggetti	Nanotechnology Materials science Mechanics Mechanics, Applied Spectroscopy Cancer research Characterization and Evaluation of Materials Solid Mechanics Spectroscopy/Spectrometry Cancer Research
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end each chapters.
Nota di contenuto	Part I: Nanomaterials and their classification -- Nanomaterials and their Classification -- A Brief Manifestation of Nanotechnology -- An Overview on Advances in the Nano Carriers Drug Delivery Systems -- Part II: EMR Characterization of Nanoparticles -- EMR of Metallic Nanoparticles -- Elecron Spin Resonance Applied to Nano-Sized Doped Oxides -- EPR Studies of Cerium Dioxide Nanoparticles -- Synthesis and Characterization of Undoped and Doped (Mn, Cu, Co) ZnO Nanoparticles: An EPR Study. .
Sommario/riassunto	The subject matter of this book is the application of EMR/ESR/EPR spectroscopy for characterization of nanomaterials. Initial chapters deal with nanomaterials and their classification. Characterization of metallic nanoparticles, metal oxide nanoparticles and rare earth impurity doped nanoparticles from the (ESR) spectrum parameters are covered in the

chapters that follow. A special feature of the book is EMR/ESR/EPR spectroscopic characterization of nanoparticles which are important due to their bactericidal and anticancerous properties. Strength of continuous wave (CW) is explained with the help of suitable examples. The book focuses on applications and data interpretation avoiding extensive use of mathematics so that it also caters to the need of young scientists in the life science disciplines. The book includes a comparison with other spectroscopic characterization methods so as to give an integrated approach to the reader. It will prove useful to biomedical scientists and engineers, chemists, and materials engineers in student, researcher, and practitioner positions.