1. Record Nr. UNINA9910298463403321

Titolo	Applications of EPR in Radiation Research [[electronic resource] /] / edited by Anders Lund, Masaru Shiotani
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2014
ISBN	3-319-09216-2
Edizione	[1st ed. 2014.]
Descrizione fisica	1 online resource (766 p.)
Disciplina	363.7 54 541.2 541.38
Soggetti	Nuclear chemistry Materials science Radiation protection Radiation—Safety measures Nucleic acids Oxidative stress Chemistry, Physical and theoretical Nuclear Chemistry Characterization and Evaluation of Materials Effects of Radiation/Radiation Protection Nucleic Acid Chemistry Oxidative Stress Theoretical and Computational Chemistry
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	From the Contents: PART I Elementary radiation processes -- PART II Solid state radiation chemistry -- PART III Biochemistry, biophysics, and biology applications -- PART IV Material science -- PART V Radiation metrology -- PART VI Geological dating -- EPR dating -- PART VII Advanced EPR techniques -- PART VIII Theoretical tools.

Sommario/riassunto

Applications of EPR in Radiation Research is a multi-author contributed volume presented in eight themes: I. Elementary radiation processes (fundamental reaction mechanisms, low temperature radiolysis, quantum solids); II: Solid state radiation chemistry (crystalline, amorphous and heterogeneous systems); III: Biochemistry, biophysics and biology applications (radicals in biomaterials, spin trapping, free-radical-induced DNA damage); IV: Materials science (polymeric and electronic materials, materials for treatment of nuclear waste); V: Radiation metrology (EPR-dosimetry, clinical applications); VI: Geological applications; VII: Advanced techniques (pulsed and optically detected EPR, spatial distributions of radicals, radical ion pairs); VIII: Theoretical tools (density-functional calculations, spectrum simulations). .