1. Record Nr. UNISA996418166003316

Autore	Bertrand Patrick
Titolo	Electron Paramagnetic Resonance Spectroscopy [[electronic resource]] : Applications / / by Patrick Bertrand
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2020
ISBN	3-030-39668-1
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (XXX, 433 p. 2 illus.)
Disciplina	543.67
Soggetti	Spectroscopy Microscopy Atomic structure Molecular structure Magnetism Magnetic materials Crystallography Physical chemistry Materials science Spectroscopy and Microscopy Atomic/Molecular Structure and Spectra Magnetism, Magnetic Materials Crystallography and Scattering Methods Physical Chemistry Characterization and Evaluation of Materials
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	This book shows how the fundamentals of electron paramagnetic resonance (EPR) spectroscopy are practically implemented and illustrates the diversity of current applications. The technique is used at various levels, and applications are presented in order of increasing difficulty, with reference to theoretically obtained results. This book

features a diverse array of application examples, from fields such as ionizing radiation dosimetry, neurodegenerative diseases, structural transitions in proteins, and the origins of terrestrial life. The final chapter of this book highlights the principles and applications of the technique of ferromagnetic resonance spectroscopy, followed by a brief introduction to advanced EPR techniques such as electron spin echo envelope modulation (ESEEM), hyperfine sub-level correlation (HYSCORE), pulsed electron-electron double resonance (PELDOR), and continuous wave electron nuclear double resonance (ENDOR) experiments.