1. Record Nr. UNINA9910150266103321

Autore	Grupen Claus
Titolo	Radioactivity and Radiation : What They Are, What They Do, and How to Harness Them / / by Claus Grupen, Mark Rodgers
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2016
ISBN	3-319-42330-4
Edizione	[1st ed. 2016.]
Descrizione fisica	1 online resource (XI, 248 p. 137 illus., 26 illus. in color.)
Disciplina	530
Soggetti	Medical physics Radiation Nature Environment Radiation protection Radiation—Safety measures Particle acceleration Nuclear energy Medical and Radiation Physics Popular Science in Nature and Environment Effects of Radiation/Radiation Protection Particle Acceleration and Detection, Beam Physics Nuclear Energy
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Introduction -- Units of Radiation Protection -- Essentials of Nuclear Physics -- Interactions of Ionising Radiation with Matter -- Radiation Detectors -- Radiation Sources -- X-Rays -- Environmental Radioactivity -- Biological Effects of Ionising Radiation -- Nuclear Power -- Radiation Accidents -- Non-Ionising Radiation -- International Safety Standards for Radiation Protection -- Organization of Radiation Protection -- Practical Safety Measures.
Sommario/riassunto	This book lays the foundations for you to understand all that you always wanted to know about radioactivity. It begins by setting out

essential information about the structure of matter, how radiation occurs and how it can be measured. It goes on to explore the substantial benefits of radioactivity through its many applications, and also the possible risks associated with its use. The field of radioactivity is explained in layman’s terms, so that everybody who is interested can improve their understanding of issues such as nuclear power, radiation accidents, medical applications of radiation and radioactivity from the environment. Everything is radioactive. There is natural radioactivity in the homes that we live in, the food that we eat and the air that we breath. For over 100 years, people have recognised the potential for radioactivity to help solve problems and improve our standard of living. This has led to the creation of radioactivity levels in some places that are much higher than naturally-occurring background levels. Such high levels of radiation can be harmful to people and the environment, so there is a clear need to manage this potential harm and to make the risk worth the benefits mankind can achieve from radioactive materials.