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Titolo	Practical applications of radioactivity and nuclear radiations : an introductory text for engineers, scientists, teachers and students // G. C. Lowenthal, P.L. Airey [[electronic resource]]
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Descrizione fisica	1 online resource (xxvii, 337 pages) : digital, PDF file(s)
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Soggetti	Radioisotopes Radioactivity Radioisotopes - Industrial applications Radioactivity - Industrial applications
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Atoms, nuclides, radionuclides -- Units and standards for radioactivity and radiation dosimetry and rules for radiation protection -- Properties of radiations emitted from radionuclides -- Nuclear radiations from a user's prespective -- Ionising radiation detectors -- Radioactivity and countrate measurements and the presentation of results -- Industrial applications of radioisotopes and radiation -- Application of tracer technology to industry and the environment -- Radionuclides to protect the environment.
Sommario/riassunto	This book is aimed at scientists and engineers wanting to use radioisotopes and the emitted ionising radiations competently but

without seeking expertise. It describes decay and stability criteria, necessary precautions to ensure radiation protection and the detection of alpha, beta and gamma rays including spectrometry. There are comments on calorimetry, liquid scintillation counting, how to use secondary standard instruments, high resolution detectors and how to calculate counting results estimating uncertainties and allowing for the statistics of radionuclide decays. The book's principal purpose is to encourage radionuclide applications which can be done safely, reliably and accurately. It describes industrial and scientific applications of alpha, beta, and gamma rays, neutrons and high energy radiations. This book will be of particular interest to scientists and technologists, teachers and students, helping them to work with radioisotopes safely, efficiently and reliably.
