1. Record Nr. UNINA9910144550403321

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Titolo	Practical gamma-ray spectrometry / / Gordon R. Gilmore
Pubbl/distr/stampa	Chichester, England ; ; Hoboken, NJ, : Wiley, c2008
ISBN	1-119-96469-5 1-283-85856-8 0-470-86198-3 0-470-86197-5
Edizione	[2nd ed.]
Descrizione fisica	1 online resource (409 p.)
Disciplina	537.5/352 537.5352
Soggetti	Gamma ray spectrometry Nuclear physics
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 (p. [343]-349) and index.
Nota di contenuto	1.6.4 Width of nuclear energy levels1.6.5 Internal conversion; 1.6.6 Abundance, yield and emission probability; 1.6.7 Ambiguity in assignment of nuclide identity; 1.7 Other Sources of Photons; 1.7.1 Annihilation radiation; 1.7.2 Bremsstrahlung; 1.7.3 Prompt gammas; 1.7.4 X-rays; 1.8 The Mathematics of Decay and Growth of Radioactivity; 1.8.1 The decay equation; 1.8.2 Growth of activity in reactors; 1.8.3 Growth of activity from decay of a parent; 1.9 The Chart of the Nuclides; 1.9.1 A source of nuclear data; 1.9.2 A source of generic information; Practical Points; Further Reading 2 Interactions of Gamma Radiation with Matter2.1 Introduction; 2.2 Mechanisms of Interaction; 2.2.1 Photoelectric absorption; 2.2.2 Compton scattering; 2.2.3 Pair production; 2.3 Total Attenuation Coefficients; 2.4 Interactions within the Detector; 2.4.1 The very large detector; 2.4.2 The very small detector; 2.4.3 The 'real' detector; 2.4.4 Summary; 2.5 Interactions within the Shielding; 2.5.1 Photoelectric interactions; 2.5.2 Compton scattering; 2.5.3 Pair production; 2.6 Bremsstrahlung; 2.7 Attenuation of Gamma Radiation; 2.8 The Design of Detector Shielding; Practical Points Further Reading3 Semiconductor Detectors for Gamma-Ray

Spectrometry; 3.1 Introduction; 3.2 Semiconductors and Gamma-Ray Detection; 3.2.1 The band structure of solids; 3.2.2 Mobility of holes; 3.2.3 Creation of charge carriers by gamma radiation; 3.2.4 Suitable semiconductors for gamma-ray detectors; 3.2.5 Newer semiconductor materials; 3.3 The Nature of Semiconductors; 3.4 The Manufacture of Germanium Detectors; 3.4.1 Introduction; 3.4.2 The manufacturing process; 3.4.3 Lithium-drifted detectors; 3.4.4 The detector configurations available; 3.4.5 Absorption in detector caps and dead layers
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3.7.5 Customer repairable detectors

Sommario/riassunto

The Second Edition of Practical Gamma-Ray Spectrometry has been completely revised and updated, providing comprehensive coverage of the whole gamma-ray detection and spectrum analysis processes. Drawn on many years of teaching experience to produce this uniquely practical volume, issues discussed include the origin of gamma-rays and the issue of quality assurance in gamma-ray spectrometry. This new edition also covers the analysis of decommissioned nuclear plants, computer modelling systems for calibration, uncertainty measurements in QA, and many more topics.