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	GAS IONIZATION DETECTORS; III. DEFINITION OF OPERATING CHARACTERISTICS OF GAS IONIZATION DETECTORS; IV. ION CHAMBERS; V. PROPORTIONAL GAS IONIZATION DETECTORS; VI. GEIGER-MULLER COUNTERS; VII. SPECIAL TYPES OF IONIZATION DETECTORS; REFERENCES; Chapter 4 - Solid-State Nuclear Track Detectors; PART 1 ELEMENTS; I. INTRODUCTION; II. DETECTOR MATERIALS AND CLASSIFICATION OF SOLID-STATE NUCLEAR TRACK DETECTORS III. RECORDABLE PARTICLES WITH SOLID-STATE NUCLEAR TRACK DETECTORS IV. TRACK FORMATION MECHANISMS AND CRITERIA; V. TRACK REVELATION; VI. PARTICLE IDENTIFICATION; VII. TRACK FADING AND ANNEALING; VIII. INSTRUMENTATION; PART 2 APPLICATIONS; I. INTRODUCTION; II. PHYSICAL SCIENCES AND NUCLEAR TECHNOLOGY; III. EARTH AND PLANETARY SCIENCES; IV. LIFE AND ENVIRONMENTAL SCIENCES; V. NANOTECHNOLOGY AND RADIATION INDUCED MATERIAL MODIFICATIONS; ACKNOWLEDGMENTS; REFERENCES; Chapter 5 - Semiconductor Detectors; I. INTRODUCTION; II. GE DETECTORS; III. SI DETECTORS IV. SPECTROSCOPIC ANALYSES WITH SEMICONDUCTOR DETECTORS IV. SPECTROSCOPIC ANALYSES WITH SEMICONDUCTOR DETECTORS IV. SPECTROSCOPIC ANALYSES WITH SEMICONDUCTOR DETECTORS IV. CHARACTERISTICS OF THE ALPHA SPECTRUM; V. RADIOCHEMICAL PROCESSING; VI. DETERMINATION OF ALPHA ACTIVITY AND RECOVERY; VII. QUALITY CONTROL; VIII. CONCLUSIONS; REFERENCES; Chapter 7 - Liquid Scintillation Analysis: Principles and Practice; I. INTRODUCTION; II. BASIC THEORY; III. LIQUID SCINTILLATION COUNTER (LSC) OR ANALYZER (LSA); IV. QUENCH IN LIQUID SCINTILLATION COUNTING V. METHODS OF QUENCH CORRECTION IN LIQUID SCINTILLATION COUNTING
Sommario/riassunto	The updated and much expanded 3e of the Handbook of Radioactivity Analysis is an authoritative reference providing the principles, practical techniques, and procedures for the accurate measurement of radioactivity from the very low levels encountered in the environment to higher levels measured in radioisotope research, clinical laboratories, biological sciences, radionuclide standardization, nuclear medicine, nuclear power, and fuel cycle facilities and in the implementation of nuclear forensic analysis and nuclear safeguards. The book describes the basic principles of radiation det