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Nilsson Model; 5.8 The Pairing Force and Quasi-Particles; 5.9 Macroscopic-Microscopic Model; 5.10 Interacting Boson Approximation; 5.11 Further Collective Excitations: Coulomb Excitation, High-Spin States, Giant Resonances; References; Further Reading; 6: Decay Modes; 6.1 Nuclear Instability and Nuclear Spectroscopy; 6.2 Alpha Decay; 6.2.1 Hindrance Factors; 6.2.2 Alpha-Decay Energies  
6.3 Cluster Radioactivity; 6.4 Proton Radioactivity; 6.5 Spontaneous Fission; 6.6 Beta Decay; 6.6.1 Fundamental Processes; 6.6.2 Electron Capture-to-Positron Ratios; 6.6.3 Nuclear Matrix Elements; 6.6.4 Parity Non-conservation; 6.6.5 Massive Vector Bosons; 6.6.6 Cabibbo-Kobayashi-Maskawa Matrix; 6.7 Electromagnetic Transitions; 6.7.1 Multipole Order and Selection Rules; 6.7.2 Transition Probabilities; 6.7.3 Internal Conversion Coefficients; 6.7.4 Angular Correlations; References; Further Reading; 7: Radioactive Decay Kinetics; 7.1 Law and Energy of Radioactive Decay; 7.2 Radioactive Equilibria  
9.2.1 Ionization Chambers

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Sommario/riassunto

The third edition of this classic in the field is completely updated and revised with approximately 30% new content so as to include the latest developments. The handbook and ready reference comprehensively covers nuclear and radiochemistry in a well-structured and readily accessible manner, dealing with the theory and fundamentals in the first half, followed by chapters devoted to such specific topics as nuclear energy and reactors, radiotracers, and radionuclides in the life sciences. The result is a valuable resource for both newcomers as well as established scientists in the field.

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