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Nota di contenuto	Phenomenological Description of Emission Processes -- Binary Emission Processes -- Core-Angular Harmonics -- Coupled Channels Methods -- Semiclassical Approach -- Fine Structure of Emission Processes -- Ternary Emission Processes -- Microscopic Description of Emission Processes -- Microscopic Emission Theories -- Preformation Amplitude -- Selfconsistent Emission Theory -- QRPA Description of the ?-Decay to Excited States -- Heavy Cluster Decays -- Conclusions -- Appendices.
Sommario/riassunto	Nowadays experimental nuclear physics pushes its limits towards highly unstable nuclei. The theoretical description of proton-rich and neutronrich nuclei or superheavy elements has become an important part of the modern nuclear physics. The main tool to investigate such unstable nuclei concerns radioactive decays, from proton emission to fission processes. We review the main theoretical methods describing decay processes induced by the strong interaction, like Coupled channels method for Gamow resonances, R-matrix theory, Distorted wave approach, Semiclassical approach, Multi step and Two center shell model. Thus, most of the book is addressed to a broad audience within the nuclear physics community. Secondly, this book is an attempt to

clarify some fundamental aspects connected with the fine structure or anisotropy in alpha decay and ternary cold fission. Finally, the self consistent microscopic theory of the alpha decay is analyzed.