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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	From the contents: Part I Charge States of Swift Ions -- Charge Equilibrium -- Charge Exchange: Atomistics -- Charge Exchange: Statistics and Energetics -- Part II Energy Loss of Swift Ions -- Stopping -- Straggling -- Part III Scattering -- Interatomic Potentials, Scattering and Nuclear Stopping -- Multiple Scattering -- Part IV Slow Ions -- Stopping of Slow Ions -- Range and Energy Deposition -- Part V Penetration of Aggregates -- Penetration of Molecules and Clusters -- Part VI Penetration Through Crystals -- Channeling and Blocking of Energetic Particles in Crystals.

## Sommario/riassunto

This book represents volume 2 of a 3-volume monograph on Particle Penetration and Radiation Effects. While volume 1 addressed the basic theory of scattering and stopping of swift point charges, i.e., protons, antiprotons and alpha particles, the present volume focuses on ions heavier than helium as well as molecules and clusters over an energy range from a few keV/u to a few hundred MeV/u. The book addressed the foundations in atomic-collision physics of a wide variety of application areas within materials and surface science and engineering, micro and nano science and technology, radiation medicine and biology as well as nuclear and particle physics. Problems have been added to all chapters. This should make the book useful for both self-study and advanced university courses. An effort has been made to establish a unified notation throughout the monograph.

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