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Autore	Friedrich Harald
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Descrizione fisica	1 online resource (293 p.)
Disciplina	530
Soggetti	Physics Low temperature physics Low temperatures Atoms Mathematical Methods in Physics Low Temperature Physics Atomic, Molecular, Optical and Plasma 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 at the end of each chapters and index.
Nota di contenuto	Classical Scattering Theory. -Elastic scattering by a conservative potential. – Internal excitation, Inelastic scattering. - Special topics -- Appendices -- Index.
Sommario/riassunto	This corrected and updated second edition of "Scattering Theory" presents a concise and modern coverage of the subject. In the present treatment, special attention is given to the role played by the long-range behaviour of the projectile-target interaction, and a theory is developed, which is well suited to describe near-threshold bound and continuum states in realistic binary systems such as diatomic molecules or molecular ions. It is motivated by the fact that experimental advances have shifted and broadened the scope of applications where concepts from scattering theory are used, e.g. to the field of ultracold atoms and molecules, which has been experiencing enormous growth in recent years, largely triggered by the successful realization of Bose-Einstein condensates of dilute atomic gases in 1995. The book contains sections on special topics such as near-threshold quantization,

quantum reflection, Feshbach resonances and the quantum description of scattering in two dimensions. The level of abstraction is kept as low as at all possible and deeper questions related to the mathematical foundations of scattering theory are passed by. It should be understandable for anyone with a basic knowledge of nonrelativistic quantum mechanics. The book is intended for advanced students and researchers, and it is hoped that it will be useful for theorists and experimentalists alike.
