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Titolo	Lectures on Quantum Statistics : With Applications to Dilute Gases and Plasmas / / by Werner Ebeling, Thorsten Pöschel
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Descrizione fisica	1 online resource (X, 271 p. 49 illus.)
Collana	Lecture Notes in Physics, , 0075-8450 ; ; 953
Disciplina	530.133
Soggetti	Plasma (Ionized gases) Phase transformations (Statistical physics) Condensed matter Statistical physics Plasma Physics Quantum Gases and Condensates Statistical Physics and Dynamical Systems
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Preface -- Basic physics of gases and plasmas -- Elements of quantum-statistical theory -- Ideal Quantum Gases -- Density operators and other tools of quantum statistics -- Real gas quantum statistics -- Quantum Statistics of Dilute Plasmas -- Non-Ideality and Deep Bound States in Plasmas -- Non-equilibrium - Kinetic equations -- Index.
Sommario/riassunto	Most of the matter in our universe is in a gaseous or plasma state. Yet, most textbooks on quantum statistics focus on examples from and applications in condensed matter systems, due to the prevalence of solids and liquids in our day-to-day lives. In an attempt to remedy that oversight, this book consciously focuses on teaching the subject matter in the context of (dilute) gases and plasmas, while aiming primarily at graduate students and young researchers in the field of quantum gases and plasmas for some of the more advanced topics. The majority of the material is based on a two-semester course held jointly by the authors over many years, and has benefited from extensive feedback provided

by countless students and co-workers. The book also includes many historical remarks on the roots of quantum statistics: firstly because students appreciate and are strongly motivated by looking back at the history of a given field of research, and secondly because the spirit permeating this book has been deeply influenced by meetings and discussions with several pioneers of quantum statistics over the past few decades.
