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Titolo	Statistical physics of nanoparticles in the gas phase // Klavs Hansen
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ISBN	1-283-91148-5 94-007-5839-1
Edizione	[1st ed. 2013.]
Descrizione fisica	1 online resource (285 p.)
Collana	Springer series on atomic, optical, and plasma physics, , 1615-5653 ; ; 73
Disciplina	530 620.115
Soggetti	Nanoparticles Gases Statistical physics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	The relation between classical and quantum statistics -- Microcanonical temperature -- Thermal properties of vibrations -- Rate constants for emission of atoms, electrons and photons.- The evaporative ensemble -- Abundance distributions; large scale features -- Molecular dynamics and Monte Carlo simulations -- Thermal excitation of valence electrons -- He droplets.
Sommario/riassunto	Thermal processes are ubiquitous and an understanding of thermal phenomena is essential for a complete description of the physics of nanoparticles, both for the purpose of modeling the dynamics of the particles and for the correct interpretation of experimental data. This book has the twofold aim to present coherently the relevant results coming from the recent scientific literature and to guide the readers through the process of deriving results, enabling them to explore the limits of the mathematical approximations and test the power of the method. The book is focused on the fundamental properties of nanosystems in the gas phase. For this reason there is a strong emphasis on microcanonical physics. Each chapter is enriched with exercises and 3 Appendices provide additional useful materials.

