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Titolo	Kinetics of Complex Plasmas [[electronic resource] /] / by Mahendra Singh Sodha
Pubbl/distr/stampa	New Delhi : , : Springer India : , : Imprint : Springer, , 2014
ISBN	81-322-1820-5
Edizione	[1st ed. 2014.]
Descrizione fisica	1 online resource (300 p.)
Collana	Springer Series on Atomic, Optical, and Plasma Physics, , 1615-5653 ; ; 81
Disciplina	530.44
Soggetti	Plasma (ionized gases) Nanotechnology Chemistry, Physical and theoretical Plasma Physics Physical Chemistry Textbooks.
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 and index.
Nota di contenuto	Introduction -- Electron Emission from Dust -- Accretion of Electrons/ions on Dust Particles -- Kinetics of Dust-electron Cloud -- Kinetics of Complex Plasmas with Uniform Size Dust -- Kinetics of Flowing Complex Plasma -- Kinetics of Complex Plasmas having Dust with a Size Distribution -- Theory of Electrical Conduction -- Electromagnetic Wave Propagation in Complex Plasmas -- Fluctuation of Charge on Dust Particles in a Complex Plasma -- Kinetics of Complex Plasmas in Space -- Complex Plasma as Working Fluid in MHD Power Generators -- Rocket Exhaust Complex Plasmas -- Kinetics of Complex Plasmas with Liquid Droplets -- Growth of Particles in a plasma -- Electrostatic Precipitation.
Sommario/riassunto	The presentation in the book is based on charge balance on the dust particles, number and energy balance of the constituents and atom-ion-electron interaction in the gaseous plasma. Size distribution of dust particles, statistical mechanics, Quantum effects in electron emission from and accretion on dust particles and nonlinear interaction of complex plasmas with electric and electromagnetic fields have been

discussed in the book. The book introduces the reader to basic concepts and typical applications. The book should be of use to researchers, engineers and graduate students.

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