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Titolo	Nanoclusters and microparticles in gases and vapors [[electronic resource] /] / Boris M. Smirnov
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ISBN	1-283-85790-1 3-11-027400-0
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Collana	De Gruyter studies in mathematical physics ; ; 6
Classificazione	UF 4000
Disciplina	533
Soggetti	Ionized gases Microclusters Vapors - Microstructure Kinetic theory of gases
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	Front matter -- Preface -- Contents -- List of figures -- Chapter 1. Introduction -- Part I. Properties of small particles and their behavior in gases -- Chapter 2. Nanoclusters and microparticles in gases -- Chapter 3. Cluster properties and their modeling -- Chapter 4. Dynamics of collisions in buffer gas involving clusters -- Part II. Processes involving small particles in gases -- Chapter 5. Transport phenomena in gases involving small particles -- Chapter 6. Particle motion in gas flows -- Chapter 7. Processes in buffer gas on surface of small particles -- Chapter 8. Charging of small particles in ionized gases -- Chapter 9. Growth of clusters and small particles in buffer gas -- Chapter 10. Structures formed in aggregation of solid particles -- Chapter 11. Conclusion -- Appendix A. Physical parameters -- Appendix B. Conversional factors -- Appendix C. Transport coefficients of atomic particles in gases -- Bibliography -- Index
Sommario/riassunto	Various nanoclusters and microparticles are considered in excited and ionized gases, as well as various processes with their participation. The concepts of these processes were developed 50 - 100 years ago mostly for dense media, and basing on these concepts, we analyze these processes in gases in two opposite regimes, so that in the kinetic

regime surrounding atoms of a buffer gas do not partake in processes involving small particles, and the diffusion regime corresponds to a dense gas where interaction of small particles with a buffer gas subjects to laws of hydrodynamics. For calculation or estimation of the rates of these processes, we are based on the liquid drop model for small particles which was introduced in physics by N. Bohr about 80 years ago for the analysis of properties of atomic nuclei including the nuclear fusion and the hard sphere model (or the model of billiard balls) which was used by J. C. Maxwell 150 years ago and helped to create the kinetic theory of gases. These models along with the analysis of their accuracy allow one to study various processes, such as transport processes in gases involving small particles, charging of small particles in gases, chemical processes, atom attachment and quenching of excited atomic particles on the surface of a small particle, nucleation processes for small particles including coagulation, coalescence and growth of fractal aggregates, chain aggregates, fractal fibres and aerogels. Each analysis is finished by analytic formulas or simple models which allow us to calculate the rate of a certain real process with a known accuracy or to estimate this, and criteria of validity are given for these expressions obtained. Examples of real objects and processes involving small particles are analyzed.

2. Record Nr.	UNINA9910143029203321
Titolo	ISPASS 2007 : IEEE International Symposium on Performance Analysis of Systems and Software : April 25-27, 2007, San Jose, CA / / sponsored by the IEEE Computer Society
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ISBN	9781509083220 1509083227
Disciplina	004
Soggetti	Computer systems - Evaluation Computer systems - Reliability
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
3. Record Nr.	UNINA9910229184803321
Titolo	Georgetown journal of law & modern critical race perspectives
Pubbl/distr/stampa	Washington, DC : , : Georgetown University Law Center
Descrizione fisica	1 online resource (volumes)
Soggetti	Race discrimination - Law and legislation - United States Critical legal studies - United States Critical legal studies Race discrimination - Law and legislation Race relations Law reviews. Periodicals. United States Race relations Periodicals United States
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Periodico

