

1. Record Nr.	UNINA9910303440703321
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Titolo	Gaseous Ion Mobility, Diffusion, and Reaction // by Larry A. Viehland
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2018
ISBN	3-030-04494-7
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (301 pages)
Collana	Springer Series on Atomic, Optical, and Plasma Physics, , 1615-5653 ; ; 105
Disciplina	541.3723
Soggetti	Atomic structure Molecular structure Physical chemistry Analytical chemistry Physics Atomic/Molecular Structure and Spectra Physical Chemistry Analytical Chemistry Mathematical Methods in Physics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Preface -- 1 Introduction -- 2 Experiments and Elementary Theory -- 3 Momentum-Transfer Theory -- 4 The Boltzmann Equation -- 5 Moment Methods for Solving the Boltzmann Equation -- 6 Gram-Charlier Approach to Ion-Molecule Reactions -- 7 Connections with Atomic Ion-Atom Interaction Potentials -- 8 Molecular Ion and Neutrals -- 9 Summary and Prognosis -- Appendix: Mathematics -- Index.
Sommario/riassunto	This book is about the drift, diffusion, and reaction of ions moving through gases under the influence of an external electric field, the gas temperature, and the number density. While this field was established late in the 19th century, experimental and theoretical studies of ion and electron swarms continue to be important in such varied fields as atomic and molecular physics, aeronomy and atmospheric chemistry, gaseous electronics, plasma processing, and laser physics. This book follows in the rigorous tradition of well-known older books on the

subject, while at the same time providing a much-needed overview of modern developments with a focus on theory. Graduate students and researchers new to this field will find this book an indispensable guide, particularly those involved with ion mobility spectrometry and the use of ion transport coefficients to test and improve ab initio ion-neutral interaction potentials. Established researchers and academics will find in this book a modern companion to the classic references.

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