



History of Modern Physical Sciences – Vol. 1

THE KINETIC THEORY OF GASES

An Anthology of Classic Papers with Historical Commentary

by
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edited by
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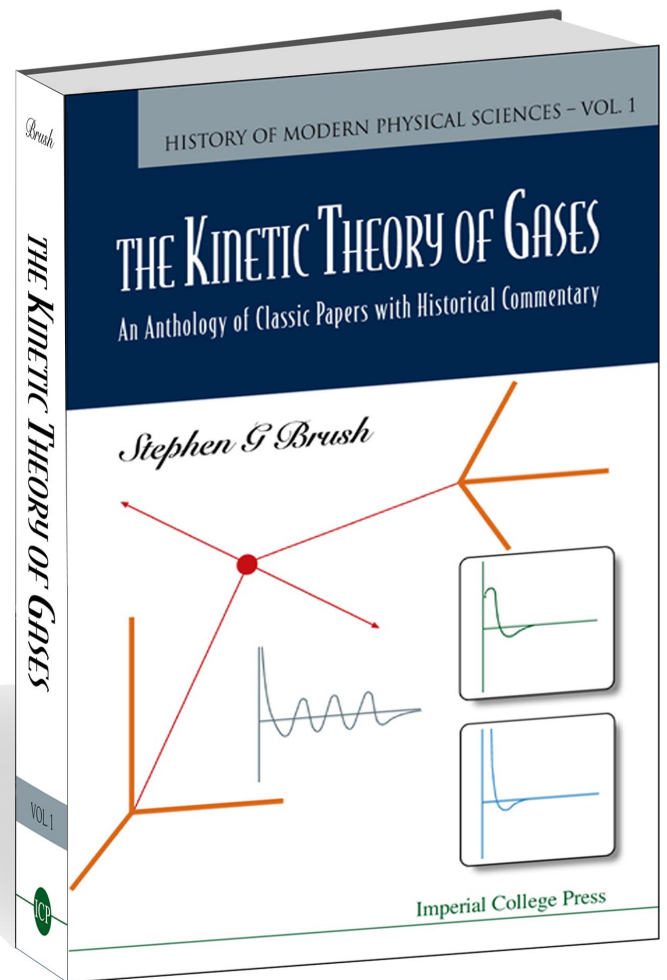
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This book introduces physics students and teachers to the historical development of the kinetic theory of gases, by providing a collection of the most important contributions by Clausius, Maxwell and Boltzmann, with introductory surveys explaining their significance. In addition, extracts from the works of Boyle, Newton, Mayer, Joule, Helmholtz, Kelvin and others show the historical context of ideas about gases, energy and irreversibility. In addition to five thematic essays connecting the classical kinetic theory with 20th century topics such as indeterminism and interatomic forces, there is an extensive international bibliography of historical commentaries on kinetic theory, thermodynamics, etc. published in the past four decades.

The book will be useful to historians of science who need primary and secondary sources to be conveniently available for their own research and interpretation, along with the bibliography which makes it easier to learn what other historians have already done on this subject.

Contents: The Nature of Gases and of Heat (Boyle, Newton, Bernoulli, Gregory, Mayer, Joule, von Helmholtz, Clausius, Maxwell); Irreversible Processes (Maxwell, Boltzmann, Thomson, Poincaré, Zermelo); Historical Discussions by Stephen G Brush; A Guide to Historical Commentaries: Kinetic Theory of Gases, Thermodynamics, and Related Topics.

Readership: Graduate and research students, teachers, lecturers and historians of physics.



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