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Titolo	Handbook of Thermal Plasmas / / edited by Maher I. Boulos, Pierre L. Fauchais, Emil Pfender
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Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (1236 illus., 550 illus. in color. eReference.)
Disciplina	621.4021 530.44
Soggetti	Thermodynamics Heat engineering Heat transfer Mass transfer Surfaces (Technology) Thin films Manufactures Engineering Thermodynamics, Heat and Mass Transfer Surfaces, Interfaces and Thin Film Machines, Tools, Processes
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	The Plasma State -- Basic Atomic and Molecular Theory -- Kinetic Theory of Gases -- Fundamental Concepts in Gaseous Electronics -- Thermodynamic Properties of Plasmas -- Plasma Spray Torches -- Plasma-Particle Momentum, Heat and Mass Transfer -- Plasma Process Integration.
Sommario/riassunto	This authoritative reference presents a comprehensive review of the evolution of plasma science and technology fundamentals over the past five decades. One of this field’s principal challenges has been its multidisciplinary nature requiring coverage of fundamental plasma physics in plasma generation, transport phenomena under high-temperature conditions, involving momentum, heat and mass transfer,

and high-temperature reaction kinetics, as well as fundamentals of material science under extreme conditions. The book is structured in five distinct parts, which are presented in a reader-friendly format allowing for detailed coverage of the science base and engineering aspects of the technology including plasma generation, mathematical modeling, diagnostics, and industrial applications of thermal plasma technology. This book is an essential resource for practicing engineers, research scientists, and graduate students working in the field.