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Nota di contenuto	Plasma Technology for Hyperfunctional Surfaces; Contents; Preface; List of Contributors; List of Contacts; Part I Introduction to Plasma Technology for Surface Functionalization; 1 Introduction to Plasma and Plasma Technology; 1.1 Plasma: the Fourth State of Matter; 1.2 Historical Highlights; 1.3 Plasma Fundamentals; 1.3.1 Free Ideal Gas; 1.3.2 Interacting Gas; 1.3.3 The Plasma as a Fluid; 1.3.4 Waves in Plasmas; 1.3.5 Relevant Parameters that Characterize the State of Plasma; 1.4 Classification of Technological Plasmas; 1.4.1 Hot (Thermal) Plasmas and Their Applications 1.4.2 Cold (Nonthermal) Plasmas and Their Applications 1.5 Reactive Plasmas; 1.5.1 Elementary Plasma-Chemical Reactions; 1.5.2 Elastic Scattering and Inelastic Thomson Scattering: Ionization Cross-section; 1.5.3 Molecular Ionization Mechanisms; 1.5.4 Stepwise Ionization by Electron Impact; 1.6 Plasma Sheaths; 1.7 Summary; References; 2 Plasma Systems for Surface Treatment; 2.1 Introduction; 2.2 Low

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Sommario/riassunto

Based on a project backed by the European Union, this is a must-have resource for researchers in industry and academia concerned with application-oriented plasma technology research. Clearly divided in three sections, the first part is dedicated to the fundamentals of plasma and offers information about scientific and theoretical plasma topics, plasma production, surface treatment process and characterization. The second section focuses on technological aspects and plasma process applications in textile, food packaging and biomedical sectors, while the final part is devoted to concerns about t
