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Titolo	Aryl Diazonium Salts and Related Compounds : Surface Chemistry and Applications / / edited by Mohamed M. Chehimi, Jean Pinson, Fatima Mousli
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Collana	Physical Chemistry in Action, , 2197-4357
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Principle, general features and scope of the reaction, recent advances, future prospects -- Structures, stability, and safety of diazonium salts -- Kinetics and mechanisms of aryldiazonium ions in aqueous solutions -- Iodonium salts as reagents for surface modification: from preparation to reactivity in surface-assisted transformations -- Control of the aryl layer growth -- Grafting of aryl radicals onto surfaces – a DFT study -- Modification of sp^2 carbon allotropes with diazonium salts – Focus on carbon nanotubes functionalization -- Covalent modification of graphite and graphene using diazonium chemistry -- Aryldiazonium Tetrachloroaurate(III) Salts: Synthesis, Structure, and Fundamental Applications -- Modification and uses of synthetic and biobased polymeric materials -- Surface modification of plasmonic nanomaterials with aryl diazonium salts -- Diazonium electroreduction and molecular electronics -- Modification of surfaces with calix[4]arene

diazonium salts -- Diazonium salts and related compounds for biomedical applications -- On the use of diazonium salts in the design of catalytic hybrid materials and coatings -- Aryldiazonium Salts as Photoinitiators for Cationic and Free Radical Polymerizations -- Polymer surface science and adhesion using diazonium chemistry -- Diazonium-modification of plasmonic surfaces formed by laser ablation -- Diazonium salts and the related compounds for the design of biosensors -- Reinforced polymers: the emerging role of diazonium modification of fillers -- Diazonium salts for the preparation of carbon composites with a focus on applications of carbon fibers -- Diazonium salts and related compounds in electrochemical energy storage and conversion -- Recent patents and industrial applications.

Sommario/riassunto

This volume provides the latest developments in the field of surface science and technology based on diazonium coupling agents as well as their precursors (e.g. aromatic amines). It presents new concepts of surface chemistry of diazonium salts and discusses their novel and challenging applications. The latest advances on surface modification with diazonium salts are discussed and various promising alternative surface modifiers such as iodonium salts are examined. This book demonstrates the universality of diazonium salts in the surface treatment of classical and emergent materials and it will be a great tool for researcher and graduates working in this field.