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Titolo	Conversion Coatings for Magnesium and its Alloys // edited by Viswanathan S. Saji, T. S. N. Sankara Narayanan, Xiaobo Chen
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Descrizione fisica	1 online resource (577 pages)
Disciplina	661.0392
Soggetti	Metals Coatings Building materials Materials Metals and Alloys Steel, Light Metal Structural Materials Materials for Devices
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Conversion Coatings – Types and Mechanism -- Fundamentals of Chemical Conversion Coatings -- Fundamentals of Electrochemical Conversion Coatings -- Other Conversion Coatings Approaches -- Chromium Conversion Coatings –Present Status -- Phosphate-based Conversion Coatings -- Rare Earth-based Conversion Coatings -- Permanganate, Molybdate and Vanadate Conversion Coatings -- Fluoride Conversion Coatings -- Carbonate Conversion Coatings -- Layered double hydroxide conversion coatings -- Other Conversion Coatings -- Phytic Acid Conversion Coatings -- Tannic and Gallic Acid Conversion Coatings -- Aliphatic Carboxylic Acid Conversion Coatings -- Catechol and Vanillic Acid Conversion Coatings -- Other Conversion Coatings -- Electrochemical Anodic Oxidation of Mg alloys- Fundamentals and Recent developments -- Plasma Electrolytic Oxidation of Mg alloys - Fundamentals and Recent developments -- Recent Research Advancements in superhydrophobic electrochemical

conversion coatings for Mg -- Self-healing Conversion Coatings -- Ionic Liquids-assisted Conversion Coatings -- Superhydrophobic Conversion Coatings -- Chitosan-based coatings -- Silane-based Coatings.

Sommario/riassunto

This book covers fundamentals and recent advancements on conversion coatings for magnesium and its alloys. The contents are presented in two sections, respectively dealing with chemical and electrochemical conversion coatings. The chemical conversion coating section is further subdivided into inorganic conversion coatings, organic conversion coatings and advanced approaches/coatings. The section on electrochemical conversion coatings spans from fundamentals to state-of-the-art progress on electrochemical anodization and plasma electrolytic oxidation of magnesium and its alloys. Collects a range of chapters covering all aspects of chemical and electrochemical conversion coatings for magnesium alloys to improve their corrosion resistance and biocompatibility. Stands as the first book dedicated exclusively for conversion coatings on magnesium alloys. Serves as a ready reference for graduate students, researchers, and practitioners in multiple industries .
