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| Autore | Khanna Virat |
| Titolo | MXenes for Sustainable Development : Comprehensive Insights and Innovative Applications / / edited by Virat Khanna, Rashmi Walvekar |
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| Descrizione fisica | 1 online resource (559 pages) |
| Collana | Green Chemistry and Sustainable Technology, , 2196-6990 |
| Altri autori (Persone) | WalvekarRashmi |
| Disciplina | 530.41<br>620.19 |
| Soggetti | Condensed matter<br>Chemistry, Inorganic<br>Materials<br>Catalysis<br>Force and energy<br>Environmental chemistry<br>Biomaterials<br>Two-dimensional Materials<br>Inorganic Chemistry<br>Materials for Energy and Catalysis<br>Environmental Chemistry<br>Biomedical Materials |
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| Nota di contenuto | Introduction, Synthesis, and Characterization of MXenes -- Introduction to MXenes: Building Blocks for Sustainability -- Synthesis Methods of MXenes: From Theory to Practice -- To Characterisation Techniques for MXenes: Structure and Properties. |
| Sommario/riassunto | This book serves as a detailed guide to MXenes and their diverse applications in various domains, helping to achieve sustainable development. It begins with a thorough exploration of the introduction, synthesis, and characterization of MXenes, laying the foundation for understanding their significance as key building blocks for sustainability. The subsequent sections delve into MXene's pivotal role |

in various sustainable energy applications, environmental remediation, and sustainable materials and manufacturing domains. Each chapter within these sections covers the practical applications of MXenes, ranging from renewable energy systems to eco-friendly production processes, highlighting their potential to drive innovation and progress toward a sustainable future. Furthermore, the book explores MXenes' promising prospects in biomedical and healthcare applications, showcasing their potential in revolutionising diagnostics, drug delivery systems, and biocompatible materials for sustainable healthcare solutions. Additionally, it addresses the challenges and opportunities in MXene research for sustainable development, offering valuable insights into future directions and perspectives. This book aims to bridge the gap between theory and practice, offering a comprehensive understanding of MXenes' applications across diverse sectors of sustainable development. With contributions from leading experts in the field, this book is an invaluable resource for researchers, scientists, engineers, policymakers, and students seeking to explore and harness the potential of MXenes for sustainable solutions. This volume is poised to be a good resource for anyone interested in the forefront of sustainable materials science and technology, providing a roadmap for leveraging MXenes toward a more sustainable and prosperous future.