

1. Record Nr.	UNINA9910872181203321
Autore	Pandeya Oma Prakasa
Titolo	MXenes: Emerging 2D Materials / / edited by Om Prakash Pandey, Piyush Sharma
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2024
ISBN	9789819740642 9789819740635
Edizione	[1st ed. 2024.]
Descrizione fisica	1 online resource (330 pages)
Altri autori (Persone)	SharmaPiyush
Disciplina	530.41 620.19
Soggetti	Condensed matter Composite materials Biophysics Energy harvesting Plant biotechnology Two-dimensional Materials Composites Bioanalysis and Bioimaging Energy Harvesting Plant Biotechnology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	The wave of 2D Mxenes -- Strategies to prepare and characterize 2D Mxenes -- Properties of Mxenes -- MXenes derived composites -- MXenes for energy harvesting and storage applications -- Implementation of MXenes for water treatment -- MXenes for sensing applications -- Progress of MXenes in Biomedical Sciences -- MXenes as a promising material for electromagnetic shielding -- Role of MXenes in Biotechnology -- Application of MXenes on separation processes -- MXenes for organic/perovskite optoelectronic devices -- Future prospective and research avenue for Mxenes.
Sommario/riassunto	This book focuses on the expanding market for 2D MXenes and their increasing importance in future applications. It provides a thorough

understanding of MXenes and their derivatives by exploring their complex composition and chemical diversity. The book provides a thorough examination of synthesis processes, characterization methodologies, and crucial attributes, which may give significant insights for both researchers and engineers. Furthermore, the book explores diverse applications of MXenes, spanning from energy storage and catalysis to electronics and beyond, thus highlighting their vast potential in driving technological innovation. Additionally, by elucidating the current state and challenges hindering the commercialization of 2D MXenes, this resource serves as a valuable guide for navigating the path towards widespread adoption. This book is an essential resource for scientists, engineers, research researchers, and students who want to delve into the captivating realm of 2D MXenes. Its interdisciplinary approach makes it a valuable tool.

---