1. Record Nr. UNINA9910410040703321

Titolo	Metal-Organic Framework : From Design to Applications / / edited by Xian-He Bu, Michael J. Zaworotko, Zhenjie Zhang
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2020
ISBN	3-030-47340-6
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (431 pages)
Collana	Topics in Current Chemistry Collections, , 2367-4075
Disciplina	547.05
Soggetti	Organometallic chemistry Polymers Materials - Analysis Organometallic Chemistry Characterization and Analytical Technique
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Functionalized Metal-Organic Frameworks as Smart Switch for Sensor and Adsorption -- Metal–Organic Frameworks in Desulfurization of Fuels -- Why design matters: From decorated metal-oxide clusters to functional metal-organic frameworks -- The Exploration on Electronic and Electrochemical Applications of Two-Dimensional Metal-Organic Frameworks -- Recent Advances of Techniques for the incorporation of Biomolecules in Metal-Organic Frameworks -- Applications and Advantages of Organosulfonate-based metal-organic frameworks -- Insights into the Gas Adsorption Mechanisms in Metal–Organic Frameworks from Classical Molecular Simulations -- Current Status of Microporous Metal-Organic Frameworks for Hydrocarbon Separation -- Mechanical Properties of Shaped Metal-Organic Frameworks -- Regulation of the degree of interpenetration in metal-organic frameworks -- Switching 2-dimentional square lattice networks -- Organometallic Chemistry in Metal-Organic Frameworks -- Metal-Organic Frameworks catalyzed chemical conversion of CO2.
Sommario/riassunto	The series Topics in Current Chemistry Collections presents critical reviews from the journal Topics in Current Chemistry organized in

topical volumes. The scope of coverage is all areas of chemical science including the interfaces with related disciplines such as biology, medicine and materials science. The goal of each thematic volume is to give the non-specialist reader, whether in academia or industry, a comprehensive insight into an area where new research is emerging which is of interest to a larger scientific audience. Each review within the volume critically surveys one aspect of that topic and places it within the context of the volume as a whole. The most significant developments of the last 5 to 10 years are presented using selected examples to illustrate the principles discussed. The coverage is not intended to be an exhaustive summary of the field or include large quantities of data, but should rather be conceptual, concentrating on the methodological thinking that will allow the non-specialist reader to understand the information presented. Contributions also offer an outlook on potential future developments in the field.