Record Nr. UNINA9910298625203321 Autore Zhu Yun-Pei Titolo Mesoporous Organic-Inorganic Non-Siliceous Hybrid Materials [[electronic resource]]: Basic Principles and Promising Multifunctionality / / by Yun-Pei Zhu, Zhong-Yong Yuan Berlin, Heidelberg:,: Springer Berlin Heidelberg:,: Imprint: Springer, Pubbl/distr/stampa , 2015 ISBN 3-662-45634-6 Edizione [1st ed. 2015.] Descrizione fisica 1 online resource (127 p.) Collana SpringerBriefs in Molecular Science, , 2191-5407 Disciplina 54 541395 546 620115 621.3126 Soggetti Inorganic chemistry Nanotechnology Catalysis Energy storage **Inorganic Chemistry Energy Storage** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references. Introduction -- History and classification of non-siliceous hybrid Nota di contenuto materials -- Strategies to incorporate mesoporosity -- Morphological design of mesoporous hybrid materials -- Modification and potential applications of organic-inorganic non-siliceous hybrid materials --Summary and outlook. This book provides extensive information on organic-inorganic hybrid Sommario/riassunto materials with controllable compositions and structures developed over the past few decades, including metal sulfonates, carboxylates, phosphonates, metal-organic frameworks (MOFs), etc. A variety of

judicious strategies for optimizing mesoporosity are also introduced,

frameworks in practical applications at the nano-/meso-scale. The

aiming at realizing the corresponding superiorities of hybrid

morphological design and modification methods are also described in detail, which extend the potential application range of hybrid materials from traditional areas to high-tech fields. The book offers an ideal reference work for readers in the fields of chemistry, chemical engineering, physics, materials and biology, especially those who are interested in porous hybrid materials. Zhong-Yong Yuan is a Chair Professor at the College of Chemistry, Nankai University, China.