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Titolo	Porous materials : theory and its application for environmental remediation / / Juan Carlos Moreno-Pirajan, Liliana Giraldo-Gutierrez, Fernando Gomez-Granados, editors
Pubbl/distr/stampa	Cham, Switzerland : , : Springer, , [2021] ©2021
ISBN	3-030-65991-7
Edizione	[1st ed. 2021.]
Descrizione fisica	1 online resource (XVIII, 363 p. 185 illus., 135 illus. in color.)
Collana	Engineering materials
Disciplina	628
Soggetti	Surfaces (Technology) Porous materials - Environmental aspects Pollution prevention
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Activated carbons: preparation and characterization. -- Zeolites -- Aerogels and Xerogels -- Metal Organics Framework -- Nanostructures of carbons -- Preparation of graphene compounds -- Biochars and its use in pollution -- Thermodynamic Porosity Analysis -- Use of immersion calorimetry to characterize porous materials -- Use of adsorption calorimetry to characterize surface chemistry -- Techniques for purifying contaminated water: PSA, VSA and TSA -- Use of thermodynamic models to analyze porous materials in pollution processes.
Sommario/riassunto	This book is written in honor of Prof. Francisco Rodriguez-Reinoso, who has made significant contributions in the area of porous materials such as active carbons and graphenes. It details the preparation of porous materials, including carbonaceous, zeolitic, and siliceous materials, MOFs, aerogels, and xerogels, describing the characterization techniques and the interpretation of the results, and highlighting common errors that can occur during the process. This book subsequently presents the use of modeling based on thermodynamics to describe the materials. Lastly, it illustrates a number of current environmental protection applications in the context

of both water and air.