Record Nr. UNINA9910451299703321 Adsorption and diffusion [[electronic resource] /] / editors, Hellmut G. **Titolo** Karge, Jens Weitkamp; with contributions by S. Brandani ... [et al.] Pubbl/distr/stampa Berlin, : Springer, 2008 **ISBN** 3-540-73966-1 Edizione [1st ed. 2008.] 1 online resource (413 p.) Descrizione fisica Collana Molecular sieves: science and technology, , 1436-8269; ; 7 Altri autori (Persone) KargeH. G (Hellmut G.) WeitkampJ (Jens) Disciplina 541.335 Soggetti Adsorption Diffusion Electronic books. Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Includes bibliographical references and index. Nota di bibliografia Nota di contenuto Fundamentals of Adsorption Equilibrium and Kinetics in Microporous Solids -- Measurement of Diffusion in Microporous Solids by Macroscopic Methods -- Diffusion Measurements by NMR Techniques -- Application of IR Spectroscopy, IR Microscopy, and Optical Interference Microscopy to Diffusion in Zeolites -- Investigation of Diffusion in Molecular Sieves by Neutron Scattering Techniques --Frequency Response Measurements of Diffusion in Microporous Materials -- Positron Emission Profiling: a Study of Hydrocarbon Diffusivity in MFI Zeolites -- Single-File Diffusion in Zeolites. Molecular Sieves - Science and Technology covers, in a comprehensive Sommario/riassunto manner, the science and technology of zeolites and all related microporous and mesoporous materials. Authored by renowned experts, the contributions to this handbook-like series are grouped together topically in such a way that each volume deals with a specific sub-field. Volume 7 is treating fundamentals and analyses of adsorption and diffusion in zeolites including single-file diffusion, i.e. phenomena of basic importance, especially with respect to separation processes and catalysis. Various methods of measuring adsorption and diffusion are described and discussed, i.e. techniques such as

chromatographic, gravimetric and barometric uptake and desorption,

nuclear magnetic resonance, infrared spectroscopy, interference microscopy, neutron scattering, frequency response as well as proton profiling.