

1. Record Nr.	UNINA9910350334303321
Autore	Xu Jun
Titolo	Solid-State NMR in Zeolite Catalysis // by Jun Xu, Qiang Wang, Shenhui Li, Feng Deng
Pubbl/distr/stampa	Singapore : , : Springer Singapore : , : Imprint : Springer, , 2019
ISBN	981-13-6967-4
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (XI, 260 p. 193 illus., 52 illus. in color.)
Collana	Lecture Notes in Chemistry, , 0342-4901 ; ; 103
Disciplina	541.395
Soggetti	Catalysis Materials science Spectroscopy Surfaces (Physics) Interfaces (Physical sciences) Thin films Characterization and Evaluation of Materials Spectroscopy/Spectrometry Surface and Interface Science, Thin Films
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction -- Solid-State NMR Principles and Techniques -- Characterization of Synthesis Mechanism of Heterogeneous Catalysts -- Characterization of Framework Structure of Heterogeneous Catalysts -- Characterization of Porous Structure of Heterogeneous Catalysts -- Characterization of Guest-Host Interaction in Heterogeneous Catalysts -- Characterization of Active Centers of Heterogeneous Catalysts -- Characterization of Heterogeneous Catalytic Reactions.
Sommario/riassunto	Solid-State NMR Characterization of Heterogeneous Catalysts and Catalytic Reactions provides a comprehensive account of state-of-the-art solid-state NMR techniques and the application of these techniques in heterogeneous catalysts and related catalytic reactions. It includes an introduction to the basic theory of solid-state NMR and various frequently used techniques. Special emphasis is placed on characterizing the framework and pore structure, active site, guest-

host interaction, and synthesis mechanisms of heterogeneous catalysts using multinuclear one- and two-dimensional solid-state NMR spectroscopy. Additionally, various in-situ solid-state NMR techniques and their applications in investigation of the mechanism of industrially important catalytic reactions are also discussed. Both the fundamentals and the latest research results are covered, making the book suitable as a reference guide for both experienced researchers in and newcomers to this field. Feng Deng is a Professor at Wuhan Institute of Physics and Mathematics, Chinese Academy of Sciences.
