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Publications

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3. Wang, X.; Zeng, S. Q.; Qi, G. D.*; Wang, Q.; Xu, J.*; **Deng, F.** CO Oxidation over Embedded Pt Nanoparticles on Al_2O_3 with Al Coordination Flexibility *Chem. Commun.* **2023**, <https://doi.org/10.1039/D3CC01736B>

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Invited Review Articles:

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17. Zheng, A.M.; Huang, S.J.; Wang, Q.; Zhang, H.L.; **Deng, F.***; Liu, S.B.* Progress in development and application of solid-state NMR for solid acid catalysis. *Chin. J. Catal.* **2013**, 34: 436-491.

18. Li, S. H.; Li, J.; Zheng, A. M.; **Deng, F.*** Solid-state NMR characterization of the structure and catalytic reaction mechanism of solid acid catalysts *Acta Phys.-Chim. Sin.* **2017**, 33: 270-282.
19. Li, S.H. ; Zhou, L.; Zheng, A.M.; **Deng, F.*** Recent advances in solid-state NMR characterization of zeolites *Chin. J. Catal.* **2015**, 36 :789-796.
20. Qi, G.D.; Ye, X.D.; Xu, J.*; **Deng, F.*** Progress in NMR studies of carbohydrates conversion on zeolites *Chem. J. Chinese Universities-Chinese* **2021**, 42:148-164.
21. Xiao, Y.Q.; Li, S.H.*; Tang, J.; Xu, J.; **Deng, F.*** Solid-state NMR spectroscopy studies on structure, dynamics and host-guest interaction in metal-organic framework materials *Chem. J. Chinese Universities-Chinese* **2020**, 41: 204-220
22. Yu, Z. W.; Zheng, A. M.; Wang, Q.; **Deng, F.*** Application of two-dimensional double quantum magic angle spinning NMR to solid functional materials *Chem. J. Chinese Universities-Chinese* **2011**, 32: 471-484.
23. Yu, Z.W.; Zheng, A.M.; Wang, Q.; Huang, S.-J.; **Deng, F.***; Liu, S.B.* Acidity characterization of solid acid catalysts by solid-state NMR spectroscopy: a review on recent progresses. *Chin. J. Magn. Reson.* **2010**, 27: 485-515.

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1. Xu, J.; Wang, Q.; Li, S. H.; **Deng, F.** *Solid-State NMR in Zeolite Catalysis*, Lecture Notes in Chemistry 103, Springer Nature Singapore Pte Ltd. **2019**, page 1-260.

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1. Zheng, A.M.; Li, S.H.; **Deng, F.** Solid-state NMR characterization of acidity of solid catalysts, *Modern Magnetic Resonance*, Springer, Graham A. Webb (ed.) **2017**, 1-23.
2. Li, S.H.; **Deng, F.** Solid-state NMR studies of zeolites, *Zeolites in Sustainable Chemistry, Green Chemistry and Sustainable Technology*, F.S. Xiao, X. Meng (ed), Springer-Verlag Berlin Heidelberg **2015**, page 231-268.
3. **Deng, F.**; Yang, J.; Ye, C.H. Solid-state NMR characterization of solid surface of heterogeneous catalysts *Modern Magnetic Resonance*, Graham A. Webb (ed.) **2005**, 205-211.

Selected Presentations:

1. ¹H spin diffusion of organic molecules adsorbed on porous solids, Oral presentation, Proceedings of International 4th Beijing Conference and Exhibition on Instrumental Analysis, October 18-24, **1991**, Beijing, China
2. Adsorption of Na⁺ to γ -alumina studied by ²³Na and ²⁷Al solid-state NMR spectroscopy, Oral presentation, Proceedings of International 5th Beijing Conference and Exhibition on Instrumental Analysis, October 9-12, **1993**, Beijing, China

3. Solid-state NMR investigation of acid sites in dealuminated H-ZSM-5 zeolite, Short oral presentation, Proceedings of the Third International Meeting on Recent Advances in MR Applications to Porous Media, September 3-6, **1995**, Louvian-La-Neuve, Belgium
4. ^1H MAS and $^1\text{H}\{^{23}\text{Na}\}$ double resonance NMR studies on the modification of surface hydroxyls of γ -alumina by sodium, Plenary lecture, the 9th Chinese National Magnetic Resonance Conference, September, 15-19, **1996**, Chengde, China
5. Solid-state NMR studies of molecular sieves and catalytic reactions, Invited lecture, Proceedings of International 8th Beijing Conference and Exhibition on Instrumental Analysis, October 25-28, **1999**, Beijing, China
6. Solid-state NMR studies of zeolite catalysts, Invited lecture for Wang T. C. Award for Magnetic Resonance Spectroscopy, the 11th Chinese National Magnetic Resonance Conference, October 15-18, **2000**, Nanjing, China
7. Using trimethylphosphine as a probe molecule to study the acid sites in Al-MCM-41 materials by solid-state NMR spectroscopy, Oral presentation, International Symposium on Solid State Chemistry in China, August 9-12, **2002**, Changchun, China
8. Solid-state NMR studies of ordered mesoporous materials. Oral presentation, Proceedings of International 10th Beijing Conference and Exhibition on Instrumental Analysis, October 13-16, **2003**, Beijing, China
9. Surface acidity of $\text{BF}_3/\text{Al}_2\text{O}_3$ catalyst as studied by solid-state NMR and theoretical calculation. Invited lecture, the 1st Asia-Pacific NMR Symposium, November 9-11, **2005**, Yokohama, Japan
10. Solid-state NMR spectroscopy and its application to heterogeneous catalysts, Invited lecture, the 1st Sino-French Workshop on Solid-state NMR Spectroscopy, October 17-21, **2006**, Wuhan, China
11. Solid-state NMR studies on solid acid catalysts, Plenary lecture, the 14th Chinese National Magnetic Resonance Conference, October 11-13, **2006**, Xi'an, China.
12. A Combined Solid-State NMR Spectroscopy and Theoretical Calculation Study of Bronsted/Lewis Acid Synergy in Dealuminated Y Zeolite. Invited lecture, the 16th ISMAR (International Society for Magnetic Resonance) Conference, October 14-19, **2007**, Kenting, Taiwan, China
13. Two-dimensional ^1H - ^1H Double-quantum Magic Angle Spinning NMR Studies of Bronsted/Lewis Acid Synergy in zeolites. Invited lecture, the 1st Cross-Strait Magnetic Resonance Symposium, Oct. 10 - 12, **2007**, Taipei, China.
14. Solid-state NMR spectroscopy: principle and application. Invited lecture, Advanced Class of Modern Characterization Techniques for Catalysis, October 26-30, **2007**, Dalian, China.
15. Solid-state NMR spectroscopy. Invited lecture, Bruker Workshop on Solid-state NMR spectroscopy, April 4-6, **2008**, Beijing, China.
16. Bronsted/Lewis Acid Synergy in Microporous Zeolites Studied by Solid-State NMR Spectroscopy and Theoretical Calculation. Invited lecture, the 13th Asian Chemical Conference, September 14-16, **2009**, Shanghai, China.
17. Solid-state NMR studies of spatial proximity between different acid sites in zeolites, Keynote lecture, the 15th Chinese National Conference on Zeolites, October 12-15, **2009**, Luoyang, China

18. Spatial Proximity of Acid Sites in Microporous Zeolites as Studied by ^1H - ^1H and ^{27}Al - ^{27}Al DQ MAS Solid-state NMR Spectroscopy. Invited lecture, Joint EUROMAR **2010** and 17th ISMAR (International Society for Magnetic Resonance) conference, July 4-9, **2010**, Florence, Italy.
19. Surface acidity of solid acid catalysts studied by solid-state NMR spectroscopy and theoretical DFT calculations. Invited lecture, the 240th ACS National Meeting, August 22-27, **2010**, Boston, USA.
20. Solid-state NMR characterization of heterogeneous catalysts. Invited lecture, the 2nd Sino-French Workshop on Solid-state NMR Spectroscopy, November 1-3, **2010**, Wuhan, China
21. Two-dimensional ^1H - ^1H and ^{27}Al - ^{27}Al DQ MAS Solid-state NMR Studies of Spatial Proximity of Acid Sites in Zeolites. Invited lecture, the 4th Asia-Pacific NMR Symposium, October 16-19, **2011**, Beijing, China
22. Solid-state NMR and DFT calculation studies of zeolites. Keynote lecture, the 16th Chinese National Conference on Zeolites, October 14-17, **2011**, Beijing, China
23. Bronsted/Lewis Acid Synergy in Zeolites Studied by Two-dimensional ^1H - ^1H and ^{27}Al - ^{27}Al DQ MAS Solid-state NMR Spectroscopy. Invited lecture, Frontiers Seminar Series, Pacific Northwest National Laboratory, April 23, **2011**, Richland, Washington, USA.
24. Solid-state NMR Studies of Heterogeneous Catalysts, Invited lecture, the 6th Pacific Basin Conference on Adsorption Science and Technology, May 20-23, **2012**, Taibai, China.
25. Two-dimensional ^1H - ^1H and ^{27}Al - ^{27}Al DQ MAS Solid-state NMR Studies of Zeolites, Invited lecture, the 41th Korean Magnetic Resonance Society Conference, June 28-30, **2012**, Jeju Island, Korea.
26. Methane activation and conversion over Zn modified ZSM-5 Zeolites studied by Solid-state NMR spectroscopy and DFT Calculation. Invited lecture, the 6th Asia-Pacific Congress on Catalysis, October 14-17, **2013**, Taipei, China.
27. Solid-state NMR studies of heterogeneous catalysts and catalytic reactions. Invited lecture, the 3rd Sino-French Workshop on Solid-state NMR Spectroscopy, May 9-11, **2013**, Dalian, China
28. Solid acid catalysts and catalytic reactions studied by solid-state NMR and DFT calculations. Keynote lecture, the 17th Chinese National Conference on Zeolites, Aug 29- Sept 2, **2013**, Yinchuan, China.
29. Solid-state NMR and theoretical DFT calculation studies on solid acid catalysts and related catalytic reactions. Invited lecture, the 55th ENC (Experimental Nuclear Magnetic Resonance Conference), March 23-28, **2014**, Boston, USA.
30. Solid-state NMR and theoretical DFT calculation studies on solid acid catalysts and related catalytic reactions. Invited lecture, the 29th National Conference of Chinese Chemical Society (porous functional materials section), August 4-7, **2014**, Beijing, China
31. Solid acid catalysts and related catalytic reactions studied by solid-state NMR spectroscopy and DFT calculations. Keynote lecture, the 17th National Congress on Catalysis of China, October 13-17, **2014**, Hanzhou, China
32. Solid-state NMR and theoretical DFT calculation studies on solid acid catalysts and catalytic reactions. Plenary lecture, 18th Chinese National Conference on Zeolites, October 25-28, **2015**, Shanghai, China.

33. Solid-state NMR studies on methane activation and conversion over Zn-modified ZSM-5 Zeolites. Invited lecture, the 19th ISMAR (International Society for Magnetic Resonance) Conference, August 16-21, **2015**, Shanghai, China.
34. Methane and CO activation and conversion over Zn-modified ZSM-5 zeolites studied by solid-state NMR and ESR spectroscopy, Invited lecture, the 16th International Congress on Catalysis, July 3-8, **2016**, Beijing, China
35. Solid-state NMR studies of solid acid catalysts and related catalytic reactions. Invited lecture, 2016 Lanzhou International Workshop on Solid-state Nuclear Magnetic Resonance, August 19-21, **2016**, Lanzhou, China
36. Solid-state NMR studies of zeolite catalysis. Invited lecture, the 7th Cross-Strait Magnetic Resonance Symposium, October 30 - Nov. 1, **2018**, Taipei, China.
37. The structures and catalytic reaction mechanisms of zeolites studied by solid-state NMR spectroscopy. Keynote lecture, the 19th National Congress on Catalysis of China, October 13-17, **2019**, Chongqing, China
38. Solid-state NMR studies of heterogenous catalysis in zeolites. Keynote lecture, the 21st Chinese National Conference on Zeolites, September 27-30, **2021**, Qingdao, China
39. Zeolite catalysis studied by solid-state NMR spectroscopy, Invited online lecture, Chinese Analytical Forum, Nano Catalysis Section, June 10, **2022**