

# Curriculum Vitae

Feng Deng

Professor

State Key Laboratory of Magnetic Resonance and Atomic and Molecular Physics,

National Center for Magnetic Resonance in Wuhan

Wuhan Institute of Physics and Mathematics

Innovation Academy for Precision Measurement Science and Technology

Chinese Academy of Sciences (CAS)

West Xiaohongshan 30#, Wuhan 430071, P. R. China

Tel: +86-027-87198820

Email: [dengf@wipm.ac.cn](mailto:dengf@wipm.ac.cn)

Web: <http://denglab.wipm.ac.cn/>

## Education

09/1984-06/1988 B.S. in Physical Chemistry, Department of Chemistry, Chengdu University of Science and Technology (now Sichuan University), P. R. China

09/1988 -06/1991 M.S. in Nuclear Magnetic Resonance, Wuhan Institute of Physics, CAS (supervisor: Prof. Youru Du)

09/1993 - 06/1996 Ph.D in Nuclear Magnetic Resonance, Wuhan Institute of Physics, CAS (supervisor: Prof. Chaohui Ye and Prof. Youru Du)

## Postdoctoral Training

10/1997-12/1998 Research Fellow, Chemistry Department, Texas A & M University, USA (with Prof. James F. Haw, working on in-situ solid-state NMR studies of heterogeneous catalytic reactions in zeolites)

## Faculty Academic Appointments

07/1991-05/1993 Research assistant, Wuhan Institute of Physics, CAS

06/1993-06/1996 Assistant professor, Wuhan Institute of Physics, CAS

07/1996-11/1999 Associate professor, Wuhan Institute of Physics and Mathematics, CAS

12/1999-present Professor, Wuhan Institute of Physics and Mathematics, Innovation Academy for Precision Measurement Science and Technology, CAS; Group Leader of Solid-state NMR Spectroscopy and Heterogeneous Catalysis

09/2008-07/2020 Vice director of National Centre for Magnetic Resonance in Wuhan

04/2005-11/2016 Vice director of State Key Laboratory of Magnetic Resonance and Atomic and Molecular Physics

12/2016-present Director of State Key Laboratory of Magnetic Resonance and Atomic and Molecular Physics

## Main research activities:

Solid-state NMR methodology

Heterogeneous catalysts (such as zeolites, MOFs, metal oxides, heteropoly acids etc) and relevant catalytic reactions studied by solid-state NMR spectroscopy and DFT calculations

Solid-state NMR characterization of functional materials

## Awards:

Wang T. C. Award for Magnetic Resonance Spectroscopy (2000)

Distinguished Young Scholars supported by National Science Foundation of China (Physical Chemistry, 2004)

## Academic Positions:

Council Member of the International Society of Magnetic Resonance (ISMAR)

Committee Member of Chinese Magnetic Resonance Society

Committee Member of Chinese Catalysis Society

Committee Member of Chinese Zeolite Society

Committee Member of Chinese Physical Chemistry Society

Editorial Board of *Solid State Nuclear Magnetic Resonance*

Editorial Board of *Magnetic Resonance Letter*

Editorial Board of *Chinese Science Bulletin*

Editorial Board of *Chinese Journal of Magnetic Resonance*

Editorial Board of *Chemical Journal of Chinese Universities*

Editorial Board of *Acta Physico-Chimica Sinica*

## Publications

More than 300 papers have been published in journals including *Chem Rev*, *Chem Soc Rev*, *Acc Chem Res*, *Nat Catal*, *Nat Commun*, *JACS*, *Angew Chem Int Ed*, *Chem*, *PRL*, *Adv Mater*, *Chem Sci*, *Chem Commun*, *JPCL*, *JPC*, *JCP*, *PCCP*, *ACS Catal*, *J Catal*, *J Magn Reson*, *Solid State Nucl Magn Reson* etc, which have been cited over 13500 times by other authors. Selected publications are listed in the following:

1. Wang, C.; Chu, Y.Y.; Hu, M.; Cai, W.J.; Wang, Q.; Qi, G.D.; Li, S.H.; Xu, J.\*; **Deng, F.** Insight into carbocation induced non-covalent interactions in methanol-to-olefins reaction over ZSM-5 zeolite from solid-state NMR spectroscopy *Angew. Chem. Int. Ed.* **2021**, 60, 26847-26854.
2. Wang, C.; Zhao, X.L.; Hu, M.; Qi, G.D.; Wang, Q.; Li, S.H.; Xu, J.\*; **Deng, F.** Unraveling hydrocarbon pool boosted propane aromatization on gallium/ZSM-5 zeolite by solid-state NMR spectroscopy *Angew. Chem. Int. Ed.* **2021**, 60, 23630-23634.
3. Gao, W.; Qi, G.D.; Wang, Q.; Wang, W.Y.; Li, S.H.; Hung, I.; Gan, Z.H.; Xu, J.\*; **Deng, F.** Dual active sites on molybdenum/ZSM-5 catalyst for methane dehydroaromatization: insights from solid-state NMR spectroscopy *Angew. Chem. Int. Ed.* **2021**, 60: 10709-10715.
4. Qi, G.D.; Wang, Q.; Xu, J.\*; **Deng, F.** Solid-state NMR studies of internuclear correlations for characterizing catalytic materials *Chem. Soc. Rev.* **2021**, 50: 8382-8399.
5. Zheng, M.J.; Xin, S.H.; Wang, Q.\*; Trebosc, J.; Xu, J.; Qi, G.D.; Feng, N.D.; Lafon, O.\*; **Deng, F.\*** Through-space  $^{11}\text{B}$ - $^{27}\text{Al}$  correlation: influence of the recoupling channel *Magn. Reson. Chem.* **2021**, 59:1062-1076.
6. Xiao, Y.Q.; Chu, Y.Y.; Li, S.H.\*; Chen, F.; Gao, W.; Xu, J.; **Deng, F.\*** Host-guest interaction in ethylene and ethane separation on zeolitic imidazolate frameworks as revealed by solid-state NMR spectroscopy *Chem. Eur. J.* **2021**, 27: 11303-11308.
7. Tang, J.; Chu, Y.Y.; Li, S.H.\*; Xu, J.; Xiong, W.P.; Wang, Q.; **Deng, F.\*** Breathing effect via solvent inclusions on the linker rotational dynamics of functionalized MIL-53 *Chem. Eur. J.* **2021**, 27: 14711-14720.