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技术职务: 教授 专业及学历: 化学工程, 博士
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工作及教育经历:

2018/09–至今, 天津工业大学化学与化工学院 教授
2006/04–2018/09, 美国太平洋西北国家实验室 研究员
1999/01–2006/04, 美国弗吉尼亚大学化学工程系 研究科学家
1997/04–1998/12, 清华大学化学工程系 博士后
1993/09–1996/12, 石油大学(北京)化学工程系 博士研究生
1990/09–1993/06, 北京化工学院化学工程系 硕士研究生
1982/09–1986/07, 西北大学化学工程系 本科

研究方向:

1. 基于第一性原理的非均相催化反应理论模型计算
2. 新型化工分离和催化反应的材料设计

代表性学术论文:

- (1) Hensley, A.J.R., Wang, Y., **Mei, D.*** and McEwen, J.S.* “*Mechanistic Effects of Water on the Fe-Catalyzed Hydrodeoxygenation of Phenol - The Role of Brønsted Acid Sites*”, **ACS Catalysis**, 8, 2200-2208. (2018)
- (2) Nie, L.,[†] **Mei, D.,[†]** Xiong, H.F.[†], Peng, B., Ren, Z. B., Hernandez, X.I.P., DeLaRiva, A., Wang, M., Engelhard, M.H., Kovarik, L., Datye, A.K.* and Wang, Y.* “*Activation of Surface Lattice Oxygen in Single Atom Pt/Ceria for Low Temperature CO Oxidation*”, **Science**, 358, 1419-1423. (2017)

- (3) **Mei, D.*** and Lercher, J.A. “*Mechanistic Insights into Aqueous Phase Propanol Dehydration in H-ZSM-5 Zeolite*”, **AICHE Journal**, 63, 172-184. (2017)
- (4) Yoon, Y., Rousseau, R.,* Weber, R.S., **Mei, D.*** and Lercher, J.A.* “*First-Principles Study of Phenol Hydrogenation on Pt and Ni Catalysts in Aqueous Phase*”, **Journal of the American Chemical Society**, 136, 10287-10298. (2014)
- (5) **Mei, D.***, Glezakou, V.A., Lebarbier, V.M., Kovarik, L., Wan, H.Y., Albrecht, K.O., Rousseau, R.* and Dagle, R.A.* “*Highly Active and Stable MgAl₂O₄-supported Rh and Ir Catalysts for Methane Steam Reforming: A Combined Experimental and Theoretical Study*”, **Journal of Catalysis**, 316, 11-23. (2014)
- (6) **Mei, D.***, Rousseau, R., Kathmann, S. M., Glezakou, V.A., Engelhard, M.A., Jiang, W.L., Wang, C.M., Gerber, M.A., White, J.F. and Stevens, D.J. “*Ethanol Synthesis from Syngas over Rh-based/SiO₂ Catalysts: A Combined Experimental and Theoretical Modeling Study*”, **Journal of Catalysis**, 271, 325-342. (2010)
- (7) **Mei, D.**, Neurock, M.* and Smith, C.M. “*Hydrogenation of Acetylene-Ethylene Mixtures over Pd and Pd-Ag Alloys: First-principles-based Kinetic Monte Carlo Simulations*”, **Journal of Catalysis**, 268, 181-195. (2009)
- (8) Kwak, J.H., Hu, J.Z., **Mei, D.**, Yi, C.W., Kim, D.H., Peden, C.H.F.*, Allard, L.F. and Szanyi, J.* “*Coordinatively Unsaturated Al³⁺ Centers as Binding Sites for Active Catalyst Phases of Platinum on γ -Al₂O₃*”, **Science**, 325, 1670-1673. (2009)
- (9) **Mei, D.***, Xu, L. and Henkelman, G. “*Dimer Saddle Point Searches to Determine the Reactivity of Formate on Cu(111)*”, **Journal of Catalysis**, 258, 44-51. (2008)
- (10) **Mei, D.**, Sheth, P.A., Neurock, M.* and Smith, C.M. “*First-principles-based Kinetic Monte Carlo Simulation of the Selective Hydrogenation of Acetylene over Pd(111)*”, **Journal of Catalysis**, 242, 1-15. (2006)