



# Yong GUO

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## Profile

Yong Guo, Associate Professor, received his B.E. degree in Chemical Engineering from East China University of Science and Technology (ECUST) in 2003. During April to August in 2007, he studied physical chemistry under the supervision of Prof. Swidersky at Luebeck University of Applied Science (Luebeck, Germany) as a visiting scholar, where he finished his thesis for bachelor degree. From 2007 to 2012, he studied at Research Institute of Industrial Catalysis at ECUST, where he received his Ph.D. degree in 2012. From 2012 to 2017, He worked on the biomass conversion by catalytic process at the Research Institute of Petroleum Processing (RIPP), SINOPEC (Beijing, China) as a senior engineer. In 2017, he joined ECUST as an associated professor. His current research interests include the catalytic conversion of biomass and catalytic production of hydrogen. He has published more than 50 academic papers, including Accounts of Chemical Research, Chem, ACS Catalysis. He obtained "Min Enze Energy and Chemical Industry Award" for excellent youth.

## Research Field

Heterogeneous catalysis

## Research results and main published thesis

- 1) Guo Yong, Wang Yanqin, Lignin Upgrading in 《Heterogeneous Catalysis for Sustainable Energy》, Wiley-VCH
- 2) Guo Yong, Jing Yaxuan, Xia Qineng\*, Wang, Yanqin\*, NbOx -Based Catalysts for the Activation of C–O and C–C Bonds in the Valorization of Waste Carbon Resources. Acc. Chem. Res. 2022, 55 (9)
- 3) Dong Lin, Lin Longfei, Han Xue, Si Xiaoqin, Liu Xiaohui, Guo Yong\*, Lu Fang, Rudić Svemir, Parker Stewart F, Yang Sihai\*, Wang Yanqin\*. Breaking the limit of lignin monomer production via cleavage of interunit carbon-carbon linkages. Chem. 2019, 5, 1521-1536.
- 4) Jing Yaxuan, Guo Yong, Xia Qineng, Liu Xiaohui, Wang Yanqin, Catalytic Production of Value-Added Chemicals and Liquid Fuels from Lignocellulosic Biomass. Chem 2019, 5 (10), 2520-2546.
- 5) Li Didi, Li Yi, Liu Xiaohui, Guo Yong\*, Pao, ChanWen, Chen JengLung, Hu Yongfeng, Wang Yangqin\*, NiAl<sub>2</sub>O<sub>4</sub> Spinel Supported Pt Catalyst: High Performance and Origin in Aqueous-Phase Reforming of Methanol. ACS Catal. 2019, 9 (10), 9671-9682.
- 6) Li Lingxiao, Dong Lin, Li Didi, Guo Yong\*, Liu Xiaohui, Wang Yangqin\*, Hydrogen-Free Production of 4-Alkylphenols from Lignin via Self-Reforming-Driven Depolymerization and Hydrogenolysis. ACS Catal. 2020, 10 (24), 15197-15206.
- 7) Zhou Hao, Chen Lu, GuoYong\*, Liu Xiaohui, Wu Xin-Ping\*, Gong Xue-Qing, and Wang Yanqin\*, Hydrogenolysis Cleavage of the Csp<sup>2</sup>–Csp<sup>3</sup> Bond over a Metal-Free NbOPO<sub>4</sub> Catalyst. 2022, ACS Catal. doi: 10.1021/acscatal.2c0034.
- 8) Mao Qianlong, Guo Yong\*, Liu Xiaohui, Shakouri, M., Hu Yongfeng, Wang Yanqin, Identifying the realistic catalyst for aqueous phase reforming of methanol over Pt supported by lanthanum nickel perovskite catalyst. Appl. Catal. B: Environ. 2022, 313.
- 9) Li Lingxiao, Dong Lin, Liu Xiaohui, Guo Yong\*, Wang Yanqin\*, Selective production of ethylbenzene from lignin oil over FeOx modified Ru/Nb<sub>2</sub>O<sub>5</sub> catalyst. Appl. Catal. B: Environ 2020, 260.
- 10) Dong Lin, Xia Jie, Guo Yong\*, Liu Xiaohui, Wang Haifeng\*, Wang Yanqin, Mechanisms of Caromatic-C bonds cleavage in lignin over NbOx-supported Ru catalyst. J. Catal. 2021, 394, 94-103.
- 11) Xin Yu, Dong Lin, Guo Yong\*, Liu Xiaohui, Hu Yongfeng, and Wang Yanqin\*. Correlation of the catalytic performance with Nb<sub>2</sub>O<sub>5</sub> surface properties in the hydrodeoxygenation of lignin model compound. J. Catal. 2019, 375, 202-212.
- 12) Li Jinjian, Tong Fengya, Li Yi, Liu Xiaohui, Guo Yong\*, Wang Yanqin. Dehydrogenation of dodecahydro-N-ethylcarbazole over spinel supporting catalyst in a continuous flow fixed bed reactor. 2022, Fuel. doi: 10.1016/j.fuel.2022.124034
- 13) Yue Shenzhi, Dong Lin, Liu Xiaohui, Guo Yong\*, Wang Yanqin. Hydrogenation of palmitic acid over Ni/Nb<sub>2</sub>O<sub>5</sub>-SiO<sub>2</sub> catalyst: Synergetic effect and kinetic study. Ind. Crop Prod. 2020, 158, 113006.
- 14) Guo Yong, Ying Ting, Liu Xiaohui, Shi Bianfang, and Wang Yanqin\*. A partially graphitic carbon catalyst for aerobic oxidation of cyclohexane. Mol. Catal. 2019, DOI: 10.1016/j.mcat.2019.110487.
- 15) Jing Yaxuan, Xin Yu, Guo Yong\*, Liu Xiaohui, Wang Yanqin\*. Highly efficient Nb<sub>2</sub>O<sub>5</sub> catalyst for aldol condensation of biomass-derived carbonyl molecules to fuel precursors. Chin. J. Catal., 2019, 40, 1168-1177
- 16) Guo Yong, Liu Xiaohui, Wang Yanqin\*. Catalytic and DRIFTS Studies of Pt-Based Bimetallic Alloy Catalysts in Aqueous-Phase Reforming of Glycerol. Ind. Eng. Chem. Res. 2019, 58 (8), 2749-2758.