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Education:

Sep 1995 – Jul 1999 Zhengzhou University, China, Department of Chemistry, B.S.

Sep 1999 – Jan 2005 Dalian Institute of Chemical Physics, Chinese Academy of sciences, Ph.D.
Physical Chemistry

Academic and Working Experience:

May 2022 – present Associate Editor, *ACS Catalysis*

May 2021 – present Vice Director, Dalian Institute of Chemical Physics, CAS

Oct 2018 – Mar 2024 Director, Division of Biomass Conversion & Bio-energy, Dalian Institute of Chemical Physics, CAS

Jan 2014 – Oct 2018 Vice Director, Division of Biomass Conversion & Bio-energy, Dalian Institute of Chemical Physics, CAS

Jun 2011 – present Professor, Dalian Institute of Chemical Physics, CAS

Dec 2009 – Jun 2011 Associate Professor, Team leader of Bioenergy Chemical Group, Dalian Institute of Chemical Physics, CAS

Sep 2006 – Dec 2009 Postdoc, Catalysis Research Center, Hokkaido University, Japan

Aug 2005 – Sep 2006 Postdoc, Department of Chemical Engineering, University of California-Berkeley, USA

Mar 2005 – Jul 2005 Assistant Professor, Organic Catalysis Group, Dalian Institute of Chemical Physics, CAS

Research Interests:

- Synthesis and characterization of structurally well-defined nanomaterials, such as metal oxides, zeolites, and metal nanoparticles
- Development of green and environmentally benign processes for the production of oxygenates from olefins, alcohols and carbon oxides
- Catalytic upgrading of biomass (lignocellulose and derivatives) into phenolic compounds, alcohols and polymer building blocks
- Photocatalysis for solar fuel production, CO₂ valorization, and biomass conversion
- Theoretical calculations and machine learning in catalytic materials and chemistry

Awards:

- ◆ 2023 First-class Dalian Natural Science Award
- ◆ 2022 Rare Earth Science and Technology Award - First Prize of Fundamental Research
- ◆ Min Enze Energy and Chemical Industry Award - Outstanding Contribution Award, 2021
- ◆ ACS Sustainable Chemistry & Engineering Lectureship Awards, ACS, 2020



- ◆ National Science Fund for Outstanding Young Scholars, NSFC, 2020
- ◆ NSFC-RS Newton Advanced Fellowship, 2019 (Collaborator: Stuart Taylor, Cardiff University, UK)
- ◆ Jiayi Lu Excellent Mentor Award, 2020
- ◆ Mentor Award of Chinese Academy of Science, 2019
- ◆ Cheung Kong Youth Scholar Program, Ministry of Education of P.R. China, 2016
- ◆ National Science Fund for Excellent Young Scholars, NSFC, 2014
- ◆ Lin Liwu Excellent Youth Award, 2012
- ◆ Chinese Catalytic Xinxiu Award, Chinese Chemistry Society, 2012
- ◆ Young Scientist Award, 15th International Congress on Catalysis, Munich, 2012
- ◆ Chinese Academy of Sciences (CAS) Presidential Scholarship, 2005

Memberships:

American Chemical Society (ACS)

Chinese Chemical Society (CCS)

Conference Talk:

1. Catalytic Depolymerization of Lignocellulose, 16th Eurasia Conference on Chemical Sciences 2023, Bangkok, Thailand, Dec.13-15, 2023
2. Catalytic Fractionation of Lignocellulose towards Holistic Valorization, 9th Asia-Pacific Congress on Catalysis (APCAT-9), Hangzhou, China, Oct. 30-Nov. 2, 2023
3. Photocatalytic biorefineries for H₂ production, 2023 International Conference on Photochemistry and Industry, Wuhan, Oct. 10-13, 2023
4. Photocatalytic Cleavage of Lignin C–C or C–O bond, Nature Sustainability Workshop Series, Shenzhen, May 13, 2021
5. Catalytic conversion of lignin into aromatic chemicals, 2020 2nd International Youth Conference on Lignin- and Collagen-based Materials (2nd IYCLCM-2020), Dalian, Nov. 07, 2020
6. Light-driven Catalytic Biomass Conversion, Syngenta International Online Conference, Oct. 22, 2020
7. Light-Driven Catalytic Biomass Conversion to Liquid Fuels and Chemicals, The China-UK Catalysis Symposium, Dalian, Oct. 21, 2020
8. Light-driven Catalytic Biomass Conversion to Liquid Fuels and Chemicals, The 1st CAS-NST Joint Symposium - Focusing on Energy-Related Catalysis, Sept. 1-3, 2020
9. 2020 Catalysis Gordon Research Conference, June 28, 2020
10. Photocatalytic conversion of biomass and its derivatives, the 24th Annual Green Chemistry & Engineering Conference, Washington, USA, June 15-20, 2020
11. Catalytic scissoring of lignin C–C and C–O bonds, the 6th UK Catalysis Conference (UKCC), Loughborough, UK, Jan. 1-7, 2020
12. Ru/Ceria catalyzes the C–C/C–N bond formation reactions and Selective production of phase-separable product from a mixture of biomass-derived aqueous oxygenates, and Visible-light-driven coproduction of diesel precursors and hydrogen from lignocellulose-derived methylfurans, The 258th ACS National Meeting, Aug. 24-31, 2019
13. Photocatalytic Conversion of Biomass to Fuels and Chemicals, The 10th National Conference



- on Environmental Chemistry (10th NCEC), Beijing, August 15-19, 2019
14. Catalytic Cleavage of Lignin and its Derivatives into Aromatic Compound, The Spring Meeting of Korea Institute of chemical Engineers (KIChE), Jeju, Republic of Korea, April 23-27, 2019
 15. Oxidative cleavage of carbon-carbon bonds of lignin to aromatic and Ceria catalysts for stitching small molecules via multiple bond formation, The 257th ACS National Meeting, Orlando, USA, March 31- April 4, 2019
 16. Homogeneous Catalytic Oxidation of Lignin to Cleave C–O and C–C Bonds, Lignin Gordon Research Conference, Easton, USA, Aug. 5-10, 2018
 17. Heterogeneous catalysis for lignin conversion, ACS Publications Forum in the 31st CCS, Hangzhou, China, May 5-8, 2018
 18. Catalytically oxidative cleavage of lignin C–C bond, The 255th ACS National Meeting, New Orleans, USA, March 18-22, 2018.
 19. Catalytic Oxidative Cleavage of C–C Bond Converts Lignin Models and Extracts to Aromatic chemicals, CatBior 2017, Lyon, France, Dec. 11-15, 2017.
 20. Acid-base Catalysis of Ceria and Doped Ceria in Organic Transformation, OKCAT2017, Osaka, Japan, Oct. 27-28, 2017.
 21. Photocatalytic Cleavage of Lignin into Aromatics, The 254th ACS National Meeting, Washington DC, USA, Aug. 20-24, 2017.
 22. Catalytic Conversion of Lignin Models and Extracts into Oxygenates, The 253th ACS National Meeting, San Francisco, USA, April 2-6, 2017.
 23. Catalytic cleavage of lignin C–C and/or C–O bonds to oxygenates, International Symposium on Catalytic Activation and Selective Conversion of Energy-Related-Molecules, Xiamen, China, July 10-12, 2016
 24. Defect Site Control of Ceria and the Efficient Catalysis in Organic Reactions, The Pacificchem2015, Hawaii, USA, Dec. 14-20, 2015
 25. *Session organizer*: Hydrogenolysis of lignin and lignosulfonate over nickel-based catalysts, The Pacificchem2015, Hawaii, USA, Dec. 14-20, 2015
 26. Ceria-catalyzed organic reactions, The 17th International Symposium on Relations between homogeneous and heterogeneous catalysis, Utrecht, the Netherlands, July 12-15, 2015
 27. Defected oxide-supported gold nanoparticles: charge transfer and crystalline effect in catalysis, The Gold2015 Conference, Cardiff, UK, July 28-30, 2015
 28. Catalytic Organic Transformation Reactions over Nanostructured Oxides, PIRE-ECCI Annual Meeting, Santa Barbara, USA, Dec. 16-17, 2013
 29. Catalytic Nature of Oxides as Water-Tolerant Lewis Acidic Catalysts in Hydrolysis Reaction, 23rd North American Catalysis Society Meeting, Louisville, USA, Oct. 16, 2013
 30. Fundamental studies on lignin depolymerization reaction in alcohol over nickel-based catalysts, 2nd International Symposium on Green Chemistry Renewable carbon and Eco-Efficient Processes, La Rochelle, France, May 21-24, 2013
 31. Catalytic Nature of Oxides as Water-Tolerant Lewis Acidic Catalysts in Hydrolysis Reaction, The 6th Asia-Pacific Congress on Catalysis, Taipei, Taiwan, Oct. 13, 2013
 32. Electron Transfer at the Interface of Gold Nanoparticles and Partially Reduced MoO_x and Catalytic Applications, The 6th International conference GOLD 2012, Tokyo, Japan, Sep. 7, 2012



33. Catalytic utilization of glycerol as a sustainable feedstock for chemicals and materials, The 15th International Congress on Catalysis, Munich, Germany, July 1-6, 2012
34. Catalytic C–C Cross Coupling Reactions at Benzylic Position over Molybdenum Oxide, The Sixth Tokyo Conference on Advanced Catalytic Science and Technology & The Fifth Asia Pacific Congress on Catalysis, Sapporo, Japan, July 18-23, 2010

Major Grants and Funds:

1. National Key R&D Program, “Directional catalytic conversion of biomass to prepare high value-added oxygenated chemicals”, 2022/12-2027/11.
2. Major Program of National Natural Science Foundation of China, “The conversion of methanol coupling with oxygenates”, 2020/01-2024/12.
3. National Science Fund for Outstanding Young Scholars, “Heterogenous Catalysis”, 2021/01-2025/12.
4. National Key R&D Program (International Science and Technology Innovation Cooperation Key Special Project), “Photocatalyzed selective transformation of lignocellulose with hydrogen production”, 2020/01-2022/12. (*Collaborator*: Paolo Fornasiero, the University of Trieste, Italy)
5. NSFC-RS Newton Advanced Fellowship, “Catalytic transformation of light alkanes to olefins or oxygenates”, 2019/03-2022/02. (*Collaborator*: Stuart Taylor, Cardiff University, United Kingdom)
6. Dalian Science and Technology Innovation Fund, “Catalytic technology for high-value utilization of low-carbon olefins”, 2019/01-2021/12.
7. Strategic Priority Research Program of the Chinese Academy of Sciences (B), “Research on New Catalytic Reaction for Efficient Use of Resources”, 2016/06-2021/05.
8. National Science Fund for Excellent Young Scholars, “Heterogenous Catalysis”, 2015/01-2017/12.

Books and Reviews:

1. Chaofeng Zhang, Feng Wang. Lignin Conversion Catalysis: Transformation to Aromatic Chemicals[M]. Weinheim, Germany: WILEY-VCH GmbH, 2022. Print ISBN 978-3-527-34973-9.
2. Jianyu Han; Junju Mu; Feng Wang, Single-Metal Alloys. In *Supported Metal Single Atom Catalysis*[B], 2022; pp 145-168. (chapter)
3. Chaofeng Zhang, Feng Wang, Catalytic cleavage of lignin C–O and C–C bonds. *Advances in Inorganic Chemistry*, 2021, 77: 175-218. (Editor: Ford, Peter C.; van Eldik, Rudi) (chapter)
4. Chaofeng Zhang,* Xiaojun Shen, Yongcan Jin,* Jinlan Cheng, Cheng Cai, Feng Wang*, Catalytic Strategies and Mechanism Analysis Orbiting the Center of Critical Intermediates in Lignin Depolymerization. *Chemical Reviews* 2023, 123, 8, 4510-4601.
5. Zhipeng Huang; Nengchao Luo; Chaofeng Zhang; Feng Wang, Radical generation and fate control for photocatalytic biomass conversion. *Nature Reviews Chemistry* 2022, 6, 197-214.
6. Zhuyan Gao[#], Puning Ren[#], Lulu Sun, Nengchao Luo*, Feng Wang*. Photocatalysts for steering charge transfer and radical reactions in biorefineries, *Nature Synthesis*, 2024, 3, 438-451.
7. Xiaojun Shen; Chaofeng Zhang; Buxing Han; Feng Wang, Catalytic self-transfer hydrogenolysis of lignin with endogenous hydrogen: road to the carbon-neutral future. *Chemical Society Reviews* 2022, 51, 1608-1628.
8. Xuejiao Wu; Nengchao Luo; Shunji Xie*; Haikun Zhang; Qinghong Zhang; Feng Wang*; Ye Wang*, Photocatalytic transformations of lignocellulosic biomass into chemicals. *Chemical Society Reviews* 2020, 49(17), 6198-6223.
9. Hongji Li; Anon Bunrit; Ning Li; Feng Wang*, Heteroatom-participated lignin cleavage to functionalized aromatics. *Chemical Society Reviews* 2020, 49(12), 3748-3763.



10. Min Wang*, Hongru Zhou, Feng Wang*. Photocatalytic biomass conversion for hydrogen and renewable carbon-based chemicals, *Joule*, 2024, 8(3), 604-621.
11. Min Wang*, Hongru Zhou, and Feng Wang*. Photocatalytic Production of Syngas from Biomass. *Accounts of Chemical Research* 2023, 56, 9, 1057-1069.
12. Chaofeng Zhang; Feng Wang, Catalytic Lignin Depolymerization to Aromatic Chemicals. *Accounts of Chemical Research* 2020, 53(2), 470-484.
13. Mahdi M. Abu-Omar; Katalin Barta; Gregg T. Beckham; Jeremy S. Luterbacher; John Ralph; Roberto Rinaldi; Yuriy Román-Leshkov; Joseph S. M. Samec; Bert F. Sels; Feng Wang, Guidelines for performing lignin-first biorefining. *Energy & Environmental Science*, 2021, 14 (1), 262-292.
14. Min Wang; Feng Wang*, Catalytic Scissoring of Lignin into Aryl Monomers. *Advanced Materials* 2019, 31(50), 1901866.

Research articles:

1. Ning Li, Kexin Yan, Thanya Rukkijakan, Jiefeng Liang, Yuting Liu, Zhipeng Wang, Heran Nie, Suthawan Muangmeesri, Gonzalo Castiella-Ona, Xuejun Pan, Qunfang Zhou, Guibin Jiang, Guangyuan Zhou, John Ralph, Joseph S.M. Samec*, Feng Wang*. Selective lignin arylation for biomass fractionation and benign bisphenols. *Nature*, 2024, *in press*.
2. Nengchao Luo; Tiziano Montini; Jian Zhang; Paolo Fornasiero; Emiliano Fonda; Tingting Hou; Wei Nie; Jianmin Lu; Junxue Liu; Marc Heggen; Long Lin; Changtong Ma; Min Wang; Fengtao Fan; Shengye Jin; Feng Wang*, Visible-light-driven coproduction of diesel precursors and hydrogen from lignocellulose-derived methylfurans. *Nature Energy*, 2019, 4(7), 575-584.
3. Zhipeng Huang[‡]; Zhitong Zhao[‡]; Chao Feng Zhang; Jianmin Lu; Huifang Liu; Nengchao Luo; Jian Zhang; Feng Wang*, Enhanced photocatalytic alkane production from fatty acid decarboxylation via inhibition of radical oligomerization. *Nature Catalysis*, 2020, 3(2), 170-178.
4. Xuke Chen, Yu Xia, Yingfeng Wu, Yunpeng Xu, Xiuquan Jia*, Richard N. Zare*, Feng Wang*. Sprayed Oil–Water Microdroplets as a Hydrogen Source. *J. Am. Chem. Soc.*, 2024, 146, 15, 10868-10874.
5. Ruolan Zhang[#], Zhenyuan Zhang[#], Xuke Chen[#], Jichun Jiang, Lei Hua, Xiuquan Jia,* Rui Bao,* Feng Wang*. Pyrogenic Carbon Degradation by Galvanic Coupling with Sprayed Seawater Microdroplets, *J. Am. Chem. Soc.*, 2024, 146, 8528-8535.
6. Jianyu Han[#], Jingyi Yang[#], Zhixin Zhang[#], Xunzhu Jiang, Wei Liu*, Botao Qiao*, Junju Mu*, Feng Wang. Strong Metal–Support Interaction Facilitated Multicomponent Alloy Formation on Metal Oxide Support. *J. Am. Chem. Soc.*, 2023, 145, 41, 22671–22684.
7. Xuke Chen, Yu Xia, Zhenyuan Zhang, Lei Hua, Xiuquan Jia*, Feng Wang, Richard N. Zare*. Hydrocarbon Degradation by Contact with Anoxic Water Microdroplets. *J. Am. Chem. Soc.*, 2023, 145, 39, 21538–21545.
8. Hongru Zhou, Min Wang*, Fanhao Kong, Zhiwei Chen, Zhaolin Dou, Feng Wang*. Facet-Dependent Electron Transfer Regulates Photocatalytic Valorization of Biopolyols, *J. Am. Chem. Soc.*, 2022, 144, 46, 21224–21231.
9. Zhuyan Gao, Junju Mu, Jian Zhang, Zhipeng Huang, Xiangsong Lin, Nengchao Luo*, Feng Wang*. Hydrogen bonding promotes alcohol C–C coupling, *J. Am. Chem. Soc.*, 2022, 144, 41, 18986-18994.
10. Zhe Zhang; Min Wang*; Hongru Zhou; Feng Wang*, Surface Sulfate Ion on CdS Catalyst Enhances Syngas Generation from Biopolyols. *J. Am. Chem. Soc.*, 2021, 143, 6533-6541.
11. Chaofeng Zhang; Zhipeng Huang; Jianmin Lu; Nengchao Luo; Feng Wang*, Generation and Confinement of Long-Lived N-Oxyl Radical and Its Photocatalysis. *J. Am. Chem. Soc.*, 2018, 140(6), 2032-2035.
12. Jinghua An[‡]; Yehong Wang[‡]; Jianmin Lu; Jian Zhang; Zhixin Zhang; Shutao Xu; Xiaoyan Liu; Tao Zhang; Martin Gocyla; Marc Heggen; Rafal E. Dunin-Borkowski; Paolo Fornasiero; Feng Wang*, Acid-Promoter-Free Ethylene Methoxycarbonylation over Ru-Clusters/Ceria: The Catalysis of Interfacial Lewis Acid-Base Pair. *J. Am. Chem. Soc.*, 2018, 140(11), 4172-4181.
13. Yehong Wang; Feng Wang*; Qi Song; Qin Xin; Shutao Xu; Jie Xu*, Heterogeneous Ceria Catalyst with Water-Tolerant Lewis Acidic Sites for One-Pot Synthesis of 1,3-Diols via Prins Condensation and Hydrolysis Reactions. *J. Am. Chem. Soc.* 2013, 135(4), 1506-1515.
14. Hongru Zhou; Min Wang; Feng Wang, Oxygen-controlled photo-reforming of biopolyols to CO over Z-scheme CdS@g-C₃N₄. *Chem*, 2022, 8, 465-479.



15. Puning Ren, Zhuyan Gao, Tiziano Montini, Zhitong Zhao, Na Ta, Yike Huang, Nengchao Luo*, Emiliano Fonda, Paolo Fornasiero*, Feng Wang*, Stepwise photoassisted decomposition of carbohydrates to H₂, *Joule*, 2023, 7(2), 333-349.
16. Hongru Zhou; Min Wang; Feng Wang, Oxygen-vacancy-mediated catalytic methanation of lignocellulose at temperatures below 200°C. *Joule*, 2021, 5, 3031-3044.
17. Xiaoqin Si; Rui Lu; Zhitong Zhao; X. Yang; Feng Wang; Huifang Jiang; Xiaolin Luo; Aiqin Wang; Zhaochi Feng; Jie Xu; Fang Lu*, Catalytic production of low-carbon footprint sustainable natural gas. *Nature Communications*, 2022, 13, 258.
18. Min Wang; Meijiang Liu; Jianmin Lu; Feng Wang*, Photo splitting of bio-polyols and sugars to methanol and syngas. *Nature Communications*, 2020, 11(1), 1083.
19. Yehong Wang; Mi Peng; Jian Zhang; Zhixin Zhang; Jinghua An; Shuyan Du; Hongyu An; Fengtao Fan; Xi Liu; Peng Zhai; Ding Ma*; Feng Wang*, Selective production of phase-separable product from a mixture of biomass-derived aqueous oxygenates. *Nature Communnications*, 2018, 9(1), 5183.
20. Meijiang Liu, Hongji Li, Jian Zhang, Huifang Liu*, Feng Wang. Photocatalytic Production of Ethanolamines and Ethylenediamines from Bio-Polyols over a Cu/TiO₂ Catalyst. *Angew. Chem. Int. Ed.*, 2023, e202315795.
21. Qingchun Xu[#], Puning Ren[#], Yang Peng, Nengchao Luo*, Zhuyan Gao, Caixia Meng, Jian Zhang, Feng Wang*. Photocatalytic 2-iodoethanol coupling to produce 1,4-butanediol mediated by TiO₂ and a catalytic nickel complex. *Angew. Chem. Int. Ed.*, 2023, e202301668.
22. Lin Yuan; Yancheng Hu; Zhitong Zhao; Guangyi Li; Aiqin Wang; Yu Cong; Feng Wang; Tao Zhang; Ning Li, Production of Copolyester Monomers from Plant-Based Acrylate and Acetaldehyde. *Angew. Chem. Int. Ed.*, 2022, 61, e202113471:1-5.
23. Hu Yancheng[‡]; Zhao Zhitong[‡]; Liu Yanting; Li Guangyi; Wang Aiqin; Cong Yu; Zhang Tao; Wang Feng*; Li Ning*, Synthesis of 1,4-Cyclohexanedimethanol, 1,4-Cyclohexanedicarboxylic Acid and 1,2-Cyclohexanedicarboxylates from Formaldehyde, Crotonaldehyde and Acrylate/Fumarate. *Angew. Chem. Int. Ed.*, 2018, 57(23), 6901-6905.
24. Jinghua An; Yehong Wang; Zhixin Zhang; Zhitong Zhao; Jian Zhang; Feng Wang*, The Synthesis of Quinazolinones from Olefins, CO, and Amines over a Heterogeneous Ru-clusters/Ceria Catalyst. *Angew. Chem. Int. Ed.*, 2018, 57(38), 12308-12312.
25. Min Wang; Jianmin Lu; Jiping Ma; Zhe Zhang; Feng Wang*, Cuprous Oxide Catalyzed Oxidative C-C Bond Cleavage for C-N Bond Formation: Synthesis of Cyclic Imides from Ketones and Amines. *Angew. Chem. Int. Ed.*, 2015, 54(47), 14061-14065.
26. Feng Wang*; Wataru Ueda*; Jie Xu*, Detection and Measurement of Surface Electron Transfer on Reduced Molybdenum Oxides (MoO_x) and Catalytic Activities of Au/MoO_x. *Angew. Chem. Int. Ed.*, 2012, 51(16), 3883-3887.
27. Shiyang Liu, Yike Huang, Nengchao Luo*, Jian Zhang, Botao Qiao, Feng Wang*. Water-mediated photocatalytic coproduction of diesel fuel additives and hydrogen from dimethyl ether. *ACS Catalysis*, 2024, 14, 6807-6815.
28. Yinpan Zhang, Qiang Guo*, Feng Wang*. Concepts of ethylene carbonylation with hydrogen gas and insitu generated hydrogen. *ChemCatChem*, 2024, e202301568.
29. Yuting Liu, Beili Nie, Ning Li, Huifang Liu*, Feng Wang*, Chlorine radical-mediated photocatalytic C(sp³)-H bond oxidation of aryl ethers to ester. *Chinese Journal of Catalysis*, 2024, 58, 123-128.
30. Kun Zhang, Qiang Guo*, Yehong Wang, Pengfei Cao, Jian Zhang, Marc Heggen, Joachim Mayer, Rafal E. Dunin-Borkowski, Feng Wang*. Ethylene carbonylation to 3-Pentanone with in-situ hydrogen via water-gas-shift reaction on Rh/CeO₂. *ACS Catalysis*, 2023, 13, 3164-3169.
31. Jiaoyue Wang, Jingying, Zhitong Zhao, Longfei Bing, Fengming Xi*, Feng Wang*, Jiang Dong, Shiyun Wang, Gang Lin, Yan Yin, Qinqin Hu. Benefit analysis of multi-approach biomass energy utilization toward carbon neutrality, *The Innovation*, 2023, 4(3), 100423.
32. Yuting Liu, Huifang Liu*, Ning Li, Feng Wang*. Photoinduced organocatalytic lignin C-C bond cleavage in mixed binary solvents, *Applied Catalysis B: Environmental*, 2023, 339, 123137.
33. Huixiang Li, Yehong Wang*, Chaofeng Zhang, Zhipeng Huang, Jianyu Han, Xuezhong Nie, Feng Wang*. Insight into the Strong Brønsted Acid Sites on Isolated WO_x-Modified Pt/Zirconium Phosphate for Glycerol Efficient Hydrodeoxygenation, *Applied Catalysis B: Environmental*, 2023, 325, 122342.
34. Cheng Cai, Chaofeng Zhang, Ning Li, Huifang Liu, Jun Xie*, Hongming Lou*, Xuejun Pan*, J. Y. Zhu*, Feng Wang*. Changing the role of lignin in enzymatic hydrolysis for a sustainable and efficient sugar platform, *Renewable*



- and Sustainable Energy Reviews*, 2023, 183, 113445.
35. Yuda Zhang, Yehong Wang*, Xian Guan, Huixiang Li, Xuezhong Nie, Yafei Liang, Xiaolei Bao, Xiaoqiang Li*, Feng Wang*. Ce doping promote the selective conversion of ethanol to ethyl acetate via the dehydrogenation-condensation over CuCeZr catalyst. *Journal of Catalysis*, 2023, 426, 86-95.
 36. Xuezhong Nie, Yehong Wang*, Junju Mu, Jianyu Han, Huixiang Li, Nengchao Luo, Zhipeng Huang, Qiang Guo, Ning Li, Jian Zhang, Ning Li, Feng Wang*. Tuning Redistribution of CuO_x Nanoparticles on TiO₂ Support. *ACS Appl. Mater. Interfaces*, 2023, 15, 48168–48178.
 37. Puning Ren, Yue Zhou, Kaiyi Su, Lulu Sun, Nengchao Luo*, Feng Wang. Visible-Light-Driven Furfural Oxidation over CuO_x/Nb₂O₅. *Chem Asian J.*, 2023, 18, e202300732,
 38. Dongxia Jiao, Jinghua An, Huixiang Li, Zhipeng Huang, Yehong Wang*, Feng Wang*. Relay catalysis for conversion of secondary amine to formamide. *Chin. J. Catal.*, 2023, 53, 161-170.
 39. Jianyu Han, Zhixin Zhang, Zhuoran Xu, Lunhua He, Feiran Shen, Yehong Wang, Xuebin Liu, Meiling Guo, Zaihong Guan, Feng Wang*. Bottom-up synthesis of a pyramid-type (Pt/4nmCeO₂)/SiO₂ catalyst via a surface reduction strategy. *J. Mater. Chem. A*, 2023, 11, 10927.
 40. Yafei Liang, Yehong Wang*, Zhixin Zhang, Jianyu Han, Jian Zhang, Yuda Zhang, Feng Wang*. Facile synthesis of defective porous Sn-modified CeO₂ catalyst via ball milling-pyrolysis method for efficient conversion of biomass-derived oxygenates. *ACS Sustainable Chem. Eng.*, 2023, 11, 5858-5866.
 41. Lulu Sun, Yike Huang, Shiyang Liu, Xiumei Liu, Nengchao Luo*, Feng Wang*. Photocatalytic reductive C–O bond scission promoted by low-work-function Cd single atoms and clusters, *Chem. Commun.*, 2023, 59, 2102-2105.
 42. Zhipeng Huang, Yang Yang, Junju Mu, Genheng Li, Jianyu Han, Puning Ren, Jian Zhang, Nengchao Luo, Ke-Li Han, Feng Wang*. Controlling the reactions of free radicals with metal-radical interaction, *Chinese Journal of Catalysis*, 2023, 45, 120-131.
 43. Cheng Cai, Ning Li, Huifang Liu, Jian Zhang, J.Y. Zhu*, Feng Wang*, Extracting high β-O-4 content lignin and by-producing substrate susceptible to enzymatic hydrolysis by a green flow through process. *Chem. Eng. J.*, 2023, 453, 139730:1-8.
 44. Ying Ji, Huifang Liu, Feng Wang*, Xinwen Guo*, Conversion of biomass to γ-valerolactone by efficient transfer hydrogenation of ethyl levulinate over Al-SPAN nanosheets, *Catal. Today*, 2023, 408, 73-80.
 45. Lin Yuan, Yancheng Hu, Xin Guo, Guangyi Li, Aiqin Wang, Yu Cong, Feng Wang*, Tao Zhang*, and Ning Li*. Biomass-based production of food preservatives, *Chem Catal.*, 2022, 2, 9, 2302-2311.
 46. Zhe Zhang, Min Wang*, and Feng Wang*. Plasma-assisted construction of CdO quantum dots/CdS semi-coherent interface for the photocatalytic bio-CO evolution. *Chem Catal.*, 2022, 2(6), 1394-1406.
 47. Feng Wang* and Haodong Duan*. Opportunities and future directions for photocatalytic biomass conversion to value-added chemicals, *Chem Catal.*, 2022, 2, 4, 644-646.
 48. Haohong Duan* and Feng Wang*. Opportunities for electrocatalytic biomass valorization, *Chem Catal.*, 2022, 2, 4, 641-643.
 49. Nengchao Luo, Wei Nie, Junju Mu, Shiyang Liu, Mingrun Li, Jian Zhang, Zhuyan Gao, Fengtao Fan, Feng Wang*. Low-work function metals boost selective and fast scission of methanol C–H bonds. *ACS Catalysis*, 2022, 12, 11, 6375-6384.
 50. Z. L. Wu; Q. H. Yang; Y. Liu; B. Y. Zhang; R. G. Li; W. Y. Wang; J. J. Wang; K. Domen; F. Wang; F. T. Fan, Can Li: A Career in Catalysis. *ACS Catalysis* 2022, 12, 3063-3082.
 51. Qiang Guo; Yehong Wang; Jianyu Han; Jian Zhang; Feng Wang, Interfacial Tandem Catalysis for Ethylene Carbonylation and C–C Coupling to 3-Pentanone on Rh/Ceria. *ACS Catalysis* 2022, 12, 3286-3290.
 52. Anon Bunrit; Teera Butburee; Meijiang Liu; Zhipeng Huang; Keerati Meeporn; Chaiyasit Phawa; Jian Zhang; Sanchai Kuboon; Huifang Liu; Kajornsak Faungnawakij; Feng Wang, Photo-Thermo-Dual Catalysis of Levulinic Acid and Levulinate Ester to γ-Valerolactone. *ACS Catalysis* 2022, 12, 1677-1685.
 53. Shichao Zhang, Hang Dong, An Lin, Chaofeng Zhang, Hong Du, Junju Mu*, Jianyu Han, Jian Zhang, and Feng Wang*. Design and optimization of solid amine CO₂ adsorbents assisted by machine learning, *ACS Sustainable Chem. Eng.* 2022, 10, 39, 13185–13193.
 54. Yehong Wang*, Jiawei Wang, Yuda Zhang, Qiang Guo, Jie An, Yafei Liang, Yanan Wang, Pengfei Cao, Marc Heggen, Rafal E. Dunin-Borkowski, Xiangxue Zhu, Xiujie Li*, Feng Wang. Revealing the catalytic role of Sn dopant in CO₂-oxidative dehydrogenation of propane over Pt/Sn-CeO₂ catalyst, *ChemCatChem*, 2022, 14, e202200982.



55. Meijiang Liu, Huifang Liu*, Ning Li, Chaofeng Zhang, Jian Zhang, Feng Wang*, Selective oxidation of glycerol into formic acid by photogenerated holes and superoxide radicals, *ChemSuschem*, 2022, 15(19), e202201068.
56. Xueyuan Wang, Nengchao Luo, Feng Wang*. Advances and challenges of photocatalytic methane C-C coupling. *Chin. J. Chem.*, 2022, 12, 1492-1505.
57. Ying Ji, Yi Zuo, Huifang Liu, Feng Wang*, Xinwen Guo*. Synthesis of Silico-Phospho-Aluminum Nanosheets by Adding Amino Acid and its Catalysis in the Conversion of Furfuryl Alcohol to Fuel Additives. *ChemSusChem*, 2022, 15, e202200747.
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