李 慧 博士，北达科他州立大学

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教育背景

中国科学院长春应用化学研究所			2006/9 – 2011/12
高分子化学与物理	博士（硕博连读）	导师：程延祥 研究员	长 春
东北师范大学			2002/9 – 2006/7
化学教育	学士	导师：李建新 教授	长 春

工作经历

美国北达科他州立大学植物科学系	博士后	导师：陈炳灿 教授	2019/1 – 现在
美国北达科他州立大学生物化学系	助理研究员	导师：杨仲羽 教授	2018/1 – 2018/12
美国北达科他州立大学植物科学系	助理研究员	导师：Marisol Berti 教授	2017/6 – 2017/12
美国北达科他州立大学生物化学系	博士后	导师：孙文芳 教授	2014/10 – 2017/3
中国科学院长春应用化学研究所高分子物理与化学国家重点实验	助理研究员	导师：程延祥 研究员	2012/1 – 2014/9

荣誉奖项

- 校长奖学金 3 次，三好学生 3 次　东北师范大学　2003 – 2006
- 国家奖学金 2 次　东北师范大学　2004、2006
- 优秀毕业生　东北师范大学　2006
- 研究助理奖学金（最高级）　中国科学院长春应用化学研究所　2006 – 2011

教学经历

- 客座讲师　食品分析之总灰分及矿物质含量的测定　美国北达科他州立大学　2022/2
- 客座讲师　食品化学之油脂的介晶相　美国北达科他州立大学　2022/3

研究方向

- 食品蛋白和多糖的功能改性
- 植物蛋白基食品及风味
- MOF 基发光材料在食品质量与安全检测中的应用
- MOF 基固定化食品酶

科研项目

1. 国家自然科学基金–青年基金，采用柔性连接方法改善树枝状铂(II)配合物的电致发光性能，项目批准号：21204083，2013/01 – 2015/12，25 万元，项目负责人。
2. ND Corn Utilization Council Grants, “Formation of Non-Aqueous Air-in-Corn Oil Foams as Functional Bakery Ingredients”, Project ID: NOV0004171, 2021/07 – 2023/06, $69814.00, Co-PI.

论文发表

第一作者、共同一作和通讯作者论文（14 篇）

1. **Hui Li**, Yanxiong Pan, Chun Li, Zhongyu Yang, Jiajia Rao, Bingcan Chen. “Lysozyme−Dietary Phenolic Antioxidants Bioconjugates as Antioxidant and Antibacterial Bifunctional Polymers: Structural Basis Underlying the Dual-Function”. *Biomaterials* (Accept). (一区，IF = 12.479)

2. **Hui Li**, Yanxiong Pan, Zhongyu Yang, Jiajia Rao, Bingcan Chen "Physical and Oxidative Stabilities of Stripped Hemp Oil-in-Water Emulsions Stabilized by Phenolic Conjugated β-Lactoglobulin: Impact of Gentisic Acid Grafting Number". *Food Hydrocoll.*, 2022, 128, 107578. (一区， IF = 9.147)
3. **Hui Li**, Yanxiong Pan, Chun Li, Zhongyu Yang, Jiajia Rao, Bingcan Chen "Fabrication of Lysozyme–Gentisic Acid Dual-Functional Conjugates with Antibacterial/Antioxidant Activities". *Food Chem.* 2022, 370, 131032. (一区， IF = 7.514)
4. **Hui Li**, Yanxiong Pan, Zhongyu Yang, Jiajia Rao, Bingcan Chen. "Structure, Dynamic, and Interactions of Food Protein: Perspectives from Site Directed Spin-Labeling Electron Paramagnetic Resonance". *Trends Food Sci. Technol.* 2021, 109, 37. (一区， IF = 12.563)
5. **Hui Li**, Shan Liu, Levi Lystrom, Svetlana Kilina, Wenfang Sun. "Improving Triplet Excited-State Absorption and Lifetime of Cationic Ir(III) Complexes by Extending π-Conjugation of the 2-(2-Quinolinyl)quinoxaline Ligand". *J. Photochem. Photobio. A: Chem.* 2020, 400, 112609. (三区， IF = 4.291)
6. **Hui Li**, Yanxiong Pan, Zhongyu Yang, Jiajia Rao, Bingcan Chen. "Improving Antioxidant Activity of *β*-Lactoglobulin by Nature-Inspired Conjugation with Gentisic Acid". *J. Agric. Food Chem.* 2019, 67, 11741. (一区 IF = 5.279)
7. **Hui Li (co-first author)**, Yanxiong Pan, Jasmin Farmakes, Feng Xiao, Guodong Liu, Bingcan Chen, Xiao Zhu, Jiajia Rao, Zhongyu Yang. "A Sulfonated Mesoporous Silica Nanoparticle for Enzyme Protection against Denaturants and Controlled Release under Reducing Conditions". *J. Colloid Interface Sci.* 2019, 556, 292. (一区， IF= 8.128)
8. **Hui Li**, Wei Yuan, Luyi Zou, Xingdong Wang, Hongmei Zhan, Yanxiang Cheng. "Synthesis, Characterization and Photophysical Properties of Homoleptic Platinum(II) Complexes with 2,2'-Biimidazole-Based Ligands". *Transit. Met. Chem.* 2018, 43, 231. (四区， IF = 1.588)
9. Zhongjing Li, **Hui Li (co-first author)**, Brendan J. Gifford, Wadumesthrige D. N. Peiris, Svetlana Kilina and Wenfang Sun. "Synthesis, Photophysics, and Reverse Saturable Absorption of 7-(Benzothiazol-2-yl)-9,9-di(2-ethylhexyl)-9*H*-fluoren-2-yl Tethered $[Ir(bpy)(ppy)_2]PF_6$ and $Ir(ppy)_3$ Complexes (bpy = 2,2'-Bipyridine, ppy = 2-Phenylpyridine)". *RSC Adv.* 2016, 6, 41214. (三区， IF = 3.245)
10. **Hui Li**, Wei Yuan, Xingdong Wang, Hongmei Zhan, Zhiyuan Xie, Yanxiang Cheng. "Enhancement of Luminescent Performance of Pt(II) Dendrimers from the Alteration of Stacking Patterns of Pt(II) dendrimers". *J. Mater. Chem. C* 2015, 3, 2744. (二区， IF = 7.393)
11. **Hui Li**, Jing Li, Junqiao Ding, Wei Yuan, Zilong Zhang, Luyi Zou, Xingdong Wang, Hongmei Zhan, Zhiyuan Xie, Yanxiang Cheng, Lixiang Wang. "Synthesis, Structure, Optoelectronic Properties of Dendrimeric Pt(II) Complexes and their Ability to Inhibit Intermolecular Interaction". *Inorg. Chem.* 2014, 53, 810. (二区， IF = 5.165)
12. **Hui Li**, Junqiao Ding, Zhiyuan Xie, Yanxiang Cheng, Lixiang Wang. "Synthesis, Characterization and Electrophosphorescent Properties of Mononuclear Platinum(II) Complexes Based on 2-Phenylbenzoimidazole Derivatives". *J. Organomet. Chem.* 2009, 694, 2777. (三区， IF = 2.369)
13. **李慧**，袁伟，王兴东，陈博，程延祥，谢志元，王利祥。"2-苯基异喹啉及其衍生物铂(II)配合物的合成和光谱性质。"*应用化学*，2012, 29, 1148.
14. 袁伟，任清江，孙恒达，**李慧***，程延祥，马东阁。"外围取代基团对卟啉铂(II)配合物发光性能的影响。"*高等学校化学学报*，2014, 6, 1229. (四区， IF = 0.615)

第二作者论文（4 篇）

15. Yanxiong Pan, **Hui Li**, Qiaobin Li, Mary Lenertz, Isabelle Schuster, Drew Jordahl, Xiao Zhu, Bingcan Chen, Zhongyu Yang. "Protocol for Resolving Enzyme Orientation and Dynamics in Advanced Porous Materials via SDSL-EPR". *STAR Protocols* 2021, 2, 100676. (IF = 7.5 ~ 10.0 Impact Prediction)
16. Yanxiong Pan, **Hui Li**, Qiaobin Li, Mary Lenertz, Xiao Zhu, Bingcan Chen, Zhongyu Yang. "Site-Directed Spin Labeling-Electron Paramagnetic Resonance Spectroscopy in Biocatalysis: Enzyme Orientation and Dynamics in Nanoscale Confinement". *Chem Catalysis* 2021, 1, 207. (IF = 15 ~ 18 Impact Prediction)
17. Yanxiong Pan, **Hui Li**, Mary Lenertz, Yulun Han, Angel Ugrinov, Dmitri Kilin, Bingcan Chen, Zhongyu Yang. "One-Pot Synthesis of Enzyme@Metal–Organic Material (MOM) Biocomposites for Enzyme Biocatalysis". *Green Chem.* 2021, 23, 4466. (一区， IF = 10.182)

18. Yanxiong Pan, **Hui Li**, Jasmin Farmakes, Feng Xiao, Bingcan Chen, Shengqian Ma, Zhongyu Yang. "How Do Enzymes Orient When Trapped on Metal-Organic Framework (MOF) Surfaces?". *J. Am. Chem. Soc.* 2018, 140, 16032. (一区， IF = 15.419)

其他发表论文（14 篇）

19. Jianxiong Yue, Zhenbao Zhu, Jianhua Yi, **Hui Li**, Bingcan Chen, Jiajia Rao. "One-step Extraction of Oat Protein by Choline Chloride-Alcohol Deep Eutectic Solvents: Role of Chain Length of Dihydric Alcohol". *Food Chem.*, 2021, 376, 131943. (一区， IF = 7.514)
20. Qiaobin Li, Yanxiong Pan, **Hui Li**, Mary Lenertz, Kailyn Reed, Drew Jordahl, Taylor Bjerke, Angel Ugrinov, Bingcan Chen, Zhongyu Yang. "Cascade/Parallel Biocatalysis via Multi-Enzyme Encapsulation on Metal-Organic Materials for Rapid and Sustainable Biomass Degradation" *ACS Appl. Mater. Interfaces* 2021, 13, 43085. (一区， IF = 9.229)
21. Yanxiong Pan, Xiaoliang Wang, **Hui Li**, Jasmin Farmakes, Zhongyu Yang, Shengqian Ma, "*In Situ* Monitoring of Protein Transfer into Nanoscale Channels". *Cell Rep. Phys. Sci.* 2021, 2, 100576. (IF = 9.5 ~ 13.0 Impact Prediction)
22. Yanxiong Pan, Qiaobin Li, **Hui Li**, Jasmin Farmakes, Angel Ugrinov, Xiao Zhu, Zhiping Lai, Bingcan Chen, Zhongyu Yang. "A General Ca-MOM Platform with Enhanced Acid-Base Stability for Enzyme Biocatalysis". *Chem Catalysis* 2021, 1, 146. (IF = 15 ~ 18 Impact Prediction)
23. Qiaobin Li, Yanxiong Pan, **Hui Li**, Linda Alhalhooly, Jing Jin, Bingcan Chen, Yongki Choi, Zhongyu Yang, "Size-tunable Metal-Organic Framework Coated Magnetic Nanoparticles for Enzyme Encapsulation and Large-Substrate Biocatalysis" *ACS Appl. Mater. Interfaces* 2020, 12, 41794. (一区， IF = 9.229)
24. Yanxiong Pan, Oksana Zholobko, **Hui Li**, Jing Jin, Jinlian Hu, Bingcan Chen, Andriy Voronov, Zhongyu Yang. "Spatial Distribution and Solvent Polarity-Triggered Release of Polypeptide Incorporated into Invertible Micellar Assemblies". *ACS Appl. Mater. Interfaces* 2020, 12, 12075. (一区， IF = 9.229)
25. Qi Sun, Yanxiong Pan, Xiaoliang Wang, **Hui Li**, Jasmin Farmakes, Briana Aguila, Zhongyu Yang, Shengqian Ma. "Mapping out the Degree of freedom of Hosted Enzymes in Confined Spatial Environments". *Chem.* 2019, 5, 3184. (一区， IF = 22.804)
26. James V. Anderson, Alex Wittenberg, **Hui Li**, Marisol T. Berti. "High Throughput Phenotyping of Camelina Sativa Seeds for Crude Protein, Total Oil, and Fatty Acids Profile by Near Infrared Spectroscopy". *Ind. Crops Prod.* 2019, 137, 501. (一区， IF = 5.645)
27. Sunanda Neupane, Kristen Patnode, **Hui Li**, Kwaku Baryeh, Guodong Liu, Jinlian Hu, Bingcan Chen, Yanxiong Pan, Zhongyu Yang. "Enhancing Enzyme Immobilization on Carbon Nanotubes via Metal–Organic Frameworks for Large-Substrate Biocatalysis". *ACS Appl. Mater. Interfaces* 2019, 11, 12133. (一区， IF = 9.229)
28. Sunanda Neupane, Yanxiong Pan, **Hui Li**, Kristen Patnode, Jasmin Farmakes, Guodong Liu, Zhongyu Yang. "Engineering Protein-Gold Nanoparticle/Nanorod Complexation via Surface Modification for Protein Immobilization and Potential Therapeutic Application". *ACS Appl. Nano Mater.* 2018, 1, 4053. (二区， IF = 5.097)
29. Rui Liu, Naveen Dandu, Christopher McCleese, Yuhao Li, Taotao Lu, **Hui Li**, Dillon Yost, Chengzhe Wang, Svetlana Kilina, Clemens Burda, Wenfang Sun. "Influence of a Naphthaldiimide Substituent at the Diimine Ligand on the Photophysics and Reverse Saturable Absorption of Pt^{II} Diimine Complexes and Cationic Ir^{III} Complexes". *Eur. J. Inorg. Chem.* 2015, 5241. (三区， IF = 2.524)
30. Wei Yuan, Yue Zhang, **Hui Li**, Qingjiang Ren, Yanxiang Cheng. "Efficient Photoluminescence from the Encumbered Platinum(II) Porphyrins". *Inorg. Chem. Commun.* 2014, 53, 124. (四区， IF = 2.459)
31. Luyi Zou, Yanxiang Cheng, Yan Li, Hui Li, Hongxing Zhang, Aimin Ren. "A Theoretical Analysis of the Phosphorescence Efficiencies of Cu (I) Complexes". *Dalton Trans.* 2014, 43, 11252. (二区， IF = 4.39)
32. Luyi Zou, Mingshuo Ma, Zilong Zhang, **Hui Li**, Yanxiang Cheng, Aimin Ren. "Theoretical Study on Photophysical Property of Cuprous Bis-phenanthroline Coordination Complexes". *Org. Electron.* 2012, 13, 2627. (二区， IF = 3.721)

正在投稿的文章

33. **Hui Li**, Yanxiong Pan, Yang Lan, Zhongyu Yang, Jiajia Rao, Bingcan Chen. "Molecular Interaction Mechanism and Structure–Activity Relationships of Protein–Polyphenol Noncovalent Complexes Revealed by Side-Directed Spin Labeling EPR Spectroscopy". Submitted to *Food. Hydrocoll.* (under review).

34. **Hui Li**, Yanxiong Pan, Jiajia Rao, Bingcan Chen. “Synthesis, Characterization and Gelling Ability of Tyramine-Modified High and Low Methoxyl Pectin”. Submitted to *Food. Hydrocoll.* (under review).

专利

1. 程延祥，**李慧**，丁军桥，王利祥，谢志元，树枝状有机金属配合物及该配合物的电致发光器件，中国发明专利，专利号：CN 101580521（授权）。

学术会议

1. **Hui Li**, Bingcan Chen. “Enhancing Antioxidant Capacity at the Interfaces of Oil-in-Water Emulsions Stabilized by Phenolic Conjugated Protein: Protein Structure and Surface Activity Effect”. American Oil Chemists' Society (AOCS) annual meeting, May 2022, Atlanta, USA, Abstracts paper and Oral presentation.
2. **Hui Li**, Yanxiong Pan, Zhongyu Yang, Jiajia Rao, Bingcan Chen. “Structural Characterization and Antioxidant Activity Evaluation of β-Lactoglobulin-Gentisic Acid Conjugates: A Nature-Inspired Strategy to Improve Protein Biopolymer Functionalities”. Institute of Food Technologists (IFT), July 2020, Chicago, USA, Research showcase presenter and Poster.
3. **Hui Li**, Yanxiong Pan, Zhongyu Yang, Jiajia Rao, Bingcan Chen. “Enhancement of Antioxidant Activity of beta Lactoglobulin from Conjugation with Gentisic Acid Polyphenol”. American Chemical Society (ACS) Spring National SciMeeting, 2020, Pennsylvania, USA, Abstracts paper and Virtual presentation.
4. **Hui Li**. American Oil Chemists' Society (AOCS) annual meeting, May 2019, St. Louis, USA.
5. **李慧**，李静，袁伟，张子龙，王兴东，丁军桥，程延祥，有机金属铂(II)配合物的设计合成及性能研究，高分子物理与化学国家重点实验室青年骨干学术交流报告会，2012.10，长春，中国，口头报告。
6. **李慧**，袁伟，贾恒庆，程延祥，铂(II)配合物的分子构型与光电性能，第十六届全国金属有机化学学术讨论会，2010.10，温州，中国，会议摘要和墙报。