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### 教育背景

2001年9月 – 2004年7月南开大学，有机化学专业，理学博士学位  
 1992年9月 – 1995年7月中科院兰州化学物理研究所，化学专业，理学硕士学位  
 1986年9月 – 1990年7月兰州大学，有机化学专业，理学学士学位

### 工作经历

1990年8月 – 1992年8月 新疆农业大学基础部，教师，主讲有机化学  
 1995年8月 – 1997年8月 新疆石油学院化工系，教师，主讲有机化学  
 1997年9月 – 至今 天津医科大学药学院，教师，主讲物理化学  
 2011年9月 – 2016年7月 中科院新疆理化技术研究所，中科院百人计划（国内）  
 2012年5月 获中科院百人计划B类择优资助

### 研究成果（本人具有代表性的论著、论文及主持的科研项目）

论著及编著	<p><b>授权专利：</b></p> <ol style="list-style-type: none"> <li>以三羟甲基丙烷三甲基丙烯酸酯整体柱为基质的固定化酶反应器，申请号：CN 109266637 B，申请日：2018.09.29，授权号：ZL 2018 1 1144835.9，授权日：2021.10.15</li> <li>八乙烯基-POSS 和二甲基丙烯酸乙二醇酯共交联的硼亲和整体柱及其制备方法，申请号：CN 109400823B，申请日：2018.10.25，授权号：ZL 2018 1 1248881.3，授权日：2020.12.29</li> <li>波聚合制备胸腺五肽分子印迹水凝胶的方法，申请号：CN 108948413 B，申请日：2018.06.11，授权号：ZL 2018 1 0592059.2，授权日：2020.12.15</li> <li>紫杉醇胃内滞留分子印迹控缓释给药系统及其制备方法，申请号：CN 107412149 B，申请日：2017.08.07，授权号：ZL 2017 1 0664663.7，授权日：2020.10.23</li> <li>碳纳米管掺杂芬布芬分子印迹聚合物控缓释材料的制备，申请号：CN 107536800 B，申请日：2017.09.08，授权号：ZL 2017 1 0803001.3，授权日：2020.8.14</li> </ol> <p><b>著作：</b></p> <ol style="list-style-type: none"> <li>主编德国 SPRINGER 出版社外文专著一部（Molecularly Imprinted Polymers as Advanced Drug Delivery Systems, 2021）</li> <li>“医用配位化学”，天津科技翻译出版公司，2006,参编</li> <li>“Supplementary Reading in Inorganic and Physical Chemistry”，天津医科大学出版社，2001,参编</li> <li>“有机化学实验”，陕西科学技术出版社，1993,参编</li> <li>“有机化学习题集”，天则出版社，1991,参编</li> </ol>
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论文

1. Ya-Jie Jiao, Fang-Fang Yuan, Pei-Ru Fan, Ze-Hui Wei, Yan-Ping Huang\*, **Zhao-Sheng Liu\***, Macroporous monolithic enzyme microreactor based on high internal phase emulsion functionalized with gold nanorods for enzymatic hydrolysis of protein. *Chemical Engineering Journal*, **2021**, 407: 127061.
2. Ze-Hui Wei, Xue Zhang, Xue Zhao, Ya-Jie Jiao, Yan-Ping Huang\*, **Zhao-Sheng Liu\***. Construction of a microfluidic platform integrating online protein fractionation, denaturation, digestion, and peptide enrichment. *Talanta*, **2021**, 224:121810.
3. Xue Zhang, Jian Yang, Chao Wang, Ya-kun Sun, **Zhao-sheng Liu**, Yan-ping Huang\*, Haji Akber Aisa\*, Improving imprinting effect by reducing sites embedding: Selective extraction of 1,2,3,4,6-penta-o-galloyl- $\beta$ -d-glucose from paeonia lactiflora pall by hydrophilic molecularly imprinted polymers based on macromonomer and metal ion pivot, *Microchemical Journal*, **2020**,158: 105140.
4. Jian Yang, Xue Zhang, Yasen Mijiti, Ya-kun Sun, Man Jia, **Zhao-sheng Liu**, Yan-ping Huang\*, Haji Akber Aisa\*, Improving performance of molecularly imprinted polymers prepared with template of low purity utilizing the strategy of macromolecular crowding. *Journal of Chromatography A*, **2020**, 1624:461155
5. Fang-Fang Yuan, Rong-Rong Zhang, Xiao-Li Ma, Jian Yang, Yan-Ping Huang\*, **Zhao-Sheng Liu\***, Cooperation effect of 4-vinylbenzeneboronic acid/methacrylic acid on affinity of capecitabine imprinted polymer for drug carrier, *European Journal of Pharmaceutical Sciences*, **2020**,154:105746.
6. Long Zhao, Mei-Hong Chai, Hong-Fei Yao, Yan-Ping Huang\*, **Zhao-Sheng Liu\***. Molecularly imprinted polymers doped with carbon nanotube with aid of metal-organic gel for drug delivery systems, *Pharmaceutical Research*, **2020**, 37(10):1-14.
7. Xue Zhang, Yan-Feng Shen, Xin-Xin Li, Jin-Rong Yang, **Zhao-Sheng Liu\***, Yan-Ping Huang\*, Preparation of gold nanorod - incorporated monolith for solid phase extraction of polycyclic aromatic hydrocarbons. *Microchimica Acta*, 2020, 187(7):418.
8. Yan-Feng Shen, Xue Zhang, Chun-E Mo, Yan-Ping Huang\*, **Zhao-Sheng Liu\***, Preparation of graphene oxide incorporated monolithic chip based on deep eutectic solvents for solid phase extraction, *Analytica Chimica Acta*, **2020**, 1096, 184-192.
9. Ze-Hui Wei, Pei-Ru Fan, Ya-Jie Jiao, Yang Wang, Yan-Ping Huang\*, **Zhao-Sheng Liu\***, Integrated microfluidic chip for on-line proteome analysis with combination of denaturing and rapid digestion of protein. *Analytica Chimica Acta*, **2020**,1102:1-10.
10. Xue Zhao, Pei-Ru Fan, Chun-E Mo, Yan-Ping Huang\*, **Zhao-Sheng Liu\***, Green synthesis of monolithic enzyme microreactor based on thiol-ene click reaction for enzymatic hydrolysis of protein. *Journal of Chromatography A*, **2020**, 1611: 460681.
11. Pei-Ru Fan, Xue Zhao, Ze-Hui Wei, Yan-Ping Huang\*, **Zhao-Sheng Liu\***, Robust immobilized enzyme reactor based on trimethylolpropane trimethacrylate organic monolithic matrix through “thiol-ene” click reaction, *European Polymer Journal*, **2020**, 124, 109456.
12. Xue Zhang, Mei-Hong Chai, Ze-Hui Wei, Wen-Jing Chen, **Zhao-Sheng Liu\***, Yan-Ping Huang\*, Deep eutectic solvents-based polymer monolith incorporated with titanium dioxide nanotubes for specific recognition of proteins, *Analytica Chimica Acta*, **2020**, 1139:27-35.
13. Li-Ping Zhang, Ze-Hui Wei, Su-Na He, Yan-Ping Huang, **Zhao-Sheng Liu\***, Preparation, characterization, and application of soluble liquid crystalline molecularly imprinted polymer in electrochemical sensor. *Analytical and Bioanalytical Chemistry*, **2020**,412:7321-7332.

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14. Pei-Ru Fan, Xue Zhao, Ze-Hui Wei, Yan-Ping Huang\*, **Zhao-Sheng Liu\***, Robust immobilized enzyme reactor based on trimethylolpropane trimethacrylate organic monolithic matrix through “thiol-ene” click reaction, *European Polymer Journal*, **2020**, 124, 109456.
15. Ze-Hui Wei, Pei-Ru Fan, Ya-Jie Jiao, Yang Wang, Yan-Ping Huang\*, **Zhao-Sheng Liu\***, Integrated microfluidic chip for on-line proteome analysis with combination of denaturing and rapid digestion of protein, *Analytica Chimica Acta*, **2020**, 1102, 1-10.
16. Yan-Feng Shen, Xue Zhang, Chun-E Mo, Yan-Ping Huang\*, **Zhao-Sheng Liu\***, Preparation of graphene oxide incorporated monolithic chip based on deep eutectic solvents for solid phase extraction, *Analytica Chimica Acta*, **2020**, 1096, 184-192.
17. Xue Zhao, Pei-Ru Fan, Chun-E Mo, Yan-Ping Huang\*, **Zhao-Sheng Liu\***, Green synthesis of monolithic enzyme microreactor based on thiol-ene click reaction for enzymatic hydrolysis of protein, *Journal of Chromatography A*, **2020**, 1611:460618.
18. Yan-Feng Shen, Fang-Fang Yuan, Xin-Yu Liu, Yan-Ping Huang\*, **Zhao-Sheng Liu\***, Synergistic effect of organic-inorganic hybrid monomer and polyhedral oligomeric silsesquioxanes in a boronate affinity monolithic capillary/chip for enrichment of glycoproteins, *Microchimica Acta*, **2019**, 186(12):812
19. Ze-Hui Wei, Rong-Rong Zhang, Li-Na Mu, Yan-Ping Huang\*, **Zhao-Sheng Liu\***, Fabrication of core-shell sol-gel hybrid molecularly imprinted polymer based on metal-organic framework, *European Polymer Journal*, **2019**.
20. Yi Mu, Xi Wu, Yan-Ping Huang, **Zhao-Sheng Liu\***, Investigation of deep eutectic solvents as additives to  $\beta$ -CD for enantiomeric separations of Zopiclone, Salbutamol, and Amlodipine by CE, *Electrophoresis*, **2019**, 40: 1992-1995.
21. Long Zhao, Xiao-Lin Wang, Li Ma, Ping-Ping Shang, Yan-Ping Huang\*, **Zhao-Sheng Liu\***, Improving affinity of  $\beta$ -cyclodextrin-based molecularly imprinted polymer using room temperature ionic liquid, *European Polymer Journal*, **2019**, 116:275-282.
22. Jing Feng, Fang Li, Rui-Xue Ran, Yan-Ping Huang\*, **Zhao-Sheng Liu\***, Synergistic effect of metal ions pivot and macromolecular crowding reagents on affinity of molecularly imprinted polymer, *European Polymer Journal*, **2019**, 120, 109242.
23. Chun-E Mo, Mei-Hong Chai, Li-Ping Zhang, Rui-Xue Ran, Yan-Ping Huang\*, **Zhao-Sheng Liu\***, Floating molecularly imprinted polymers based on liquid crystalline and polyhedral oligomeric silsesquioxanes for capecitabine sustained release, *International Journal of Pharmaceutics*, **2019**, 557: 293-303
24. Ze-Hui Wei, Xuan Sun, Li-Na Mu, Yan-Ping Huang\*, **Zhao-Sheng Liu\***, Improving affinity of imprinted monolithic polymer prepared in deep eutectic solvent by metallic pivot, *Journal of Chromatography A*, **2019**, 1602: 48-55
25. Wen-Fang Song, Qing-Li Zhao, Xiu-Jie Zhou, Li-Shun Zhang, Yan-Ping Huang\*, **Zhao-Sheng Liu\***, A star-shaped molecularly imprinted polymer derived from polyhedral oligomeric silsesquioxanes with improved site accessibility and capacity for enantiomeric separation via capillary electrochromatography, *Microchimica Acta*, **2019**, 186, 22
26. Xiu-Jie Zhou, Chun-E Mo, Meng Chen, Yan-Ping Huang\*, **Zhao-Sheng Liu\***, Improving affinity of boronate capillary monolithic column for microextraction of glycoproteins with hydrophilic macromonomer, *Journal of Chromatography A*, **2018**, 1581-1582, 8-15.

<p>科研项目</p>	<ol style="list-style-type: none"> <li>1. 国家自然科学基金-新疆联合基金<b>重点项目</b>“新型分子印迹整体柱特异性分离提取新疆药材中植物多酚及活性单体的研究”（项目号 U1303202），220 万元，课题负责人。（2014.1-2017.12）</li> <li>2. 国家自然科学基金<b>面上项目</b>“大分子拥挤试剂协助的高内相乳液制备 ATRP 接枝印迹整体柱的研究”（项目号 21075090），35 万元，课题负责人。（2011.1-2013.12）</li> <li>3. 国家自然科学基金<b>面上项目</b>“一单体整体型分子印迹聚合物研究及在药物分析中的应用”（项目号 20575045），25 万元，课题负责人。（2006.1-2008.12）</li> <li>4. 中国科学院重点实验室开放课题“石榴皮中活性药物成分提取的分子印迹新方法研究”（项目号 DP173091-2011-01），20 万元，课题负责人。（2011.9-2014.9）</li> <li>5. 新疆高技术项目“安石榴苷等 8 种活性组分分子印迹提取关键技术研究”（项目号 08JCYBJC02000），50 万元，课题负责人。（2012.1-2014.12）</li> </ol> <p>新疆自治区重点研发计划项目“菊苣酸等 3 种民族药活性组分分子印迹提取关键技术研究”（项目号 2016B03044-2），30 万元，课题负责人。（2016.1-2018.12）</p>
<p><b>荣誉奖励</b></p>	
<ol style="list-style-type: none"> <li>1. 天津市自然科学三等奖，第一完成人，2008 年</li> <li>2. 天津市优秀硕士论文指导教师，2014 年，2015 年</li> <li>3. 天津医科大学校级优秀教师，2001 年</li> <li>4. 天津医科大学新世纪人才，2005 年</li> <li>5. 国家奖学金指导教师，2012 年，2013 年，2014 年，2015 年，2016 年，2019 年</li> </ol>	
<p><b>其他事项</b></p>	
<p><b>主要社会兼职</b></p> <ol style="list-style-type: none"> <li>1. 中国化学会有机分析专业委员会委员（2015-2017）</li> <li>2. 天津市色谱学会副秘书长（2016-）</li> <li>3. 天津市药学会药物分析分会副主任委员（2014-）</li> <li>4. 中科院干旱区资源化学重点实验室学术委员会委员（2012-2014）</li> <li>5. 天津市色谱学会理事（2013-2016）</li> </ol>	