



生物有机与分子工程教育部重点实验室

# 2008 年度工作报告

2009 年 1 月 6 日

# 2008 年度重点实验室总结报告

---

重点实验室名称：生物有机与分子工程教育部重点实验室

实验室主任：王剑波 教授                      副主任：袁谷 教授

学术委员会主任：张礼和 院士                秘书：陈家华

填报人：王剑波

总结报告内容：

## 一、 研究水平与贡献

- 1、本年度新增项目和合同经费数（万元）  
本年度新增项目 13 项，获得合同经费 709.2 万元。
- 2、本年度获奖情况（其中：国家级奖，省部级奖）
  - 1) 王剑波：中国化学会 - BASF 青年知识创新奖
  - 2) 施章杰：CAPA Distinguished Professor Award
  - 3) 施章杰：霍英东青年基金
  - 4) 施章杰：中国化学会-威立青年化学奖
  - 5) 余志祥：中国化学会-英国皇家化学会青年化学奖
  - 6) 余志祥：The Asian Core Program Lectureship Award of the Asian Cutting-Edge Organic Chemistry programs
  - 7) 袁谷：中国分析测试协会科学技术奖, 三等奖
- 3、本年度发表论文数（其中：SCI, EI 论文数）  
本年度发表 SCI 论文 82 篇。
- 4、本年度申请及授权专利：  
裴坚 江映 马玉国：一种共轭树枝状电致纯蓝光材料及其制备方法和应用  
(2008100564206)  
赵美萍：一种通用分子信标核酸探针及其检测DNA的方法  
(200810114619.X)  
赵美萍：一种通用、实时的核酸酶荧光检测方法  
(200810114618.5)

## 二、 队伍建设与人才培养

- 1、人才队伍情况：  
总人数：19 人（教授 12 人，副教授 5 人），其中院士：0 人、长江学者：3 人、杰出青年人数：6 人。

- 2、人才培养情况：  
 出站博士后：1人  
 在站博士后：9人  
 毕业博士生：22人  
 在读博士生：71人  
 在读硕士生：17人

### 三、 开放交流与运行管理

- 1、开放课题情况（项数，总经费）  
无。
- 2、承办学术会议情况  
无。
- 3、实验室内部规章制度是否健全（是否有年报、简报等）  
健全。
- 4、本年度召开学术委员会会议情况  
召开。

### 四、 问题及建议

近一年来在学校 211 二期的支持下，实验室购置了一批新的仪器，使得实验室仪器设备的使用条件有了一定程度的改善。随着实验室的大幅度调整、装修的完成，工作环境有比较大的改观。

近两年多来，通过不断强调论文的规范标注，实验室成员在论文的规范标注方面有了很大的提高，使得实验室的论文发表数逐年增多，特别是影响因子大于 3.0 的论文数目在逐年增多。

目前实验室主任基金的绝大部分仍用于资助各课题组论文发表，随着近年来实验室发表论文的质量逐年提高，按照以前的资助办法，每年下拨的实验室主任基金只用作资助各课题组论文发表费均已不够，更没有经费用来提供开放项目或进行实验室装修等工作了。

### 五、 实验室主任基金使用情况：

总经费	实验室改建	2007 年资助各课题组论文发表、科研费	重点实验室评估	仪器运行	杂费	结余 *
42.66 万	0 万	39.02 万	2.4 万	0 万	2.26 万	- 1.02 万

\* 2008 年度国家实验室拨入经费总计 70 万元。

附件一、2008 年重点实验室评估会议纪要

附件二、2008 年重点实验室发表研究论文

## 生物有机分子与分子工程教育部重点实验室第四届学术委员会会议

### 会议纪要

2008年6月30日，“生物有机分子工程教育部重点实验室”第四届学术委员会会议在北京大学化学新楼205会议室举行。学术委员主任张礼和院士、学术委员王梅祥研究员、马大为研究员、余飙研究员、周其林教授、席真教授、周翔教授、杨震教授、王剑波教授出席了会议。学术委员林硕教授因故未能出席本次会议。北京大学科研部郑英姿老师和何洁老师，以及化学学院院长高松院士也出席了会议。高松院长首先代表化学学院讲话，感谢学术委员们不辞辛劳，在百忙中来参加学术委员会会议，感谢学术委员们多年来对生物有机重点实验室建设的一贯支持，同时也表示化学学院将继续给予重点实验室以必要的支持。

会议由学术委员会主任张礼和院士主持。实验室主任王剑波教授首先向学术委员汇报了实验室近五年来的工作和研究进展，指出近年来重点实验室在科研成果以及年轻学术带头人的引进方面取得显著进展。同时也指出在若干重要的方向，特别是化学生物学方面仍需加强，实验室的硬件条件方面仍有所不足。

随后，杨震教授、杜大明副教授、赵美萍副教授、袁谷教授、裴坚教授、施章杰教授、甘良兵教授、席振峰教授和王剑波教授分别向学术委员会介绍了各自课题组的研究工作。在汇报过程中，委员们就各个课题组的研究工作展开了热烈的讨论。

委员们还继续就实验室的学术方向，研究队伍，奋斗目标等重要问题进行了热烈地讨论，与高松院长和王剑波主任一同探讨了实验室进一步发展的方向。委员们一致认为在过去几年里实验室在优秀学术带头人培养以及科研成果方面取得突出的进步。同时学术委员会也建议在实验室以后长期的发展过程中，要充分关注并解决好学科交叉与融合问题，增加与生物科学家的合作与交流，实现本实验室的交叉学科发展，并形成自己的特点。同时在发展过程中要注意研究方向的拓展与相对集中的关系，进一步明确和集中本实验室的发展方向。

生物有机与分子工程教育部重点实验室  
学术委员会主任 张礼和

生物有机与分子工程教育部重点实验室  
实验室主任 王剑波

2008年6月30日

---

## 2008 年度重点实验室发表研究论文

---

- 1) Palladium-Catalyzed Cyclopropanation of Electron Deficient Olefins with Aryldiazocarbonyl Compounds  
Shufeng Chen, Jian Ma and Jianbo Wang  
*Tetrahedron Letters* **2008**, 49, 6781–6783.
- 2) Sequential Copper(I)-Catalyzed Reaction of Amines with o-Acetylenyl Substituted Phenyldiazoacetates  
Cheng Peng, Jiajia Cheng, and Jianbo Wang  
*Advanced Synthesis & Catalysis*, **2008**, 350, 2359-2364.
- 3) Palladium-Catalyzed Reaction of Allyl Halides with alpha-Diazocarbonyl Compounds  
Shufeng Chen, Jianbo Wang  
*Chem. Commun.* **2008**, 4198-4200.
- 4) Recent studies on the reactions of alpha-diazocarbonyl compounds  
Zhenhua Zhang, Jianbo Wang  
*Tetrahedron*, **2008**, 64, 6577-6605.
- 5) Highly Diastereoselective Addition of the Lithium Enolate of Alpha-Diazoacetoacetate to N-Sulfinyl Imines: Enantioselective Synthesis of 2-Oxo and 3-Oxo Pyrrolidines  
Changqing Dong, Fanyang Mo, and Jianbo Wang  
*J. Org. Chem.* **2008**, 73, 1971-1974.
- 6) Rh(II)-Catalyzed Sommelet-Hauser Rearrangement  
Mingyi Liao, Lingling Peng, and Jianbo Wang  
*Org. Lett.* **2008**, 10, 693-696.
- 7) Palladium-Catalyzed Cross-Coupling of Alpha-Diazocarbonyl Compounds with Arylboronic Acids  
Cheng Peng, Yan Wang, and Jianbo Wang  
*J. Am. Chem. Soc.* **2008**, 130, 1566-1567.
- 8) Sequential catalytic process: synthesis of quinoline derivatives by AuCl<sub>3</sub>/CuBr-catalyzed three-component reaction of aldehydes, amines, and alkynes  
Fengping Xiao, Yulin Chen, Yu Liu, Jianbo Wang  
*Tetrahedron*, **2008**, 64, 2755-2761.
- 9) Catalytic Addition of Alkyne C–H, Amine N–H, and Phosphine P–H Bonds to Carbodiimides: An Efficient Route to Propiolamidines, Guanidines, and Phosphaguanidines  
Wen-Xiong Zhang and Zhaomin Hou\*  
*Org. Biomol. Chem.* **2008**, 6, 1720–1730. (Perspective Article, Inside Cover Picture)
- 10) Synthetic Methods for Multiply Substituted Butadiene-containing Building Blocks

Zhenfeng Xi\*, and Wen-Xiong Zhang\*.  
*Synlett* **2008**, 2557–2570.

- 11) Selective Synthesis of Multiply Substituted 7-Norbornenone Derivatives or Diels-Alder Cycloadducts from 1,2,3,4-Tetra-substituted 1,3-Butadienes and Maleic Anhydride with or without Lewis Acids  
Dongzhen Li, An Shi, Wen-Xiong Zhang, Guangzhen Liu, and Zhenfeng Xi\*.  
*Tetrahedron* **2008**, 64, 9895–9900.
- 12) Pyranilidene Carbene Complexes from 1-Lithio-1,3-Dienes and  $M(CO)_6$  ( $M = Cr, Mo, W$ ): Novel Synthesis and De-metallation Reaction  
Qifeng Wang, Wen-Xiong Zhang, and Zhenfeng Xi\*.  
*Organometallics* **2008**, 27, 3627–3629.
- 13) Diversified Reaction Chemistry of 1,4-Dilithio-1,3-dienes with Nitriles: Facile Access to Tricyclic  $\Delta^1$ -Bipyrrolines, Multi-Substituted Pyridines, Siloles and (Z, Z)-Dienylsilanes by Tuning of Substituents on the Butadienyl Skeleton  
Nan Yu, Congyang Wang, Fei Zhao, Lantao Liu, Wen-Xiong Zhang, and Zhenfeng Xi\*.  
*Chem. Eur. J.* **2008**, 14, 5670–5679.
- 14) CuCl-Mediated tandem CO insertion and annulation of 1,4-dilithio-1,3-dienes: formation of multiply substituted cyclopentadienones and/or their head-to-head dimers  
Qian Luo, Chao Wang, Wen-Xiong Zhang, and Zhenfeng Xi\*.  
*Chem. Commun.* **2008**, 1593–1595.
- 15) Novel [Ruthenium(substituted-tetramethylcyclopentadiene) (2-quinolinecarboxylato)(allyl)] Hexafluorophosphate Complexes as Efficient Catalysts for Highly Regioselective Nucleophilic Substitution of Aliphatic Allylic Substrates  
Hui-Jun Zhang, Bernard Demerseman, Loïc Toupet, Zhenfeng Xi,\* and Christian Bruneau\*  
*Adv. Synth. Catal.* **2008**, 350, 1601–1609.
- 16) Synthesis of stereo-defined 1,1,4,4-tetrahalo- and 1,1,4,4-mixed-tetrahalo-1,3-butadienes  
Hui-Jun Zhang, Zhiyi Song, Chao Wang, Christian Bruneau,\* , Zhenfeng Xi\*  
*Tetrahedron Lett.* **2008**, 49, 624–627.
- 17) Ruthenium Complexes Bearing Bulky Pentasubstituted Cyclopentadienyl Ligands and Evaluation of  $[Ru(\eta^5-C_5Me_4R)(MeCN)_3][PF_6]$  Precatalysts in Nucleophilic Allylic Substitution Reactions  
Hui-Jun Zhang, Bernard Demerseman, Zhenfeng Xi,\* and Christian Bruneau\*  
*Eur. J. Inorg. Chem.* **2008**, 3212–3217
- 18) 稳定烯醇及其合成方法学  
胡乔舒 席振峰\*  
*有机化学*, **2008**, 28, 1864–1874.

- 19) Controlled regio- and chemoselective addition of isothiocyanate to the dione moiety of a cage-opened fullerene-mixed peroxide derivative.  
Xiaobing Yang, Liangbing Gan,\* Zheming Wang\*  
*Chem. Commun.* **2008**, 1980-1982.
- 20) Towards the rational synthesis of norfullerenes. Controlled deletion of one carbon atom from C-60 and preparation of 2,5,9-trioxo-1-nor(C60-Ih)[5,6]fullerene C59(O)3 derivatives.  
Jiayao Yao, Zuo Xiao, Liangbing Gan,\* Dazhi Yang, Zheming Wang\*  
*Org. Lett.* **2008**, 10, 2003-2006.
- 21) Reactivity of fullerene epoxide: Preparation of fullerene-fused thiirane, tetrahydrothiazolidin-2-one, and 1,3-dioxolane  
xiaobing Yang, Shaohua Huang, Zhenshan Jia, Zuo Xiao, Zhongping Jiang,  
Qianyan Zhang, Liangbing Gan, \* Bo Zheng, Gu Yuan, Shiwei Zhang\*  
*J. Org. Chem.* **2008**, 73, 2518-2526.
- 22) Preparation of fullerenol, fullerenone and aminofullerene derivatives through selective cleavage of fullerene C-H, C-C, C-N and C-O bonds in fullerene-mixed peroxide derivatives  
Zhongping Jiang, Yan Zhang, Liangbing Gan,\* Zheming Wang\*  
*Tetrahedron* **2008**, 64, 11394-11403
- 23) Preparation of Azafullerene Derivatives from Fullerene-mixed Peroxides and Single Crystal X-Ray Structures of Azafulleroid and Azafullerene  
Gaihong Zhang, Shaohua Huang, Zuo Xiao, Quan Chen, Liangbing Gan,\* Zheming Wang\*  
*J. Am. Chem. Soc.* **2008**, 130, 12614-12615.
- 24) Stereoselective Construction of an Unprecedented 7-8 fused ring system in icrandilactone A by [3,3]-sigmatropic rearrangement  
Yandong Zhang; Weiwu Ren; Yu Lan; Qing Xiao; Kai Wang; Jie.Xu; Jiahua Chen\*; ZhenYang\*  
*Org. Lett.* **2008**, 10, 665-668.
- 25) A Concise and Diversity-Oriented Approach to the Synthesis of SAG Derivatives  
Nengdong Wang, Jing Xiang, Zhibo Ma, Junmin Quan, Jiahua Chen, and Zhen Yang\*  
*J. Comb. Chem.* **2008**, 10, 825-834.
- 26) Synthesis of Catechins via Thiourea/AuCl<sub>3</sub>-Catalyzed Cycloalkylation of Aryl Epoxides  
Yangxiang Liu; Xiben Li; Guang Lin; Zheng Xiang,; Jing Xiang,; Mingzhe Zhao; Jiahua Chen\*; Zhen Yang\*  
*J. Org. Chem.* **2008**, 73, 4625-4629.
- 27) Total Synthesis of Crisamicin A  
Zhengtao Li, Yingxiang Gao, Yefeng Tang, Mingji Dai, Guoxin Wang, Zhigang Wang\* and Zhen Yang\*  
*Org. Lett.* **2008**, 10, 3017-3020.

- 28) Diversity-Oriented Synthesis of Fused Pyran-Lactones via an Efficient Thiourea-Catalyzed Alkoxy-carbonylative Annulation  
Zhengtao Li, Yingxiang Gao, Zhaodong Jiao, Na Wu, David Zhigang Wang\*, and Zhen Yang\*  
*Org. Lett.*, **2008**, *10*, 5163-5166.
- 29) Origins of Differences in Reactivities of Alkenes, Alkynes, and Allenes in [Rh(CO)<sub>2</sub>Cl]<sub>2</sub>-Catalyzed (5 + 2) Cycloaddition Reactions with Vinylcyclopropanes  
Zhi-Xiang Yu,\* Paul Ha-Yeon Cheong, Peng Liu, Claude Y. Legault, Paul A. Wender,\* and K. N. Houk,\*  
*J. Am. Chem. Soc.* **2008**, *130*, 2378.
- 30) Tandem Rh(I)-Catalyzed [5+2+1] Cycloaddition/Aldol Reaction for the Construction of Linear Triquinane Skeleton: Total Synthesis of (±)-Hirsutene and (±)-1-Desoxyhydnophillin  
Lei Jiao, Changxia Yuan, Zhi-Xiang Yu,\*  
*J. Am. Chem. Soc.* **2008**, *130*, 4421.
- 31) Mechanism, Regioselectivity, and Kinetics of Phosphine-Catalyzed (3+2) Cycloaddition of Allenes and Electron-Deficient Alkenes  
Yong Liang, Song Liu, Yuanzhi Xia, Yahong Li, and Zhi-Xiang Yu  
*Eur. J. Chem.*, **2008**, *14*, 4361.
- 32) Rh(I)-Catalyzed Intramolecular [3+2] Cycloaddition of trans-Vinylcyclopropanes  
Lei Jiao, Siyu Ye, and Zhi-Xiang Yu,\*  
*J. Am. Chem. Soc.* **2008**, *130*, 7178.
- 33) Mechanisms of Brønsted Acid Catalyzed Additions of Phenols and Protected Amines to Olefins: a DFT Study  
Xin Li, Siyu Ye, Chuan He, Zhi-Xiang Yu\*,  
*Eur. J. Org. Chem.* **2008**, 4296.
- 34) Direct Arylation of Aryl/Alkenyl Pivalates with Organozinc Reagents via Nickel-Catalyzed C-O Activation under Mild Conditions.  
Bi-Jie Li, Yi-Zhou Li, Xing-Yu Lu, Jia Liu, Bing-Tao Guan, and Zhang-Jie Shi.  
*Angew. Chem. Int. Ed.* **2008**, *47*, 10124-10127.
- 35) Biaryl Construction via Ni-Catalyzed Aryl C-O Bond Activation of Aryl Carboxylates. Bing-Tao Guan, Yang Wang, Bi-Jie Li, Da-Gang Yu, Zhang-Jie Shi  
*J. Am. Chem. Soc.* **2008**, on line (DOI: 10.1021/ja8056503).
- 36) Intra/Intermolecular Direct Allylic Alkylation via Pd(II)-Catalyzed sp<sup>3</sup> C-H Activation.  
Song Lin, Chun-Xiao Song, Gui-Xin Cai, Wen-Hua Wang, and Zhang-Jie Shi  
*J. Am. Chem. Soc.* **2008**, *130*, 12901-12903.



- 37) Foster collaboration.  
Zhang-Jie Shi.  
*Nature*, **2008**, 454, 399-403. (Commentary).
- 38) A small molecule enhances RNA interference and promotes microRNA processing.  
Ge Shan, Yujing Li, Junliang Zhang, Wendi Li, Keith Szulwach, Ranhui Duan, Mohammad A Faghihi, Ahmad M Khalil, Lianghua Lu, Zain Paroo, Anthony Chan, Zhangjie Shi, Qinghua Liu, Claes Wahlestedt, Chuan He, Peng Jin  
*Nature Biotechnology*, **2008**, 26, 933-940.
- 39) Direct Benzylic Alkylation via Ni-Catalyzed Selective  $sp^3$  C-O Activation.  
Bing-Tao Guan, Shi-Kai Xiang, Bi-Qin Wang, Zuo-Peng Sun, Yang Wang, Ke-Qing Zhao, and Zhang-Jie Shi  
*J. Am. Chem. Soc.* **2008**, 130, 3268-3269.
- 40) Methylation of arenes via Ni-catalyzed aryl C–O/F activation  
Bing-Tao Guan, Shi-Kai Xiang, Tao Wu, Zuo-Peng Sun, Bi-Qin Wang, Ke-Qing Zhao and Zhang-Jie Shi  
*Chem. Comm.* **2008**, 1437-1439.
- 41) Recent Advances on Direct Arylation via Palladium Catalyzed Aryl C-H Activation.  
Bi-Jie Li, Shang-Dong Yang, Zhang-Jie Shi  
*Synlett.* **2008**, 949-957.
- 42) Palladium Catalyzed Direct Arylation of (Hetero)Arenes with Aryl Boronic Acids.  
Shang-Dong Yang, Chang-Liang Sun, Zhao Fang, Bi-Jie Li, Yi-Zhou, Li, and Zhang-Jie Shi  
*Angew. Chem. Int. Ed.* **2008**, 47, 1473-1476.
- 43) Multiple C-H Activations To Construct Biologically Active Molecules in a Process Completely Free of Organohalogen and Organometallic Components.  
Bi-Jie Li, Shi-Liang Tian, Zhao Fang, Zhang-Jie Shi  
*Angew. Chem. Int. Ed.* **2008**, 47, 1115-1119.
- 44) Yan Zhou, Lei Wang, Jian Wang, Jian Pei, Yong Cao,  
Highly Sensitive, Air-Stable Photodetectors Based on Single Organic Sub-micrometer Ribbons Self-Assembled through Solution Processing  
*Adv. Mater.* **2008**, 20, 3745.
- 45) Jie-Yu Wang, Jing Yan, Zhendong Li, Ji-Min Han, Yuguo Ma, Jiang Bian, and Jian Pei.  
Isomeric Effect on Microscale Self-Assembly: Interplay Between Molecular Property and Solvent Polarity in the Formation of 1D *n*-Type Microbelts  
*Chem. Eur. J.* **2008**, 14, 7760-7764.
- 46) Jin-Liang Wang, Jing Yan, Zheng-Ming Tang, Qi Xiao, Yuguo Ma, and Jian Pei

Gradient Shape-Persistent  $\pi$ -Conjugated Dendrimers for Light-Harvesting: Synthesis, Photophysical Properties, and Energy Funneling  
*J. Am. Chem. Soc.* **2008**, *130*, 9952-9962.

- 47) Jin-Liang Wang, Zheng-Ming Tang, Qi Xiao, Yuguo Ma, Jian Pei  
Energy transfer in new D-pi-A conjugated dendrimers: Their synthesis and photophysical properties  
*Org. Lett.* **2008**, *10*, 4271-4274.
- 48) Hai-Bo Chen, Jie Yin, Yi Wang, and Jian Pei,  
Unsaturated Strained Cyclophanes based on Dibenz[a,j]anthracene by an Intramolecular McMurry Olefination  
*Org. Lett.* **2008**, *10*, 3113-3116.
- 49) Qifan Yan, Yan Zhou, Ben-Bo Ni, Yuguo Ma, Jian Wang, Jian Pei, and Yong Cao  
Organic Semiconducting Materials from Sulfur-hetero benzo[k]fluoranthene Derivatives: Synthesis, Photophysical Properties, and Thin Film Transistor Fabrication  
*J. Org. Chem.* **2008**, *73*, 5328-5339.
- 50) Wen-Jun Liu, Yan Zhou, Qi-Feng Zhou, Yuguo Ma, and Jian Pei  
Shape-persistent Elliptic Macrocycles Composed of Polycyclic Aromatic Hydrocarbons: Synthesis and Photophysical Properties  
*Org. Lett.* **2008**, *10*, 2123-2126.
- 51) Jia Luo, Ting Lei, Xiaoguang Xu, Fang-Mei Li, Yuguo Ma, Kai Wu, and Jian Pei  
Three-dimensional Shape-persistent Fluorescent Nanocages: Facile Dynamic Synthesis, Photophysical Properties, and Surface Morphologies  
*Chem. Eur. J.* **2008**, *14*, 3860 - 3865.
- 52) Qiaoli Niu, Yan Zhou, Lei Wang, Junbiao Peng, Jian Wang, Jian Pei, and Yong Cao  
Enhancing the Performance of Polymer Light-emitting Diodes by Integrating Self-assembled Organic Nanowires  
*Adv. Mater.* **2008**, *20*, 964-969.
- 53) Jin-Liang Wang, Zheng-Ming Tang, Qi Xiao, Qi-Feng Zhou, Yuguo Ma, and Jian Pei  
Molecular Wires Based on Thienylethynylene: Synthesis, Photophysical Properties, and Excited State Lifetime  
*Org. Lett.* **2008**, *10*, 17-20.
- 54) Nanoparticles: is it promising in capillary electrophoresis?  
Zhengxiang Zhang, Bo Yan, Yiping Liao, Huwei Liu  
*Anal. Bioanal. Chem.*, **2008**, *391* (3): 925-927
- 55) Separation and fragmentation study of heroin and its basic impurities by reversed-phase liquid chromatography coupled to tandem mass spectrometry  
Zhengxiang Zhang, Bo Yan, Kelin Liu, Yiping Liao, and Huwei Liu  
*Rapid Commun. Mass Spectrom.*, **2008**, *22*(18): 2851-2862

- 56) Synergistic Design of Electric Field and Membrane in Facilitating Continuous Adsorption for Cleanup and Enrichment of Proteins in Direct ESI-MS Analysis  
Yu Zhou, Hailin Shen, Tie Yi, Dawei Wen, Nannan Pang, Jie Liao, and Huwei Liu  
*Anal. Chem.*, **2008**, 80 (23): 8920–8929
- 57) Chiral separation of Raltitrexed by cyclodextrin-modified micellar electrokinetic chromatography  
Yi Liu, Xiaofang Fu, Chao Ma, Jiasheng Zhong, Huwei Liu  
*Anal. Bioanal. Chem.*, **2009**, 393: 321–326
- 58) Enantioseparation of zolmitriptan and determination of binding constants and thermodynamic parameters by CD-modified CZE  
Nan-Nan Pang, Zhengxiang Zhang, Huwei Liu  
*Anal. Bioanal. Chem.*, **2009**, 393: 313--320
- 59) Molecularly imprinted silica prepared with immiscible ionic liquid as solvent and porogen for selective recognition of testosterone  
Chiyang He, Yuanyuan Long, Junlan Pan, Kean Li, Feng Liu  
*Talanta*, **2008**, 74, 1126-1131.
- 60) Molecularly imprinted polymer using  $\beta$ -cyclodextrin as functional monomer for the efficient recognition of bilirubin  
Yu Yang, Yuanyuan Long, Qing Cao, Kean Li, Feng Liu  
*Anal. Chim. Acta*, **2008**, 606, 92-97.
- 61) Resurveying the Tris buffer solution: the specific interaction between Tris (hydroxymethyl) aminomethane and lysozyme  
Li Quan, Dengguo Wei, Xiaolu Jiang, Yang Liu, Zhiyu Li, Na Li, Kean Li, Feng Liu\*, Luhua Lai\*  
*Anal. Biochem.*, **2008**, 378, 144-150.
- 62) A method to coat colloidal particles with molecularly imprinted silica film  
Chiyang He, Yuanyuan Long, Junlan Pan, Kean Li, Feng Liu  
*J. Mater. Chem.*, **2008**, 18, 2849-2854.
- 63) J-Aggregates of diprotonated tetrakis (4-sulfonatophenyl) porphyrin induced by ionic liquid 1-butyl-3-methylimidazolium tetrafluoroborate  
Jianjun Wu, Na Li, Kean Li, Feng Liu  
*J. Phys. Chem. B*, **2008**, 112, 8134-8138.
- 64) Partition of horseradish peroxidase with maintained activity in aqueous biphasic system based on ionic liquid  
Qing Cao, Li Quan, Chiyang He, Na Li, Kean Li and Feng Liu\*  
*Talanta*, **2008**, 77, 160-165.
- 65) Enhanced Anodic Ru(bpy)<sub>3</sub><sup>2+</sup> Electrogenerated Chemiluminescence by Polyphenols  
Rong Lei, Xiao Xu, Da Xu, Gang Zhu, Na Li\*, Huwei Liu\*, and Ke'an Li  
*Anal. Chim. Acta*, **2008**, 625, 13-21.
- 66) Selective Enhancement of Resonance Light-scattering of Gold Nanoparticles by Glycogen,

Minghui Xiang, Xiao Xu, Dongxu Li, Feng Liu, Na Li\*, and Kean Li\*  
*Talanta*, **2008**, 76, 1207-1211.

67) A method to determine quercetin by enhanced luminol electrogenerated chemiluminescence (ECL) and quercetin autoxidation

Rong Lei, Xiao Xu, Fei Yu, Na Li\*, Hu Wei Liu, Ke'an Li  
*Talanta*, **2008**, 75, 1068-1074.

68) Free Radical Scavenging Capacity Using Fenton Reaction with Rhodamine B as Spectrophotometric Indicator

Fei Yu, Da Xu, Rong Lei, Na Li\*, Ke'an Li  
*Journal of Agriculture and Food Chemistry*, **2008**, 56, 730-735.

69) Li HH, Yuan G, Du DM

Investigation of formation, recognition, stabilization, and conversion of dimeric G-quadruplexes of HIV-1 integrase inhibitors by Electrospray ionization mass Spectrometry  
*J. Am. Soc. Mass Spectro.* **2008**, 19, 550-559,

70) Hui Hui Li, Gu Yuan,

Investigation of formation of dimeric G-quadruplex of HIV-1 integrase inhibitor by nuclear magnetic resonance  
*Chinese Chemical Letters* **2008**, 191108–1110.

71) 袁谷, 李卉卉, 周江, 林森, G-四链体DNA的质谱学研究: 形成、性质、转变和识别  
*质谱学报*, **2008**, 29, 106-107.

72) Simultaneous Determination of Nandrolone, and Methyltestosterone by Testosterone, Multi-immunoaffinity Column and Capillary Electrophoresis

Xiao-Hua Qi, Li-Wei Zhang, Xin-Xiang Zhang,\*  
*Electrophoresis* **2008**, 29, 3398-3405.

73) Antibody Development to Testosterone and its Application in Capillary Electrophoresis-Based Immunoassay

Hong-Xu Chen and Xin-Xiang Zhang,\*  
*Electrophoresis* **2008**, 29, 3406-3413.

74) Capillary Electrophoresis Immunoassay Using Magnetic Beads

Hong-Xu Chen, Jean-Marc Busnel, Anne-Laure Gassner, Gabriel Peltre, Xin-Xiang Zhang,\* Hubert H. Girault\*  
*Electrophoresis* **2008**, 29, 3414-3421.

75) Magnetic Beads Based Immunoaffinity Capillary Electrophoresis of Total IgE with Laser-Induced Fluorescence Detection,

Hong-Xu Chen, Jean-Marc Busnel, Gabriel Peltre, Xin-Xiang Zhang,\* Hubert H. Girault,\*

- Analytical Chemistry* **2008**, 9583-9588.
- 76) 亲和毛细管电泳法和荧光法研究氟喹诺酮类药物与牛血清白蛋白的相互作用,  
张黎伟, 张新祥, \*  
*高等学校化学学报* **2008**, 29, 694-699.
- 77) Immunoaffinity Extraction of Testosterone by Antibody Immobilized Monolithic Capillary,  
Hong-Xu Chen, Ting Huang, Xin-Xiang Zhang,\*  
*Talanta*, 2008, DOI:10.1016/j.talanta.2008.11.004.
- 78) Quantification of Testosterone and Epitestosterone in Biological samples by Capillary Electrophoresis  
with Immunoaffinity Extraction,  
Hong-Xu Chen, Qin-Pei Deng, Li-Wei Zhang, Xin-Xiang Zhang,\*  
*Talanta*, 2008, DOI:10.1016/j.talanta.2008.11.048.
- 79) Continuous monitoring of restriction endonuclease cleavage activity by universal molecular beacon  
light quenching coupled with real-time polymerase chain reaction  
Xiaomin Li, Chen Song, Meiping Zhao\*, Yuanzong Li,  
*Analytical Biochemistry*, **2008**, 381, 1-7.
- 80) Thermosensitive and Salt-Sensitive Molecularly Imprinted Hydrogel for Bovine Serum Albumin  
ZhenDong Hua, ZhiYong Chen, YuanZong Li, and MeiPing Zhao\*,  
*Langmuir*, **2008**, 24, 5773–5780.
- 81) Protein-responsive imprinted polymers with specific shrinking and rebinding,  
Zhiyong Chen; Zhendong Hua; Li Xu; Yong Huang; Meiping Zhao\*; Yuanzong Li\*  
*Journal of Molecular Recognition*, **2008**, 21, 71-77.
- 82) Polyethylene glycol diacrylate-based supermacroporous monolithic cryogel as high-performance  
liquid chromatography stationary phase for protein and polymeric nanoparticle separation  
Zhiyong Chen, Li Xu, Yuan Liang, Jianbin Wang, Meiping Zhao\*, Yuanzong Li\*  
*Journal of Chromatography A*, **2008**, 1182, 128–131.