



生物有机与分子工程教育部重点实验室

# 2005 年度工作报告

2005 年 12 月 20 日

# 2005 年度重点实验室总结报告

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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 副主任: 袁谷、李元宗

填报人: 张秀

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): 10项, 305万元。
- 2、本年度获奖情况: 4项
  - 1) 席振峰, 杨震: 中国礼来科学贡献奖。
  - 2) 李元宗: 中国分析测试协会 2005 年 CAIA 二等奖。
  - 3) 袁谷: 全国优秀博士后奖。
  - 4) 杜大明: 北京青年科技优秀论文二等奖。
- 3、本年度发表论文数: 76 篇其中 SCI 论文 72 篇, 影响因子大于 3.0 的论文 30 篇。
- 4、本年度申请及授权专利数: 3 项。

## 二、 队伍建设与人才培养

- 1、人才队伍情况: 总人数: 20 人(教授 13 人, 副教授 5 人, 实验技术人员: 2 人), 其中院士: 0 人、长江学者: 2 人、杰出青年人数: 4 人(4 位杰出青年均为教授)。
- 2、人才培养情况: 在站博士后: 8 人、在读研究生: 84 人、毕业研究生: 12 人。

## 三、 开放交流与运行管理

- 1、开放课题情况(项数, 总经费): 0 项, 0 万元。
- 2、承办学术会议情况:
  - 1) 承办了“第三届中日青年有机化学家研讨会”(2005 年 10 月 17 - 20 日, 北京)。
  - 2) 承办了“2005 年京津地区青年有机化学家研讨会”(2005 年 10 月 7-9 日)。
- 3、实验室内部规章制度是否健全(是否有年报、简报等)有。
- 4、本年度召开学术委员会会议情况: 未召开。

## 四、 存在问题及困难

2003 年 12 月份本实验室接受了教育部的评估。评估小组在肯定我们的成绩以后, 也提出了以下的问题:

1. 实验室仪器不足，部分仪器老化，亟需添置和更新。
2. 实验室面积不足，研究队伍规模偏小。
3. 实验室需加强规范化管理。

对于实验室的进一步发展也提出以下的建议：

1. 希望依托单位和主管部门加大对该实验室的投入，加强研究平台的建设，为开展高水平研究提供更好的条件。
2. 希望依托单位协助实验室做好研究队伍的整合工作，进一步提高实验室承担国家重大研究项目的能力。
3. 希望在学术委员会的指导下进一步明确实验室的定位和发展方向，向更高的目标努力。

近一年多来我们针对评估小组提出的意见开展工作。加强了日常的规范化管理，特别强调论文的规范标注。今年本实验室还引进了两位年轻的学术带头人，一位的研究方向是理论有机化学，另一位是金属有机化学/化学生物学。在实验室的设备方面有学校 985 二期的支持，有了一定程度的改善。

存在的主要问题仍然是实验室面积不足，研究队伍规模偏小。这在短期内是难以改变的。

由于本年度时间安排等问题，未能够召开学术委员会会议。考虑在 2006 年初召开一次重点实验室学术会议。

#### 五、 实验室主任基金使用情况：

总经费	实验室改建	2004 年论文奖励	实验室仪器运转	杂费	结余*
15	0	13.9 万	0.5 万	0.6 万	0 万

\*2005 年主任基金拨款 15 万元。

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## 附件一、2005 年重点实验室发表研究论文:

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- 1) Nucleophilic Addition to C=O and C=N Bonds by the Nucleophiles Containing Diazo Group.  
Yonghua Zhao, Jianbo Wang  
*Synlett*, **2005**, 2886-2892. (A account)
- 2) Reaction of  $\beta$ -Trimethylsiloxy  $\alpha$ -Diazocarbonyl Compounds with Trimethylsilyl Halide: A Novel Diazo Decomposition Process.  
Fengping Xiao, Zhenhua Zhang, Jian Zhang, Jianbo Wang  
*Tetrahedron Lett.* **2005**, 46, 8873–8875.
- 3) A new method for the synthesis of 2-cyclopenten-1-one-5-carboxylic ester derivatives via  $\text{Rh}_2(\text{OAc})_4$ -mediated intramolecular C–H insertion reaction of 4Z- $\beta$ -vinyl- $\alpha$ -diazo- $\beta$ -ketoesters.  
Guisheng Deng,\* Baihua Xu, Jianbo Wang  
*Tetrahedron*, **2005**, 61, 10811-10817.
- 4) Highly Stereoselective [2,3]-Sigmatropic Rearrangement of Sulfur Ylide Generated through Cu(I) Carbene and Sulfides.  
Ming Ma, Lingling Peng, Changkun Li, Xiu Zhang, Jianbo Wang  
*J. Am. Chem. Soc.* **2005**, 127, 15016-15017.
- 5) Stereoselective Intramolecular 1,3 C-H Insertion in Rh(II) Carbene Reactions.  
Weifeng Shi, Bo Zhang, Jian Zhang, Bingge Liu, Shiwei Zhang, Jianbo Wang  
*Org. Lett.* **2005**, 7, 3103-3106.
- 6) Concise and Diastereoselective Approach to *syn*- and *anti*- $\alpha$ -Hydroxy  $\beta$ -Amino Acid Derivatives  
Yonghua Zhao, Nan Jiang, Shufeng Chen, Cheng Peng, Xiaomei Zhang, Yaping Zou, Shiwei Zhang and Jianbo Wang  
*Tetrahedron* **2005**, 61, 6546-6552.
- 7) 1,2-Vinyl and 1,2-Acetylenyl Migration in Rh(II) Carbene Reaction: Remarkable Bystander Effect  
Weifeng Shi, Fengping Xiao and Jianbo Wang  
*J. Org. Chem.* **2005**, 70, 4218-4322.
- 8) 1,2-Thio Group Migration in Rh(II) Carbene Reactions  
Feng Xu, Weifeng Shi, and Jianbo Wang  
*J. Org. Chem.* **2005**, 70, 4191-4194.
- 9) An Efficient Synthesis of Aryl  $\alpha$ -Keto Esters  
Ming Ma, Changkun Li, Lingling Peng, Fang Xie, Xiu Zhang and Jianbo Wang  
*Tetrahedron Lett.* **2005**, 46, 3927-3929.

- 10) 1,2-Shift in Organic Reactions  
Weifeng Shi, Fengping Xiao, Jianbo Wang  
*Journal of Yunnan University of the Nationalities (Natural Sciences Edition)*.  
**2005**, *14*, 109-114. (A review in Chinese)
- 11) Regioselective 1, 2-Addition of Ti(IV)-Enolate to  $\alpha$ ,  $\beta$ -Unsaturated Compounds  
Guisheng Deng, Mingyi Liao, Xue Tian, Jianbo Wang  
*Chin. Chem. Lett.* **2005**, *16*, 589-592.
- 12) Zirconocene-mediated intermolecular coupling of Si-tethered diynes with alkynes, ketones, aldehydes, and isocyanates via novel skeletal rearrangement of zirconacyclobutene-silacyclobutene and zirconacyclohexadiene-silacyclobutene fused ring intermediates  
Tao Yu, Xiaohua Sun, Congyang Wang, Liang Deng, and Zhenfeng Xi\*  
*Chem. Eur. J.* **2005**, *11*, 1895-1902.
- 13) Cleavage of C-Si bond by intramolecular nucleophilic attack: lithiation-promoted formation of siloles from 1-bromo-4-tetrasubstituted silyl-1,3-butadiene derivatives  
Zhihui Wang, Hongyun Fang, and Zhenfeng Xi\*  
*Tetrahedron Lett.* **2005**, *46*, 499-501.
- 14) Preparation and Electrophilic Cyclization of Multi-substituted Dienamides Leading to Cyclic Iminoethers  
Congyang Wang, Jiang Lu, Guoliang Mao, and Zhenfeng Xi\*  
*J. Org. Chem.* **2005**, *70*, 5150-5156.
- 15) Lewis acid-promoted reactions of zirconacyclopentadienes with isocyanates. One-pot three-component synthesis of multiply substituted iminocyclopentadienes from one isocyanate and two Alkynes  
Jiang Lu, Guoliang Mao, Wenxiong Zhang, and Zhenfeng Xi\*  
*Chem. Commun.* **2005**, 4848-4850.
- 16) New Methods for the Preparation of Multiply Substituted Cyclopentadienes and Related Compounds  
Zhenfeng Xi\*  
*Topics in Catalysis* **2005**, *35*, 63-71.
- 17) Concise Synthesis of Multiply Substituted Stereodefined *cis*, *cis*-2,4-diene-1,6-dials, *cis*, *cis*-2,4-diene-1,6-diols and further applications  
Guoliang Mao, Congyang Wang, Jinglong Chen, Ayako Muramatsu, and Zhenfeng Xi\*  
*Tetrahedron Lett* **2005**, *46*, 5369-5372.
- 18) Tetramethyl Thiourea/ $C_{O_2}(CO)_8$ -Catalyzed Pauson-Khand Reaction under Balloon Pressure of CO  
Yefeng Tang, Lujiang Deng, Yandong Zhang, Guangbin dong, Jiahua Chen, and Zhen Yang  
*Org.Lett.* **2005**, *7*, 593-595.

- 19) Copper-Free Sonogashira Coupling Reaction with PdCl<sub>2</sub> in –Water under Aerobic Conditions Bo Liang, Mingji Dai, Jiahua Chen, and Zhen Yang  
*J. Org. Chem.* **2005**, *70*, 391-393.
- 20) A Highly Efficient Synthesis of the FGH Ring of Micrandilactone A. Application of Thioureas as Ligands in the Co-Catalyzed Pauson-Khand Reaction and Pd-Catalyzed Carbonylative Annulation  
Yefeng Tang, Yandong Zhang, Mingji Dai, Tuoping Luo, Lujiang Deng, Jiahua Chen, and Zhen Yang  
*Org.Lett.* **2005**, *7*, 885-888.
- 21) Thioureas as Ligands in the Pd-Catalyzed Intramolecular Pauson- Khand Reaction  
Yefeng Tang, Lujiang Deng, Yandong Zhang, Guangbin dong, Jiahua Chen, and Zhen Yang  
*Org.Lett.* **2005**, *7*, 1657-1659.
- 22) Pd-Catalyzed Copper-Free Carbonylative Sonogashira Reaction of Aryl Iodides with Alkynes for the Synthesis of Alkynyl Ketones and Flavones by Using Water as Solvent  
Bo Liang, Mengwei Huang, Zejin You, Zhengchang Xiong, Kui Lu, Reza Fathi, Jiahua Chen, and Zhen Yang  
*J. Org. Chem.* **2005**, *70*, 6097-6100.
- 23) Exploring an Expedient IMDA Reaction Approach to Construct the Guanacastepene Core  
Chuang-Chuang Li, Shuang Liang, Xin-Hao Zhang, Zhi-Xiang Xie, Jia-Hua Chen, Yun-Dong Wu, and Zhen Yang  
*Org.Lett.* **2005**, *17*, 3709-3712.
- 24) Linear C<sub>2</sub>-symmetric polycyclic benzodithiophene: efficient, highly diversified approaches and the optical properties  
Cui-Hua Wang, Rong-Rong Hu, Shuang Liang, Jia-Hua Chen, Zhen Yang and Jian Pei  
*Tetrahedron Letters* **2005**, *46*, 8153-8157.
- 25) A Concise and Diversity-Oriented Strategy for the Synthesis of Benzofurans and Indoles via Ugi and Diels-Alder Reactions  
Kui Lu, Tuoping Luo, Zheng Xiang, Zejin You, Reza Fathi, Jiahua Chen, and Zhen Yang  
*J. Comb. Chem.* **2005**, *7*, 958-967.
- 26) Oligothiophene-Functionalized Truxene: Star-Shaped Compounds for Organic Field-Effect Transistors  
Yanming Sun, Kai Xiao, Yunqi Liu, Jinliang Wang, Jian Pei, Gui Yu, and Daoben Zhu  
*Adv.Funct.Mater.* **2005**, *15*,
- 27) Nanosized  $\pi$ -Conjugated Molecules Based on Truxene and Porphyrin: Synthesis and High Fluorescence Quantum Yields  
Xiaofei Duan, Jinliang Wang, and Jian Pei  
*Org. Lett.* **2005**, *7*, 4071-4074.

- 28) Single-Molecule Nanosized Polycyclic Aromatics with Alternant Five- and Six-Membered Rings: Synthesis and Optical Properties  
Wei Zhang, Xiaoyu Cao, Hong Zi, and Jian Pei  
*Org. Lett.* **2005**, *7*, 959-962.
- 29) Star-Shaped and Linear Nanosized Molecules Functionalized with Hexa-*peri*-hexabenzocoronene: Synthesis and Optical Properties  
Xiaoyu Cao, Hong Zi, Wei Zhang, Hua Lu, and Jian Pei  
*J. Org. Chem.* **2005**, *70*, 3645-3653.
- 30) Novel Highly fluorescent dendritic chiral amines: synthesis and optical properties  
Hui Wang, Jinliang Wang, Sichun Yuan, Jian Pei, Weiwei Pei  
*Tetrahedron*, **2005**, *61*, 8465-8474.
- 31) Linear C<sub>2</sub>-symmetric polycyclic benzodithiophene: efficient highly diversified approaches and the optical properties  
Cuihua Wang, Rongrong Hu, Shuang Liang, Jiahua Chen, Zhen Yang, and Jian Pei  
*Tetrahedron Letters*, **2005**, *46*, 8153-8157.
- 32) Preparation of [5,6]- and [6,6]-oxahomofullerene derivatives and their interconversion by lewis acid assisted reactions of fullerene mixed peroxides  
Huang, SH; Xiao, Z; Wang, FD; Zhou, J; Yuan, G; Zhang, SW; Chen, ZF; Thiel, W; Schleyer, PV; Zhang, X; Hu, XQ; Chen, BC; Gan, LB  
*Chem. Eur. J.* **2005**, *11*, 5449-5456.
- 33) Regiochemistry of [70]fullerene: Preparation of C-70((OOBu)-Bu-t)(n), (n = 2, 4, 6, 8, 10) through both equatorial and cyclopentadienyl addition modes  
Xiao, Z; Wang, FD; Huang, SH; Gan, LB; Zhou, J; Yuan, G; Lu, MJ; Pan, JQ  
*J. Org. Chem.* **2005**, *70*, 2060-2066.
- 34) Asymmetric Henry reaction catalyzed by C<sub>2</sub>-symmetric tridentate bis(oxazoline) and bis(thiazoline) complexes: metal-controlled reversal of enantioselectivity  
Du, Da-Ming<sup>\*</sup>; Lu, Shao-Feng; Fang, Tao; Xu, Jiayi<sup>\*</sup>  
*J. Org. Chem.* **2005**, *70*(9), 3712-3715.
- 35) Synthesis of C<sub>3</sub>-Symmetric tris(β-hydroxy amide) ligands and their Ti(IV) complex-catalyzed enantioselective alkynylation of aldehydes  
Fang, Tao; Du, Da-Ming<sup>\*</sup>; Lu, Shao-Feng; Xu, Jiayi<sup>\*</sup>  
*Org. Lett.* **2005**, *7*(11), 2081-2084.

- 36) Synthesis of novel chiral semicrown ether-like bis(oxazoline) ligands and application in enantioselective cyclopropanation of styrene  
Wang, Zhan-Yue; Du, Da-Ming<sup>\*</sup>; Xu, Jia-Xi  
*Synth. Commun.* **2005**, 35(2), 299-313.
- 37) Investigation on mass spectra fragmentation mechanism of C<sub>2</sub>-symmetric chiral bis(oxazolines) and bis(thiazolines)  
Chen, Hui; Du, Da-Ming; Fu, Bin; He, Meiyu<sup>\*</sup>  
*Chin. J. Chem.* **2005**, 23(6), 720-724.
- 38) C<sub>2</sub>-对称性手性双噁唑啉和双噻唑啉配体的合成及其在不对称催化反应中的应用  
杜大明<sup>\*</sup>, 吕少峰, 傅滨, 许家喜  
*有机化学*, **2005**, 25(增刊), 103.
- 39) 三齿双噁唑啉和双噻唑啉络合物催化的不对称 Henry 反应—Lewis 酸控制的对映选择性反转  
吕少峰, 杜大明<sup>\*</sup>, 许家喜  
*有机化学*, **2005**, 25(增刊), 104.
- 40) Analysis of Noncovalent Complexes between Human Telomeric DNA and Polyamides Containing N-Methylpyrrole and N-Methylimidazole by Using Electrospray Ionization Mass Spectrometry  
Jiang Zhou, Gu Yuan  
*Chem.Eur. J.* **2005**, 11, 1157-1162.
- 41) Studies on Electrochemical Oxidation Mechanisms of Polyamides Containing N-Methylpyrrole and N-Methylimidazole by Electrospray Ionization Tandem Mass Spectrometry  
Zhonghua Ji, Jingjian Li, Jiang Zhou, Limei Hui, Gu Yuan, and Shengmin Cai  
*J.Phys.Chem.B*, **2005**, 109(36), 17162-17168.
- 42) Electrospray negative ionization mass spectrometry of polyamides containing N-Methylpyrrole and N-Methylimidazole  
*J.Mass Spectrom.*, **2005**, 40, 688-689.
- 43) Synthesis of a Novel Conjugate of Bromoarene and Polyamide Containing N-Methylimidazoles  
Dan Liu, Gu Yuan  
*Chinese Chemical Letters*, **2005**, 16, 1330-1332.
- 44) Development of miniaturized competitive immunoassays on a protein chip as a screening tool for drugs  
Du HW, Wu MT, Yang WP, Yuan G, Sun YM, Lu Y, Zhao S, Wang F, Yan S, Pan M, Lu Y, Wang S, Cheng J.  
*Clinical Chemistry*, **2005**, 51(2), 368-375.



- 45) Selective carbonyl propargylation mediated by SnCl<sub>2</sub>/NiCl<sub>2</sub>-KL in water  
Wang J, Miao XP, Yuan G.  
*Australian Journal of chemistry*, **2005**, 58(8), 611-614.
- 46) 聚酰胺类DNA识别分子质谱的碎裂机理  
李钦玲, 周江, 汤菲力, 袁谷  
*化学学报*, **2005**, 63, 834-840.
- 47) N-甲基吡咯类聚酰胺的合成及其与 DNA 的相互作用  
李钦玲, 周江, 刘丹, 袁谷  
*高等学校化学学报*, **2005**, 12, 2267-2269.
- 48) Microwave and photoirradiation-induced Staudinger reactions of cyclic imines and ketenes generated from  $\alpha$ -diazoketones. A further investigation into the Stereochemical process  
Liang, Yong; Jiao, Lei; Zhang, Shiwei; **Xu, Jiayi**.  
*J. Org. Chem.*, **2005**, 70(1), 334-337.
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Wei, Tiezheng; Lan, Yu; **Xu, Jiayi**.  
*Heteroatom Chem.*, **2005**, 16(1), 2-5.
- 50) Rationale on abnormal effect of temperature on the enantioselectivity in the asymmetric borane reduction of ketones catalyzed by prolinol  
**Xu, Jiayi**; Wei, Tiezheng; Lin, Shrong-Shi; Zhang, Qihan  
*Helv. Chim. Acta*, **2005**, 88(1), 180-186.
- 51) A structurally diverse heterocyclic library: A benzothiazepine-fused  $\beta$ -lactam library derived from reaction of 2,3-dihydro-1,5-benzothiazepines and acyl chlorides: synthesis and stereochemistry  
**Xu, Jiayi**.  
*Molecular Diversity*, **2005**, 9(1-3), 45-49.
- 52) Negative ion electrospray ionization mass spectrometry of *N*-benzyloxycarbonyl protected 1-substituted and cyclic taurines  
**Xu, Jiayi**; Ma, Yuan; Xu, Shu; Zhao, Yufen  
*Rapid Commun. Mass Spectrom.*, **2005**, 19(13), 1835-1838.
- 53) Differentiation of constitutional isomer of 2,2a,3,4-tetrahydro-4-methyl-2a-phenyl-2-(thiophen-2-yl)-1*H*-azeto[2,1-*d*][1,5]benzothiazepin-1-one-5-oxide and fragmentations of 2,3-dihydro-2,4-diphenyl-1,5-benzothiazepine-1-oxide/-1,1-dioxide  
**Xu, Jiayi**; Zuo, Gang; Liang, Bo  
*Chem. Res. Chin. Univ.*, **2005**, 21(3), 274-279.

- 54) A new and expeditious synthesis of 1-substituted and cyclic taurines  
Huang, Jiaying; Wang, Fei; Du, Daming; **Xu, Jiayi**  
*Synthesis*, **2005**, (13), 2122-2128.
- 55) Mass spectrometry of 2a,4-disubstituted  
5-benzoyl-2a,3,4,5-tetrahydro-2-phenoxy-azeto[1,2-*a*][1,5]benzodiazepin-1(2*H*)-ones under  
electron impact ionization conditions  
**Xu, Jiayi**; Huang, Xu  
*Chem. Res. Chin. Univ.*, **2005**, 21(4), 452-456.
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Friedel-Crafts acylation and alkylation of sulfides and acyl chlorides  
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*Synth. Commun.*, **2005**, 35(17), 2347-2353.
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*Heteroatom Chem.*, **2005**, 16(6), 466-471.
- 58) Chiral oxazaborolidine-catalyzed asymmetric borane reduction of alkyl 1-(4-dialkylaminophenyl)  
ketones  
**Xu, Jiayi**; Lan, Yu; Wei, Tiezheng; Zhang, Qihan  
*Chin. J. Chem.*, **2005**, 23(10), 1457-1461.
- 59) Rational tuning chelate size of bis-oxazoline ligands to improve enantioselectivity in the  
asymmetric aziridination of chalcones  
Ma, Linge; Du, Daming; **Xu, Jiayi**  
*J. Org. Chem.*, **2005**, 70 (24), 10155-10158.
- 60) Rigid backbone 1,8-anthracene-linked bis-oxazolines (AnBOXes): design, synthesis, application  
and characteristics in catalytic asymmetric aziridination  
Ma, Linge; Jiao, Peng; Zhang, Qihan; **Xu, Jiayi**.  
*Tetrahedron: Asymmetry*, **2005**, 16(22), 3718-3734.
- 61) Mass spectrometric fragmentation of 2a,4-disubstituted  
2,2a,3,4-tetrahydro-2-phenyl-1*H*-azeto[2,1-*d*][1,5]benzothiazepin-1-ones under electron impact  
ionization conditions and comparison with their 2-heteroatom substituted analogues  
**Xu, Jiayi**; Wang, Chao  
*Phosphorus Sulfur Silicon Relat. Elem.*, **2005**, 180(12), 2779-2785.
- 62) Synthesis of 1-(*N*-ethoxycarbonylamino)alkylphosphonic monoesters  
Liu, H.; **Xu, Jiayi**  
*Amino Acids*, **2005**, 29(3), 241-243.

- 63) Theoretical and experimental study of nicotinamide molecularly imprinted polymers with different porogens  
Wu LQ, Zhu KC, Zhao WP, **Li YZ**.  
*ANALYTICA CHIMICA ACTA*, 2005, 549 (1-2): 39-44.
- 64) Molecularly imprinted polymer with salicylaldehyde-Cu(OAc)<sub>2</sub> as template  
Yang ML, **Li YZ**.  
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Xiaofang Fu, Yiping Liao and Huwei Liu\*  
*Anal. Bioanal. Chem.*, **2005**, 381, 75-77.
- 66) Separation and detection of erythropoietin (EPO) by CE and CE-MS  
Bing Yu, Hailin Cong, Huwei Liu \*, Yuanzong Li and Feng Liu  
*Trend in Analytical Chemistry, TrAC*, **2005**, 24(4), 350-357.
- 67) Separation Methods for Toxic Components in Traditional Chinese Medicines  
Wei Li, Weining Yue, Zheng Chen, Yiping Liao, Huwei Liu\*  
*Anal. Sci*, **2005**, 21 (9) 1019-1029.
- 68) Ionene-dynamically coated capillary for analysis of urinary and recombinant human erythropoietin by capillary electrophoresis and online electrospray ionization mass spectrometry  
Bing Yu, Hailin Cong, Huwei Liu\*, Yuanzong Li, Feng Liu  
*J. Sep. Sci.*, **2005**, 28, 2390-2400.
- 69) A UNIVERSAL METHOD FOR THE DETERMINATION OF PHENOLIC ACIDS IN COMPOUND HERBAL DRUGS BY HPLC  
Dawei Wen, Yuping Liu, Huwei Liu\*  
*Journal of Agricultural and Food Chemistry*, **2005**, 53(17): 6624-6629.
- 70) 用 6,6-ionene 涂层的毛细管对重组促红细胞生长素及其酶解产物进行 CE 和 CE-ESI-MS 分析  
于冰, 丛海林, 刘虎威\*, 李元宗, 刘锋  
*色谱*, **2005**, 23, 487-491.
- 71) Ionic liquid-based aqueous two-phase system, a sample pretreatment procedure prior to high-performance liquid chromatography of opium alkaloids  
Li, SH; He, CY; Liu, HW; Li, K; Liu, F  
*JOURNAL OF CHROMATOGRAPHY B-ANALYTICAL TECHNOLOGIES IN THE BIOMEDICAL AND LIFE SCIENCES*, **2005**, 826 (1-2): 58-62.

- 72) Ionic liquid-salt aqueous two-phase system, a novel system for the extraction of abused drugs  
Li, SH; He, CY; Liu, HW; Li, KA; Liu, F  
*CHINESE CHEMICAL LETTERS*, **2005**, 16 (8): 1074-1076.
- 73) Extraction of testosterone and epitestosterone in human urine using aqueous two-phase systems of ionic liquid and salt  
He, CY; Li, SH; Liu, HW; Li, K; Liu, F  
*JOURNAL OF CHROMATOGRAPHY A*, **2005**, 1082 (2): 143-149.
- 74) Selection of ligands for affinity chromatography using quartz crystal biosensor  
Liu, Y; Tang, XL; Liu, F; Li, K  
*ANALYTICAL CHEMISTRY*, **2005**, 77 (13): 4248-4256.
- 75) Highly Selective Aerobic Oxidation of Alcohol Catalyzed by a Gold(I) Complex with an Anionic Ligand  
Bingtao Guan, Dong Xing, Guixing Cai, Xiaobin Wan, Nan Yu, Zhao Fang, Liping Yang, and Zhangjie Shi  
*J. Am. Chem. Soc.* **2005**, 127, 18004-18005.
- 76) Novel efficient blue light-emitting conjugated polymers: synthesis, optical properties, and thermal optical stability  
X.-Y. Cao, H. Zi, H. Lu, J. Pei  
*Proc. SPIE*, **2005**, 5632, 7-16.

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## 附件二、2005 年度实验室来访讲学

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- 1) Lyle Isaacs 教授 Department of Chemistry and Biochemistry, University of Maryland  
*Asymmetric heterofunctionalization of olefins: From hydrosilylation to hydrophosphination.*  
2005 年 1 月 11 日
- 2) Aiwen Lei 博士 Stanford University  
*Transition-metal Catalyzed Alder-ene Type Cycloisomerization of Enynes*  
2005 年 2 月 28 日
- 3) Kotohiro Nomura 教授 Nara Institute of Science and Technology  
*(Arylimido)vanadium complexes that exhibits unique characteristics for olefin coordination/insertion and metathesis polymerization. - First isolation example of "olefin metathesis active" vanadium-alkylidene*  
2005 年 2 月 28 日

- 4) Junzo Otera 教授 Okayama University of Science  
***Fluorous Organotin Catalysts***  
2005 年 4 月 1 日
- 5) Wenyuan Qian 博士 UCLA, The Scripps Research Institute Amgen  
***From Molecular Surgery on C60 to Total Synthesis of "Unnatural" Natural Product -- Azaspiracid***  
2005 年 4 月 22 日
- 6) Henri Rudler 教授 Laboratoire de Chimie Organique Université P. et M. Curie  
***Biomimetic reduction of carbene complexes of tungsten and chromium. Synthesis of butenolides***  
2005 年 4 月 27 日
- 7) I. P. 库拉诺娃 教授 俄罗斯科学院  
***The 3D-structure of Glu-endopeptidase from B. Intermedius and its similarity to some viral enzymes***  
2005 年 4 月 27 日
- 8) Ken S. Feldman 教授 The Pennsylvania State University, USA  
***Reaction Development and Natural Products Synthesis***  
2005 年 5 月 12 日
- 9) Antonio Togni 教授 Swiss Federal Institute of Technology (ETH), Switzerland  
***Asymmetric heterofunctionalization of olefins: From hydrosilylation to hydrophosphination***  
2005 年 5 月 20 日
- 10) 陈立 博士 科研总监和首席科学官 罗氏研发（中国）有限公司  
***Target-based Drug Discovery and Molecular Medicine***  
2005 年 5 月 23 日
- 11) Wenfang Sun 教授 North Dakota State University  
***Development and Characterization of Metallo-Organic Complexes for Optical Limiting Applications***  
2005 年 5 月 25 日
- 12) Armido Studer 教授, University of Munster, Germany  
***Radical Reactions in Organic Synthesis***  
2005 年 5 月 27 日

- 13) 胡纪如 教授 台湾清华大学化学系  
*1) Design and Synthesis of New Materials with Photodegradability and Light Emitting Capability*  
*2) Modern Silicon-Controlled Organic Reactions and Their Mechanisms*  
2005年5月31日
- 14) Dr. Qing Dai, 美国芝加哥大学  
*Chemical Approach to Syntheses of Stable and Depurinating Adducts of o-Quinones with Deoxyadenosine and deoxyguanosine*  
2005年6月23日
- 15) 张绪穆 教授 The Pennsylvania State University, USA  
*不对称催化研究的新进展*  
2005年7月6日
- 16) Charles H. Winter 教授 Wayne State University, USA  
*Group 1 and 2 Metal Complexes Containing Nitrogen Rich Ligands*  
2005年7月8日
- 17) 刘鸿文 教授 University of Texas, USA  
*Bioorganic Chemistry of Enzyme Catalysis*  
2005年7月13日
- 18) X. Peter Zhang 教授, Department of Chemistry, University of Tennessee, USA  
*Bio-Inspired Carbene and Nitrene Transfer Reactions by Metalloporphyrins*  
2005年7月27日
- 19) Gregory C. Fu 教授, 美国麻省理工学院  
*Asymmetric Catalysis with "Planar -Chiral" Heterocycles*  
2005年8月15日
- 20) 侯召民 教授 RIKEN (The Institute of Physical and Chemical Research), JAPAN  
*Cationic Rare Earth Metal Alkyl Complexes as Novel Catalysts for Olefin Polymerization and Copolymerization*  
2005年8月19日
- 21) 祝介平 教授 法国国家科学研究中心 (CNRS, France)  
*几个新的成环反应*  
2005年8月19日

22) Ran Hong 博士 Brandeis University, USA

*Asymmetric Catalysis Enabled Biomimetic Synthesis of Sorbicillinoids*

2005 年 9 月 21 日

23) Claude Lapinte 教授 CNRS- University of Rennes, France

*Information Transfer in Ditung Organometallic Complexes Mediated by Carbon Rich Bridges*

2005 年 10 月 10 日

24) Johannes Teunis Zuilhof 教授 Wageningen University, Netherlands

*Stability of Cations and Conjugated Materials*

2005 年 10 月 12 日

25) Keiji Maruoka 教授 日本京都大学

*Catalytic Asymmetric Synthesis with Designer Chiral Organocatalysts*

2005 年 10 月 12 日

26) Feihe Huang (黄飞鹤) 博士 Virginia Polytechnic Institute & State University, USA

*Supramolecular Chemistry with Cryptands: Improved Complexation of Paraquat Derivatives by the Formation of Cryptand Structures*

2005 年 11 月 1 日

27) Hisashi Yamamoto 教授, 美国芝加哥大学

*Acid Catalysis for Selective Organic Synthesis*

2005 年 11 月 7 日

28) 龚流柱 教授 中国科学院成都有机化学研究所

*有机小分子催化的不对称直接 aldol 反应*

2005 年 11 月 8 日

29) Francine Agbossou-Niedercorn 教授; Laboratoire de Catalyse de Lille, France

*Chiral auxiliaries from Amino Acids, Enantioselective Catalysis, and Key Intermediates: Recent Developments*

2005 年 11 月 8 日

30) 陆天尧 教授 台湾大学

*由小而大*

2005 年 11 月 17 日

31) Kuniaki Tatsuta 教授 日本早稻田大学

*Total Synthesis and Developments of Bioactive Natural Products*

2005年12月6日

32) Weiping Tan 博士 美国哈佛大学

*Palladium Catalyzed Enantioselective Synthesis of Bioactive Targets Chemical Genetic Dissection of Histone Modifications*

2005年12月23日

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