

Curriculum Vitae of Professor Guo-An Luo

Director of the Network Center (Ministry of Education) for Collaborative Study of
TCM Modernization, Department of Chemistry, Tsinghua University



Professor Luo graduated from Biochemical Engineering department of East China University of Science and Technology in 1969, and obtained the Master degree from Department of Chemistry of the same university in 1982. Then he joined Department of Analytical Chemistry at China Pharmaceutical University in Nanjing, as an associate professor and deputy director. In 1990, he went to Penn. State University as a visiting professor, and an associate research fellow later. He moved to Department of Chemistry, Tsinghua University in 1994, and had served successively as Deputy Director of Analytical Center, Assistant Dean of Institute of life Science and Engineering, Deputy Director of Institute of Pharmacy and Director of Modern Research Center of Traditional Chinese Medicine. During 2007-2012, Prof. Luo set up the College of Pharmacy Science, Nankai University in Tianjin, and took the position of Executive Dean of College of Pharmacy Science.

Prof. Luo has long been engaged in pharmaceutical analysis, the systems biology for traditional Chinese medicine (TCM) and modernization for TCM research. Six research monographs and more than 760 papers were published, of which 310 was indexed by Web of Science, with an H-index of 35. Prof. Luo has been authorized more than twenty-five invention patents and completed six preclinical applications of new drug. Till now, he has won twice National Award of Science & Technology Advancement and eleven provincial and ministerial Awards of Science & Technology Advancement. Professor Luo has won the title of Outstanding Returned Overseas

Scholars and enjoys special government allowances of the State Council. Over 30 important projects have been completed such as 973 Projects, 863 Projects, Science & Technology Key Program, and Major Projects of the National Natural Science Foundation of China (NSFC) as well as some international cooperation projects.

Education:

1964-1969 Graduated from Biochemical Engineering Department, East China University of Science and Technology, Shanghai, China.

1979-1982 Obtain the Master degree from Department of Chemistry, East China University of Science and Technology, Shanghai, China.

Professional Chronology:

1969-1979 Institute of pharmaceuticals of Anhui Province

1982-1990 Department of Analytical Chemistry, China Pharmaceutical University in Nanjing, Associate professor and deputy director

1990-1994 Visiting Professor and Associate Research Fellow later, Penn. State University, USA

1994-present Professor, Department of Chemistry, Tsinghua University. Served successively as Deputy Director of Analytical Center, Assistant Dean of Institute of Life Science and Engineering, Deputy Director of Institute of Pharmacy and Director of Modern Research Center for Traditional Chinese Medicine, Director of the Network Center (Ministry of Education) for Collaborative Study of TCM Modernization.

1994-1998 Visiting professor in Hongkong University, Hongkong University of Science & Technology and Hongkong Baptist University.

2007-2012 Founder and Executive Dean of the College of Pharmacy Science, Nankai University in Tianjin

Teaching Subjects:

- 1) Pharmaceutical analysis
- 2) System Biology for Traditional Chinese Medicine

Research Fields:

- 1) Pharmaceutical Analysis
- 2) System Biology for Traditional Chinese Medicine
- 3) Modernization for Traditional Chinese Medicine

Memberships:

- 1) Member of the first expert council of Chinese National S&T Major Project on R&D of Innovative Drugs, member of responsibility expert council of TCM
- 2) Vice President, China Medicine of Minorities Association
- 3) Chairman, Chinese Biopharmaceutical Technology Association (CBPTA)
- 4) TCM officer, Chinese Medicine Division, Department of Health, Hong Kong SAR China
- 5) Executive Member of Chinese Pharmacopoeia Commission and the Chairman of Physical and Chemical Analysis Committee
- 6) Associate Editor-in-chief of the Pharmacopoeia of P.R.China (2010-Eng.)
- 7) Member of National New Drug Approval Council of China
- 8) Associate Editor-in-chief of the journal of Chinese Traditional Patent Medicine

Awards:

- 1) Two Second Prize of National Award of Science & Technology Advancement, in 1999 and 2006, respectively.
- 2) First Prize of Hebei Province Award of Science & Technology Progress in 2012
Second Prize of Beijing Award of Science & Technology Progress in 2012
First Prize of Shanghai Award of Science and Technology Progress in 2011;
First Prize of Hebei Province Medicine Scientific and Technological Progress Award in 2010;
Second Prize of Ministry of Public Security Scientific and Technological

Progress Award in 2007;
First Prize of Tianjin Award of Natural Science in 2006;
Second Prize of AQSIQ science and technology Award in 2005;
First Prize of Ministry of Education Science and Technology Progress Award in 2004;
Second Prize of Jiangsu Province Science and Technology Progress Award in 2003;
Second Prize of PLA Military Science and Technology Progress Award in 1994;
Third Prize of State Pharmaceutical Administration Science and Technology Progress Award in 1991;
Two papers (published in 2003) have been named as international top 1% papers by Essential Science IndicatorsSM.

Selected Publications:

Major monographs :

1. **Luo GA**, Wang YM, Liang QL, Liu QF. 《Systems Biology for Traditional Chinese Medicine》 (512 pages) , John Wiley, USA, 2012
2. **Luo GA**, Wang YM, Liang QL, Liu QF. 《Systems Biology for Traditional Chinese Medicine》 (Chinese Version, a million words) , Science Press, Beijing, 2010
3. **Luo GA**, Wang YM, Liang QL. 《Fingerprints of Traditional Chinese Medicines—Quality assessment, Quality Control and Drug Discovery》 (1.01 million words) , Chemical Industry Press, Beijing, 2009
4. **Luo GA**, Editor-in-Chief, 《Technology for Pharmaceutical and Toxicological Analysis》 (0.595 million words) , Chemical Industry Press, Beijing, 2007
5. **Luo GA**, Wang ZH, Wang YM. 《Construction and application of biocompatible electrodes》 (0.324 million words) , Science Press, Beijing, 2006

6. **Luo GA**, Wang YM, Chen LX, Liang QL. 《Capillary electrochromatography and its application in life science》(0.268 million words), Science Press, Beijing, 2005

Representative Papers(* represents the corresponding author):

1. Huang M, Liang QL, Li P, Xia JF, Wang Y, Hu P, Jiang ZT, He YX, Pang LQ, Han LD, Wang YM, **Luo GA***. Biomarkers for early diagnosis of type 2 diabetic nephropathy: a study based on an integrated biomarker system. *Mol. Biosyst.* 2013, 9(8): 2134-2141.
2. Ren GX, Fan XM, Liang QL, Wang YM, **Luo GA***. Screening and evaluation of traditional Chinese medicine by microarray expression analysis. *J. Ethnopharmacol.* 2013, 147(3): 564-569.
3. Liang QL, Liang XP, Wang YM, Xie YY, Zhang RL, Chen X, Gao R, Cheng YJ, Wu J, Xu QB, Xiao QZ, Li X, Lv SF, Fan XM, Zhang HY, Zhang QL, **Luo GA***. Effective components screening and anti-myocardial infarction mechanism study of the Chinese medicine NSLF6 based on "system to system" mode. *J. Transl. Med.* 2012, 10: 26-37.
3. Ai XN, Liang QL, Luo MN, Zhang K, Pan JM, **LuoGA***. Controlling gas/liquid exchange using microfluidics for real-time monitoring of flagellar length in living *Chlamydomonas* at the single-cell level. *Lab Chip* 2012, 12(21): 4516-4522.
4. Cong WJ, Liang QL, Li L, Shi J, Liu QF, Feng Y, Wang YM, **Luo GA***. Metabonomic study on the cumulative cardiotoxicity of a pirarubicin liposome powder. *Talanta* 2012, 89: 91-98.
5. Xie YY, Luo D, Cheng YJ, Ma JF, Wang YM, Liang QL, **Luo GA***. Steaming-induced chemical transformations and holistic quality assessment of red Ginseng derived from *Panax ginseng* by means of HPLC-ESI-MS/MSn-based multicomponent quantification fingerprint. *J. Agric. Food Chem.* 2012, 60(33): 8213-8224.
6. Xiao X, Hou YY, Du J, Liu Y, Liu YJ, Dong LY, Liang QL, Wang YM, Bai G, **Luo GA***. Determination of main categories of components in corn steep liquor by near-infrared spectroscopy and partial least-squares regression. *J. Agric. Food*

- Chem. 2012, 60(32): 7830-7835.
7. Liang XP, Zhang HY, Hu P, Wang YM, **Luo GA***. Metabonomic study of Chinese medicine ShuangLong formula as an effective treatment for myocardial infarction in rats. *J. Proteome Res.* 2011, 10: 790-799.
 8. Zhang K, Liang QL, Ai XN, Hu P, Wang YM, **Luo GA***. Comprehensive two-dimensional manipulation of picoliter microfluidic droplets sampled from nanoliter samples. *Anal. Chem.* 2011, 83(20): 8029-8034.
 9. Cong WJ, Liu QF, Chen X, Gao R, Lu J, Wang YM, Luo GA*. Characterization and pharmacokinetics of a novel pirarubicin liposome powder. *Drug Dev. Ind. Pharm.* 2010, 36(10): 1186-1194.
 10. Fan XM, Li X, Lv SF, Wang YM, Zhao YF, **Luo GA***. Comparative proteomics research on rat MSCs differentiation induced by Shuanglong Formula. *J. Ethnopharmacol.* 2010, 131(3): 575-580.
 11. Zhang K, Liang QL, Ma S, Mu X, Hu P, Wang YM, **Luo GA***. On-chip manipulation of continuous picoliter-volume superparamagnetic droplets using a magnetic force. *Lab Chip* 2009, 9 (20): 2992-2999.
 12. Ren KN, Liang QL, Mu X, **Luo GA***, Wang YM. Miniaturized high throughput detection system for capillary array electrophoresis on chip with integrated light emitting diode array as addressed ring-shaped light source. *Lab Chip* 2009, 9 (5): 733-736.
 13. Mu X, Liang QL, Hu P, Ren KN, Wang YM, **Luo GA***. Laminar flow used as "liquid etch mask" in wet chemical etching to generate glass microstructures with an improved aspect ratio. *Lab Chip* 2009, 9 (14): 1994-1996.
 14. Zhang M, Ignatova S, Liang QL, Jun FW, Sutherland I, Wang YM, **Luo GA***. Rapid and high-throughput purification of salvianolic acid B from *Salvia miltiorrhiza* Bunge by high-performance counter-current chromatography. *J. Chromatogr. A* 2009, 1216(18): 3869-3873.
 15. Zhang HY, **Luo GA***, Liang QL, Wang Y, Yang HH, Wang YM, Zheng XY, Song XM, Chen G, Zhang T, Wu JX. Neural tube defects and disturbed maternal folate and homocysteine-mediated one-carbon metabolism. *Exp. Neurol.* 2008,

212(2):515-521.

16. Ye NS, Chen J, **Luo GA**^{*}, Zhang RL, Zhao YF, Wang YM. Proteomic profiling of rat bone marrow mesenchymal stem cells induced by 5-azacytidine. *Stem Cells Dev.* 2006, 15 (5): 665-676.
17. Zhao JY, Liang QL, **Luo GA**^{*}, Wang YM, Zuo YJ, Jiang M, Yu GL, Zhang T. Purine metabolites in gout and asymptomatic hyperuricemia: Analysis by HPLC-electrospray tandem mass spectrometry. *Clin. Chem.* 2005, 51 (9): 1742-1744.
18. Hu P, Liang QL, **Luo GA**^{*}, Zhao ZZ, Jiang ZH. Multi-component HPLC fingerprinting of radix salviaemiltiorrhizae and its LC-MS-MS identification. *Chem. Pharm. Bull.* 2005, 53(5): 677-683.
19. Wang ZH, Liang QL, Wang YM, **Luo GA**^{*}. Carbon nanotube-intercalated graphite electrodes for simultaneous determination of dopamine and serotonin in the presence of ascorbic acid. *J. Electroanal. Chem.* 2003, 540: 129-134.
20. Wang ZH, Liu J, Liang QL, Wang YM, **Luo GA**^{*}. Carbon nanotube-modified electrodes for the simultaneous determination of dopamine and ascorbic acid. *Analyst* 2002, 127(5): 653-658.

罗国安教授

清华大学化学系，教育部中医药现代化网上合作研究中心主任



简介:罗国安教授 1969 年毕业于华东理工大学生化工程专业，1982 年于同校化学系获硕士学位。1982 年毕业后于南京中国药科大学分析化学教研室任教研室副主任，副教授。1990 年赴美国宾州大学（Penn. State Univ.）化学系任客座教授，后任副研究员。1994 年应聘回国，于清华大学化学系任教授，历任清华大学分析中心副主任，清华大学生命科学与工程研究院院长助理，清华大学药物研究所副所长，清华大学中药现代化研究中心主任。2007 至 2012 年间，创建天津南开大学药学院，任执行院长

罗国安教授主要从事药物分析、中医药系统生物学、中药现代化及相关领域研究工作。撰写研究专著 6 部，发表学术论文 760 余篇，其中 SCI 收录 310 余篇，发表论文 Hirsh 指数为 35。获得国家发明专利授权 25 项。研发新药 6 项。获国家科技进步二等奖两次；获省部级科技进步或自然科学奖 11 项。获优秀留学回国人员称号，国务院特殊津贴专家。先后承担和完成国家 973，863，科技攻关/科技支撑计划，国家自然科学基金重大研究计划项目、重点项目等国家级科研项目 30 余项。

学历:

1964-1969 年，上海华东理工大学生化工程专业毕业

1979-1982 年，上海华东理工大学仪器分析专业获硕士学位

工作经历:

1969-1979 年, 安徽芜湖地区工厂及医药研究所工作

1982-1990 年, 南京中国药科大学副教授, 分析化学教研室副主任

1990-1994 年, 美国宾州大学 (Penn. State Univ.) 化学系客座教授, 后任副研究员

1994 年-今, 清华大学化学系教授, 历任清华大学分析中心副主任, 清华大学生命科学与工程研究院院长助理, 清华大学药物研究所副所长, 清华大学中药现代化研究中心主任, 现任教育部中医药现代化网上合作研究中心主任。

1995-1998 年, 先后在香港大学, 香港科技大学, 香港浸会大学任客座教授

2007-2012 年, 创建天津南开大学药学院, 任执行院长

授课科目: 药物分析, 中医药系统生物学

研究领域: 药物分析

……………中医药系统

……………中药现代化及相关领域研 作

主要社会兼职: “重大新药创制” 国家科技重大专项第一届总体专家组成员, 中药责任专家组成员

中国民族医药协会副会长

中国医药生物技术协会生物制药技术分会主任委员

中国香港特区政府卫生署中药主任

国家药典委员会执行委员、理化分析专业委员会主任委员

中国药典 (2010 版一部英文版) 副主编.

国家新药审评委员

中成药杂志副主编

获奖: 1999 年和 2006 年获国家科技进步二等奖两次; 2012 年获河北省科技进步一等奖; 2012 年获北京市科技进步二等奖; 2011 年获上海市科技进步一等奖; 2010 年获河北省医药科技进步一等奖; 2007 年公安部科技进步二等奖; 2006 年获天津市自然科学一等奖; 2005 年获国家质检总局科技兴

检二等奖；2004年获教育部科技进步一等奖；2003年获江苏省科技进步二等奖；1994年获全军科技进步二等奖；1991年获国家医药管理局科技进步三等奖。两篇论文被 Essential Science Indicators SM 评为国际 top 1% 论文（2003年）。

主要学术成果

主要学术专著：

1. Luo GA, Wang YM, Liang QL, Liu QF. 《Systems Biology for Traditional Chinese Medicine》（512 pages）, John Wiley, USA, 2012
2. 罗国安, 王义明, 梁琼麟, 刘清飞著. 《中医药系统生物学》（99.9万字）, 科学出版社, 北京, 2010
3. 罗国安, 梁琼麟, 王义明著. 《中药指纹图谱——质量评价、质量控制与新药研发》（101万字）, 化学工业出版社, 北京, 2009
4. 罗国安主编. 《药物分析与毒物分析技术》（59.5万字）, 化学工业出版社, 北京, 2007
5. 罗国安, 王宗花, 王义明著. 《生物兼容性电极构置及应用》（32.4万字）, 科学出版社, 北京, 2006
6. 罗国安, 王义明, 陈令新, 梁琼麟著. 《毛细管电色谱及其在生命科学中的应用》（26.8万字）, 科学出版社, 北京, 2005

代表性学术论文（*为通讯作者）：

1. Huang M, Liang QL, Li P, Xia JF, Wang Y, Hu P, Jiang ZT, He YX, Pang LQ, Han LD, Wang YM, Luo GA*. Biomarkers for early diagnosis of type 2 diabetic nephropathy: a study based on an integrated biomarker system. Mol. Biosyst. 2013, 9(8): 2134-2141.
2. Ren GX, Fan XM, Liang QL, Wang YM, Luo GA*. Screening and evaluation of traditional Chinese medicine by microarray expression analysis. J. Ethnopharmacol. 2013, 147(3): 564-569.

3. Liang QL, Liang XP, Wang YM, Xie YY, Zhang RL, Chen X, Gao R, Cheng YJ, Wu J, Xu QB, Xiao QZ, Li X, Lv SF, Fan XM, Zhang HY, Zhang QL, **Luo GA**^{*}. Effective components screening and anti-myocardial infarction mechanism study of the Chinese medicine NSLF6 based on "system to system" mode. *J. Transl. Med.* 2012, 10: 26-37.
3. Ai XN, Liang QL, Luo MN, Zhang K, Pan JM, **LuoGA**^{*}. Controlling gas/liquid exchange using microfluidics for real-time monitoring of flagellar length in living *Chlamydomonas* at the single-cell level. *Lab Chip* 2012, 12(21): 4516-4522.
4. Cong WJ, Liang QL, Li L, Shi J, Liu QF, Feng Y, Wang YM, **Luo GA**^{*}. Metabonomic study on the cumulative cardiotoxicity of a pirarubicin liposome powder. *Talanta* 2012, 89: 91-98.
5. Xie YY, Luo D, Cheng YJ, Ma JF, Wang YM, Liang QL, **Luo GA**^{*}. Steaming-induced chemical transformations and holistic quality assessment of red Ginseng derived from *Panax ginseng* by means of HPLC-ESI-MS/MSn-based multicomponent quantification fingerprint. *J. Agric. Food Chem.* 2012, 60(33): 8213-8224.
6. Xiao X, Hou YY, Du J, Liu Y, Liu YJ, Dong LY, Liang QL, Wang YM, Bai G, **Luo GA**^{*}. Determination of main categories of components in corn steep liquor by near-infrared spectroscopy and partial least-squares regression. *J. Agric. Food Chem.* 2012, 60(32): 7830-7835.
7. Liang XP, Zhang HY, Hu P, Wang YM, **Luo GA**^{*}. Metabonomic study of Chinese medicine ShuangLong formula as an effective treatment for myocardial infarction in rats. *J. Proteome Res.* 2011, 10: 790-799.
8. Zhang K, Liang QL, Ai XN, Hu P, Wang YM, **Luo GA**^{*}. Comprehensive two-dimensional manipulation of picoliter microfluidic droplets sampled from nanoliter samples. *Anal. Chem.* 2011, 83(20): 8029-8034.
9. Cong WJ, Liu QF, Chen X, Gao R, Lu J, Wang YM, Luo GA^{*}. Characterization and pharmacokinetics of a novel pirarubicin liposome powder. *Drug Dev. Ind. Pharm.* 2010, 36(10): 1186-1194.
10. Fan XM, Li X, Lv SF, Wang YM, Zhao YF, **Luo GA**^{*}. Comparative proteomics

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11. Zhang K, Liang QL, Ma S, Mu X, Hu P, Wang YM, **Luo GA***. On-chip manipulation of continuous picoliter-volume superparamagnetic droplets using a magnetic force. *Lab Chip* 2009, 9 (20): 2992-2999.
 12. Ren KN, Liang QL, Mu X, **Luo GA***, Wang YM. Miniaturized high throughput detection system for capillary array electrophoresis on chip with integrated light emitting diode array as addressed ring-shaped light source. *Lab Chip* 2009, 9 (5): 733-736.
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 14. Zhang M, Ignatova S, Liang QL, Jun FW, Sutherland I, Wang YM, **Luo GA***. Rapid and high-throughput purification of salvianolic acid B from *Salvia miltiorrhiza* Bunge by high-performance counter-current chromatography. *J. Chromatogr. A* 2009, 1216(18): 3869-3873.
 15. Zhang HY, **Luo GA***, Liang QL, Wang Y, Yang HH, Wang YM, Zheng XY, Song XM, Chen G, Zhang T, Wu JX. Neural tube defects and disturbed maternal folate and homocysteine-mediated one-carbon metabolism. *Exp. Neurol.* 2008, 212(2):515-521.
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 17. Zhao JY, Liang QL, **Luo GA***, Wang YM, Zuo YJ, Jiang M, Yu GL, Zhang T. Purine metabolites in gout and asymptomatic hyperuricemia: Analysis by HPLC-electrospray tandem mass spectrometry. *Clin. Chem.* 2005, 51 (9): 1742-1744.
 18. Hu P, Liang QL, **Luo GA***, Zhao ZZ, Jiang ZH. Multi-component HPLC fingerprinting of *radix salviaemiltiorrhizae* and its LC-MS-MS identification. *Chem. Pharm. Bull.* 2005, 53(5): 677-683.

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