Jianguo Liu

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EDUCATION

- Ph.D. in Environmental Management, Peking University, July 2007
- M.S. in Environmental Chemistry, Peking University, July 1998
- B.S. in Environmental Chemistry, Jilin University, July 1995

RESEARCH INTERESTS

- Risk assessment & risk management of chemicals
- Global governance of chemicals, especially MEAs
- Green or sustainable chemistry

POSITIONS

2008–Present	Associate Professor, College of Environmental Sciences and Engineering, Peking University
2002–2007	Assistant Professor, College of Environmental Sciences, Peking University
1998–2002	Teaching Assistant, Assistant Professor, Environmental Chemistry Institute, Peking University

TEACHING EXPERIENCE

2005–Present	Graduate course: Environmental Issues & Environmentally Sound Management of Chemicals
2002-Present	Undergraduate course: General Environmental Sciences
1999-2000	Graduate course: Environmental Pollution Control
1998-2000	Undergraduate course: Experiments of Quantified Analytical Chemistry

PROFESSIONAL ACTIVITIES AND MEMBERSHIPS (Selected)

International

- Member of the Steering Committee of the Global Chemicals Outlook (GCO) II of UN Environment (UNEP), 2018-
- Member of Apple Green Chemistry Advisory Board, 2015-
- Expert of the OECD/UNEP Global PFC Group for Synthesis Paper on PFCs, 2012

- International consultant of UNIDO for developing the Guidance for the Inventory of Perfluorooctane sulfonic acid (PFOS) and Related Chemicals listed under the Stockholm Convention on Persistent Organic Pollutants, 2011

National

- Consultant & member of the Chinese governmental delegation, participating in the intergovernmental negotiations of International Chemical Management Conference on SAICM (Strategic Approach of International Chemicals Management), ICCM2-ICCM4-, 2009-2015-
- Consultant & Member of the Chinese governmental delegation, participating in the intergovernmental negotiations of the Stockholm Convention on Persistent Organic Pollutants, INC7, COP1-COP7-, 2003-2015-
- Consultant & member of the Chinese governmental delegation for the intergovernmental negotiations of the Minamata Convention on Mercury, OEWG3, INC1-INC5, INC7-, 2009-2013, and 2016-
- Chief Consultant on policies analysis of major sectors involving Hg in the UNIDO-MEP program "Minamata Convention Initial Assessment in China" (MIA).2016-2017.
- Organizer and presenter of the National Forum for SAICM Implementation in China, with UNITAR-MEP-PKU cooperation, 2015.
- Member of Expert Review Committee for Chemicals Management of Ministry of Environmental Protection of China, 2010-
- Member of Expert Committee on Persistent Organic Pollutants of Chinese Society for Environmental Science (CSES), 2013-
- Member of Expert Committee on Chemicals Risk Control of Chinese Society for Environmental Science (CSES), 2016-
- Member of Sub-Committee on Environmental Chemistry of Chinese Society for Environmental Science (CSES), 2016-
- Member of Expert committee on Environmental Management of China Management Science Society (CMSS), 2016-
- National Trainer for Environmental Protection(in the field of ESMC), Ministry of Environmental Protection of China, 2017-

HONORS AND AWARDS (Selected)

- United Nations Industrial Development Organization (UNIDO): *Valuable support and contribution of GEF-UNIDO project "Strengthening Institutions, Regulations and Enforcement Capacities for Effective and Efficient Implementation of the National Implementation Plan (NIP) of the Stockholm Convention in China"*, 2015.
- Ministry of Environmental Protection of China (MEP): *Science and Technology of Environmental Protection Award* (for "Design and policy studies on environmental risk management of chemicals in China"), 2015.

- Chinese Society for Environmental Sciences (CSES): *Outstanding Professional on Environmental Science & Technology, 2016.*
- Peking University: *Outstanding Individual Award on Collaboration of Industry-Academia-Research in Peking University*, 2015; Zeng xianzi Award for Outstanding Teaching, 2017.

RESEARCH PROJECTS (Selected)

International and national policies, action plans on chemicals management & MEAs

- Chief Advisor & Project Manager (PI), *Enabling Activities for the Development of a SAICM Implementation Plan as a Key Contribution towards an Integrated National Program for the Sound Management of Chemicals in the People's Republic of China*, SAICM Quick Start Program (QSP) Trust Fund(UNEP), No.: IX.06.G.CHN, 2012-2015.
- PI, Development of the Framework of National Strategy of Chemicals Management of China, sponsored by MEP of China, 2017-2018.
- PI, Development of the National Implementation Plan for the Minimata Convention on Mercury in China, sponsored by MEP of China, 2018-2020.
- PI, Development of the *White Paper on Policies and Actions on Environmentally Sound Management of Chemicals, sponsored by MEP of China*, 2015-2016.
- PI, *The Evaluation on the SAICM Implementation and the National Action Plan development in China*, sponsored by MEP, 2014.
- PI, *Evolving Situation of International Chemicals Management and China's Strategy for Participation*, sponsored by MEP, 2012-2013.
- Chief Expert, *Development of Chinese 12th Five-Years' Plan (2011-2015) on Environmental Risk Control of Chemicals*, sponsored by MEP, 2009-2010.
- Chief Expert, *Major Issues and Policy Framework of Environmentally Sound Management of Chemicals in China*, sponsored by China Council for International Cooperation on Environment and Development (CCICED), 2009.
- PI, Initial assessment of the institutional capacity for China to implement Minanata Convention, sponsored by MEP of China, 2015-2016.
- PI on Policy & Regulation, *Strengthening Institutions, Regulations and Enforcement Capacities for Effective and Efficient Implementation of the National Implementation Plan (NIP) of the Stockholm Convention in China*, Global Environment Facility (GEF) fund, UNIDO as the Implementation Agency with MEP, 2009-2015.
- Core member of the Expert Working Group, *Development of the National Implementation Plan (NIP) for China to Implement the Stockholm Convention*, GEF/UNIDO with MEP, 2005-2007.

Risk assessment & Socio-Economic Analysis of chemicals management

- PI, *Integrating dynamic substance flow analysis and modified multimedia model for environmental risk assessment of short-chain perfluoroalkyl substances (S-PFASs)*, National Nature Science Foundation of China, No.21577002, 2016-2019.
- PI, *Socio-Economic Analysis and National Action Plan of Endosulfan Phase-out for China to Implement the Stockholm Convention*, GEF/UNIDO Project for Update of National Implementation Plan of Stockholm Convention of China, 2015-2016.
- PI, *Socio-Economic Analysis and Risk Management of Hexabromocyclododecane (HBCD) in China*, Sponsored by MEP, 2012-2013.
- Chief Expert, *Assessment of the Environmental Risk and Socio-Economic Impact of Perfluorooctane sulfonate (PFOS) in China*, Sponsored by MEP, 2009-2010.

ORAL PRESENTATIONS AND LECTURES (Selected)

- *"**Use of the SEA and DSFA on Risk Assessment & Management for Chemicals of Concern**"*, in the session of Improve the Link Between Academic Research and Policy-making, SETAC Europe 26th Annual Meeting, 22-26 May, 2016, Nantes, France.
- *"**Chemicals management policy issues in China: Socio-economic Analysis of HBCD as a Case Study**"*, as an invited speaker, in pre-meeting of BFR-2015" The Science and Policy of Flame Retardants and other POPs", organized by Green Science Policy Institute (Berkeley, California), 21 April 2015, Beijing, China.
- *"**China: Striving to come up with global steps for chemical safety**"*, as an invited speaker, on the workshop "Paths to Global Chemical Safety: The 2020 Goal & Beyond" organized by Center of International Environmental Law (CIEL), 11 March, 2013, Washington D.C., US.
- *"**Evolution of Environmentally Sound Management of Chemicals in China**"*, as an invited speaker, on the workshop "A vision of risk-based chemical management in Asia: developing tools and expertise through partnership", organized by Lancaster University & Unilever, 18-19 October, 2011, Colworth, UK.
- *"**New POPs: Challenges for China to Implement International Conventions and Environmental Management of Chemicals**"*, Lecture to Director Generals of local environmental protection agencies in China (in Chinese), on MEP's training workshop for leaders of local environmental protection agencies in China, 2013, Beidaihe, China.
- *"**Environmental & Health Risk and Global Governance of Chemicals**" (in Chinese)*, Lecture to the public, on Forum of Capital Library of China, 2013, Beijing, China.

PUBLICATIONS (Selected)

Books (as the first or chief editor)

1. LIU Jianguo, ***Environmentally Sound Management of Chemicals: Risk Management & Governance*** [Monograph, based on my Ph.D thesis, in Chinese]. Beijing: Chinese Environmental Science Press, 2008. (A brief introduction is attached in the end of CV)
2. LIU Jianguo et.al, ***Chemicals Management in China: Profile and Assessment*** [In Chinese]. Beijing: Peking University Press, 2015.
3. LIU Jianguo, HU Jianxin, YU Lifeng, DING Qiong, CHEN Haijun, ***Guidance and Handbook of Laws, Regulation and Rules on Persistent Organic Pollutants in China*** [In Chinese]. Chinese Environmental Science Press, 2012.
4. LIU Jianguo et al, Chapter on "***Major Issues and Policy Framework Policy Environmentally Sound Management of Chemicals in China***" in *2007 Innovation and Environmental Friendly Society-CCICED Policy Report* by China Council for International Cooperation on Environment and Development (CCICED) [In Chinese], Chinese Environmental Science Press, 2007.

Papers (as the first or corresponding author*)

(Chinese journals were specifically indicated; all others without the indication were international journals including EI, ES&T, EP, CHEMOSPHERE, ETC, ESPR, RTP etc.)

Policy studies on chemicals management & international conventions

1. Liu J G, Li L, Hu J X. Substances of very high concern (SVHCs): *Challenge to risk management system, capability and fundamental research of chemicals in China. Chinese Science Bulletin (Chinese Version)*, 2013.
2. GUO Weiguang，LIU Jianguo*. *Perspective of Global Mercury Control Convention and Obligation Analysis for China, Environmental Sciences & Technology (Chinese journal),* 2010.
3. Liu Jianguo, Tang Xiaoyan, Hu Jianxin. *Global Governance on Environmentally Sound Management of Chemicals and Improvement Requirements for China's System. Research of Environmental Sciences (Chinese journal),* 2006.
4. Liu Jianguo, Tang Xiaoyan, Hu Jianxin. *Principles and Framework of Environmentally Sound Management of Chemicals. Environmental Protection (Chinese journal)*, 2005.
5. Liu Jianguo, Tang Xiaoyan, Hu Jianxin. *Study on Persistent, Bioaccumulative, Toxic pollutants (PBTs) and International Policies. Environmental Protection (Chinese journal),* 2003.
6. Liu Jianguo, Hu Jianxin, Tang Xiaoyan. *Primary Identification on Duties and Obstacles of China to Implement the Stockholm Convention. Environmental Protection (Chinese journal)*, 2002.

Risk assessment & Socio-Economic Analysis studies on chemicals

1. Kaihui Shen, Li Li, Junzhou Liu, Chengkang Chen, Jianguo Liu*, Stocks, flows and emission of DBDPE in China and its international distribution through products and waste, Environmental Pollution, 2019.
2. Yan Cao, Li Li, Kaihui Shen, Jianguo Liu*, Disease burden attributable to

endocrine-disrupting chemicals exposure in China: A case study of phthalates, Science of The Total Environment, 2019.

3. Bowen Ti, Li Li, Jianguo Liu*, Chengkang Chen, Global distribution potential and regional environmental risk of F-53B, Science of The Total Environment, 2018.
4. Jie Wang, Li Li, Jianguo Liu*, Bowen Ti. *Distribution mode and environmental risk of POP pesticides such as endosulfan under the agricultural practice of straw incorporating*, *Environmental Pollution,* 2017.
5. Li Li, Roland Weber, Jianguo Liu*, Jianxin Hu, *Long-term emissions of hexabromocyclododecane as a chemical of concern in products in China, Environment International,* 2016.
6. Jing Zhu, Jianguo Liu*, Jianxin Hu, Shan Yi, *Socio-economic analysis of the risk management of hexabromocyclododecane (HBCD) in China in the context of the Stockholm Convention, Chemosphere,* 2016.
7. Shan Yi, Jian-Guo Liu *, Jun Jin, Jing Zhu, *Assessment of the occupational and environmental risks of hexabromocyclododecane (HBCD) in China, Chemosphere,* 2016.
8. Yan Cao, Jianguo Liu*; Yang Liu, Jie Wang, Xuewen Hao, *An integrated exposure assessment of phthalates for the general population in China based on both exposure scenario and biomonitoring estimation approaches, Regulatory Toxicology and Pharmacology,* 2016.
9. Xuewen Hao, Yan Cao, Lai Zhang, Yongyong Zhang, Jianguo Liu*, *Fluoroquinolones in the Wenyu River Catchment, China: Occurence Simulation and Risk Assessment, Environmental Toxicology and Chemistry,* 2015.
10. Lai Zhang, Yan Cao, Xuewen Hao, Yongyong Zhang, Jianguo Liu*, *Application of the GREAT-ER model for environmental risk assessment of nonylphenol and nonylphenol ethoxylates in China, Environmental Science and Pollution Research,* 2015.
11. Li Li, Jianguo Liu*, Jianxin Hu, *Global inventory, long-range transport and environmental distribution of dicofol, Environmental Sciences & Technology,* 2015.
12. Zhu jing, Liu Jianguo*, Zhang Lai, Yi Shan, Hao Xuewen, *Building Methodology for Scocial-economic Analysis in Chemcials Management, Environmental Science& Technology (Chinese Journal), 2013.*
13. *Lai Zhang, Jianguo Liu*, Jian*xin Hu, Chao Liu, Weiguang Guo, Qiang Wang, Hong Wang. *The inventory of sources, environmental releases and risk assessment for perfluorooctane sulfonate in China, Environmental Pollution*, 2012.

Technological and standards evaluation studies

1. GUO Weiguang, LIU Jianguo*, ZHANG Lai. *A comprehensive assessment of typical municipal solid waste incineration technologies in China. Research of Environmental Sciences(Chinese journal)*, 2012.
2. Liu Jianguo, Liu Yang. The significance and standards of the evaluation Carbon dioxide in indoor environment, J*ournal of Environmental Health (Chinese journal)*, 2005.

Environmental chemistry studies (Laboratory-modeling study of my M.S. stage)

1. LIU Jianguo, SHAO Ke-sheng, SHAO Min, ZHANG Yuan-hang, TANG Xiao-yan,

Characteristic $\delta^{13}C$ of Methane from a Typical Metropolitan Landfill in China, Research of Environmental Sciences(Chinese journal), 2004.

2. J.G. Liu, Y.H. Zhang, K.S. Shao, M. Shao, L.M. Zeng, S.H. Lu, S. Slanina & H.A.C. Denier van der Gon, *Estimation of regional methane emission from rice fields using simple atmospheric diffusion models. Nutrient Cycling in Agroecosystems*, 2000.

Annex: A brief introduction of my key monograph based on Ph.D thesis

Environmentally Sound Management of Chemicals: Risk Management & Governance

[Beijing: Chinese Environmental Science Press, 2008. in Chinese].

My research on chemicals management started from the Stockholm Convention. After participations of a few governmental surveys, study tours (to Europe) and projects for China to prepare the implementation of the Convention during 2002-2003, I realized that the POPs issue was just 'a corner of an iceberg' of global chemicals issues; while laws, institutions and a regulatory systems of ESMC had been developed in the developed countries for about 30 years, there was no much awareness, knowledge, polices and even almost no specialized studies on that yet in China at that time.

After a comprehensive learning of the international chemicals management, my Ph.D research focused on the decision/policy & action making mechanisms under the uncertainty of the risk assessment and multiple interests of stakeholders/actors in chemicals management.

In my Ph.D dissertation and the monograph published later on, I explored the scientific uncertain and the subjective nature of the processes of the risk assessment & risk management of chemicals both in the theory and practice, indicated the multiple social-economic factors and polynary actors (government, industry, NGOs and public) involved in the decision & action-making of that; Then, as an great effort(and also interest) for me trying to make solution across the natural and social sciences, I explored the nature and structure of the governance on chemicals management at global, national and government levels through series of empirical studies on: international regimes, organizations and interactions on ESMC(global level), the dominant voluntary agreements (VAs) or partnerships between the government and industries on chemicals management in OECD countries, the popularity of initiatives or stewardships(e.g., Responsible Care)from the chemical industries, the actual decision-making of stakeholders engagement (e.g., Chemical Stakeholder Forum in UK) (national level), and different inter-sector coordination forms within the government of different countries(government level). Finally, I performed a comprehensive analysis and review of the national situation on chemicals management in China, and then figured out a holistic proposal and a strategy on the construction of good governance of chemicals to achieve ESMC in China.