

MING XU, PH.D.

School for Environment and Sustainability
Department of Civil and Environmental Engineering
University of Michigan
440 Church St., Ann Arbor, MI 48109-1041
Tel: 734-763-8644; Fax: 734-936-2195; Email: mingxu@umich.edu
Web: <http://www.mingxugroup.org>

EDUCATION

- **Ph.D.**, Civil and Environmental Engineering, Arizona State University, Tempe, AZ, 2009
- **M.S.**, Environmental Science and Engineering, Tsinghua University, Beijing, China, 2006
- **B.S.**, Environmental Engineering, Tsinghua University, Beijing, China, 2003

PROFESSIONAL EXPERIENCES

- **University of Michigan**
 - Director of China Programs, School for Environment and Sustainability, 09/2017-present
 - Associate Professor
 - School for Environment and Sustainability (formally School of Natural Resources and Environment), 05/2016-present
 - Department of Civil and Environmental Engineering, 05/2016-present
 - Assistant Professor
 - School of Natural Resources and Environment, 09/2010-05/2016
 - Department of Civil and Environmental Engineering, 09/2011-05/2016
 - Co-Director, Graduate Certificate Program in Industrial Ecology, 09/2012-present
 - Core Faculty, Center for Sustainable Systems, 09/2010-present
 - Faculty Associate, Energy Institute, 09/2010-present
 - Faculty Associate, Program in the Environment, 11/2010-present
 - Faculty Affiliate, Erb Institute for Global Sustainable Enterprise, 01/2011-present
 - Faculty Associate, Lieberthal-Rogel Center for Chinese Studies, 04/2012-present
 - Faculty Associate, China Data Center, 11/2015-present
 - Affiliated Faculty, Michigan Institute for Data Science, 11/2015-present
 - Affiliated Faculty, Michigan Institute for Computational Discovery & Engineering, 01/2016-present
- **Georgia Institute of Technology**
 - Postdoctoral Fellow, Brook Byers Institute for Sustainable Systems, 06/2009-08/2010

AWARDS AND HONORS

- Nanova/CAPEES Frontier Research Award, Chinese-American Professors in Environmental Engineering and Science (CAPEES), 2017 (for “*recognized research leadership and pioneered an innovative research area*” in environmental science and engineering)
- Department of Science and Technology (DOST) Engineering Research and Development for Technology (ERDT) Visiting Professor to De La Salle University, Republic of the Philippines, 02/2017
- Visiting Professor, School of Environment, Tsinghua University, 01/2017-05/2017
- NSF CAREER Award, 2016 (NSF’s “*most prestigious award in support of junior faculty who exemplify the role of teacher-scholars through outstanding research, excellent education and the integration of education and research within the context of the mission of their organizations*”)

- Robert A. Laudise Medal, International Society for Industrial Ecology (ISIE), 2015 (“for outstanding achievements in industrial ecology by a researcher under the age of 36”)
- Recognized for Impact in Global Education (among 54 faculty/staff members recognized campus wide), Council on Global Engagement, University of Michigan, 2013
- Francois Fiessinger Scholarship, Environmental Research and Education Foundation (EREF), 2008-2010
- Excellent Graduate Award, Tsinghua University, 2006
- Excellent Master Thesis Award, Tsinghua University, 2006
- Tsinghua-Samsung First-Class Scholarship, Samsung Corp., 2006
- Danaher-Hach Environment Scholarship, Danaher Corp., 2005

PROFESSIONAL AFFILIATIONS

- American Association for the Advancement of Science (AAAS), Member, 2010-present
- American Society of Civil Engineers (ASCE), Student Member, 2006-2009; Associate Member, 2009-present
- Association of Environmental Engineering and Science Professors (AEESP), Member, 2010-present
- International Input-Output Association (IIOA), Member, 2012-present
- International Society for Industrial Ecology (ISIE), Member, 2009-present

EDITORSHIP AND EDITORIAL BOARD MEMBERSHIP

- **Editor-in-Chief**, *Resources, Conservation & Recycling* (Elsevier), 06/2015-present
- **Editorial Board**, *Journal of Environmental Accounting and Management*, 12/2017-present
- **Guest Editor**, Special Issue on Advances in Complex Adaptive Systems and Industrial Ecology, *Journal of Industrial Ecology* (Wiley), 2015
- **Associate Editor**, *Elementa: Science of the Anthropocene - Sustainable Engineering*, 03/2013-present
- **Associate Editor**, *Resources, Conservation & Recycling* (Elsevier), 01/2013-05/2015

SERVICES

School services

- **Chair, Global Engagement Committee**, School for Environment and Sustainability, 09/2017-present
- **PhD Committee**, School for Environment and Sustainability, 09/2017-05/2018
- **Global Engagement Committee**, School of Natural Resources and Environment, 11/2013-12/2016
- **PhD Committee**, School of Natural Resources and Environment, 09/2013-05/2016
- **Research Committee**, School of Natural Resources and Environment, 09/2012-08/2013
- **Faculty Search Committee**, School of Natural Resources and Environment, 09/2011-05/2012

University services

- **Council of Global Engagement**, University of Michigan, 09/2017-present
- **Committee on Environment and Sustainability Programs**, University of Michigan, 01/2016-04/2016
- **Advisory Committee**, University of Michigan Transportation Research Institute (UMTRI), 09/2014-08/2016
- **Internal Review Committee**, University of Michigan Transportation Research Institute (UMTRI), 10/2014-08/2015

- **Executive Committee**, China Data Center, 07/2013-present

Services to scientific and professional organizations

- **Chair**, Gordon Research Conference on Industrial Ecology, 2022 (elected in 2018, Vice Chair in 2020)
- **President**, Chinese Society for Industrial Ecology, 01/2018-12/2018
- **Award Committee**, Chinese-American Professors in Environmental Engineering and Science (CAPEES), 2018
- **Advisory Board**, Greenometry, 01/2017-present
- **Councilor**, Chinese Society for Industrial Ecology, 07/2015-12/2016
- International Society for Industrial Ecology
 - **Councilor**, 01/2013-12/2015
 - **Award Committee**, 01/2017-06/2017
- **Invited Referee**

Grant proposals (*Ad hoc* reviewer and panelist):

- US National Science Foundation
- US Environmental Protection Agency
- World Bank
- Israel Science Foundation
- Canada Social Sciences and Humanities Research Council
- European Research Council
- Vienna Science and Technology Fund

Book manuscripts:

- United Nations University Press
- Oxford University Press
- CRC Press

Contest:

- China Food Waste Solution Contest 2017 organized by UNEP, FAO, Swedish Environmental Research Institute

Journal manuscripts:

- | | |
|---|---|
| ○ Applied Energy | ○ Journal of Cleaner Production |
| ○ Building and Environment | ○ Journal of Environmental Management |
| ○ Ecological Economics | ○ Journal of Industrial Ecology |
| ○ Ecological Modelling | ○ Natural Resources |
| ○ Energy Economics | ○ Proceedings of the ICE – Engineering Sustainability |
| ○ Energy Policy | ○ Regional Development Dialogue |
| ○ Environmental Engineering and Management | ○ Regional Environmental Change |
| ○ Environmental Management | ○ Resources, Conservation & Recycling |
| ○ Environmental Science & Policy | ○ Science of the Total Environment |
| ○ Environmental Science & Technology | ○ Sustainability |
| ○ Frontiers of Environmental Science and Engineering | ○ Sustainability Science |
| ○ IEEE Transactions on Engineering Management | ○ Water |
| ○ International Journal of Sustainable Transportation | ○ Waste Management |

- **Conference Committees**

- *Chair*: International Conference on Resource Sustainability (icRS), June 27-29, 2018, Beijing, China
- *Advisory Committee*: 2018 International Conferences on Intelligent Manufacturing and Internet of Things (IMIOT'2018) & Intelligent Computing for Sustainable Energy and Environment (ICSEE'2018), September, 2018, Belfast, UK.
- *Program Co-Chair*: 2017 AEESP Research and Education Conference, June 20-22, Ann Arbor, MI
- *Co-Chair*: The 18th International Society for Business Innovation and Technology Management Conference (ISBITM), May 1-3, 2016, Ann Arbor, MI
- *Leadership Committee*: 2015 International Conference on Sustainable Design, Engineering and Construction (ICSDEC 2015), May 10-13, 2015, Chicago, IL
- *Poster Session Chair*:
 - 2016 International Symposium on Sustainable Systems and Technology (ISSST), May 16-18, Phoenix, AZ
 - 2015 International Symposium on Sustainable Systems and Technology (ISSST), May 18-20, Dearborn, MI
- *Organization Committee*: Third ISIE Asia-Pacific Meeting, October 20-21, 2012, Beijing, China
- *Technical/Program Committees*:
 - 2018 International Symposium on Sustainable Systems and Technology (ISSST), June 26-28, 2018, Buffalo, NY
 - Sustainable Asia Conference 2018 (SAC 2018), May 18-21, Beijing, China (Program Committee Co-Chair)
 - 2016 International Conference on Sustainable Infrastructure (ICSI 2016), October 17-19, Shenzhen, China
 - 2016 International Symposium on Sustainable Systems and Technology (ISSST), May 16-18, Phoenix, AZ
 - 2015 International Society for Industrial Ecology (ISIE) Conference, July 7-10, Guildford, UK
 - The 4th Symposium on Industrial Ecology for Young Professionals (SIEYP), July 11, 2015, Guildford, UK
 - 2015 International Symposium on Sustainable Systems and Technology (ISSST), May 18-20, Dearborn, MI
 - The 4th International Engineering Systems Symposium (CESUN 2014), June 8-11, Hoboken, NJ
 - 2014 International Symposium on Sustainable Systems and Technology (ISSST), May 18-21, 2014, Oakland, CA
 - 2013 International Symposium on Sustainable Systems and Technology (ISSST), May 15-17, 2013, Cincinnati, OH
 - IADIS International Conference on Sustainability, Technology and Education 2012 (STE 2012), November, 28-30, 2012, Perth, Australia
 - 2012 IEEE International Symposium on Sustainable Systems and Technology (ISSST), May 16-18, 2012, Boston, MA
 - 2011 IEEE International Symposium on Sustainable Systems and Technology (ISSST), May 16-18, 2011, Chicago, IL
 - 2010 IEEE International Symposium on Sustainable Systems and Technology (ISSST), May 16-19, 2010, Washington, DC

- 2009 International Society for Industrial Ecology (ISIE) Conference, June 21-24, 2009, Lisbon, Portugal
- **Founding Chair**, International Conference on Resource Sustainability (icRS)
- **Founding Co-Chair**, The Symposium on Industrial Ecology for Young Professionals (SIEYP)
- **Chair**, Student Chapter, International Society for Industrial Ecology, 2007-2008

TEACHING

- **University of Michigan**
 - EAS 573 (formally NRE 573), Environmental Footprinting and Input-Output Analysis, Winter 2013; Winter 2014; Winter 2015; Winter 2018
 - ENVIRON 367, Global Enterprise and Sustainable Development, Fall 2011; Winter 2013; Winter 2015; Winter 2018
 - NRE 501.036, Sustainable Systems in Developing Countries, Winter 2011; Winter 2012

STUDENT/POSTDOCTORAL ADVISEES AND VISITING SCHOLARS

- Postdoctoral advisees
 - Shen Qu, Dow Sustainability Fellow, 2015-present
 - Sai Liang, Dow Sustainability Fellow, 2013-2016 (current position: Professor at Beijing Normal University, China)
- Ph.D. students
 - As Committee Chair
 - Morteza Taiebat, Natural Resources and Environment, expected 2020
 - Ping Hou, Natural Resources and Environment, expected 2019
 - Hua Cai, Natural Resources and Environment & Civil and Environmental Engineering, 2015 (immediate placement: Assistant Professor, Purdue University)
 - As Committee Member
 - Katerina Stylianou, Public Health, expected 2018
 - Shamitha Keerthi, Natural Resources and Environment, 2017 (immediate placement: Postdoctoral Researcher, Nature Conservancy)
 - Xi Tian, Economics, Beijing University of Technology (immediate placement: Assistant Professor, Beijing University of Technology), 2017
 - Francisco Sotomayor, Civil and Environmental Engineering, 2016 (immediate placement: Application Scientist, Quantachrome Instruments)
 - Zhihao Chen, Industrial Engineering, 2016 (immediate placement: Analyst, Amazon)
 - Sarang Supekar, Mechanical Engineering, 2015 (immediate placement: Research Fellow, University of Michigan)
 - Najet Bichraoui, Environmental Studies and Sustainability (Examiner), University of Technologies of Troyes, 2015
 - Jose Alfaro, Natural Resources and Environment, 2014 (immediate placement: Assistant Professor of Practice, University of Michigan)
 - Xi Wang, Engineering and Public Policy, Carnegie Mellon University, 2013
- Master thesis students
 - As Committee Chair
 - Kaihui Song, Natural Resources and Environment, 2018 (immediate placement: Ph.D. student, University of Maryland)

- Zahra Bahrani Fard, Natural Resources and Environment, 2017 (immediate placement: Transportation Systems Analyst, Center for Automotive Research)
 - Yifan Xu, Natural Resources and Environment, 2017 (immediate placement: Sustainability Developer, H&M)
 - Rui Shi, Natural Resources and Environment, 2017 (immediate placement: Ph.D. student, John Hopkins University)
 - Zeqi Zhu, Natural Resources and Environment, 2016 (immediate placement: Investor Relationship Manager, Tsing Capital)
 - Jiarui Cai, Natural Resources and Environment, 2016 (immediate placement: Associate Environmental Engineer, Steelcase)
 - Xiaoyue Zhao, Natural Resources and Environment, 2015 (immediate placement: Engineer, China Railway Eryuan Engineering Group)
 - Yu Feng, Natural Resources and Environment, 2014 (current job: Senior Big Data Engineer, EBates)
 - Ye Yue, Natural Resources and Environment, 2013 (immediate placement: Associate Consultant, Bain & Company, Shanghai)
 - Michelle H.W. Lee, Natural Resources and Environment, 2012 (immediate placement: Ph.D. student, Indiana University)
 - Sonika Choudhary, Natural Resources and Environment (Co-Chair), 2012 (immediate placement: Senior Analyst, Pacific Gas & Electric)
- As Committee Member
 - Shreyas Vangala, Natural Resources and Environment, 2016 (immediate placement: Strategy Analysis, New York Power Authority)
 - Yu-De Lee, Natural Resources and Environment, 2014 (immediate placement: self-employed start-up)
 - Minetta van Strien, Natural Resources and Environment, 2012 (immediate placement: Sustainability Coordinator, Central Community College)
- Master's Projects advised (*capstone of Master's students in School of Natural Resources and Environment, conducted by groups of students with diverse background to solve problems for real-world clients*)
 - Water for All: Sustainable Solutions for Reducing and Utilizing Sarvajal's Reverse Osmosis Brine in Northwestern India (client: Piramal Water Private Limited), 2011-2012
 - Sustainable Enterprise: Plastic Waste Recycling in Jakarta (client: PepsiCo), 2011-2012
 - Pursuing Sustainability with University of Michigan, Patient Food and Nutrition Services: Aligning Sustainable Practices with Healthcare Delivery (client: University of Michigan), 2012-2013
 - Green Infrastructure Analysis, Design and Application in Detroit's Lower Eastside Action Plan (client: Lower Eastside Action Plan), 2012-2013 (secondary advisor)
 - Exploring Commodity Tradeoffs in Soft Commodity Production (client: World Wildlife Fund), 2013-2014
 - The Business Case for Sustainable Agriculture in Asia (client: Kellogg Company), 2014-2015 (secondary advisor)
 - Defining Next Generation Supply Chain Sustainability Performance & Resilience to Climate Change and Environmental Risks (client: Schneider Electric), 2014-2015
 - Carbon Sources, Sinks and Offsets in Global Forest Investment (client: Global Forest Partners LP), 2015-2016
 - Stone Paper LCA (client: Taiwan Lung Meng Technology Co. Ltd), 2015-2016

- Combination of Water Sensitive Urban Design and Ecological Landscape Design in China (client: SPD Planning & Design Corporation), 2015-2016 (secondary advisor)
- Natural Capital Valuation and Post-Consumer Waste Assessment: A study of Amcor's Flexible Packaging (client: Amcor), 2016-2017
- Comparing Carbon Footprints of Brick & Mortar and E-commerce Retail (client: Stitch Fix), 2018-2019
- Undergraduate students
 - Amir Soleimany, Literature, Science, and the Arts, 2018
 - Abby Bass, Program in the Environment, 2018
 - Imari Willingham, Environmental Engineering, 2018-present
 - Beatrix Yan, Program in the Environment, 2015-2017
 - Kristen Collins, Program in the Environment, 2015-2016
 - Anthony Zheng, Literature, Science, and the Arts, 2015-2016
 - Xintong Zhu, Literature, Science, and the Arts, 2015-2016
 - Kate Peterson, Mechanical Engineering, summer 2015
 - Donald Chao, Business, 2013-2014
 - Austin Smith, Literature, Science, and the Arts, 2012-2014
 - Ranya Ilayian, Literature, Science, and the Arts, 2011-2012
 - Shane Freeman, Economics, 2010-2011
- High school student researchers
 - Megan He, Ann Arbor Huron High School, 2014-2016
- Visiting scholars
 - Yuantao Yang, PhD Candidate, Beijing Institute of Technology, 12/2017-12/2018
 - Cuiyang Feng, PhD Candidate, China University of Petroleum, 11/2017-11/2018
 - Xuechun Yang, PhD Candidate, Shandong University, 10/2017-10/2018
 - Haoran Zhao, PhD Candidate, North China Electric Power University, 10/2017-10/2018
 - Rongrong Deng, Associate Professor, University of South China, 09/2017-08/2018
 - Guohua Yang, Associate Professor, Shanxi University of Finance and Economics, 09/2017-08/2018
 - Tiantian Feng, Assistant Professor, China University of Geosciences (Beijing), 09/2017-08/2018
 - Jiangxue Zhang, Associate Professor, Beijing Normal University, 09-2017-03/2018
 - Lingzhi Chu, undergraduate student, Tsinghua University, China, 06/2017-08/2017
 - Chulong Huang, Professor, Quanzhou Normal University, China, 05/2017-05/2018
 - Yuhua Guo, Research Scientist, China Central Iron and Steel Research Institute, China, 05/2017-05/2018
 - Chengkang Gao, Associate Professor, Northeastern University, China, 04/2017-04/2018
 - Yun Li, Ph.D. Candidate, North China Electric Power University, China, 12/2016-12/2017
 - Miaoqia Lu, Ph.D. Candidate, Hong Kong Polytechnic University, Hong Kong, 04/2016-10/2016
 - Jinchao Li, Associate Professor, North China Electric Power University, China, 03/2016-03/2017
 - Wei Zhao, Associate Professor, Liaoning University of Technology, China, 02/2016-02/2017
 - Jing Li, Professor, Dongbei University of Finance and Economics, China, 02/2016-02/2017
 - Guiyuan Xue, Ph.D. Candidate, North China Electric Power University, China, 11/2015-07/2016

- Xi Tian, Ph.D. Candidate, Beijing University of Technology, China, 09/2015-09/2016
- Tianming Bai, M.S. student, Central University of Finance and Economics, China, 09/2015-09/2016
- Hongxia Wang, Ph.D. Candidate, Beihang University, China, 09/2015-09/2016
- Nana Li, Ph.D. Candidate, North China Electric Power University, China, 09/2015-07/2016
- Ning Liu, Associate Professor, Nanjing University, China, 08/2015-01/2016
- Siyun Yang, Senior Manager, China Datang Overseas Investment Company, China, 05/2015-05/2016
- Yancheng Liu, Associate Professor, Tsinghua University, China, 04/2015-03/2016
- Da Liu, Associate Professor, North China Electric Power University, China, 12/2014-12/2015
- Ru Guo, Associate Professor, College of Environmental Science and Engineering, Tongji University, China, 11/2014-10/2015
- Tiantian Feng, Ph.D. Candidate, North China Electric Power University, China, 11/2014-04/2015
- Rao Rao, Ph.D. Candidate, North China Electric Power University, China, 11/2014-04/2015
- Sen Guo, Ph.D. Candidate, North China Electric Power University, China, 10/2014-10/2015
- Yingjia Liu, Ph.D. Candidate, Chinese Academy of Social Sciences, China, 10/2014-06/2015
- Meng Xu, Ph.D. Candidate, Hong Kong University of Science and Technology, Hong Kong, 08/2014-12/2014
- Narges Shahraki, Ph.D. Candidate, Koç University, Turkey, 07/2014-11/2014
- Ruoxi Kang, undergraduate Student, Tsinghua University, China, 07/2014-08/2014
- Ying Dong, Associate Professor, Zhejiang University of Science and Technology, China, 03/2014-03/2015
- Yanxia Zhang, Ph.D. Candidate, Nanjing University, China, 10/2013-04/2014
- Ling Ji, Ph.D. Candidate, North China Electric Power University, China, 09/2013-08/2014
- Yinan Tang, Ph.D. Candidate, Karlsruhe Institute of Technology, Germany, 09/2013-12/2013
- Najet Bichraoui, Ph.D. Candidate, University of Technologies of Troyes, France, 01/2013-12/2014
- Hongqing Li, Ph.D. Candidate, China Agricultural University, China, 05/2012-08/2013
- Lin Zeng, Ph.D. Candidate, Tsinghua University, China, 02/2012-05/2012
- Lan Li, Professor, Wuhan University, China, 12/2011-05/2012

STUDENT/POSTDOC ACHIEVEMENTS

- Third Place, Student Poster Competition, 2017 Joint Conference for International Society for Industrial Ecology (ISIE) and International Symposium on Sustainable Systems and Technology (ISSST), June 25-29, 2017, Chicago, IL
- Outstanding Paper Award, 18th International Society for Business Innovation and Technology Management Conference (ISBITM), May 1-3, 2016, Ann Arbor, MI
- Third Place, Student Paper Competition, 2014 International Symposium on Sustainable Systems and Technology, May 18-21, 2014, Oakland, CA
- Third Place, Student Poster Competition, 2013 AEESP 50th Anniversary Conference, July 14-16, 2013, Golden, CO

- Second Place, Poster Competition, 3rd Symposium on Industrial Ecology for Young Professionals, June 29, 2013, Ulsan, Korea
- First Place, Student Poster Competition, 7th International Society for Industrial Ecology Biennial Conference, June 25-28, 2013, Ulsan, Korea

DATABASE AND WEBSITE

- Chinese Environmentally Extended Input-Output (CEEIO) Database, <http://www.ceeio.com>

ENTREPRENEURSHIP RECOGNITIONS

- Michigan Business Challenge Semi-Finalist (top 8), University of Michigan, 2014
- Chinese Business Challenge Finalist (top 10), China Entrepreneur Network Michigan, 2013
- Mayleben Venture Shaping Grant, Zell Lurie Institute for Entrepreneurial Studies, University of Michigan, 2013

MEDIA EXPOSURE

- NBC MACH, "This skyscraper-sized air purifier is the world's tallest," 03/21/2018
- China Daily USA, "Microsoft, IBM help on pollution," 01/19/2016
- Al Jazeera English, "News Hour," 01/01/2016

GRANTS

External

- **Co-PI**, "Travel behavior changes and sustainability implications of CAV fleet deployment," Ford Motor Company, \$150,000, 07/01/2018-12/31/2019.
- **PI**, "UNS: U.S.-China: Integrated Systems Modeling of Food-Energy-Water (FEW) Nexus for Urban Sustainability," National Science Foundation, \$499,990, CBET-1605202, 06/01/2016-05/31/2020. (Xu share: \$409,784)
- **Single PI**, "CAREER: Computational Approaches for Life Cycle Inventory Database Development," National Science Foundation, \$509,800, CBET-1554349, 02/01/2016-01/31/2021.
- **PI**, "Water Scarcity Risk for the Global Trade Network," National Science Foundation, \$319,200, CBET-1438197, 09/01/2014-08/31/2017. (Xu share: \$290,887)
- **PI**, "Developing a Spatially-Explicit Agent-Based Life Cycle Analysis Framework for Improving the Environmental Sustainability of Bioenergy Systems," National Science Foundation, \$309,097, CBET-1132581, 09/01/2011-08/31/2015. (Xu share: \$251,890)
- **Co-PI** (PI: D. Assanis; H. Peng), "CERC-CV: U.S.-China Clean Energy Research Center for Clean Vehicles," Department of Energy, \$12,500,000, DE-PI0000012, 10/01/2010-09/30/2015. (Xu share: \$121,217)
- **Co-PI** (PI: B. Allenby), "The First Symposium on Industrial Ecology for Young Professionals, May 17, 2009 Tempe, AZ," National Science Foundation, \$37,886, GBET-0903619, 05/01/2009-07/31/2009.

Internal

- **Single PI**, "An interactive website for environmental footprints of products in China," Lieberthal and Rogel Center for Chinese Studies (Outreach Grant), \$9,050, 05/01/2018-02/28/2019.
- **Single PI**, "Mapping greenhouse gas emissions in China," Lieberthal and Rogel Center for Chinese Studies, \$10,374, 05/01/2018-04/30/2019.
- **Single PI**, "Impacts of global water scarcity under climate change on China-US bilateral trade," Lieberthal and Rogel Center for Chinese Studies, \$8,000, 01/01/2017-12/31/2017.

- **PI**, "Defining innovative sustainable solutions for film-based packages," MCubed Diamond sponsored by Procter & Gamble, \$60,000, 01/01/2016-06/30/2017.
- **Single PI**, "Impacts of China's water scarcity on the global trade network," Lieberthal and Rogel Center for Chinese Studies, \$6,900, 01/01/2016-12/31/2016.
- **PI**, "Uncovering the food-energy-water nexus for urban sustainability," MCubed, \$60,000, 10/01/2015-04/29/2017.
- **Co-PI** (PI: A. Agrawal), "Transforming Sustainability Education and Case-Based Teaching," Third Century Initiative, \$1,595,749, 01/01/2016-12/31/2019.
- **Single PI**, "Global Drivers of Greenhouse Gas Emissions of Southeast Asia," Center for Southeast Asian Studies, \$500, 07/01/2015-05/31/2016.
- **Single PI**, "Economic Drivers of Historical Labor Force Variations in Japan," Center for Japanese Studies, \$5,000, 05/01/2015-04/30/2016.
- **Single PI**, "Combination of Water Sensitive Urban Design and Ecological Landscape Design in China (SPD)," International Institute, \$10,000, 05/01/2015-06/30/2016.
- **Single PI**, "Decoupling of Economic Growth and Environmental Pressure in China," Center for Chinese Studies, \$9,459, 06/01/2014-05/31/2015.
- **Co-PI** (PI: O. Jolliet), "Influence of Global Trade on the Human Health Impacts of Particulate Matter Induced by Consumption," MCubed, \$60,000, 09/01/2013-08/31/2014.
- **Single PI**, "Structure of the Global Trade Network," Rackham Sp/Su Research Grant, 05/01/2013-08/31/2013.
- **Co-PI** (PI: P. Adriaens), "An Agent-Based Modeling Approach to Sustainability Driven Value Creation in the Paper Industry," Erb Institute Faculty Affiliate Grant, \$10,000, 07/01/2012-06/30/2013.
- **PI** (U-M), "Integrated Energy-Economy-Environment (3E) Modeling for Clean Vehicle Development in China," UM-SJTU Collaboration on Renewable Energy Science and Technology, \$200,000, 09/01/2012-08/31/2014.
- **PI**, "Advancing the Science of Infrastructure Ecology by Exploring and Explaining Universal Regularities of Urban Sustainability Indicators," UM SNRE Seed Grant, \$29,138, 01/01/2012-08/31/2013.
- **Co-PI** (PI: J. Kelly), "Advancing livable communities: IA of infrastructure greening within Detroit for improved sustainable transportation, water quality, and health," Graham Institute, \$20,000, 11/30/2011-5/31/2012.
- **Single PI**, "Creative solutions for addressing wastewater in India," International Institute, \$10,000, 03/01/2011-06/30/2012.
- **Co-PI** (PI: J. Newell), "Research Roadmap for Urban Sustainability," UM SNRE Seed Grant, \$19,418, 01/01/2011-12/31/2011.

PUBLICATIONS (underlined: student/postdoc/visiting scholar advisees; *corresponding author)

Citation profiles

- Google Scholar: <https://scholar.google.com/citations?hl=en&user=V3n7rKMAAAAJ>
- ResearcherID: <http://www.researcherid.com/rid/F-3653-2010>
- Scopus: <http://www.scopus.com/authid/detail.url?authorId=55519747200>

Refereed journals

73. Qu, S.; Li, Y.; Liang, S.; Yuan, J.-H.; **Xu, M.*** Virtual CO₂ emission flows in the global electricity trade network. *Environmental Science & Technology* **2018**, in press.

- J72. Wu, T.; Shen, Q.; **Xu, M.***; Peng, T.-D.; Ou, X.-M.* Development and application of an energy use and CO₂ emissions reduction evaluation model for China's online car hailing services. *Energy* **2018**, *154*, 298-307.
- J71. Lu, M.-J.; Taiebat, M.; **Xu, M.**; Hsu, S.-C. Multi-agent spatial simulation of autonomous taxis for urban commute: travel economics and environmental impacts. *Journal of Urban Planning and Development* **2018**, in press.
- J70. Hou, P.; Cai, J.-R.; Qu, S.; **Xu, M.*** Estimating missing unit process data in life cycle assessment using a similarity-based approach. *Environmental Science & Technology* **2018**, *52* (9), 5259-5267.
- J69. Li, J.-C.; Chen, L.; Xiang, Y.-W.; **Xu, M.** Research on influential factors of PM_{2.5} within the Beijing-Tianjin-Hebei region in China. *Discrete Dynamics in Nature and Society* **2018**, *2018*, 6375391.
- J68. Qu, S.; Liang, S.; Konar, M.; Zhu, Z.-Q.; Chiu, A. S. F.; Jia, X.-P.; **Xu, M.*** Virtual water scarcity risk to the global trade system. *Environmental Science & Technology* **2018**, *52* (2), 673-683.
- J67. Cai, B.-F.; Liang, S.; Zhou, J.; Wang, J.-N.; Cao, L.-B.; Qu, S.; **Xu, M.**; Yang, Z.-F. China high resolution emission database (CHRED) with point emission sources, gridded emission data, and supplementary socioeconomic data. *Resources, Conservation & Recycling* **2018**, *129*, 232-239.
- J66. Rao, R.; Cai, H.; **Xu, M.** Modeling electric taxis' charging behavior using real-world data. *International Journal of Sustainable Transportation*, in press.
- J65. Liang, S.; Wang, Y.-F.; Zhang, C.; **Xu, M.**; Yang, Z.-F.; Liu, W.-D.; Liu, H.-G.; Chiu, A. S. F. Final production-based emissions of regions in China. *Economic Systems Research* **2018**, *30* (1), 18-36.
- J64. Liang, S.; Stylianou, K.; Jolliet, O.*; Supekar, S.; Qu, S.; Skerlos, S. J.*; **Xu, M.*** Consumption-based human health impacts of primary PM_{2.5}: the hidden burden of international trade. *Journal of Cleaner Production* **2017**, *167*, 133-139.
- J63. Qu, S.; Liang, S.; **Xu, M.*** CO₂ emissions embodied in interprovincial electricity transmissions in China. *Environmental Science & Technology* **2017**, *51* (18), 10893-10902.
- J62. Chang, J.; Yu, M.; Shen, S.-Q.; **Xu, M.** Location design and relocation of a mixed car-sharing fleet with a CO₂ emission constraint. *Service Science* **2017**, *9* (3), 205-218.
- J61. Gu, Y.-F.; Wu, Y.-F.; **Xu, M.**; Wang, H.-D.; Zuo, T.-Y. To realize better extended producer responsibility: redesign of WEEE fund mode in China. *Journal of Cleaner Production*, **2017**, *164*, 347-356.
- J60. Heard, B. R.; Miller, S. A.; Liang, S.; **Xu, M.** Emerging challenges and opportunities for the food-energy-water nexus in urban systems. *Current Opinion in Chemical Engineering*, **2017**, *17*, 48-53.
- J59. Qu, S.; Wang, H.-X.; Liang, S.; Shapiro, A. M.; Suh, S.; Sheldon, S.; Zik, O.; Fang, H.; **Xu, M.*** A Quasi-Input-Output model to improve the estimation of emission factors for purchased electricity from interconnected grids. *Applied Energy* **2017**, *200*, 249-259.
- J58. Pang, M.-Y.; Zhang, L.-X.; Liang, S.; Liu, G.-Y.; Wang, C.-B.; Hao, Y.; Wang, Y.-F.; **Xu, M.** Trade-off between carbon reduction benefits and ecological costs of biomass-based power plants with carbon capture and storage (CCS) in China. *Journal of Cleaner Production* **2017**, *144*, 279-286.
- J57. Liang, S.; Qu, S.; Zhu, Z.-Q.; Guan, D.-B.; **Xu, M.*** Income-based greenhouse gas emissions of nations. *Environmental Science & Technology* **2017**, *51* (1), 346-355.
- J56. Hui, M.-L.; Wu, Q.-R.; Wang, S.-X.; Liang, S.; Zhang, L.; Wang, F.-Y.; Lenzen, M.; Wang, Y.-F.; Xu, L.-X.; Lin, J.-T.; Yang, H.; Lin, Y.; Larssen, T.; **Xu, M.**; Hao, J.-M. Mercury flows in China and global drivers. *Environmental Science & Technology* **2017**, *51* (1), 222-231.
- J55. Liang, S.; Feng, T.-T.; Qu, S.; Chiu, A. S. F.; Jia, X.-P.; **Xu, M.*** Developing the Chinese Environmentally Extended Input-Output (CEEIO) Database. *Journal of Industrial Ecology* **2017**, *21* (4), 953-965.
- J54. Pandit, A.; Minne, E. A.; Li, F.; Brown, H.; Jeong, H.; James, J.-A. C.; Newell, J. P.; Weissburg, M.; Chang, M. E.; **Xu, M.**; Yang, P.; Wang, R.-S.; Thomas, V. M.; Yu, X.-W.; Lu, Z.-M.; Crittenden, J. C.

- Infrastructure ecology: an evolving paradigm for sustainable urban development. *Journal of Cleaner Production*, **2017**, *163*, S19-S27.
- J53. Zhang, C.; Zhong, L.-J.; Liang, S.; Sanders, K. T.; Wang, J.; **Xu, M.** Virtual scarce water embodied in inter-provincial electricity transmission in China. *Applied Energy* **2016**, *187*, 438-448.
- J52. Tian, X.; Wu, Y.-F.*; Qu, S.; Liang, S.; **Xu, M.***, Zuo, T.-Y. The disposal and willingness to pay for residents' scrap fluorescent lamps in China: a case study of Beijing. *Resources, Conservation & Recycling* **2016**, *114*, 103-111.
- J51. Ji, L.; Jia, X.-P.; Chiu, A. S. F.; **Xu, M.*** Global electricity trade network: structures and implications. *PLOS ONE* **2016**, *11* (8), e0160869.
- J50. Liang, S.; Wang, H.-X.; Qu, S.; Feng, T.-T.; Guan, D.-B.; Fang, H.; **Xu, M.*** Socioeconomic drivers of greenhouse gas emissions in the United States. *Environmental Science & Technology* **2016**, *50* (14), 7535-7545.
- J49. Liu, D.; **Xu, M.**; Niu, D.-X.; Wang, S.-K.; Liang, S. Forecast modelling via variations in binary image-encoded information exploited by deep learning neural networks. *PLOS ONE* **2016**, *11* (6), e0157028.
- J48. Gu, Y.-F.; Wu, Y.-F.*; **Xu, M.***; Mu, X.-Z.; Zuo, T.-Y. Waste electrical and electronic equipment (WEEE) recycling for a sustainable resource supply in the electronics industry in China. *Journal of Cleaner Production* **2016**, *127*, 331-338.
- J47. Cai, H.*; Zhan, X.-W.; Zhu, J.; Jia, X.-P.; Chiu, A. S. F.; **Xu, M.*** Understanding taxi travel patterns. *Physica A: Statistical Mechanics and Its Applications* **2016**, *457*, 590-597.
- J46. Liang, S.; Qi, Z.-L.; Qu, S.; Zhu, J.; Chiu, A. S. F.; Jia, X.-P.; **Xu, M.*** Scaling of global input-output networks. *Physica A: Statistical Mechanics and Its Applications* **2016**, *452*, 311-319.
- J45. Liang, S.; Qu, S.; **Xu, M.*** Betweenness-based method to identify critical transmission sectors for supply chain environmental pressure mitigation. *Environmental Science & Technology* **2016**, *50* (3), 1330-1337.
- J44. Gu, Y.-F.; Wu, Y.-F.*; **Xu, M.***, Wang, H.-D.; Zuo, T.-Y. The stability and profitability of the informal WEEE collector in development countries: a case study of China. *Resources, Conservation & Recycling* **2016**, *107*, 18-26.
- J43. Liang, S.; Guo, S.; Newell, J. P.; Qu, S.; Feng, Y.; Chiu, A. S. F.; **Xu, M.*** Global drivers of Russian timber harvest. *Journal of Industrial Ecology*, **2016**, *20* (3), 515-525.
- J42. Ji, L.; Liang, S.; Qu, S.; Zhang, Y.-X.; **Xu, M.***; Jia, X.-P.; Jia, Y.-T.; Niu, D.-X.; Yuan, J.-H.; Hou, Y.; Wang, H.-K.; Chiu, A. S. F.; Hu, X.-J. Greenhouse gas emission factors of purchased electricity from interconnected grids. *Applied Energy* **2016**, *184*, 751-758.
- J41. Yue, Y.; Wang, T.; Liang, S.*; Yang, J.; Hou, P.; Qu, S.; Zhou, J.; Jia, X.-P.; Wang, H.-T.; **Xu, M.*** Life cycle assessment of high speed rail in China. *Transportation Research Part D: Transport and Environment* **2015**, *41*, 367-376.
- J40. Shahraki, N.; Cai, H.; Turkay, M.; **Xu, M.** Optimal locations of electric public charging stations using real world vehicle travel patterns. *Transportation Research Part D: Transport and Environment* **2015**, *41*, 165-176.
- J39. Bichraoui-Draper, N.; **Xu, M.***; Miller, S. A.; Guillaume, B. Agent-based life cycle assessment for switchgrass-based bioenergy systems. *Resources, Conservation & Recycling* **2015**, *103*, 171-178.
- J38. **Xu, M.***; Cai, H.; Liang, S. Big data and industrial ecology. *Journal of Industrial Ecology* **2015**, *19* (2), 205-210.
- J37. Liang, S.; Feng, Y.; **Xu, M.*** Structure of the global virtual carbon network revealing important sectors and communities. *Journal of Industrial Ecology* **2015**, *19* (2), 307-320.
- J36. Zhang, Y.-X.; Wang, H.-K.; Liang, S.; **Xu, M.**; Zhang, Q.; Zhao, H.-Y.; Bi, J. A dual strategy for controlling energy consumption and air pollution in China's metropolis of Beijing. *Energy* **2015**, *81*, 294-303.

- J35. Pontau, P.; Hou, Y.; Cai, H.; Zhen, Y.; Jia, X.-P.; Chiu, A. S. F.; **Xu, M.** Assessing land-use impacts by clean vehicle systems. *Resources, Conservation & Recycling* **2015**, *95*, 112-119.
- J34. Cai, H.; Jia, X.-P.; Chiu, A. S. F.; Hu, X.-J.; **Xu, M.*** Siting public electric vehicle charging stations in Beijing using big-data informed travel patterns of the taxi fleet. *Transportation Research Part D: Transport and Environment* **2014**, *33*, 39-46.
- J33. Ji, L.; Niu, D.-X.; **Xu, M.**; Huang, G.-H. An optimization model for regional micro-grid system management based on hybrid inexact stochastic-fuzzy chance-constrained programming. *International Journal of Electrical Power & Energy Systems* **2015**, *64*, 1025-1039.
- J32. Zhang, Y.-X.; Wang, H.-K.; Liang, S.; **Xu, M.**; Liu, W.-D.; Li, S.-L.; Zhang, R.-R.; Nielsen, C. P.; Bi, J. Temporal and spatial variations in consumption-based carbon dioxide emissions in China. *Renewable and Sustainable Energy Reviews* **2014**, *40*, 60-68.
- J31. Liang, S.; Zhang, C.; Wang, Y.-F.; **Xu, M.***; Liu, W.-D. Virtual atmospheric mercury emission network in China. *Environmental Science & Technology* **2014**, *48* (5), 2807-2815.
- J30. Choudhary, S.; Liang, S.; Cai, H.; Keoleian, G. A.; Miller, S. A.; Kelly, J.; **Xu, M.*** Reference and functional unit can change bioenergy pathway choices. *The International Journal of Life Cycle Assessment* **2014**, *19* (4), 796-805.
- J29. Liang, S.*; Liu, Z.; Crawford-Brown, D.; Wang, Y.-F.; **Xu, M.*** Decoupling analysis and socioeconomic drivers of environmental pressure in China. *Environmental Science & Technology* **2014**, *48* (2), 1103-1113.
- J28. Zeng, L.; **Xu, M.***; Liang, S.; Zeng, S.-Y.; Zhang, T.-Z.* Revisiting drivers of energy intensity in China during 1997-2007: a structural decomposition analysis. *Energy Policy* **2014**, *67*, 640-647.
- J27. Yuan, J.-H.*; Xu, Y.; Zhang, X.-P.; Hu, Z.*; **Xu, M.*** China's 2020 clean energy target: consistency, pathways and policy implications. *Energy Policy* **2014**, *65*, 692-700.
- J26. Liang, S.*; **Xu, M.***; Suh, S.; Tan, R. R. Unintended environmental consequences and co-benefits of economic restructuring. *Environmental Science & Technology* **2013**, *47* (22), 12894-12902.
- J25. Cai, H.; **Xu, M.*** Greenhouse gas implications of fleet electrification based on Big Data-informed individual travel patterns. *Environmental Science & Technology* **2013**, *47* (16), 9035-9043.
- J24. Cai, H.; Hu, X.-J.; **Xu, M.*** Impact of emerging clean vehicle system on water stress. *Applied Energy* **2013**, *111*, 644-651.
- J23. Liang, S.; **Xu, M.**; Liu, Z.; Suh, S.; Zhang, T.-Z. Socioeconomic drivers of mercury emissions in China from 1992 to 2007. *Environmental Science & Technology* **2013**, *47* (7), 3234-3240.
- J22. Liang, S.; Liu, Z.; **Xu, M.**; Zhang, T.-Z. Waste oil derived biofuels in China bring brightness for global GHG mitigation. *Bioresource Technology* **2013**, *131*, 139-145.
- J21. Liang, S.; **Xu, M.**; Zhang, T.-Z. Life cycle assessment of biodiesel production in China. *Bioresource Technology* **2013**, *129*, 72-77.
- J20. Liang, S.; **Xu, M.**; Zhang, T.-Z. Unintended consequences of bioethanol feedstock choice in China. *Bioresource Technology* **2012**, *125*, 312-317.
- J19. Yuan, J.-H.*; Xu, Y.; Hu, Z.*; Yu, Z.-F.; Liu, J.-Y.; Hu, Z.-G.; **Xu, M.*** Managing electric power system transition in China. *Renewable and Sustainable Energy Reviews* **2012**, *16* (8), 5660-5677.
- J18. Yuan, J.-H.; Hou, Y.; **Xu, M.*** China's 2020 carbon intensity target: consistency, implementations, and policy implications. *Renewable and Sustainable Energy Reviews* **2012**, *16* (7), 4970-4981.
- J17. **Xu, M.***; Li, R.; Crittenden, J. C.; Chen, Y.-S. CO₂ emissions embodied in China's exports from 2002 to 2008: a structural decomposition analysis. *Energy Policy* **2011**, *39* (11), 7381-7388.
- J16. **Xu, M.***; Allenby, B. R.; Crittenden, J. C. Interconnectedness and resilience of the U.S. economy. *Advances in Complex Systems* **2011**, *14* (5), 649-672.
- J15. Yang, J.; **Xu, M.**; Zhang, X.-Z.; Hu, Q.; Sommerfeld, M.; Chen, Y.-S. Life-cycle analysis on biodiesel production from microalgae: water footprint and nutrients balance. *Bioresource Technology* **2011**, *102* (1), 159-165.

- J14. **Xu, M.*** Development of the Physical Input Monetary Output model for understanding material flows within ecological-economic systems. *Journal of Resources and Ecology* **2010**, *1* (2), 123-134.
- J13. **Xu, M.***; Crittenden, J. C.; Chen, Y.-S.; Thomas, V. M.; Noonan, D. S.; DesRoches, R.; Brown, M. A.; French, S. P. Gigaton problems need gigaton solutions. *Environmental Science & Technology* **2010**, *44* (11), 4037-4041.
- J12. **Xu, M.***; Williams, E.; Allenby, B. Assessing environmental impacts embodied in manufacturing and labor input for the China-U.S. trade. *Environmental Science & Technology* **2010**, *44* (2), 567-573.
- J11. **Xu, M.***; Allenby, B.; Chen, W.-Q. Energy and air emissions embodied in China-U.S. trade: eastbound assessment using adjusted bilateral trade data. *Environmental Science & Technology* **2009**, *43* (9), 3378-3384.
- J10. **Xu, M.***; Allenby, B.; Kim, J.; Kahhat, R. A dynamic agent-based analysis for the environmental impacts of conventional and novel book retailing. *Environmental Science & Technology* **2009**, *43* (8), 2851-2857.
- J9. Kim, J.; **Xu, M.**; Kahhat, R.; Allenby, B.; Williams, E. Designing and assessing a sustainable networked delivery (SND) system: hybrid business-to-consumer book delivery case study. *Environmental Science & Technology* **2009**, *43* (1), 181-187.
- J8. Williams, E.; Kahhat, R.; Allenby, B.; Kavazanjian, E.; Kim, J.; **Xu, M.** Environmental, social, and economic implications of global reuse and recycling of personal computers. *Environmental Science & Technology* **2008**, *42* (17), 6446-6454.
- J7. **Xu, M.**; Zhang, T.-Z.; Allenby, B. How much will China weigh? perspectives from consumption structure and technology development. *Environmental Science & Technology* **2008**, *42* (11), 4022-4028.
- J6. **Xu, M.**; Jia, X.-P.; Shi, L.; Zhang, T.-Z. Societal metabolism in northeast China: case study of Liaoning Province. *Resources, Conservation & Recycling* **2008**, *52* (8), 1082-1086.
- J5. Kahhat, R.; Kim, J.; **Xu, M.**; Allenby, B.; Williams, E.; Zhang, P. Exploring e-waste management systems in the United States. *Resources, Conservation & Recycling* **2008**, *52* (7), 955-964.
- J4. **Xu, M.**; Zhang, T.-Z. Material flows and economic growth in developing China. *Journal of Industrial Ecology* **2007**, *11* (1), 121-140.
- J3. **Xu, M.**; Jia, X.-P.; Shi, L.; Zhang, T.-Z. Accounting and analyzing material metabolism in the economic system of Liaoning Province. *Resources Science* **2006**, *28* (5), 127-133. [in Chinese]
- J2. **Xu, M.**; Zhang, T.-Z. Material input analysis of China economic system. *China Environmental Science* **2005**, *25* (3), 324-328. [in Chinese]
- J1. **Xu, M.**; Zhang, T.-Z. Material flow analysis of fossil fuel usage in the Chinese economy. *Journal of Tsinghua University (Science and Technology)* **2004**, *44* (9), 1166-1170. [in Chinese]

Book chapters

- B4. Keoleian, G. A.; Newell, J. P.; **Xu, M.**; Dreps, E. Sustainable strategies for consumer products in cities. In D. Mazmanian, H. Blanco (Eds.), *Elgar Companion to Sustainable Cities*; Edward Elgar, 2014.
- B3. Pandit, A.; Jeong, H.; Crittenden, J. C.; French, S. P.; **Xu, M.**; Li, K. Sustainable infrastructure and alternatives for urban growth. In H. Cabezas, U. Diwekar (Eds.), *Sustainability: Multi-Disciplinary Perspectives*. Bentham eBooks, 2012.
- B2. Minne, L.; Pandit, A.; Crittenden, J. C.; Begovic, M.; Kim, I.; Jeong, H.; James, J.-A.; Lu, Z.-M.; **Xu, M.**; et al. Energy and water interdependence, and their implications for urban areas. In R. A. Meyers (Ed.), *Encyclopedia of Sustainability Science and Technology*. Springer, New York, 2012.

- B1. Xu, Y.-J.; Zhang, T.-Z.; **Xu, M.** Case studies of material flow analysis in China. In Y. Qian (Ed.), *Cleaner Production and Circular Economy: Concepts, Methodology, and Case Studies*. Tsinghua University Press, Beijing, 2006, 75-88. [in Chinese]

Refereed conference proceedings

- P18. Liang, S.; **Xu, M.** Betweenness-based accounting to identify critical transmission sectors for environmental pressure mitigation. *23rd International Input-Output Conference*, June 22-26, 2015, Mexico City, Mexico.
- P17. Cai, H.; **Xu, M.** Informing public electric vehicle charging infrastructure development using travel patterns mined from big-data. *2014 International Symposium on Sustainable Systems and Technology*, May 19-21, 2014, Oakland, CA. [Student Paper Competition Third Place]
- P16. Feng, Y.; Liang, S.; **Xu, M.** The structure of the global trade network. *21th International Input-Output Conference*, July 7-12, 2013, Kitakyushu, Japan.
- P15. Cai, H.; **Xu, M.** Assessing clean vehicle systems under constraints of freshwater resource. *2012 IEEE International Symposium on Sustainable Systems and Technology*, May 16-18, 2012, Boston, MA.
- P14. Heairet, A.; Choudhary, S.; Miller, S.; **Xu, M.** Beyond life cycle analysis: using an agent-based approach to model the emerging bioenergy industry. *2012 IEEE International Symposium on Sustainable Systems and Technology*, May 16-18, 2012, Boston, MA.
- P13. Bunker, W. J. B.; **Xu, M.** Dependence of wind energy on electric utility in the U.S. *2011 IEEE International Symposium on Sustainable Systems and Technology*, May 16-18, 2011, Chicago, IL.
- P12. Minne, E. A.; Crittenden, J. C.; Pandit, A.; Jeong, H.; James, J.-A.; Lu, Z.-M.; **Xu, M.**; et al. Water, energy, land use, transportation and socioeconomic nexus: a blue print for more sustainable urban systems. *2011 IEEE International Symposium on Sustainable Systems and Technology*, May 16-18, 2011, Chicago, IL.
- P11. Pandit, A.; Jeong, H.; Crittenden, J. C.; **Xu, M.** An infrastructure ecology approach for urban infrastructure sustainability and resiliency. *2011 IEEE PES Power Systems Conference & Exposition*, March 20-23, 2011, Phoenix, AZ.
- P10. Jeong, H.; Crittenden, J. C.; **Xu, M.**; Pandit, A. Holistic framework for sustainable and resilient design of urban energy and water infrastructure. *Water Environment Federation's Annual Technical Exhibition and Conference (WEFTEC) 2010*, October 2-6, 2010, New Orleans, LA.
- P9. **Xu, M.**; Williams, E.; Allenby, B. Environmental overhead of labor (EOL) embodied in trade: the case of 2002 China-U.S. trade. *2009 IEEE International Symposium on Sustainable Systems and Technology*, May 18-20, 2009, Tempe, AZ.
- P8. **Xu, M.**; Kim, J.; Kahhat, R.; Allenby, B. Market dynamics and environmental impacts of e-commerce: a case study on book retailing. *2008 IEEE International Symposium on Electronics and the Environment*, May 19-21, 2008, San Francisco, CA.
- P7. Kim, J.; **Xu, M.**; Kahhat, R.; Allenby, B.; Williams, E. Design and assessment of a sustainable networked system in the U.S.: case study of book delivery system. *2008 IEEE International Symposium on Electronics and the Environment*, May 19-21, 2008, San Francisco, CA.
- P6. Kahhat, R.; Kim, J.; **Xu, M.**; Allenby, B.; Williams, E. Proposal for an e-waste management system for the United States. *2008 IEEE International Symposium on Electronics and the Environment*, May 19-21, 2008, San Francisco, CA.
- P5. Williams, E.; Kahhat, R.; Allenby, B.; Kavazanjian, E.; **Xu, M.**; Kim, J. Sustainability review of the international reverse chain for reuse and recycling of computers. *2008 IEEE International Symposium on Electronics and the Environment*, May 19-21, 2008, San Francisco, CA.

- P4. **Xu, M.**; Zhang, T.-Z. Material flow input analysis in China. in: Fang, G.; Wang, M.; Lu, Z. (Eds.), *Proceedings of the 10th Mainland-Taiwan Environmental Protection Academic Conference*, Gau Lih Book Co., Ltd, October 23-29, 2005, Taipei, Taiwan, China, 625-628.
- P3. **Xu, M.**; Zhang, T.-Z. Material flow accounting and analysis in China. *Proceeding of the 2nd International Conference on Environmental Concerns*, October 12-15, 2004, Xiamen, China.
- P2. Zhang, T.-Z.; **Xu, M.** Material flow analysis: A base of greening the system of national economic accounting. in: Pan, Y.; Li, D. (Eds.), *Proceeding of the International Workshop on Greening China National Account System*, China Environmental Science Press, Beijing, China, June 24-25, 2004, 207-213. [in Chinese]
- P1. **Xu, M.**; Zhang, T.-Z. Accounting and analyzing of total material requirement of Chinese fossil fuel. in: He, Y.; Gu, Z.; Chen, J. (Eds.), *Proceeding of the 9th Mainland-Taiwan Environmental Protection Conference*, Xi'an Jiaotong University Press, Xi'an, China, May 10-15, 2004, 1472-1476. [in Chinese]

Conference abstracts

- A44. Taiebat, M.; Haung, E.; Masoud, N.; Liu, H.; **Xu, M.** Travel and environmental impacts of unoccupied VMT in robotaxi fleet based on GPS trajectory data. *Automated Vehicles Symposium 2017*, July 11-13, 2017, San Francisco, CA.
- A43. Hou, P.; Cai, J.-R.; **Xu, M.** Similarity-based link prediction for estimating life cycle inventory data. *2017 Joint Conference for International Society for Industrial Ecology (ISIE) and International Symposium on Sustainable Systems and Technology (ISSST): Science in Support of Sustainable and Resilient Communities*, June 25-29, 2017, Chicago, IL.
- A42. Taiebat, M.; **Xu, M.** Environmental benefits of robotaxi fleet: travel and environmental impacts of unoccupied VMT in robotaxi fleet based on GPS trajectory data. *2017 AEESP Research and Education Conference: Advancing Healthy Communities through Environmental Engineering and Science*, June 20-22, 2017, Ann Arbor, MI.
- A41. Hou, P.; Cai, J.-R.; **Xu, M.** Similarity-based link prediction for estimating life cycle inventory data. *2017 AEESP Research and Education Conference: Advancing Healthy Communities through Environmental Engineering and Science*, June 20-22, 2017, Ann Arbor, MI.
- A40. Liang, S.; Feng, T.-T.; Qu, S.; Chiu, A. S. F.; Jia, X.-P.; **Xu, M.** Chinese environmentally extended input-output (CEEIO) database. *The Joint 12th International Society for Industrial Ecology (ISIE) Socio-Economic Metabolism Section Conference and the 5th ISIE Asia-Pacific Conference*, September 28-30, 2016, Nagoya, Japan.
- A39. Liang, S.; Qu, S.; Zhu, Z.-Q.; Konar, M.; **Xu, M.** Impacts of local water scarcity risk on global trade network. *24th International Input-Output Conference*, July 4-8, 2016, Seoul, Korea.
- A38. Qu, S.; Wang, H.-X.; Liang, S.; **Xu, M.** A quasi-input-output model to evaluate emission factors of purchased electricity from interconnected grids. *24th International Input-Output Conference*, July 4-8, 2016, Seoul, Korea.
- A37. Liang, S.; Feng, T.-T.; Qu, S.; Chiu, A. S. F.; Jia, X.-P.; **Xu, M.** Chinese environmentally extended input-output (CEEIO) database. *24th International Input-Output Conference*, July 4-8, 2016, Seoul, Korea.
- A36. Cai, J.-R.; Hou, P.; **Xu, M.** Computational approach for estimating missing life cycle inventory data. *2016 International Symposium on Sustainable Systems and Technology (ISSST)*, May 16-18, 2016, Phoenix, AZ.
- A35. Qu, S.; Liang, S.; Zhu, Z.-Q.; Chiu, A. S. F.; Jia, X.-P.; **Xu, M.** Impacts of local water scarcity risk on global trade network. *The 18th International Society for Business Innovation and Technology Management Conference (ISBITM)*, May 1-3, 2016, Ann Arbor, MI.

- A34. Liang, S.; Zhao, Q.-T.; Xue, G.-Y.; **Xu, M.** Preliminary study on Detroit's urban food-energy-water (FEW) nexus. *The 18th International Society for Business Innovation and Technology Management Conference (ISBITM)*, May 1-3, 2016, Ann Arbor, MI.
- A33. Cai, J.-R.; Hou, P.; **Xu, M.** Similarity-based computational approach for estimating missing life cycle inventory data. *The 18th International Society for Business Innovation and Technology Management Conference (ISBITM)*, May 1-3, 2016, Ann Arbor, MI.
- A32. Qu, S.; Wang, H.-X.; Liang, S.; **Xu, M.** A quasi-input-output model to evaluate emission factors of purchased electricity from interconnected grids. *The 18th International Society for Business Innovation and Technology Management Conference (ISBITM)*, May 1-3, 2016, Ann Arbor, MI. [Outstanding Paper Award]
- A31. Cai, H.; **Xu, M.** Urban environmental benefits of ride sharing using autonomous vehicles. *2015 AEESP Research and Education Conference: Environmental Engineering and Science At the Nexus*, June 13-16, 2015, New Haven, CT.
- A30. Zhu, Z.-Q.; Liang, S.; **Xu, M.** Income-based GHG emissions of nations. *8th International Society for Industrial Ecology Biennial Conference*, July 7-10, 2015, Guildford, UK.
- A29. Feng, T.-T.; Liang, S.; **Xu, M.** An open access environmentally extended input-output database for China. *8th International Society for Industrial Ecology Biennial Conference*, July 7-10, 2015, Guildford, UK.
- A28. Liang, S.; Guo, S.; **Xu, M.** Important sectors of the global virtual water network. *8th International Society for Industrial Ecology Biennial Conference*, July 7-10, 2015, Guildford, UK.
- A27. Cai, H.; **Xu, M.** Assessing the environmental benefits of ride sharing in cities. *8th International Society for Industrial Ecology Biennial Conference*, July 7-10, 2015, Guildford, UK.
- A26. Stylianou, K.; Liang, S.; **Xu, M.**; Supekar, S.; Skerlos, S.; Jolliet, O. Global trade, global pollution, global health impacts: are we responsible for Asia? *2015 International Symposium on Sustainable Systems and Technology*, May 18-20, 2015, Dearborn, MI.
- A25. Cai, H.; **Xu, M.** Assessing the environmental benefits of ride sharing in cities. *2015 International Symposium on Sustainable Systems and Technology*, May 18-20, 2015, Dearborn, MI.
- A24. Guo, R.; Xu, J.; **Xu, M.** Using carbon balance analysis to assess urban sustainability and applications in China. *2015 International Symposium on Sustainable Systems and Technology*, May 18-20, 2015, Dearborn, MI.
- A23. Liu, D.; Wang, S.-K.; **Xu, M.**; Guo, S. Domestic and international environmental impacts of solar photovoltaic industry in China: from the views of lifecycle and supply chain. *2015 International Symposium on Sustainable Systems and Technology*, May 18-20, 2015, Dearborn, MI.
- A22. Liang, S.; Zhu, Z.-Q.; **Xu, M.** Income-based GHG emissions of nations. *2015 International Symposium on Sustainable Systems and Technology*, May 18-20, 2015, Dearborn, MI.
- A21. Liang, S.; Guo, S.; **Xu, M.** Important sectors of the global virtual water network. *2015 International Symposium on Sustainable Systems and Technology*, May 18-20, 2015, Dearborn, MI.
- A20. Liang, S.; Feng, T.-T.; **Xu, M.** An open access environmentally extended input-output database for China. *2015 International Symposium on Sustainable Systems and Technology*, May 18-20, 2015, Dearborn, MI.
- A19. Jolliet, O.; **Xu, M.**; Skerlos, S.; Liang, S.; Stylianou, K. Global trade, global pollution, global health impact! Are we also responsible for Asia? *2014 MCubed Symposium, University of Michigan*, October 9, 2014, Ann Arbor, MI.
- A18. Liang, S.; Feng, Y.; **Xu, M.** The structure of global virtual water trade network. *2014 Gordon Research Conference on Industrial Ecology: Transforming the Industrial Metabolism*, June 1-6, 2014, Lucca, Italy.

- A17. Cai, H.; **Xu, M.** Informing electric vehicle public charging infrastructure development using travel patterns mined from big-data. *2014 Gordon Research Conference on Industrial Ecology: Transforming the Industrial Metabolism*, June 1-6, 2014, Lucca, Italy.
- A16. Pandit, A.; Bras, B.; Minne, E.A.; Dunham-Jones, E.; Augenbroe, G.; Jeong, H.; James, J.-A. C.; Newell, J. P.; Weissburg, M.; Brown, M. A.; Chang, M. E.; **Xu, M.**; Begovic, M. M.; Yang, P.; Fujimoto, R. A.; French, S. P.; Thomas, V. M.; Yu, X.; Chen, Y.; Lu, Z.; Crittenden, J. C. Infrastructure Ecology: An evolving paradigm for sustainable urban development. Session Keynote: Environmental Engineering Education. *World Engineers Summit 2013*, September 9-15, Singapore.
- A15. Cai, H.; **Xu, M.** Big data mining for evaluating electric vehicle market acceptance and environmental impacts. *2013 AEESP 50th Anniversary Conference*, July 14-16, 2013, Golden, CO. [Student Poster Competition Third Place]
- A14. Feng, Y.; Liang, S.; **Xu, M.** Structure of the global trade network. *7th International Society for Industrial Ecology Biennial Conference*, June 25-28, 2013, Ulsan, Korea.
- A13. Pontau, P.; Cai, H.; **Xu, M.** Assessing land use impact by clean vehicle systems. *7th International Society for Industrial Ecology Biennial Conference*, June 25-28, 2013, Ulsan, Korea.
- A12. Cai, H.; **Xu, M.** Understanding market acceptance of electric vehicles based on individual travel patterns. *7th International Society for Industrial Ecology Biennial Conference*, June 25-28, 2013, Ulsan, Korea. [Student Poster Competition First Place]
- A11. Cai, H.; **Xu, M.**; Liang, S. Characterizing individual driving patterns through big data mining. *2013 International Symposium on Sustainable Systems and Technology*, May 15-17, 2013, Cincinnati, OH.
- A10. Cai, H.; **Xu, M.** Integrated assessment of clean vehicle systems under constraints of water and land resources. *2012 Gordon Research Conference on Industrial Ecology*, June 17-22, 2012, Les Diablerets, Switzerland.
- A9. Wang, T.; Yue, Y.; **Xu, M.**; Hashimoto, S. Material flows and environmental impact assessment of high-speed rail in Asia. *2012 Gordon Research Conference on Industrial Ecology*, June 17-22, 2012, Les Diablerets, Switzerland.
- A8. **Xu, M.**; Newell, J. P. Infrastructure ecology: a conceptual model for understanding urban sustainability. *6th International Society for Industrial Ecology Biennial Conference*, June 7-10, 2011, Berkeley, CA.
- A7. Jeong, H.; Pandit, A.; Crittenden, J. C.; **Xu, M.**; Perrings, C.; Wang, D.-L.; Williams, E.; Karady, G.; Li, K.; Brown, M.; Begovic, M.; Ariaratnam, S.; French, S. Infrastructure ecology for sustainable and resilient urban infrastructure design. *2010 AIChE Annual Meeting*, November 7-12, 2010, Salt Lake City, UT.
- A6. Kahhat, R.; Kim, J.; **Xu, M.** E-market for e-waste. *2008 IEEE International Symposium on Electronics and the Environment*, May 19-21, 2008, San Francisco, CA.
- A5. **Xu, M.**; Zhang, T.-Z.; Allenby, B. Material metabolism of economic system: physical input monetary output analysis for China. *4th International Society for Industrial Ecology Biennial Conference*, June 17-20, 2007, Toronto, Canada.
- A4. **Xu, M.**; Zhang, T.-Z.; Allenby, B. Physical input monetary output analysis. *4th International Society for Industrial Ecology Biennial Conference*, June 17-20, 2007, Toronto, Canada.
- A3. Kahhat, R.; **Xu, M.**; Kim, J.; Zhang, P. A framework for e-waste collecting and recycling system in the Phoenix metropolitan area. *2007 IEEE International Symposium on Electronics and the Environment*, May 7-10, 2007, Orlando, FL.
- A2. **Xu, M.**; Zhang, T.-Z. A conceptual model for sustainable consumption. *The 4th International Symposium on Environmentally Conscious Design and Inverse Manufacturing*, December 12-14, 2005, Tokyo, Japan.

- A1. Xu, Y.-J.; Zhang, T.-Z.; Shi, L.; **Xu, M.** Material flow analysis in China. *3rd International Society for Industrial Ecology Biennial Conference*, June 12-15, 2005, Stockholm, Sweden.

Editorial/Commentary/Viewpoint

- O8. Wang, H.-D.; Han, H.-G.; Liu, T.-T.; Tian, X.; Xu, M.; Wu, Y.-F.; Gu, Y.-F.; Liu, Y.-R.; Zuo, T.-Y. "Internet +" recyclable resources: a new recycling mode in China. *Resources, Conservation & Recycling* **2018**, 134, 44-47.
- O7. Song, G.-H.; Zhang, H.; Duan, H.-B.; **Xu, M.** Packaging waste from food delivery in China's mega cities. *Resources, Conservation & Recycling* **2018**, 130, 226-227.
- O6. Fan, W.-G.; **Xu, M.**; Dong, X.-B.; Wei, H.-J. Considerable environmental impact of the rapid development of China's express delivery industry. *Resources, Conservation & Recycling* **2017**, 126, 174-176.
- O5. Dijkema, G. P. J.; **Xu, M.**; Derrible, S.; Lifset, R. Complexity in industrial ecology: models, analysis, and actions. *Journal of Industrial Ecology* **2015**, 19 (2), 189-194.
- O4. **Xu, M.** Pollute local: your U.S.-bought laptop pollutes other countries, and what we can do about it. *The Conversation* **2014**, October 2, <http://sustainability.umich.edu/conversation/2014/10/pollute-local-your-u-s-bought-laptop-pollutes-other-countries-and-what-we-can-do-about-it/>
- O3. **Xu, M.***; Weissburg, M.; Newell, J. P.; Crittenden, J. C. Developing a science of infrastructure ecology for sustainable urban systems. *Environmental Science & Technology* **2012**, 46 (15), 7928-7929.
- O2. Shi, H.-J.; Liang, S.; Wang, Z.; Zhu, J.-M.; Chen, W.-Q.; **Xu, M.**; Shi, L. Science, systems and sustainability: ISIE 2011 conference review. *Acta Ecologica Sinica* **2011**, 31 (21), 6641-6644. [in Chinese]
- O1. **Xu, M.*** Comment on "Dealing with electrical and electronic equipment waste in Colombia: the case of TV sets" by L.-A. Rodríguez B., E. Estupiñán E., and F. Boons. *Regional Development Dialogue* **2010**, 31 (2), 122-123.

INVITED TALKS

- Ford Motor Company, Dearborn, MI, 05/11/2018
- Sino-Nordic Symposium on Sustainable Food Consumption and Management, Shanghai, China, 01/13-14, 2018
- US-China Joint Symposium on the Nexus of Food, Energy, and Water Systems, Nashville, Tennessee, 12/07/2017
- Workshop on Urban Infrastructures: Analysis and Modeling for Their Optimal Management and Operation, New York Institute of Technology, New York, 11/30/2017
- Department of Environmental Science and Engineering, Fudan University, 11/09/2017
- Sustainable Agriculture Matrix Workshop, National Socio-Environmental Synthesis Center (SESYNC), Annapolis, MD, August 28-31, 2017
- Policy Forum on Climate Adaptation Science (PFoCAS), Chinese Academy of Sciences, Beijing, 08/18/2017
- 2017 International Association for Energy Economics Summer School, China University of Geosciences, Beijing, 07/11/2017
- College of Environmental Science and Engineering, North China Electric Power University, 05/27/2017
- School of Resources and Environmental Engineering, Jiangxi University of Science and Technology, 05/23/2017

- Department of Civil and Environmental Engineering, The Hong Kong Polytechnic University, 04/28/2017
- School of Management, China University of Mining and Technology, Xuzhou, 04/21/2017
- School of Environment and Architecture, Shanghai University of Science and Technology, 04/20/2017.
- Industrial Ecology and Sustainable Construction Workshop: Smart and Low-carbon Transition of Urban and Industrial Systems, Chongqing University, 04/15/2017
- Center for Human-Environment System Sustainability, Beijing Normal University, 03/13/2017
- Institute of Ecology and Biodiversity, Shandong University, 01/18/2017
- Institute of Applied Ecology, Chinese Academy of Sciences, 01/04/2017
- School of Economics and Management, Beijing Jiaotong University, 12/30/2016
- College of Environmental Science and Engineering, Beijing Forestry University, 12/23/2016
- College of Management, Asia University, 12/09/2016
- College of Management, National Chin-Yi University of Technology, 12/06/2016
- College of Management, Lunghwa University of Science and Technology, 12/05/2016
- Interdisciplinary Research Forum, Institute of Urban Environment, Chinese Academy of Sciences, 12/03/2016
- School of Economics, Renmin University, 12/01/2016
- 2016 Shandong International Forum on Industrial Ecology, Institute of Science and Technology for Development of Shandong, 11/29/2016
- School of Environmental and Safety Engineering, Qingdao University of Science and Technology, 11/28/2016
- Chinese Research Academy of Environmental Sciences, 11/25/2016
- China Association of Circular Economy, 11/22/2016
- School of Economics, Peking University, 11/21/2016
- Chinese Academy for Environmental Planning, 11/17/2016
- Focus on the Future Automotive Research Conferences: Inside China, University of Michigan Transportation Research Institute, 11/09/2016
- School of Humanity, Economics and Management, China University of Geosciences, Beijing, 11/01/2016
- School of Economics and Management, North China Electric Power University, 10/31/2016
- School of Economics and Management, Beihang University, 10/28/2016
- School of Environmental Science and Engineering, Southern University of Science and Technology, 10/21/2016
- 2016 International Conference on Sustainable Infrastructure, Shenzhen, 10/18/2016 (keynote)
- School of Business, Dalian University of Technology, Panjin, 09/22/2016
- 4th Asia-Oceania Algae Innovation Summit, Wuhan, China, 09/21/2016
- College of Geography and Environment Science, Northwest Normal University, 08/25/2016
- College of Earth Environmental Sciences, Lanzhou University, 08/25/2016
- Chinese Research Academy of Environmental Sciences, 08/22/2016
- Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, 08/21/2016
- Microalgae Biotech Center, State Development & Investment Corp., 08/03/2016
- School of Economics and Management, Zhejiang Sci-Tech University, 07/20/2016
- 2016 China Association of Circular Economy Conference, Beijing, 06/26/2016
- School of Business, East China University of Science and Technology, 06/07/2016

- College of Management, National Chin-Yi University of Technology, 06/03/2016
- College of Management, Lunghwa University of Science and Technology, 06/02/2016
- The 18th International Society for Business Innovation and Technology Management Conference (ISBITM), May 1-3, 2016, Ann Arbor, MI (keynote)
- Department of Civil and Environmental Engineering, North Carolina State University, 4/14/2016
- University of Michigan Transportation Research Institute, 3/29/2016
- School of Civil and Environmental Engineering, Georgia Institute of Technology, 3/1/2016
- School of Environment, Beijing Normal University, 8/17/2015-8/19/2015
- School of Environment, Tsinghua University, 8/18/2015
- School of Environmental Science and Engineering, Peking University, 07/07/2015
- Chinese Environmental Scholars Forum, Yale University, 05/30/2015
- School of Recycling Economy, Beijing University of Technology, 04/29/2015
- China Date Center, University of Michigan, 11/07/2014
- Department of Civil and Environmental Engineering, University of Pittsburgh, 09/19/2014
- Institute of Circular Economy, Beijing University of Technology, 08/19/2014
- Department of Civil and Environmental Engineering, University of Michigan, 04/08/2014
- Chinese Research Academy of Environmental Sciences, 04/02/2014
- Modeling Social, Technical and Natural Systems for Policy, Massachusetts Institute of Technology, 09/25-27, 2013
- Workshop on Industrial Ecology & System Thinking (WIEST), University of Ulsan, 06/24/2013
- How Green is the Internet? Google, 06/06/2013
- Center for Chinese Studies, University of Michigan, 04/09/2013
- School of Environment, Nanjing University, 05/10/2012
- School of Environmental and Safety Engineering, Qingdao University of Science and Technology, 05/09/2012
- School of Environment, Tsinghua University, 05/04/2012
- Shanghai Key Lab for Urban Ecological Processes and Eco-Restoration, East China Normal University, 05/02/2012
- Center for Environmental Studies, Brown University, 04/06/2012
- College of Architecture and Environment, Sichuan University, 12/23/2011
- China Project, Harvard University, 12/01/2011
- School of Environmental Science and Engineering, Shanghai Jiao Tong University, 09/26/2011
- Global Change Research Institute, Xi'an Jiao Tong University, 04/29/2011
- School of Environment, Tsinghua University, 04/26/2011
- Department of Civil & Environmental Engineering, University of Michigan, 11/23/2010
- Erb Institute for Global Sustainable Enterprise, University of Michigan, 11/22/2010
- Department of Civil & Environmental Engineering, Rice University, 02/12/2010
- School of Natural Resources and Environment, University of Michigan, 01/20/2010
- Department of Civil and Environmental Engineering, The Hong Kong University of Science and Technology, 11/26/2009
- Brook Byers Institute for Sustainable Systems, Georgia Institute of Technology, 04/10/2009