

Assistant Professor (Research) Ying Li

Department of Environmental Science and Engineering
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Academic Qualification:

09.2015-06.2019, Ph.D. in Environmental Science, Guangzhou Institute of Geochemistry, Chinese Academy of Sciences, China

09.2012-06.2015, MSc in Environmental Science, South China University of Technology, China

Teaching Area

Environmental Geochemistry
Soil Science
Ecological Civilization

Research Area

Biogeochemical cycles of nutrients and heavy metals
Contamination and remediation of soils and water
Environmental mineralogy
Application of advanced spectroscopic techniques

Working Experience

08.2022-present, Assistant Professor, Macau University of Science and Technology, China

06.2019-12.2021, Postdoc Research Associate, University of Illinois at Urbana-Champaign, USA

09.2017-04.2019, Visiting Scholar, University of Illinois at Urbana-Champaign, USA

Research Grants

1. Macau University of Science and Technology Faculty Research Grants, Stoichiometric and spectroscopic study of heavy metal precipitation on the surface of secondary minerals - The case of nickel, FRG-23-035-FIE, 2023-
2. Advanced Photon Source, Argonne, IL, Effect of CO₂ on the formation and transformation of green rusts, Proposal Id: 79963, 2022– 2024, **PI**.
3. Advanced Photon Source, Argonne, IL, Effect of carbonate on the formation and transformation of green rusts, Proposal ID: 69156, 2020 – 2022, **PI**.
4. Advanced Photon Source, Argonne, IL, Effect of (bi)carbonate on the transformation of ferrihydrite at near neutral pH, Proposal ID: 66902, 2019 – 2021, **PI**.
5. Research Grant of the Clay Minerals Society, Effect of isomorphous substitution on the reducing capability of magnetite coupled with aqueous Fe²⁺, 2019 – 2022, **PI**.
6. Illinois Nutrient Research and Education Council, Understanding mechanisms and processes of dissolved reactive phosphate (DRP) loss in Illinois tile-drained fields, 2016-4-360347-203, 2016 – 2021, Core participant
7. USDA National Institute of Food and Agriculture, Sources and transport of phosphorus in tile drained agricultural watersheds using advanced chemical analysis, 2016-67019-25268, 2016 – 2020, Participant.

8. National Natural Science Foundation of China, Interaction of magnetite coupled with Fe(III) and its reducing capability towards environmental pollutants, 41572032, 2016 – 2019, Core participant.
9. CAS/SAFEA International Partnership Program for Creative Research Teams, Mineral structure and surface physicochemistry, 20140491534, 2014 – 2018, Participant.

Academic Publication (selected)

1. **Ying Li**, Chaoqun Zhang, Meijun Yang, Hongping He, Yuji Arai*, Carbonate accelerated transformation of ferrihydrite in the presence of phosphate. *Geoderma*, 2022, 417, 115811.
2. **Ying Li**, Kenneth J.T. Livi, Mary R. Arenberg, Suwei Xu, Yuji Arai*, Depth sequence distribution of water extractable colloidal phosphorus and its phosphorus speciation in intensively managed agricultural soils,
3. **Ying Li**, Meijun Yang, Martin Pentrak, Hongping He, Yuji Arai*, Carbonate-enhanced transformation of ferrihydrite to hematite, *Environmental Science & Technology*, 2020, 54, 13701-13708.
4. **Ying Li**, Gaoling Wei, Xiaoliang Liang*, Caihua Zhang, Jianxi Zhu, Yuji Arai, Metal substitution-induced reducing capacity of magnetite coupled with aqueous Fe(II), *ACS Earth and Space Chemistry*, 2020, 4: 905-911.
5. **Ying Li**, Donghui Han, Yuji Arai, Xin Fu, Xiaoqin Li*, Weilin Huang, Kinetics and mechanisms of debromination of tetrabromobisphenol A by Cu coated nano zerovalent iron, *Chemical Engineering Journal*,
6. **Ying Li**, Gaoling Wei, Caihua Zhang, Xiaoliang Liang*, Wei Chu*, Hongping He, Joseph W. Stucki, Lingya Ma, Xiaojun Lin, Jianxi Zhu, Remarkable effect of Co substitution in magnetite on the reduction removal of Cr(VI) coupled with aqueous Fe(II): Improvement mechanism and Cr fate, *Science of the Total Environment*, 2019, 656:
7. **Ying Li**, Gaoling Wei, Hongping He, Xiaoliang Liang*, Wei Chu*, Deyin Huang, Jianxi Zhu, Wei Tan, Qiuxin Huang, Improvement of zinc substitution in the reactivity of magnetite coupled with aqueous Fe(II) towards nitrobenzene reduction, *Journal of Colloid and Interface Science*, 2018, 517: 104-112.
8. **Ying Li**, Xiaoqin Li*, Donghui Han, Weilin Huang, Chen Yang, New insights into the role of Ni loading on the surface structure and the reactivity of nZVI toward tetrabromo- and tetrachlorobisphenol A, *Chemical Engineering Journal*, 2017, 311: 173-182.
9. **Ying Li**, Xiaoqin Li*, Yang Xiao, Chaohai Wei, Donghui Han, Weilin Huang, Catalytic debromination of tetrabromobisphenol A by Ni/nZVI bimetallic particles, *Chemical Engineering Journal*, 2016, 284: 1242-1250.
10. Xiaoliang Liang*, **Ying Li***, Gaoling Wei, Hongping He, Joseph W. Stucki, Lingya Ma, Linda Pentrakova, Martin Pentrak, Jianxi Zhu, Heterogeneous reduction of 2-chloronitrobenzene by Co-substituted magnetite coupled with aqueous Fe²⁺: Performance, factors, and mechanism, *ACS Earth and Space Chemistry*, 2019, 3: 728-
11. **Ying Li**, Yang Xiao, Xiaoqin Li*, Chen Yang, Degradation of phenanthrene by nanoscale zero-valent iron and its bimetallic nanoparticles, *Acta Scientiae Circumstantiae*, 2015, 35: 499-507. (In Chinese)
12. **Ying Li**, Yang Xiao, Xiaoqin Li*, Research progresses in tetrabromobisphenol A degradation technologies, *Environmental Protection of Chemical Industry*, 2014, 34: 326-331. (In Chinese)
13. Ai Chen, **Ying Li**, Jianying Shang, Yuji Arai*, Ferrihydrite transformation impacted by coprecipitation of phytic acid, *Environmental Science & Technology*, 2020, 54: 8837-8847.
14. Meijun Yang, Xiaoliang Liang, **Ying Li**, Hongping He*, Runliang Zhu, Yuji Arai*, Ferrihydrite transformation impacted by adsorption and structural incorporation of rare earth elements. *ACS Earth and Space*

Patents (selected)

Xiaoqin Li, **Ying Li**, Xin Fu, Qun Chen, Na Ji, A protocol for the removal of total nitrogen, total phosphorus, and heavy metals from river by zero-valent iron, China, ZL 2014 1 0386229.3.

Professional Certification and Awards

1. Outstanding research achievement award for graduate students, Guangzhou Institute of Geochemistry, Chinese Academy of Sciences (GIG, CAS), 2020.
2. Outstanding Graduate, University of Chinese Academy of Sciences, 2018 – 2019.
3. A research grant award from the Clay Minerals Society and a travel grant award for EUROCLAY 2019 (2019 CMS Annual Conference).
4. Second prize of academic report of the eighth “Mineralogy and metallogeny” academic forum, GIG, CAS, 2018.

5. Third prize of academic report of “World Soil Day” young scholar forum, Guangdong Society of Soil Sciences, 2018.
6. Third prize of research poster of the sixth “Mineralogy and metallogeny” academic forum, GIG, CAS, 2016.
7. Excellence paper award of National Mineral Science and Engineering Conference, Chinese Society for Mineralogy, Petrology and Geochemistry, 2016.
8. Merit Student, University of Chinese academy of sciences, 2015 – 2016.
9. First-class Scholarship, South China University of Technology, 2012 – 2013, 2013 – 2014.

Professional Society Membership

The Clay Minerals Society

Geochemical Society

Personal Website

<https://scholar.google.com/citations?hl=en&user=t3QWSIQAAAAJ>

<https://scholar.must.edu.mo/scholar/104861>