CURRICULUM VITAE

LI ZHANG, PhD, SENIOR ENGINEER
Key Laboratory of Geochemical Cycling of Carbon and Mercury in the Earth's Critical Zone,
Institute of Geophysical and Geochemical Exploration, Chinese Academy of Geological Sciences, China Geological Survey
Langfang, 065000, China
Phone: +86 18811316357
Email: zhanglitga@163.com; zhangli01@mail.cgs.gov.cn
Web:
http://zhanglitga.github.io
http://www.igge.cgs.gov.cn/rcdw/rcjsxl/rcfgjgcs/202306/t20230601_734276.html
https://www.researchgate.net/profile/Li-Zhang-429

BRIEF SELF-INTRODUCTION

Li Zhang, male, born in 1991, holds a Ph.D. degree and is a senior engineer at the Institute of Geophysical and Geochemical Exploration of the Chinese Academy of Geological Sciences. He is specializes in researching the macro-distribution patterns, enrichment mechanisms and biogeochemical cycling of soil elements. He used national land geochemical survey data and various data analysis methods explored the state of soil quality, element distribution, driving factors of soil elements and the ecological risks and health risks of heavy metal in a typical high geological background areas of Southwest China to serve land resource management, soil pollution prevention and control, and protection and utilization of cultivated land. Li Zhang has a wealth of scientific research achievements. He has undertaken 5 research projects; published 15 peer-reviewed papers, obtained 3 utility model patents, and published 1 geochemical atlas. H-index 8 (Google Scholar).

EDUCATION

2016.09–2020.07 Ph.D. in geochemistry (China University of Geosciences, Beijing)
Ph.D. Thesis: “Geochemical characteristics and controlling factors of elements in soil and stream sediment in the Baoshan area, Yunnan Province, Southwest China”
2018.09–2019.09 Joint training of doctoral students (School of Natural and Built Environment, Queen’s University, Belfast) sponsored by China Scholarship Council
2014.09–2016.07 Masters of engineering in geology (School of Earth Sciences and Resources, China University of Geosciences, Beijing)
2010.09–2014.06 Bachelor of engineering in geology (College of Mining Engineering, North China University of Science and Technology)

RESEARCH/PROFESSIONAL EXPERIENCE

2022.11–present Senior Engineer at Institute of Geophysical and Geochemical Exploration, Chinese Academy of Geological Sciences
2020.08–2022.11 Engineer at Institute of Geophysical and Geochemical Exploration, Chinese Academy of Geological Sciences

FELLOWSHIPS

2018–2019 Visiting Ph.D. student at School of Natural and Built Environment, Queen’s University, Belfast

CURRENT RESEARCH INTERESTS

Environmental Geochemistry: in particular, focuses on (1) soil environmental geochemical mapping and geochemical baseline; (2) the geochemical characterization of environmental matrices, contaminated and

not, as soil and sediment at a regional and local scale, to evaluate natural and anthropogenic pollution; (3) minor nutrient elements and toxic elements biogeochemical cycling in rock-soil-crop-human systems and their risk evaluation.

Exploratory data analysis: in particular, focuses on compositional data analysis and multivariate analyses to examine the soil and sediment geochemistry data for a range of key elements (e.g., heavy metals/metalloids, Se, REEs and C).

FORMER RESEARCH INTERESTS

Petrology and Mineralogy: in particular, focuses on ophiolites in orogenic belts, to study their petrological and mineralogical characteristics, partial melting characteristics, and tectonic environment by electron microscope, electron probe micro-analysis, and laser ablation inductively coupled plasma mass spectrometry.

SCIENTIFIC ACTIVITIES

Early Career Editorial Board of *Journal of* ***Ecology and Rural Environment, Geological Bulletin of China, Mineral Exploration***

External peer reviewer of **Environmental Research**, ***Science of the Total Environment, Journal of Agricultural Resources and Environment***, **Journal of Agro-Environment Science**

FUNDED RESEARCH PROJECTS

1. **Co-Principal Investigator** of Geology Survey Project: DD20221170-01 (China Geological Survey) "National Geochemical Monitoring of Land Quality", 2023, 4,000,000 ¥
2. **Principal Investigator** of National Nonprofit Institute Research Grant: AS2022J09 (Institute of Geophysical & Geochemical Exploration, Chinese Academy of Geological Sciences). "Source apportionment and risk assessment of Cd in paddy soil in Leishui river basin of Xiangjiang river", 2022-2023,400,000 ¥
3. **Co-Principal Investigator** of Geology Survey Project: DD20221170-04 (China Geological Survey) "Pilot healthy geological survey in typical land geochemical anomaly areas", 2022, 3,000,000 ¥
4. **Co-Principal Investigator** of Surplus Funds for Scientific Research Projects Funded by the Central Government Budget: JY202105 (Institute of Geophysical & Geochemical Exploration, Chinese Academy of Geological Sciences) "Genesis and prospecting significance of phanerozoic Komatite and its associated sulfide in west Kunlun"; 2021–2022; 530,000 ¥
5. **Co-Principal Investigator** of Geology Survey Project: DD20190522-10 (China Geological Survey) "1:250,000 scale land quality geochemical survey in southwest Xuanwei city, Yunnan Province"; 2021; 2,500,000 ¥
6. **Major participant** of the Land Geochemical Survey Project: DD20190522 (China Geological Survey) "Geochemical survey of land quality in Wumeng mountain area"; 2019–2021; 49,200,000 ¥
7. **Major participant** of the Surplus Funds for Scientific Research Projects Funded by the Central Government Budget: JY201906 (Institute of Geophysical & Geochemical Exploration, Chinese Academy of Geological Sciences) "Biogeochemical cycling of forest mercury in Qinling Mountains, China"; 2019;320,000 ¥
8. **Participate as PhD student** of Geology Survey Project: DD20160313 (China Geological Survey) "Geochemical survey of land quality with 1:250,000 scale in heavy metal high geological background areas in southwest China"; 2016–2018; 94,850,000 ¥
9. **Participate as PhD student** of Geology Survey Project: DD20160133-03 (China Geological Survey) "Risk assessment and results integration of heavy metals in soils from different parent materials"; 2016–2018; 2,800,000 ¥
10. **Participate as master student** of the public welfare industry research special project of Ministry of Land and Resources: 201511022 (China Geological Survey) "Origin of ophiolite and chromite in middle section of suture zone of Yarlung Zangbo River"; 2015–2017; 3,780,000 ¥

11. **Participate as master student** of Geology Survey Project: 12120115027201 (China Geological Survey) "Potential evaluation of chromite resources in Qinghai-Tibet Plateau and investigation of Zedang rock massif"; 2015; 4,000,000 ¥
12. **Participate as master student** of the Ministry of Science and Technology Foreign Affairs Project: 12120114061801 (China Geological Survey) "Tectonic evolution and metallogenic geological setting of the Paleo-Neo-Tethyan ocean basin on the Qinghai-Tibet Plateau"; 2014; 2,500,000 ¥

PUBLICATIONS

Peer-reviewed papers

1. Liting Zhang, Zhijun Wang, Yuanchen Liu, Xi Wang, Xiaoyang Xie, **Li Zhang***. Distribution Pattern and Influencing Factors of Soil Selenium in Northern Hebei Province, China. Geochemistry International, 2023, 61, 750–767.
2. **Li Zhang***, Zheng Yang, Qiaolin Wang, Fei Guo, Yuntao Song, Wei Han, Min Peng, Fei Liu, Kuo Li, Hangxin Cheng*. Temporal and Spatial Accumulation of Potentially Toxic Elements (PTEs) in Stream Sediments from a Large Lead-zinc Mine Concentration Area of Baoshan, Southwest China. Journal of Soils and Sediments, 2022, 22, 2290–2308.
3. **Li Zhang***, Zheng Yang, Min Peng, Xiaomeng Cheng. Contamination Levels and the Ecological and Human Health Risks of Potentially Toxic Elements (PTEs) in Soil of Baoshan Area, Southwest China. Applied Sciences Basle, 2022, 12, 1693.
4. **Li Zhang***, Wei Han, Min Peng, Fei Liu, Yuntao Song, Xiujin Liu, Qiaolin Wang, Kuo Li, Dongjie Zhao, Wei Yang, Hangxin Cheng*. Geochemical characteristics of rare earth elements (REEs) in soils developed on different parent materials in the Baoshan area, Yunnan Province, Southwest China. Geochemistry: Exploration, Environment, Analysis, 2021, 21: 1.
5. **Li Zhang**, Jennifer McKinley, Mark Cooper, Min Peng, Qiaolin Wang, Yuntao Song, Hangxin Cheng*. A regional soil and river sediment geochemical study in Baoshan area, Yunnan province, southwest China. Journal of Geochemical Exploration, 2020, 217: 106557.
6. **Li Zhang**, Jennifer McKinley, Mark Cooper, Wei Han, Fei Liu, Yuntao Song, Min Peng, Xiujin Liu, Wei Yang, Hangxin Cheng*. Transfer processes of potential toxic elements (PTE) between rock-soil systems and soil risk evaluation in the Baoshan area, Yunnan Province, Southwest China. Applied Geochemistry, 2020, 121: 104712.
7. **Li Zhang**, Jingsui Yang*, Fei Liu, Dongyang Lian, Jian Huang, Hui Zhao, Yan Yang. The South Gongzhucuo peridotite massif: A typical MOR type peridotite in the western Yarlung Zangbo suture zone. Acta Petrologica Sinica, 2016, (12): 3649-3672. (in Chinese with English abstract)
8. Honghong Ma, **Li Zhang**, Fei Guo, Zheng Yang, Huiyan Wang, Min Peng, Fugui Zhang. Ecological Risk and Migration Patterns of Heavy Metals in Soil and Crops in the Lead-Zinc Mining Area in Guizhou, China. Environmental Science, 2023,44(5):2856-2867. (in Chinese with English abstract)
9. Liting Zhang, Weiming Xie, Wenlong Yu, **Li Zhang**, Shicong Zhang, Xi Wang, Xiaoyang Xie, Hangxin Cheng*. Distribution and attribute analysis of soil selenium in Hebei Province, China. Geochemistry Exploration Environment Analysis, 2023, 23 (1): geochem2022-055.
10. Honghong Ma, Hangxin Cheng, Fei Guo, **Li Zhang**, Shiqi Tang, Zheng Yang, Min Peng. Distribution of mercury in foliage, litter and soil profiles in forests of the Qinling Mountains, China. Environmental Research, 2022,211,113017.
11. Xiujin Liu*, Ke Yang, Fei Guo, Shiqi Tang, Yinghan Liu, **Li Zhang**, Hangxin Cheng, Fei Liu. Effects and mechanism of igneous rock on selenium in the tropical soil-rice system in Hainan Province, South China. China Geology, 2022, 5(1): 1-11.
12. Fei Guo, Zhen Xu*, Honghong Ma, Xiujin Liu, Shiqi Tang, Zheng Yang, **Li Zhang**, Fei Liu, Min Peng, Kuo Li. Estimating chromium concentration in arable soil based on the optimal principal components by hyperspectral data. Ecological Indicators, SCI, 2021, 133(2):108400.

13. Hui Zhao, Jingsui Yang*, Fei Liu, Jian Huang, **Li Zhang**. Post-Collisional, Potassic Volcanism in the Saga Area, Western Tibet: Implications for the Nature of the Mantle Source and Geodynamic Setting. Journal of Earth Science, 2019, 30(3): 571-584.

14. Dongyang Lian, Jingsui Yang*, Fei Liu, Weiwei Wu, **Li Zhang**, Hui Zhao, Jian Huang. Geochemistry and tectonic significance of the Gongzhu peridotites in the northern branch of the western Yarlung Zangbo ophiolitic belt, western Tibet. Mineralogy and Petrology, 2017, 111(5):729-746.

15. Fei Liu, Jingsui Yang*, Dongyang Lian, Hui Zhao, Lan Zhang, **Li Zhang**, Jian Huang. Genesis and characteristics of the western part of the Yarlung Zangbo ophiolites, Tibet. Acta Petrologica Sinica, 2015(12): 3609-3628. (in Chinese with English abstract)

Special Issues in international scientific journals

1. **Li Zhang**, Jingsui Yang*, Dongyang Lian, Fei Liu, Hui Zhao, Jian Huang, Yan Yang. Gongzhucuo Massif: An Ever Slightly Depleted Peridotite in the Western YarlungZangbo Ophiolitic Belt of Southern Tibet. Acta Geologica Sinica (English Edition). 2015, V89(Z2), 117-119.

2. Fei Liu, Jingsui Yang*, Yildirim Dilek, Dongyang Lian, Zhiqin Xu, **Li Zhang**, Yanxue Xie, Songyong Chen, Jian Huang. Tectonic Evolution of the Dongbo Ophiolite in Western Yarlung Zangbo Suture Zone, Xizang (Tibet). Acta Geologica Sinica (English Edition), 2016, 90 (s1), 235-235.

3. Fei Liu, Jingsui Yang*, Dongyang Lian, Hui Zhao, Lan Zhang, Xiaolu Niu, Guangying Feng, **Li Zhang**, Jian Huang. Geogenesis and Characteristics of the Western Part of the Yarlung Zangbo Ophiolites, Tibet. Acta Geologica Sinica (English Edition), 2015, 89(s2): 52-55.

4. Dongyang Lian, Jingsui Yang*, Fei Liu, Yi Ding, Weiwei Wu, Hui Zhao, **Li Zhang**, Jian Huang. Mineralogy, Petrology and Geochemistry of Peridotites from the Northern Ophiolititc Sub-belt, Western Yarlung Zangbo Suture Zone, Tibet. Acta Geologica Sinica (English Edition), 2015, 89(s2): 44-46.

PATENT

1. **Li Zhang.** A soil vertical profile sampling device, utility model patent, ZL202122941440.5, authorized on July 22, 2022.
2. **Li Zhang.** A lake sediment sampling device, utility model patent, ZL202122860236.0, authorized on June 24, 2022.
3. **Li Zhang.** An atmospheric dry and wet deposition receiving device, utility model patent, ZL202123066785.X, authorized on April 19, 2022.