Menghan Li
SKL Lunar and Planetary Sciences
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EDUCATION

PhD 2020 Geochemistry: University of Science and Technology of China (USTC)
BSc 2016 Geochemistry: School of the Gifted Young, USTC

PROFESSIONAL APPOINTMENTS

2026 April - Present: Assistant Professor, Macau University of Science and Technology
2023-2026: Research Associate Professor, USTC
2020-2023: Postdoctoral Fellow, USTC
2018 June-August: Visiting Scholar, University of California, San Diego (Prof. Mark H. Thiemens' Laboratory)
2015 June-August: Visiting Student, Massachusetts Institute of Technology (Prof. Roger E. Summons' Laboratory)

HONORS AND AWARDS

National Postdoctoral Fellowship for Innovative Talents of China (2021)

Mozi Outstanding Youth Fellowship (2021), USTC

RESEARCH GRANTS

National Natural Science Foundation of China (NSFC), "Multiple S-isotopic constraints on environmental changes in the Sverdrup Basin during the Late Permian to Early Triassic and their impacts on biotic events", 2026-2028. Role: Principal Investigator.

National Natural Science Foundation of China (NSFC), "Nickel isotopic compositions of Late Permian – Early Triassic black shales from Arctic Canada and their environmental significance", 2022-2024. Role: Principal Investigator.

China Postdoctoral Science Foundation, "Reconstructing atmosphere and ocean chemistry changes using nickel isotopes in the Sverdrup Basin during the Permian–Triassic transition", 2021-2023. Role: Principal Investigator.

Anhui Provincial Natural Science Foundation, "New constraints on deep-ocean redox evolution during the Ediacaran in South China", 2021-2023. Role: Principal Investigator.

RESEARCH INTERESTS

Earth's environmental history, life, and the interconnections between the two; Geobiology; Astrobiology; Mass extinction events.

PROFESSIONAL SERVICE

Editorial Board Member (2025-): *Precambrian Research*

Review for: *Nature Communications*, *Science Advances*, *Geology*, *Geophysical Research Letters*, *Earth and Planetary Science Letters*, *Geochimica et Cosmochimica Acta*, *GSA Bull.*, *JGR Atmospheres*, *Chemical Geology*, *Precambrian Research*, among others

SELECTED PUBLICATIONS (* = corresponding author)

Li*, M., Xu, Y., Sun, L., Chen, J., Zhang, K., Li, D., Farquhar, J., Zhang, X., Sun, R., Macdonald, F.A., Grasby, S.E., Fu, Y., Shen, Y., 2023. Deglacial volcanism and reoxygenation in the aftermath of the Sturtian Snowball Earth. *Science Advances* 9, eadh9502 (highlighted by *Geochemical News* on the issue of Sept 26, 2023. One of the 10 most popular sciences in 2023 in China selected by the Chinese Academy of Sciences, Chinese Academy of Engineering, Ministry of Science and Technology of China, China Association for Science and Technology, China Media Group, and All-China Federation of Trade Unions).

Li*, M., Frank, T.D., Xu, Y., Fielding, C.R., Gong, Y., Shen, Y., 2022. Sulfur isotopes link atmospheric sulfate aerosols from the Siberian Traps outgassing to the end-Permian extinction on land. *Earth and Planetary Science Letters* 592, 117634.

Li, M., Grasby, S.E., Wang, S.J., Zhang, X., Wasylenki, L.E., Xu, Y., Sun, M., Beauchamp, B., Hu, D., Shen*, Y., 2021. Nickel isotopes link Siberian Traps aerosol particles to the end-Permian mass extinction. *Nature Communications* 12, 2024 (highlighted as the TOP NEWS by *Geochemical News* on the issue of June 29, 2021).

Li*, M., 2020. Evaluation of paired carbon isotopic signals from the Ediacaran Doushantuo phosphorites: Diagenetic or primary? *Precambrian Research* 349, 105502.

Shen*, Y., Zhang, Q., Xu, Y., **Li, M.**, Thiemens, M.H., 2024. Sulfur isotope anomalies in coal combustion: Applications to the present and early Earth environments. *Proc. Natl. Acad. Sci. USA* 121, e2408199121.

McLoughlin*, N., **Li, M.**, Wacey, D., Martin, L.A.J., Shen, Y., Beukesd, N.J., 2022. Microbial sulphur-cycling and atmospheric signatures in the 2.52 Ga Gamohaan Formation, South Africa. *Earth and Planetary Science Letters* 602, 117941.

Hu, D., **Li, M.**, Zhang, X., Wang, X., Farquhar, J., Xu, Y., Sun, L., Shen*, Y., 2022. Multiple S-isotope constraints on environmental changes during the Serpukhovian mass extinction. *Earth and Planetary Science Letters* 594, 117719.

Pohl*, A., Lu*, Z., Lu, W., Stockey, R.G., Elrick, M., **Li, M.**, Desrochers, A., Shen, Y., He, R., Finnegan, S., Ridgwell, A., 2021. Vertical decoupling in Late Ordovician anoxia due to reorganization of ocean circulation. *Nature Geoscience* 14, 863-873.

Johnson*, D.L., Present, T.M., **Li, M.**, Shen, Y., Adkins, J.F., 2021. Carbonate associated sulfate (CAS) $\delta^{34}S$ heterogeneity across the End-Permian Mass Extinction in South China. *Earth and Planetary Science Letters* 574, 117172.

Hu, D., **Li, M.**, Zhang, X., Turchyn, A.V., Gong, Y., Shen*, Y., 2020. Large mass-independent sulphur isotope anomalies link stratospheric volcanism to the Late Ordovician mass extinction. *Nature Communications* 11, 2297.

Lin*, M., Zhang, X., **Li, M.**, Xu, Y., Zhang, Z., Tao, J., Su, B., Liu, L., Shen*, Y., Thiemens*, M.H., 2018. Five-S-isotope evidence of two distinct mass-independent sulfur isotope effects and implications for the modern and Archean atmospheres. *Proc. Natl. Acad. Sci. USA* 115, 8541-8546.

Li, D., Zhang, X., Hu, D., Chen, X., Huang, W., Zhang, X., **Li, M.**, Qin, L., Peng, S., Shen*, Y., 2018. Evidence of a large $\delta^{13}C_{carb}$ and $\delta^{13}C_{org}$ depth gradient for deep-water anoxia during the late Cambrian SPICE event. *Geology* 46, 631-634.