Curriculum Vitae/Resume

Hao-Wei Huang

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Ludwig-Maximilians-Universität München, Department für Geo- und Umweltwissenschaften

RESEARCH INTERESTS

I am interested in the impact of chemical weathering on the carbon cycle, particularly its long-term influence on the atmospheric CO_2 budget. My research focuses on understanding the residence time and weathering history of floodplain sediments, with the aim of constraining the contribution of lowland regions to the global carbon cycle.

EDUCATION

M.S., 2023, Earth Sciences at Cheng Kung University, Taiwan

- Thesis titled 'Experiments on arsenic sorption and release by Mn oxides: an investigation of their effects on arsenic cycling'. Supervisor: Professor Huai-Jen Yang

1. Conducting sorption experiments, including co-precipitation and adsorption experiments
2. Performing mineral identification experiments (XRD, FTIR)
3. Optimizing sequential extraction procedures and quantifying the enrichment and release capabilities of manganese oxides on arsenic

B.A., 2021, Earth Sciences at Cheng Kung University, Taiwan

WORKING EXPERIENCE

Teaching Assistant (2020 - 2023):

- Petrology, especially for Polarized Light Microscopy (3 years)
- Ore and Environmental Geochemistry (occasionally)

Research Assistant in Isotope Geochemistry Laboratory (IGL) (2023 - present):

- Validating wildfire evidence in Nanhua Mountain soil via Digital Microscopy and XRD analysis (conducting experiments)
- Analyzing the $\delta^{11}B$ and $^{87}Sr/^{86}Sr$ composition of hydrothermal fluids in the Tatun Volcano Group to observe the secular variation of the B and Sr isotope signals by Thermo ScientificTM Neptune (MC-ICP-MS) (conducting experiments)
- Using Nd isotope as a proxy to reconstruct the paleo-circulation in the South China Sea (under reviewed in Journal of Asian Earth Sciences)

- Assessing the recharging source of groundwater in Choushui River Alluvial Plain through $^{87}Sr/^{86}Sr$ composition

PUBLISHED ARTICLES

- **Huang, H. W.**, Wang, R. M., Chen, W. C., Chen, Y. H., Chung, C. H., & You, C. F. (2025). Tracing chemical weathering dynamics during seasonal variability and storm in the Gaoping (Kaoping) and Choushui Rivers, Western Taiwan: Insight from Li isotope. Science of The Total Environment, 1001, 180519.
- **Huang, H. W.**, Chen, C. H., Liu, Z., Huang, K. F., Chung, C. H., & You, C. F. (2025). Evolution of deep water circulation in the South China Sea since 32 million years ago. Journal of Asian Earth Sciences, 290, 106654.
- **Huang, H. W.**, Huang, S. T., Wang, R. M., Chen, W. F., Chung, C. H., & You, C. F. (2024). Strontium Isotopic Composition as Tracers for Identifying Groundwater Recharge Sources in the Choushui River Alluvial Plain, Western Taiwan. Water, 16(15), 2151.
- Lin, Y. P., Cai, M. J., Tsai, **Hao-Wei Huang**, S. T., Chen, J. H., Huang, H. W., ... & You, C. F. (2024). Boron Isotope, FTIR, and XRD Analysis of High-Mountain Soils in Nanhua: Investigating Holocene Environmental Changes and Forest Fires in Taiwan. 臺灣鑛業, 76(1), 31-46. (in Chinese)

CONFERENCE ABSTRACTS

- **Hao-Wei Huang**, Huai-Jen Yang, Jennifer Kung, Wei-Teh Jiang. An experimental investigation on arsenic sorption and release by Mn dioxides. (2022) Goldschmidt conference, Honolulu, Hawai‘i (poster).
- **Hao-Wei Huang**, Huai-Jen Yang. Experiments of arsenic (V) adsorption on birnessite: implications on arsenic cycling. (2023) EGU General Assembly, Vienna, Austria (poster).

WORKSHOPS

- Soil and Groundwater Pollution Remediation Seed Talent Training Program (2023), Environmental Protection Administration, Taiwan.

HONOR AND REWARDS

- First Place in the Master's Division of Student Research Forum, NCKU Foundation, University of Cheng-Kung (2022).

EDUCATION ACTIVITY

- Participated in organizing two Earth Science Camps: "10th Mystery of the Planet" and "11th Puzzle History."
- Designed and contributed to three Earth Science Exhibitions: "49th Natural Hazards," "50th Paleontology," and "51st Applied Minerals."