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EDUCATION

- 1995 –1999 B.Sc. in Geology, Chinese Culture University, Taiwan
- 2000 –2009 Ph.D. in Earth Sciences, National Cheng-Kung University, Taiwan
Dissertation title: Protolith and metamorphic process controls on the petrographic and chemical characteristics of eclogites from the Sulu ultra-high pressure metamorphic terrane, eastern China (Advisor: Prof. Shu-Cheng Yu, co-advisors: Prof. Huai-Jen Yang and Prof. Wei-Min, Chen)

PROFESSIONAL EXPERIENCE

- Postdoctoral Fellow, Institute of Earth Sciences, Academia Sinica (2013 – Present)
- Postdoctoral Fellow, Woods Hole Oceanographic Institution (2012/9 – 2013/10)
Project title: Experimental constraints on Li diffusivity in diopside and Li partitioning between clinopyroxene and hydrous andesitic melts under low-pressure conditions
- Guest Investigator, Woods Hole Oceanographic Institution (2012/01 – 2012/08)
- Postdoctoral Fellow, National Cheng-Kung University (2009 – 2012)
Project title: Magma genesis and evolution of the northern Luzon arc: constraints from textural and chemical variations of phenocrysts
- Teaching assistant, National Cheng-Kung University
 - Optical Mineralogy (2000, 2005)
 - Petrology (2004)
 - Ore Deposits (2005)

RESEARCH INTERESTS

- Subduction zone geochemistry
- Paleoenvironment reconstructions
- Metamorphic history and protolith characteristics of high-grade metamorphic rocks
- Experimental constraints on element partitioning and diffusivity in the magmatic systems

PROFESSIONAL SKILLS

- *Petrographic observation and in-situ chemical analyses*: Optical microscope, electron microprobe, Laser-ablation sample introduction system, SIMS (Cameca IMS 1280), and NanoSIMS (Cameca NanoSIMS 50L).
 - *NanoSIMS U–Pb dating*
 - *In-situ sulfur and oxygen isotope measurements using NanoSIMS*
- *Bulk chemical and isotopic measurements*: ICPMS (Agilent 7500ce), TIMS (MAT262), and MC-ICP-MS (NEPTUNE PLUS).
 - *B, Li, and Mg isotope measurements of the terrestrial and extraterrestrial hard-rock samples*
- *Experimental petrology*: gas-mixing furnace (Deltech DT31VT) and end-loaded piston-cylinder apparatus.

PUBLICATIONS

1. Liu, Y.-H., Lee, D.-C., You, C.-F., Takahata, N., Iizuka, Y., Sano, Y., Zhou, C.-M., 2020. *In-situ* U–Pb dating of monazite, xenotime, and zircon from the Lantian black shales: Time constraints on provenances, deposition and fluid flow events. *Precambrian Research*, 349, 105528.
2. Liu, Y.-H., Huang, K.-F., Lee, D.-C., 2018. Precise and accurate boron and lithium isotopic determinations for small sample-size geological materials by MC-ICP-MS. *Journal of Analytical Atomic Spectrometry*, 33, 846–855.
3. Chen, C.-H., Lee, C.-Y., Liu, Y.-H., Xiang, H., Zeng, W., Zhou, H.-W., 2018. Precambrian protoliths and Phanerozoic overprinting on the Wuyishan terrain (South China): New evidence from a combination of LA-ICPMS zircon and EMP monazite geochronology. *Precambrian Research*, 307, 229–254.
4. Chen, H.-Y., Yang, H.-J., Liu, Y.-H., Huang, K.-F., Takazawa, E., 2018. Tectonic affinities of the accreted basalts in southern Taiwan. *Journal of Asian Earth Sciences*, 158, 253–265.
5. Chen, C.-H., Liu, Y.-H., Lee, C.-Y., Zhou, H.W., Xiang, H., 2017. The Triassic reworking of the Yunkai massif (South China): EMP monazite and U-Pb zircon geochronologic evidence. *Tectonophysics*, 694, 1–22.
6. Liu, Y.-H., Yang, H.-J., Takazawa, E., You, C.-F., 2015. Decoupling of the Lu–Hf, Sm–Nd, and Rb–Sr isotope systems in eclogites and a garnetite from the Sulu ultra-high pressure metamorphic terrane: Causes and implications. *Lithos*, 234–235, 1–14.
7. Chen, C.-H., Liu, Y.-H., Lee, C.-Y., Xiang, H., Zhou, H.W., 2012. Geochronology of granulite, charnockite and gneiss in the poly-metamorphosed Gaozhou Complex (Yunkai massif), South China: Emphasis on the in-situ EMP monazite dating. *Lithos*, 144–145, 109–129.
8. Liu, Y.-H., Yang, H.-J., Zhang, J. X., Shau, Y.-H., Chu, M.-F., Iizuka, Y., Yu, S.-C., 2010. Kyanite formation and element fractionation in the high-Al eclogites from the Sulu UHP metamorphic terrane. *Terrestrial, Atmospheric and Oceanic Sciences*, 21, 277–298.
9. Huang, K.-F., You, C.-F., Liu, Y.-H., Wang, R.-M., Lin, P.-Y., Chung, C.-H., 2010. Low-memory, small sample size, accurate and high-precision determinations of lithium isotopic ratios in natural materials by MC-ICP-MS. *Journal of Analytical Atomic Spectrometry*, 25, 1019–1024.
10. Liu, Y.-H., Hsu, Y.-J., Yang, H.-J., Hsieh, I., Chen, D., Wu, C., 2009. An evaluation on acid digestion techniques for rutile- and zircon-rich geological materials: an example from eclogites. *Journal of the National Taiwan Museum*, 62, 63–75. (Chinese with English Abstract)
11. Liu, Y.-H., Chen, W.-M., Yang, H.-J., Iizuka, Y., Yu, S.-C., 2009. The chemical zoning and metamorphic conditions for garnet porphyroblasts in Qinglongshan eclogites. *Journal of the National Taiwan Museum*, 62, 77–102. (Chinese with English Abstract)
12. Liu, Y.-H., Yang, H.-J., Shau, Y.-H., Meng, F. C., Zhang, J. X., Yang, J. S., Xu, Z. Q., Yu, S.-C., 2007. Compositions of high Fe-Ti eclogites from the Sulu UHP metamorphic terrane, China: HFSE decoupling and protolith characteristics. *Chemical Geology*, 239, 64–82.

CONFERENCE ABSTRACTS

1. Liu, Y.-H., Lee, D.-C., Liang, M.-C., Thiemens, M.H., Iizuka, Y., Shen, Y., Hsiao,

- S.-Y., 2020. Unraveling pyrite formation mechanism in Doushantuo cap carbonates by in-situ Sulfur isotopic analyses. 2020 Geosciences conference.
2. Lee, D.-C., Liu, Y.-H., Lee, H.-Y., 2019. Identifying FUN Inclusions with LA-MC-ICPMS Mg and Si Isotopes. 2019 Goldschmidt Conference.
 3. Lee, D.-C., Liu, Y.-H., Lee, H.-Y., 2018. Identifying FUN Inclusions with LA-MC-ICPMS Mg Isotopic Analysis. 2018 Goldschmidt Conference.
 4. Liu, Y.-H., Lee, D.-C., You, C.-F., Zhou, C.-M., 2016. Reconstruction of paleoenvironment recorded in the Ediacaran Lantain black shales. 2016 AGU Fall Meeting.
 5. Lee, D.-C., Liu, Y.-H., Huang, K.-F., Li-Be-B Isotopic Systematics in CAIs and Chondrules. 2016 Goldschmidt Conference.
 6. Liu, Y.-H., Gaetani, G.A., Marschall, H.R., Dohmen, R., 2014. Diffusion-driven Li isotope fractionation in Cpx: anisotropy and the influence of fO_2 . 2014 Goldschmidt Conference.
 7. Liu, Y.-H., Iizuka, Y., Huang, K.-F., 2012. Textural and chemical variation in phenocrysts from the early eruptions of Lutao volcanic island, the northern Luzon arc. 2012 AGU Fall Meeting, V11C-2775.
 8. Liu, Y.-H., Chen, C.-H., Chen, W.-M., Wu, J.-H., Lee, C.-Y., Iizuka, Y., Zhou, H.-W., Yang, H.-J., 2011. P-T-t path of the Yunkai granulite-charnockite association in SE China: implications on the Caledonian to Indosinian tectonic evolution. Asia Oceania Geosciences Society.
 9. Chen, C.-H., Liu, Y.-H., Xiang, H., Wu, J.-H., Lee, C.-Y., Yang, H.-J., 2011. In-situ EMP Monazite dating of the granulite-charnockite association in the Gaozhou Complex (Yunkai Massif), South China. Asia Oceania Geosciences Society.
 10. Liu, Y.-H., Yang, H.-J., Huang, K.-F., You, C.-F., 2010. Decoupled Sm-Nd and Lu-Hf isotope systems in Maobei eclogites from the Sulu ultra-high pressure metamorphic terrane: Implications on element fractionation and protolith characteristics. 2010 Western Pacific Geophysics Meeting.
 11. Liu, Y.-H., Huang, K.-F., You, C.-F., Wang, R.-M., Lin, P.-Y., Yang, H.-J., 2009. Accurate, high-precision, fast and small sample size determinations of lithium isotopic ratios of natural materials by MC-ICP-MS. 2009 Oceanic Science Meeting.
 12. Liu, Y.-H., Yang, H.-J., Shau, Y.-H., Yu, S.-C., 2008. HFSE-REE fractionation in two groups of Sulu eclogites: protolith or process control? 2008 AGU Fall Meeting, V33C-2235.
 13. Liu, Y.-H., Yang, H.-J., Tseng, C.-Y., Yu, S.-C., Yang J.-S., Xu, Z.-Q., 2006. Protolith characteristics of the Maobei and Qinglongshan high-Al eclogites: implications on the tectonic architecture of the Yangtze Craton during 600~850 Ma. 2006 AGU Fall Meeting, V31A-0572.
 14. Liu, Y.-H., Yang, H.-J., Tseng, C.Y., Yu, S.-C., Yang, J.-S., Xu, Z.-Q., 2006. Petrogenesis and significance of eclogites in the Sulu ultrahigh-pressure Terrane, China. 2006's National Symposium on Petrology and Geodynamics.
 15. Liu, Y.-H., Yang, H.-J., Yu, S.-C., Yang, J.-S., Xu, Z.-Q., 2005. Tracing the protoliths of rutile eclogites from Maobei, eastern china and implications on rutile formation. 7th International Eclogite Conference. Mitt. Österr. Miner. Ges. 150, S94.
 16. Liu, Y.-H., Chen, W.-M., Yu, S.-C., Iizuka, Y., Yang, T. N., Yang, J. S., Xu, Z. Q., 2002. Integrated P-T paths of UHP eclogites and their tectonic implications of Qinglongshan, Sulu region. The 3rd UHPM Workshop.