Curriculum Vitae – Yun-Chuan Zeng

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Education and Professional Work Experience

01/2020-present	Associate professor, China University of Geosciences, Beijing
10/2019-12/2019	Associate professor, China University of Geosciences, Beijing
06/2018-05/2019	Visiting scholar, University of Arizona
07/2017-10/2019	Postdoc, China University of Geosciences, Beijing
09/2012-06/2017	Ph.D. Guangzhou Institute of Geochemistry, Chinese Academy of Sciences
09/2008-06/2012	B.S, China University of Geosciences, Beijing

Research Interests and Awards Granted

I am an igneous petrologist and geochemist engaged in investigating the tectonic evolution of the Himalayan-Tibetan Plateau. My research interests in recent years include: (1) Tibetan ophiolites to study how Tethyan oceanic basins were formed and initially subducted; (2) The architecture, composition, and evolution of Mesozoic magmatic arcs in southern-central Tibet; and (3) post-collisional igneous rocks to study the continental lithospheric evolution and geodynamics since Indian-Asian collision and the surface response.

I have successfully applied for grants from different ministries of China as below:

1. Exhumation and hydrothermal circulation of fossil oceanic lithosphere: A contrastive investigation between the Tibetan and Troodos ophiolites, Joint NSFC-ISF Research Grant, 2024/01-2026/12, co-PI with Navot Morag as the Israeli PI, ￥4,000,000 in total with ￥700,000 to Yunchuan.
2. The composition, evolution and geodynamic process of Early Cretaceous continent arc crust of northern Lhasa Terrane, Tibetan Plateau, NSFC, 2023/01-2026/12, sole PI, ￥580,000.
3. Does remnant of Cretaceous fossil oceanic crust exist within the Bangong-Nujiang Suture Zone: Evidence from the Kangqiong Ophiolite, NSFC, 2018/01-2021/12, sole PI, ￥260,000.
4. The cause and consequence of Tethyan mantle heterogeneity, Awards to Outstanding Yong Scientist of CUGB, 2021/01-2023/12, sole PI, ￥600,000.
5. The composition, evolution and deep process of Tibetan lithosphere, Second Tibetan Plateau Scientific Expedition Program (2019QZKK0702), 2019/12-2025/12, co-PI, ￥15,000,000 in total with ￥4000,000 to Yunchuan.
6. Evolution of the overthickened crust in the India-Asia collision zone, Innovation Group Project of the NSFC, 2022/01-2026/12, co-investigator.
7. Fractionation mechanism of Mo isotopes in magmatic hydrothermal systems and indication of genesis to porphyry deposits. Key projects of the NSFC, 2019/12-2025/12, co-PI, ￥3,180,000 in total with ￥5000,000 to Yunchuan.
8. The formation age, origin and geodynamic implication of the Songwori Volcanic Formation on the northern Lhasa Terrane. The Chinese Postdoctoral Science Foundation, 2018/05-2019/10, sole PI, ￥80,000.

Selected peer-reviewed publication (*student as first author)

1. **Zeng, Y.C**., Xu, J.F., Chen, J.L., Wang, B.D., Huang, F., Yu, H.X., Paleocene oceanic island basalt-type magmatism in Lhasa Block attests a decoupled mantle-crust deformation during Indian-Asian

collision. ***GSA Bulletin***, 2024, https://doi.org/10.1130/B37289.1.

2. Zhang, H*., **Zeng, Y. C**., Chen, Q., Xu, J. F., Li, M. J., and Huang, F., Petrogenesis of Late Cretaceous gabbronorites in southwestern Lhasa Terrane, Tibetan Plateau, China: Sediment melt-mantle interaction and magmatic flare-up in response to Neo-Tethys slab roll-back. ***Journal of Asian Earth Sciences***, 2023, 105875.
3. Chai, X.H*., **Zeng, Y.C**#., Xu, J.F., Li, M.J., Huang, F., Liu, X.J., Chen, Q., Yu, H.X., Ren, S. H. Crustal thickening and uplift of the northwestern Lhasa Terrane, central Tibetan Plateau: Insights from Mid-Eocene volcanic rocks in the Gerze Region. ***Lithos***, 2023,107157. **(#corresponding author)**
4. Li, M.J*., **Zeng, Y.C**#., Tiepolo, M., Farina, F., Xu, J.F., Huang, F., Liu, X.J., Chen, Q., and Ma, Y., Grain-scale zircon Hf isotope heterogeneity inherited from sediment-metasomatized mantle: Geochemical and Nd-Hf-Pb-O isotopic constrains on Early Cretaceous intrusions in central Lhasa Terrane, Tibetan Plateau. ***American Mineralogist***, 2023, 108(9), 1692-1707. **(#corresponding author)**
5. Huang, F., Li, J., Xu, J., Chen, J., Wang, B., Hu, P., Xu, R., **Zeng, Y.C**, Zhang, L., Zhou, T., Mo isotopes archive oceanic sediments in post-orogenic lithospheric mantle. ***Geochimica et Cosmochimica Acta***, 2023, 341, 75-89.
6. Zhang, Y*., Huang, F., Xu, J., **Zeng, Y.C.,** Wang, B., Lv, M., Zhang, L., Li, M., Zhang, Z., Tian, Y., Liu, Q., Zhang, L., Origin of the volcanic rocks in Dianzhong Formation, central Lhasa Terrane, Tibet: Implication for the genesis of syn-collisional magmatism and Neo-Tethyan slab roll-back. International Geology Review, 2023, 65(1), 21-39.
7. **Zeng, Y.C**., Xu, J.F., Chen, J.L., Wang, B.D., and Huang, F., How and how much did western central Tibet raise by India-Asia collision?. ***Geophysical Research Letters***, 2022, 49, e2022GL101206.
8. Ren, S.H*., Chen, Q., **Zeng, Y.C#.**, Xu, J.F., Li, M.J., Huang, F., Lv, M.D. Identification of Jurassic pure sediment-derived granites in the Central Lhasa Terrane, Tibetan Plateau: Implications for continental crustal reworking during Mesozoic Tethyan subduction. ***Lithos***, 2022, 434–435, 106927 **(#corresponding author)**.
9. Fan, H*., Zhang, M., Huang, F., Xu, J., Liu, X., **Zeng, Y.C**, Zhang, S., Liu, Q., Lv, M., Yu, H., Tian, Y., Zhang, L., Zhou, T., Li, Z., Zhang, Y., Subducted oceanic plateau fed crustal growth: Insights from Amdo dacites in central Tibetan Plateau. ***Lithos***, 2022, 434-435, 106944.
10. Tian, Y*., Huang, F., Xu, J., **Zeng, Y.C**., Hu, P., Yu, H., Tian, Y., Yang, Z., Yang, X., Petrogenesis and geodynamic mechanisms of the Late Cretaceous magmatic 'flare-up' in the southern Lhasa Terrane, Tibet. ***Lithos***, 2022, 424-425, 106766.
11. **Zeng, Y.C**., Ducea, M.N., Xu, J.F., Chen J.L., Dong, Y.H., Negligible surface uplift following foundering of thickened central Tibetan lower crust. ***Geology***, 2021, 49, 45-50.
12. **Zeng, Y.C**., Xu, J. F., Li, M. J., Chen, J. L., Wang, B. D., Huang, F., and Ren, S. H., Late Eocene two-pyroxene trachydacites from the southern Qiangtang Terrane, central Tibetan Plateau: High-temperature melting of overthickened and dehydrated lower crust. ***Journal of Petrology***, 2021, 62(11), egab080.
13. **Zeng, Y.C**., Xu, J.F., Chen, J.L., Wang, B.D., Xia, X.P., Huang, F., Li, M.J., Early Cretaceous (~138–134 Ma) forearc ophiolite and tectonomagmatic patterns in central Tibet: subduction termination and re-initiation of Meso-Tethys Ocean caused by collision of an oceanic plateau at the continental margin?: ***Tectonics***, 2021, 42(3), e2020TC006423.
14. Huang, F., Rooney, T. O., Xu, J.F., **Zeng, Y.C.**, Magmatic record of continuous Neo-Tethyan subduction after initial India-Asia collision in the central part of southern Tibet. ***GSA Bulletin***, 2021, 133(7-8),1600-1612.
15. **Zeng, Y.C**., Xu, J.F., Huang, F., Li, M.J., Chen, Q., Generation of the 105-100 Ma Dagze volcanic rocks in the north Lhasa Terrane by lower crustal melting at different temperature and depth:

Implications for tectonic transition. ***GSA Bulletin***, 2020, 132(5-6), 1257-1272.

16. Li, M.J*., **Zeng, Y.C**#., Xu, J.F., Huang, F., Cen, Q., Petrogenesis of Early Jurassic (ca. 181 Ma) dacitic–rhyolitic volcanic rocks in the Amdo ophiolite mélange, central Tibetan Plateau: low-pressure partial melts of Bangong–Nujiang Tethys Oceanic crust?. ***Geological Journal***, 2020, 55(5), 3283-3296 **(#corresponding author).**
17. **Zeng, Y.C**., Xu, J.F#., Ducea, M.N., Chen, J.L., Huang, F., Initial rifting of the Lhasa Terrane from Gondwana: insights from the Permian（~262 Ma） amphibole-rich lithospheric mantle-derived Yawa basanitic intrusions in southern Tibet. ***Journal of Geophysical Research: Solid Earth***, 2019, 124, 2564-2581.
18. **Zeng, YC**., Xu, J.F#., Chen, J.L., Wang, B.D., Huang, F., Yu, H.X., Chen X.F., Zhao P.P., Breakup of Eastern Gondwana as inferred from the Lower Cretaceous Charong Dolerites in the central Tethyan Himalaya, southern Tibet, ***Palaeogeography, Palaeoclimatology, Palaeoecology***, 2019, 515, 70-82.
19. Huang, F., Zhang, Z., Xu, J., Li, X., **Zeng, Y.C**, Wang, B., Li, X., Xu, R., Fan, Z., Tian, Y., Fluid flux in the lithosphere beneath southern Tibet during Neo-Tethyan slab breakoff: Evidence from an appinite–granite suite. ***Lithos***, 2019, 344-345, 324-338.
20. Huang, F., Li, M., Xu, J., **Zeng, Y.C**., Chen, J., Wang, B., Yu, H., Chen, L., Zhao, P., Zhang, Z., Geodynamic transition from subduction to extension: evidence from the geochronology and geochemistry of granitoids in the Sangsang area, southern Lhasa Terrane, Tibet**.** ***International Journal of Earth Sciences***, 2019, 108(5), 1663-1681.
21. **Zeng, Y.C**., Xu, J.F., Chen, J.L., Wang, B.D., Kang, Z.Q., Huang, F, Geochronological and geochemical constraints on the origin of the Yunzhug ophiolite in the Shiquanhe–Yunzhug–Namu Tso ophiolite belt, Lhasa Terrane, Tibetan Plateau. ***Lithos***, 2018, 300, 250-260.
22. **Zeng, Y.C**., Chen, Q., Xu, J.F#., Chen, J.L., Huang, F., Yu, H.X., Zhao, P.P. Petrogenesis and geodynamic significance of Neoproterozoic (~925 Ma) high-Fe–Ti gabbros of the RenTso ophiolite, Lhasa Terrane, central Tibet. ***Precambrian Research***, 2018, 314, 160-169.
23. **Zeng, Y.C**., Chen, J.L#., Xu, J.F., Lei, M., Xiong, Q.W. Origin of Miocene Cu-bearing porphyries in the Zhunuo region of the southern Lhasa subterrane: Constraints from geochronology and geochemistry. ***Gondwana Research***, 2017, 41, 51-64.
24. Huang, F., Xu, J., **Zeng, Y.C**., Chen, J., Wang, B., Yu, H., Chen, L., Huang, W., Tan, R., Slab breakoff of the Neo-Tethys Ocean in the Lhasa Terrane inferred from contemporaneous melting of the mantle and crust. ***Geochemistry, Geophysics, Geosystems***, 2017, 18(11), 4074-4095.
25. **Zeng, Y.C**., Chen, J.L., Xu, J.F#., Wang, B.D., Huang, F., Sediment melting during subduction initiation: Geochronological and geochemical evidence from the Darutso high-Mg andesites within ophiolite mélange, central Tibet, ***Geochemistry, Geophysics, Geosystems***. 2016, 17（12）, 4859-4877.
26. Huang, F., Xu, J.F., Chen, J.L., Wu, J.B., **Zeng, Y.C**., Xiong, Q.W., Chen, X.F., Yu, H.X., Two Cenozoic tectonic events of N–S and E–W extension in the Lhasa Terrane: Evidence from geology and geochronology. ***Lithos***, 2016, 245, 118-132.

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