

## Basic Personal Data

**Family Name** Chu 朱  
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**Date of Birth** June 02, 1976  
**Place of Birth** Taiwan  
**Nationality** Taiwan (R. O. C.)  
**Family Situation** Celibate

## Language

Chinese

English (proficiency of listening, speaking, reading and writing: fine)

## Education and Diplomas Obtained

National Taiwan University, B.Sc., 1998, Geology

National Taiwan University, Ph. D., 2006, Geology

[ Ph.D. thesis title ]

Application of ICP-MS to the study of Transhimalayan petrogenesis

## Professional Positions

[ Previous Status ]

Postdoctoral Fellow, Institute of Earth Sciences, Academia Sinica, Taipei, Taiwan (Aug, 2006- Sep, 2007)

[ Present Status ]

Research Fellow, GEMOC, Dept. of Earth & Planetary Sciences, Macquarie University, Sydney, Australia (from Oct, 2007 to date)

## Principal Research Domains or Research Interests

Magmatism and tectonic evolution of the Tibetan plateau

Application of (LAM-)ICP-MS to Earth Sciences

Igneous petrogenesis

### **Lab Experiences**

Agilent 7500s + clean lab chemistry in NTU, Taipei, Taiwan:

analyses of trace element concentrations of silicate rocks

New Wave LUV213 + Agilent 7500s in NTU, Taipei, Taiwan:

*in situ* analyses of trace element concentrations of apatite

JEOL JXA-8900R WDS-EPMA in IES, Taipei, Taiwan:

*in situ* analyses of major element concentrations of zircon and apatite

JEOL JSM-6360 LV SEM with EDS & CL in IES, Taipei, Taiwan:

BSE and CL images of zircon separates

SHRIMP II in CAGS, Beijing, China:

*in situ* U-(Th-)Pb dating of zircon

Cameca SX-100 electron microprobe in GEMOC, MQ, Sydney, Australia:

*in situ* analyses of major element concentrations of zircon and apatite

New Wave UP193HE/UP213 + Nu Plasma MC-ICPMS in GEMOC, MQ, Sydney,

Australia:

*in situ* Hf isotopic analyses of zircon; *in situ* Re-Os isotopic analyses of sulfide

Nu Plasma MC-ICPMS + clean lab chemistry in GEMOC, MQ, Sydney, Australia:

Li isotopic analyses

Cameca IMS 1280 in IGG, CAS, Beijing, China

*in situ* O isotopic analyses of zircon

### **Field Experiences**

Sep 04, 2002 ~ Sep 18, 2002, southern Tibet

Sep 03, 2003 ~ Sep 10, 2003, southern Tibet

### **Honors**

Presidential Award, NTU: 5 times (1994-1998)

Graduate Dean's Award, NTU: 1998

Dean's Postgraduate Research Award, NTU: 2006

Taiwan Merit Scholarships (TMS) Program, NSC: 2008

## Publication

### [ Peer-reviewed articles ]

- 2009** Chu, M-F, Wang, K-L, Griffin, WL, Chung, S-L, O'Reilly, SY, Pearson, NJ & Iizuka, Y, 2009. Apatite composition: Tracing petrogenetic processes in Transhimalayan granitoids. *Journal of Petrology* 50(10), 1829-1855.  
doi:10.1093/petrology/egp054
- Chung, S-L, Chu, M-F, Ji, J, O'Reilly, SY, Pearson, NJ, Liu, D, Lee, T-Y & Lo, C-H, 2009. The nature and timing of crustal thickening in Southern Tibet: Geochemical and zircon Hf isotopic constraints from postcollisional adakites. *Tectonophysics* 477(1-2), 36-48. doi:10.1016/j.tecto.2009.08.008
- Chiu, H-Y, Chung, S-L, Wu, F-Y, Liu, D, Liang, Y-H, Lin, I-J, Iizuka, Y, Xie, L-W, Wang, Y & Chu, M-F, 2009. Zircon U-Pb and Hf isotopic constraints from eastern Transhimalayan batholiths on the precollisional magmatic and tectonic evolution in southern Tibet. *Tectonophysics* 477(1-2), 3-19. doi:10.1016/j.tecto.2009.02.034
- 2008** Wen, D-R, Liu, D, Chung, S-L, Chu, M-F, Ji, J, Zhang, Q, Song, B, Lee, T-Y, Yeh, M-W & Lo, C-H, 2008. Zircon SHRIMP U-Pb ages of the Gangdese Batholith and implications for Neotethyan subduction in southern Tibet. *Chemical Geology* 252, 191-201. doi:10.1016/j.chemgeo.2008.03.003
- 2007** Shen, C-C, Chiu, H-Y, Chiang, H-W, Chu, M-F, Wei, K-Y, Steinke, S, Chen, M-T, Lin, Y-S & Lo, L, 2007. High precision measurements of Mg/Ca and Sr/Ca ratios in carbonates by cold plasma inductively coupled plasma quadrupole mass spectrometry. *Chemical Geology* 236, 339-349.  
doi:10.1016/j.chemgeo.2006.10.010
- Shen, C-C, Chiu, H-Y, Chiang, H-W, Chu, M-F, Wei, K-Y, Steinke, S, Chen, M-T, Lin, Y-S & Lo, L, 2007. High precision measurements of Mg/Ca and Sr/Ca ratios in carbonates by cold plasma inductively coupled plasma quadrupole mass spectrometry (vol 236, pg 339, 2007). *Chemical Geology* 240(1-2), 194-195.
- 2006** Chu, M-F, Chung, S-L, Song, B, Liu, D, O'Reilly, SY, Pearson, NJ, Ji, J & Wen, D-J, 2006. Zircon U-Pb and Hf isotope constraints on the Mesozoic tectonics and crustal evolution of southern Tibet. *Geology* 34(9), 745-748.  
doi:10.1130/G22725.1
- Shen, C-C, Lin, H-T, Chu, M-F, Yu, E-F, Wang, X & Dorale, JA, 2006. Measurements of natural uranium concentration and isotopic composition with permil-level precision by inductively coupled plasma-quadrupole mass spectrometry. *Geochemistry, Geophysics, Geosystems (G<sup>3</sup>)* 7(9).  
doi:10.1029/2006GC001303
- Yang, J-H, Wu, F-Y, Chung, S-L, Wilde, SA & Chu, M-F, 2006. A hybrid origin for

the Qianshan A-type granite, northeast China: Geochemical and Sr-Nd-Hf isotopic evidence. *Lithos* 89(1-2), 89-106.

Yang, J-H, Chung, S-L, Wilde, SA, Wu, F-Y, Chu, M-F, Lo, C-H & Fan, H-R, 2005. "Petrogenesis of post-orogenic syenites in the Sulu Orogenic Belt, East China: geochronological, geochemical and Nd-Sr isotopic evidence" - Reply. *Chemical Geology* 235(1-2), 186-190.

**2005** Chung, S-L, Chu, M-F, Zhang, Y, Xie, Y, Lo, C-H, Lee, T-Y, Lan, C-Y, Li, X, Zhang, Q & Wang, Y, 2005. Tibetan tectonic evolution inferred from spatial and temporal variations in post-collisional magmatism. *Earth-Science Reviews* 68, 173-196.

Yang, J-H, Chung, S-L, Wilde, SA, Wu, F-Y, Chu, M-F, Lo, C-H & Fan, H-R, 2005. Petrogenesis of post-orogenic syenites in the Sulu Orogenic Belt, East China: geochronological, geochemical and Nd-Sr isotopic evidence. *Chemical Geology* 214, 99-125.

Yang, J-H, Wu, F-Y, Chung, S-L, Wilde, SA, Chu, M-F, Lo, C-H & Song, B, 2005. Petrogenesis of Early Cretaceous intrusions in the Sulu ultrahigh-pressure orogenic belt, East China and their relationship to lithospheric thinning. *Chemical Geology* 222(3-4), 200-231.

**2004** Yang, J-H, Wu, F-Y, Chung, S-L, Wilde, SA & Chu, M-F, 2004. Multiple sources for the origin of granites: Geochemical and Nd/Sr isotopic evidence from the Gudaoling granite and its mafic enclaves, northeast China. *Geochimica et Cosmochimica Acta* 68(21), 4469-4483.

Ji, J, Zhong, D, Song, B, Chu, M-F & Wen, D-J, 2004. Metamorphism, geochemistry and U-Pb zircon SHRIMP geochronology of the high-pressure granulites in the central Greater Himalayas. *Acta Petrologica Sinica* 20(5), 1283-1300.

**2003** Chung, S-L, Liu, D, Ji, J, Chu, M-F, Lee, H-Y, Wen, D-J, Lo, C-H, Lee, T-Y, Qian, Q & Zhang, Q, 2003. Adakites from continental collision zones: Melting of thickened lower crust beneath southern Tibet. *Geology* 31(11), 1021-1024.

Qian, Q, Chu, M-F, Chung, S-L, Lee, T-Y & Xiong, X-M, 2003. Was Triassic continental subduction solely responsible for the generation of Mesozoic mafic magmas and mantle source enrichment in the Dabie-Sulu orogen? *International Geology Review* 45, 659-670.

Yang, J-H, Chu, M-F, Liu, W & Zhai, M-G, 2003. Geochemistry and petrogenesis of Guojialing granodiorites from the northwestern Jiaodong Peninsula, eastern China. *Acta Petrologica Sinica* 19(4), 692-700.

[ Papers to be submitted and in preparation ]

Chu, M-F, Chung, S-L, O'Reilly, SY, Pearson, NJ, Wu, F-Y, Li, X-H, Liu, D, Ji, J, Chu, C-H & Lee, H-Y. India's Hidden Inputs to Tibetan Orogeny Revealed by Hf Isotopes of Transhimalayan Zircons and Host Rocks. To be submitted to Science or Nature-Geoscience.

Chu, M-F, Chung, S-L, Li, X-H, Wu, F-Y, Yang, J-H & O'Reilly, SY. Petrogenesis of Transhimalayan granitoids constrained by zircon O-Hf isotopes and apatite Nd isotopes. In preparation.

Chu, M-F, Pearson, NJ, O'Reilly, SY, Griffin, WL & Wieland, P. Li isotopic values of rock and mica standards. In preparation.

Chu, M-F, Griffin, WL, Scambelluri, M, O'Reilly, SY & Pearson, NJ. Li isotopic evolution during subduction. In preparation.

[ Conference Abstracts ]

**2007** Chu, M-F, Chung, S-L, O'Reilly, SY, Pearson, NJ, Li, X-H & Wu, F-Y, 2007. Zircon and whole-rock Hf isotope constraints on the petrogenesis of Transhimalayan plutonic rocks. Goldschmidt 2007, Cologne, Germany, *Geochimica et Cosmochimica Acta* 71(15), A174.

**2004** Chu, M-F, Chung, S-L, Liang, XR, Griffin, WL, Pearson, NJ, Iizuka, Y, Li X-H & Zhang, YQ, 2004. Rare earth element chemistry of apatites from the Cretaceous to Paleogene granitoids, SE Tibet. Western Pacific Geophysics Meeting, Honolulu, Hawaii, USA, conference abstracts V32A-03.

**2003** Chu, M-F, Liang, XR, Chung, S-L, Li, X-H & Zhang, YQ, 2003. Rare earth element chemistry of apatites from Southeastern Tibetan granitic rocks. EGS-AGU-EUG Joint Assembly, Nice, France, *Geophysical Research abstracts* 5, 04937.

Chu, M-F, Chung, S-L, Liang, X, Li, X-H & Zhang, Y, 2003. Application of LA-ICP-MS to in situ trace element analysis: REE geochemistry of apatites from SE Tibetan granitic rocks. Geological Society Located in Taiwan, Keelung, Taiwan, conference abstracts, 573 – 577.

**2001** Chu, M-F, Chung, S-L, Zhang, Y, Xie, Y, Lo, C-H & Lee, T-Y, 2001. Post-collisional potassic magmatism on the Tibetan plateau: Temporal and Spatial evolution. EUG XI, Strasbourg, France, *Journal of Conference*, 729.