Department of Earth Sciences

Understanding magmatic processes: Geochemical and geochronological studies

We study the island arc magmatism and volcanism processes in the Northern Luzon Arc (Taiwan and Philippine) and the Western Sunda-Banda Arc (Sumatra and Java Island, Indonesia). Our researches are focusing on igneous geochemistry, zircon uranium-lead geochronology, volcanology and experimental petrology of the Cenozoic volcanic island rocks. We welcome students who want to visit our lab for learning geochemical analyses and using geochemical data.

Techniques used in study

Operations on X-ray Fluorescence (XRF),
Scanning Electron Microscope (SEM),
Energy Dispersive Spectrometer (EDS),
Electron Probe Micro-Analyses (EPMA),
Laser Ablation Microprobe (LAM)-ICPMS

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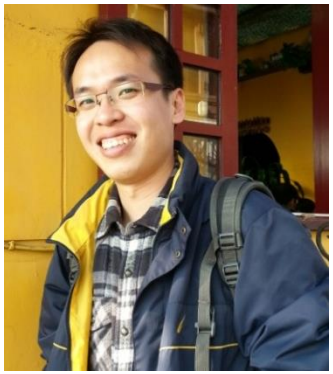
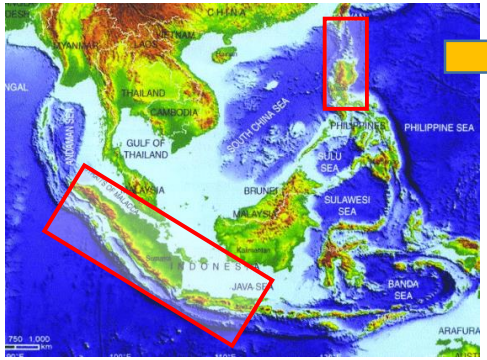


Background:

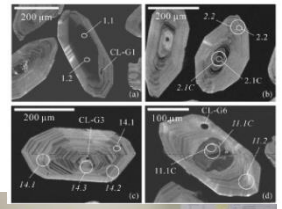
PhD in Department of Geosciences, National Taiwan University, Taiwan

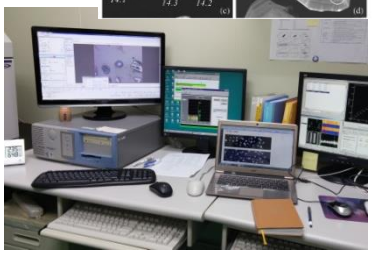
Funding: Ministry of Science and Technology



Study area:
Northern Luzon Arc
Western Sunda-Banda Arc
Focus on:
Magma evolution
Petrogenesis
Cenozoic volcanism

↓ Field survey and sample collection





Laboratory analysis →

Publications

- Zircon U-Pb and Hf isotopic constraints on the magmatic evolution of the Northern Luzon Arc. Terrestrial Atmospheric and Oceanic Science, 2018, 29 (2), 153-190.
- Age, geochemical and isotopic variations in volcanic rocks from the Coastal Range of Taiwan: Implications for magma generation in the Northern Luzon Arc. Lithos, 2017, 272-273, 92-115.