Department of Earth Sciences

Study of Paleoenvironment

My main research focus has been on the stable carbon and oxygen isotope compositions and elemental contents of Palaeozoic and Cenozoic fossil shells (mainly brachiopods, molluscs and foraminifers) and carbonate rocks as a geochemical tool to reconstruct global palaeoenvironments, as well as to tool to achieve/constrain stratigraphical correlations.

Techniques used in study

Sample collection, petrographic thin sections preparation, observation of diagenesis using cathodoluminescence microscope, Isotope Ratio Mass Spectrometer, and Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES).

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Background:

PhD in Geology, Texas A&M University, College Station, TX, USA

Funding:

Ministry of Science and Technology



The first to publish critical data on Late Carboniferous seasonality

Late Paleozoic middle-latitude Gondwana environment





Publications

- Mii, H.-S. and Grossman, E.L., 1994. Late Pennsylvanian seasonality reflected in the 180 and elemental composition of a brachiopod shell. *Geology* 22, 661-664.
- **Mii, H.-S.**, Shi, G. R., and Wang, C.-A., 2013, Late Paleozoic middle-latitude Gondwana environment -stable isotope records from Western Australia: Gondwana Research, v. 24, p. 125-138.
- Ren, H., Chen, Y.-C., Wang, X. T., Wong, G. T. F., Cohen, A. L., DeCarlo, T. M., Weigand, M. A., Mii, H.-S., and Sigman, D. M., 2017, 21st-century rise in anthropogenic nitrogen deposition on a remote coral reef: Science, V. 356, p. 749-752 (19 May 2017:Vol. 356, Issue 6339, pp. 749-752.



COLLEGE OF SCIENCE, NATIONAL TAIWAN NORMAL UNIVERSITY