

Yige Zhang

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Education

- B.S., 2007, Geochemistry, Nanjing University, China
- M. S., 2009, Marine Sciences, University of Georgia
- Ph.D., (expected graduation: 2014), Geochemistry and Paleoclimate, Yale University
Advisor: Mark Pagani

Professional Society Membership

- Geological Society of America
- American Geophysical Union
- Geochemical Society

Awards & Grants

- Schlanger Fellowship, U.S. Science Support Program for Integrated Ocean Drilling Program, 2012-2014 (\$30,000)
 - Geochemical Society Travel Grant, Goldschmidt Meeting, Montréal, Canada, 2012
 - NSF Scholarship for students attending Urbino Summer School on Paleoclimate, Urbino, Italy, 2012
 - Graduate student research grants award, Geological Society of America, 2008-2009
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Teaching Experience

- BIOL 1107L *Principle of Biology Laboratory* (2008-2009), University of Georgia, Teaching Assistant: designing and lecturing for lab sessions; grading lab reports
- G&G 240 *Forensic Geoscience* (Fall 2010), Yale University, Teaching Fellow: grading for term papers
- G&G 301 *Introduction to Geochemistry* (Fall 2011), Yale University, Teaching Fellow: assisting in lecturing and grading
- G&G 275 *Renewable Energy* (Spring 2013), Yale University, Teaching Fellow: grading
- G&G 560 *Introduction to Concepts in Geology & Geophysics* (a senior

gradient student run seminar for junior graduate and undergraduate students), Yale University, co-designer and guest lecturer

Research Experience

- *Paleoclimatology and Paleoceanography*: Cenozoic “doubthouse” climate (Oligocene, Miocene, Pliocene); Earth System climate sensitivity; paleo-El Niño
 - *Geochemistry*: organic geochemistry (alkenones; GDGTs); stable isotope geochemistry (clumped isotopes; compound-specific isotopes); global biogeochemical cycles
 - *Geomicrobiology and Biogeochemistry*: *Archaea* evolution
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Publications

1. **Zhang, Y.G.**, Pagani, M., and Wang, Z., 2014: Ring Index: Towards quality controls for the TEX₈₆ paleothermometry: *Geochimi. Cosmochimi. Acta*, to be submitted.
 2. **Zhang, Y.G.**, Pagani, M., and Liu, Z., 2014: A 12-million-year temperature history of the tropical Pacific Ocean: *Science*, accepted.
 3. Kluge, T., Affek, H., **Zhang, Y.G.**, Dublyansky, Y., Spötl, C., Immenhauser, A., and Richter, D.K., 2014: Clumped isotope thermometry of cryogenic cave carbonates: *Geochimi. Cosmochimi. Acta*, 126, 541-554.
 4. Schouten, S. et al., (69 coauthors including **Zhang, Y.G.**), 2014: An interlaboratory study of TEX₈₆ and BIT analysis of sediments, extracts and standard mixtures, *Geophys. Geochem. Geosyst.*, doi: 10.1002/2013GC004904.
 5. **Zhang, Y.G.**, Pagani, M., Liu, Z., Bohaty, S., and DeConto, R., 2013: A 40-million-year history of atmospheric CO₂: *Phil. Trans. Royal. Soc. A*, 371, 20130096.
 6. **Zhang, Y.G.**, Zhang, C.L., Liu, X.-L., Li, L., Hinrichs, K.-U., and Noakes, J.E., 2011: Methane Index: A tetraether archaeal lipid biomarker indicator for detecting the instability of marine gas hydrates: *Earth Planet. Sci. Lett.*, 307, 525-534.
 7. Boyd, E.S., Pearson, A., Pi, Y.D., Li, W.-J., **Zhang, Y.G.**, He, L., Zhang, C.L., and Geesey, G.G., 2011: Temperature and pH controls on glycerol dibiphytanyl glycerol tetraether lipid composition in the hyperthermophilic crenarchaeote *Acidilobus sulfurireducens*: *Extremophiles*, 15, 59-65.
 8. **Zhang, Y.G.**, Ji, J.F., Balsam, W.L., Liu, L.W. and Chen J., 2009: Mid-Pliocene Asian monsoon intensification and the onset of Northern Hemisphere glaciation: *Geology*, 37, 599-602.
 9. **Zhang Y.G.**, Ji, J.F., Balsam, W.L. Liu, L.W. and Chen, J., 2007: High-resolution hematite and goethite record from ODP 1143, South China Sea: Co-evolution of monsoonal precipitation and El Niño over the last 600,000 years: *Earth Planet. Sci. Lett.*, 264, 136-150.
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Invited Talks

1. 2013: AGU Fall Meeting Session “*Reconstructing past carbon cycle perturbations: Novel Developments and Applications*”
2. 2013: Harvard University, *ClimaTea Seminar*
3. 2012: Princeton University, *Environmental Geology & Geochemistry Seminar*

Meeting Abstracts († oral presentation)

1. †**Zhang, Y.G.**, Pagani, M., Henderiks, J., and Ren, H., 2013: The late Miocene “paradox” of CO₂ climate sensitivity: *American Geophysical Union Fall Meeting*, San Francisco, CA.
2. †Pagani, M., **Zhang, Y.G.** and Liu, Z., 2013: Evolution of El Niño: New perspectives from biomarker temperature proxies: *American Geophysical Union Fall Meeting*, San Francisco, CA.
3. **Zhang, Y.G.**, Pagani, M., and Liu, Z., 2013: Pacific temperature evolution since late Miocene: Implications for El Niño: *11th International Conference on Paleoceanography*, Sitges, Spain (poster); and *2nd Pliocene Workshop*, Bristol, UK (talk).
4. **Zhang, Y.G.**, Affek, H., Oleinik, A., Wang, Z., and Hu, P., 2013: Oligocene – early Miocene North Pacific ocean temperatures based on clumped isotopes of Kamchatka bivalves: *3rd International Workshop on Clumped Isotopes*, Cambridge, MA (poster); and *V. M. Goldschmidt Conference*, Florence, Italy (talk).
5. **Zhang, Y.G.**, and Pagani, M., 2012: Pacific warm pool and cold tongue evolution since late Miocene: Implications for El Niño: *American Geophysical Union Fall Meeting*, San Francisco, CA.
6. †**Zhang, Y.G.**, Pagani, M., and Wang, Z., 2012: Ring Index: Towards quality controls for the TEX₈₆ paleothermometry: *V. M. Goldschmidt Meeting*, Montréal, Canada.
7. †**Zhang, Y.G.** and Pagani, M., 2011: Late Miocene – Pliocene Evolution of the Pacific Warm Pool and Cold Tongue: Implications for El Niño: *American Geophysical Union Fall Meeting*, San Francisco, CA.
8. **Zhang, Y.G.**, and Pagani, M., 2010: Tropical sea surface temperature variability near the Oligocene – Miocene boundary: *American Geophysical Union Fall Meeting*, San Francisco, CA.
9. **Zhang, Y.G.**, and Pagani, M., 2010: Warm and stable tropical sea surface temperatures during the Oligocene – Miocene boundary: *Gordon Conference on Organic Geochemistry*, Holderness, NH.
10. †**Zhang, Y.G.**, Zhang, C.L., and Noakes, J.E., 2008: Methane Index (MI): A tetraether archaeal lipid biomarker for monitoring the instability of marine gas hydrates: *American Geophysical Union Fall Meeting*, San Francisco, CA.
11. †**Zhang, Y.G.**, 2008: Mid-Pliocene Asian monsoon development and the onset of Northern Hemisphere glaciation: *Geological Society of America Annual Meeting*, Houston, TX.

Meeting Session Convener

- *Paleotemperature proxies: Processes and comparisons*, V.M. Goldschmidt Meeting, Montréal, Canada, 2012.

Cruise Experience

- Orca Basin, Gulf of Mexico, by *R/V Pelican*, April 2012
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Services

- Review articles for:
 - Journals: *Geology*, *Organic Geochemistry*, *Tectonophysics*, *Deep Sea Research II*, *Quaternary International*, *Journal of Quaternary Research* and *Frontiers in Terrestrial Microbiology*
 - Government Agencies: *US Environmental Protection Agency*
- Departmental colloquium committee, *member*, 2010-2014; *Chair*, 2013-2014. Department of Geology and Geophysics, Yale University.
- Participated in the EVOLUTION program, the after school science program for New Haven and West Haven high school students. Mentoring two students for basic lab training and concepts of climate change, Summer 2010.