

**Junhua Guo**  
Assistant Professor  
California State University Bakersfield  
9001 Stockdale Hwy, Bakersfield, CA, 93311, U.S.A.  
Tel: 1-661-654-2550  
E-mail: [jguo1@csub.edu](mailto:jguo1@csub.edu)

***RESEARCH INTERESTS***

- 1) Clay mineralogy/diagenesis and its application in unconventional oil/gas exploration and sedimentary environments.
- 2) Paleoclimatology and environment change in the western America.
- 3) Sedimentation and geomechanical properties of sediments in the seismogenic zone along the plate convergent boundaries.

***EDUCATION AND ACADEMIC EXPERIENCE***

**California State University, Bakersfield**

Assistant Professor: 2014-

**Lincoln University - Missouri**

Research Associate: 2012-14

**University of Missouri**

Ph.D. in Geology: 2012

**Graduate School of Chinese Academy of Sciences**

M.S. in Marine Geology: 2004

**Ocean University of China**

B.E. in Applied Geophysics: 2001

***PROFESSIONAL AFFILIATIONS***

American Geophysical Union; Geological Society of America; Society of Exploration Geophysics; American Association of Petroleum Geologists

***PUBLISHED PAPERS***

***IODP 359 Scientists***, The Maldives tropical record of Miocene climates and the onset of the modern South Asian monsoon winds. Submitted to Nature and in review.

**Guo, J.**, Hua, B., Yang, J. Reducing lead mobility in shooting range with surface coating by Fe(III) and Al phosphates. Submitted and in review.

Phillips, S.C., Johnson, J.E., Underwood, M.B., **Guo, J.**, Giosan, L., Rose, K., 2014. Long-time scale variation in bulk and clay mineral composition of Indian continental margin sediments in the Bay of Bengal, Arabian Sea, and Andaman Sea, Marine and Petroleum Geology, <http://dx.doi.org/10.1016/j.marpetgeo.2014.06.018>.

**Guo, J.**, Underwood, M.B., Data Report: Consolidation characteristics of sediments from Sites C0011, C0012, and C0018, IODP Expeditions 322 and 333, NanTroSEIZE Stage 2. Proc. IODP (Integrated Ocean Drilling Program Management International, Inc.), doi:10.2204/iodp.proc.322.209.2014.

Wu, H., Zhang, S., Jiang, G., Yang, T., **Guo, J.**, Yang, H., 2013. Astrochronology for the Early Cretaceous Jehol Biota in northeastern China. Palaeogeography, Palaeoclimatology, Palaeoecology, published online, 385, 221-228.

Underwood, M.B., and **Guo, J.** Data Report: Clay Mineral Assemblages in the Shikoku Basin, NanTroSEIZE Subduction 1 Inputs, IODP Sites C0011 and C0012. In Saito, S., Underwood, M.B., Kubo, Y., and the Expedition 322 Scientists, Proc. IODP, 322: Tokyo (Integrated Ocean Drilling Program Management International, Inc.), doi:10.2204/iodp.proc.322.204.2012.

**Guo, J.**, Likos, W., Underwood, M.B., Saffer, D.M., 2013. Apparent overconsolidation of mudstones in the Kumano Basin of southwest Japan: Implications for fluid pressure and fluid flow within a forearc setting, *Geochemistry, Geophysics, Geosystems*, doi: 10.1002/ggge.20042.

**Guo, J.** and Underwood, M.B., 2012, Data Report: Clay mineral assemblages from Nankai Trough and Kumano Basin, IODP Expeditions 315 and 316, NanTroSEIZE Stage 1. In Kinoshita, M., Tobin, H., Ashi, J., Kimura, G., Lallemand, S., Screaton, E.J., Curewitz, D., Masago, H., and Moe, K.T., Proc. IODP, 314/315/316: Washington, DC (Integrated Ocean Drilling Program Management International, Inc.), doi:10.2204/iodp.proc.314315316.202.2012.

**Guo, J.** and Underwood, M.B., 2011, Data Report: Refined method for calculating percentages of kaolinite and chlorite from X-ray diffraction Analysis, with application to the Nankai margin of southwest Japan. In Kinoshita, M., Tobin, H., Ashi, J., Kimura, G., Lallemand, S., Screaton, E.J., Curewitz, D., Masago, H., and Moe, K.T., Proc. IODP, 314/315/316: Washington, DC (Integrated Ocean Drilling Program Management International, Inc.), doi:10.2204/iodp.proc.314315316.201.2011.

**Guo, J.**, Likos, W., Underwood, M.B., Saffer, D., Skarbak, R.M., Adamson, N., 2011, Data Report: Consolidation characteristics of sediments from Sites C0002, C0006, and C0007, IODP Expeditions 315 and 316, NanTroSEIZE Stage 1: In Kinoshita, M., Tobin, H., Ashi, J., Kimura, G., Lallemand, S., Screaton, E.J., Curewitz, D., Masago, H., and Moe, K.T., Proc. IODP, 314/315/316: Washington, DC (Integrated Ocean Drilling Program Management International, Inc.), doi:10.2204/iodp.proc.314315316.213.2011.

Strasser, M., Moore, G., Kimura, G., Kopf, A., Underwood, M., **Guo, J.**, Screaton E., 2011, Slumping and mass-transport deposition in the Nankai forearc: Evidence from IODP drilling and 3-D reflection seismic data; *Geochemistry, Geophysics, Geosystems*, doi:10.1029/2010GC003431.

Saffer, D., **Guo, J.**, Underwood, M.B., Likos, W., Skarbak, R.M., Song, I., Gildow, M., 2011, Data report: consolidation, permeability, and fabric of sediments from the Nankai continental slope, IODP Sites C0001, C0008, and C0004 : In Kinoshita, M., Tobin, H., Ashi, J., Kimura, G., Lallemand, S., Screaton, E.J., Curewitz, D., Masago, H., and Moe, K.T., Proc. IODP, 314/315/316: Washington, DC (Integrated Ocean Drilling Program Management International, Inc.).

Ekinci., M.K., Likos, W., **Guo, J.**, Underwood, M.B., 2011, Data Report: Permeability of Mud(stone) Samples from IODP Sites C0006 and C0007, Nankai Trough Seismogenic Zone Experiment: In Kinoshita, M., Tobin, H., Ashi, J., Kimura, G., Lallemand, S., Screaton, E.J., Curewitz, D., Masago, H., and Moe, K.T., Proc. IODP, 314/315/316: Washington, DC (Integrated Ocean Drilling Program Management International, Inc.).

Kopf, A., Strasser, M., Monsees, N., Underwood, M.B., **Guo, J.**, 2011, Data Report: Particle size analysis of sediments recovered during IODP Expedition 315 and 316, Sites C0001 - C0008, Nankai Trough forearc, off Japan: In Kinoshita, M., Tobin, H., Ashi, J., Kimura, G., Lallemand, S., Screaton, E.J., Curewitz, D., Masago, H., and Moe, K.T., Proc. IODP, 314/315/316: Washington, DC (Integrated Ocean Drilling Program Management International, Inc.).

Rowe, K., Sreaton, E., **Guo, J.**, Underwood, M.B., 2011, Data Report: Permeabilities of Sediments from the Kumano Transect Offshore the Kii Peninsula, Japan: In Kinoshita, M., Tobin, H., Ashi, J., Kimura, G., Lallemand, S., Sreaton, E.J., Curewitz, D., Masago, H., and Moe, K.T., Proc. IODP, 314/315/316: Washington, DC (Integrated Ocean Drilling Program Management International, Inc.).

Yue, L., Likos, W., **Guo, J.**, Underwood, M.B., 2011, Data Report: Permeability of Mud(stone) Samples from Site C0001, IODP Expedition 315, Nankai Trough: Stage 1 of NanTroSEIZE: In Kinoshita, M., Tobin, H., Ashi, J., Kimura, G., Lallemand, S., Sreaton, E.J., Curewitz, D., Masago, H., and Moe, K.T., Proc. IODP, 314/315/316: Washington, DC (Integrated Ocean Drilling Program Management International, Inc.).

## **PRESENTATIONS**

### **Invited Presentations**

**Guo, J.**, Evolving clay mineral assemblages in the Nankai Trough, Kumano Basin, and Shikoku Basin, offshore Japan: A summary of results from the NanTroSEIZE project. San Joaquin Geological Society, January 2015.

**Guo, J.**, Clay minerals in sedimentary geology research: Results of sediments from Nankai Trough, Kumano Basin, and Shikoku Basin, offshore Japan. Youngstown State University, March 2013.

**Guo, J.**, Sediment dewatering and fluid drainage in the NanTroSEIZE Transect Area, SW Japan. Fort Hays State University, July 2011.

Nine presentations at meetings of professional societies (e.g., American Geophysical Union - AGU) and the convener of poster session at AGU meetings.

**Guo, J.**, Pyles, C., Negrini, R., 2015. Sediment provenance and paleoenvironmental change since 35 ka in the western North America: Constrained by the mineral evolution in the Tulare Lake, California. AGU, Fall meeting, 2015.

Martindale, Z., Andrews, G., Brown, S., **Guo, J.**, Internal architecture of the proto-Kern Canyon Fault at engineer's point, Lake Isabella Dam site, Kern County, California: Pacific Section AAPG, 2015.

Underwood, M.B., **Guo, J.**, Song, C., Diagenesis of clay mineral assemblages in the Shikoku Basin: Inputs to the Nankai Trough megathrust and seismogenic zone: EOS Trans. AGU, Fall meeting, 2012.

Underwood, M.B., **Guo, J.**, Wu, H., Kutterolf, S., Saito, S., and Expedition 322 Scientists, The composition of sedimentary strata entering the Nankai Trough subduction zone: Implications for diagenetic transition into seismogenic zone: EOS Trans. AGU, Fall meeting, 2010.

**Guo, J.**, Underwood, M., Hillix, D., Wu, H., Banno, H., Shrinivar, U., 2009. Clay Mineral Assemblages from Nankai Trough and Kumano Basin, IODP Expeditions 315 and 316, NanTroSEIZE Stage 1: EOS Trans. AGU, v. 90(52), Fall Meet. Suppl., Abstract T21C-1840.

**Guo, J.**, Underwood, M.B., Calves, G., Fergusson, C., Hashimoto, Y., Milliken, K.,

Nicholson, U., Sakaguchi, A., Strasser, M., and IODP 314/315/316 Scientists, 2008, Bulk and clay mineralogy of mud from Nankai Trough IODP Expeditions 315 and 316: EOS Trans. AGU, v. 89(53), Fall Meet. Suppl., Abstract T31B-1991.

Strasser, M., Moore, G.F., Kopf, A.J., Boeckel, B., Fergusson, C., **Guo, J.**, Kimura, G., Milliken, K.L., Nicholson, U., Sreaton, E.J., Sakaguchi, A., Underwood, M.B., IODP Expedition 314/315/316 Scientists, 2008, Slope failures and subsequent mass-movement deposition related to mega splay fault activity: Results from drilling the Nankai accretionary prism during IODP NanTroSEIZE Expedition 316: EOS Trans. AGU, v. 89(53), Fall Meet. Suppl., Abstract T31B-2008.

Underwood, M.B., Calves, G., Fergusson, C., **Guo, J.**, Hashimoto, Y., Jurado, M.J., Martin, K., Millekin, K., Nicholson, U., Saito, S., Sakaguchi, A., Strasser, M., Tudge, J., and IODP 314/315/316 Scientists, 2008, Lithostratigraphy of the NanTroSEIZE transect area in Nankai Trough: A summary of results from IODP Expeditions 314, 315, and 316: EOS Trans. AGU, v. 89(53), Fall Meet. Suppl., Abstract T14A-06.

Underwood, M. B., **Guo, J.**, Kawamura, K., Ogawa, Y., Moore, G. F., 2006. Composition of Clay Minerals from Mudstones in the Nankai Accretionary Prism, Tenryu and Shiono-misaki Canyons: EOS Trans. AGU, v. 87(52), Fall Meet. Suppl., Abstract T12C-07.

### ***IN/EXTERNALLY FUNDED GRANTS***

“Clay diagenesis of Santos shale rocks from a single well in the Southern San Joaquin Basin: constraints to the burial history of the Santos Shale Formation”. CSUB RCU mini-grant, granted Decemeber, 2014, \$5000.

“Microscale response of argillaceous sediments to the compaction processes”. Proposal to the ACS, UNI grant. Requested \$55, 000, October 2014. Rejected and resubmitted Sept. 2015. In review.

“Application to sale IODP #359 and post-expedition research”. Proposal to the U.S. IODP office. Requested \$15, 000, January 2016. In review.

2007, Student application to sail on IODP Leg 315 and offshore based post cruise research fund (\$15,000).

### ***COURSES TAUGHT AT CALIFRONIA STATE UNIVERISTY, BAKERSFIELD***

#### **Geology (undergraduate)**

Sedimentology and Stratigraphy (GEOL 309), How the Earth Works (GEOL 100), California Geology and Society (SCI 352A)

#### **Geology (graduate)**

Advanced Stratigraphy (GEOL 609)

### ***STUDENT MENTORING AND RESEARCH***

Jeff Kimber – anticipated graduation June 2017

Obey Mohammadi – anticipated graduation June 2017

David Kenneth – anticipated graduation March 2016

Christine Pyles – anticipated graduation March 2016

**M.S. Thesis Committee Member**

Matthew Van Grinsven – – anticipated graduation Fall 2015

Kelsey Padilla – graduated June 2015

Ryan Russell D’Cruz – graduated June 2015