

GEOBULLETIN
NOV 20TH, 2009

GeoBulletin is distributed weekly, by E-mail. Contributions are requested! If you have a news item, a request, an announcement etc. email it to geodept@geology.wisc.edu or leave it at the office, Room 236 by noon on Monday.

Weeks Lecture

Nov. 20th No Weeks Lecture
Nov. 27th Thanksgiving
Dec. 4th Open
Dec. 11th Prof. Charles Geiger of Kiel University

UW Geology Museum Holiday Sale

Friday, December 4th - 10am to 4pm in the museum lobby.
From fossils and minerals to books and jewelry, you'll find special gifts at this holiday sale. All items will be \$20 or less!

JOB OPENINGS

- Full-time Job Opportunity Fort Lauderdale, Florida -Graduating Masters/PhD Candidate
- University of Illinois at Urbana-Champaign -The Department of Geology in the School of Earth, Society, and Environment at the University of Illinois is searching for a full-time, tenure track assistant professor in the broadly defined area of Global Change Geology
- [Research Scientist - Analytical Research Chemist \(Stable isotope mass spectrometry\)](#), through the Office of Research and the Interdisciplinary Laboratory for Elemental and Isotopic Analysis (ILEIA) of the Center for Archaeology, Materials, and Applied Spectroscopy (CAMAS) at Idaho State University.
- The Department of Earth and Environmental Sciences at the University of Kentucky invites applications for a tenure-track faculty position at the Assistant Professor level in the broad field of sedimentary geology, beginning August 2010.
- Postdoctoral and Predoctoral Fellowships-The Department of Mineral Sciences, National Museum of Natural History, Smithsonian Institution, invites fellowship applications
- Postdoctoral Position- , Nuclear Glass Alteration, Univ. Grenoble, France: Chemical And Structural Evolution Of Altered Nuclear Glasses
- Postdoctoral Position: Mineralogy, Petrology, Geochemistry Of Planetary Materials
- The University Of Texas At San Antonio -Department Of Geological Sciences, Low-Temperature Aqueous Geochemistry
- University Of Massachusetts – Amherst -Post Doctoral Research Associate Position, Materials Science – Cosmochemistry
- Department Chair Position -Department of Geological & Environmental Sciences -Youngstown State University

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Full-time Job Opportunity Fort Lauderdale, Florida -Graduating Masters/PhD Candidate

The Water Resources Division of the U.S. Geological Survey is seeking applicant who will assist project manager in selected hydrogeologic investigations of south Florida. Student should have a Master's or PhD degree in geology with 3.0 GPA or above. Duties to concentrate on aquifer characterization including Plio-Pleistocene and Eocene-Oligocene carbonate core descriptions (knowledge of carbonate sequence stratigraphy very desirable), interpretation of marine seismic geophysical data (Kingdom SMT software) and borehole geophysical data (using slim-hole tools, such as digital optical borehole image tool, full-waveform sonic tool, flow meters), hydrogeologic and hydrologic data inventory, entry, compilation and analysis. Opportunity for geomodeling with ROXAR RMS software. Potential interaction with other governmental agencies and academia. Salary commensurate with education and/or experience. Computer skills such as graphics programs and GIS desirable. Flexible hours. As a Federal agency, U.S. citizenship is required. Valid driver's license is also required.

Please email resume to: Kevin J. Cunningham, kcunning@usgs.gov or fax: 954-377-5901 (954-377-5913 office)

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University of Illinois at Urbana-Champaign -The Department of Geology in the School of Earth, Society, and Environment at the University of Illinois is searching for a full-time, tenure track assistant professor in the broadly defined area of Global Change Geology.

Examples of relevant research areas include but are not limited to:

- 1) The global carbon cycle, including connections to the deep Earth, weathering, and carbon sequestration.
- 2) Paleoclimatology, isotope geochemistry, and other studies of environmental change records.
- 3) Studies of Earth materials and elements (e.g., clathrates, nitrogen, iron, sulfur) related to climate and the evolution of life.
- 4) Glaciology and other earth science studies of modern environmental change.

Applicants must have a Ph.D. and demonstrate the potential to establish an internationally recognized, externally funded research program. An ability to contribute to excellence in education at the graduate and undergraduate levels in geosciences, and in interdisciplinary aspects of the School of Earth, Society and the Environment, is also required. Starting Date: August 16, 2010. Salary is commensurate with background and experience.

To ensure full consideration, please create your candidate profile through <https://jobs.illinois.edu/> and upload a curriculum vita including a full list of publications and a description of research and teaching interests, pdf reprints or preprints of publications, and contact information for at least three references. Full consideration will be given to applications received by November 30, 2009. Inquiries about the position are encouraged; contact Prof. Johnson (217-244-2002; tmjohnsn@illinois.edu). The University of Illinois at Urbana-Champaign is an Affirmative Action, Equal Opportunity Employer.

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Position Announcement:

[Research Scientist - Analytical Research Chemist \(Stable isotope mass spectrometry\), through the Office of Research and the Interdisciplinary Laboratory for Elemental and Isotopic Analysis \(ILEIA\) of the Center for Archaeology, Materials, and Applied Spectroscopy \(CAMAS\) at Idaho State University.](#)

Responsibilities

Operation and management of a mass spectrometer laboratory including: Thermo Delta series Mass Spectrometer with the ConFlo III, EA, TC/EA, and GasBench II peripherals. Manage sample preparation laboratory associated with the instrument. Work with ecologists, paleoecologists, geologists, and archeologists, to:

- * Establish QA/QC procedures for the instrument and laboratory.
- * Conduct sample preparation, operate, and maintain the instrumentation.

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- * Participate directly with a diverse array of research projects, and in classroom/teaching applications.
- * Train and supervise undergraduate and graduate students and others who use the facility.
- * Seek opportunities for grants and contracts, and for method development.

Minimum Qualifications

MS or equivalent in geochemistry, chemistry, geology, ecology, archaeology, physics or a related discipline. Experience in running and maintaining IRMS or similar instrumentation.

Preferred Qualifications

Strong analytical skills and detailed familiarity with the ThermoElectron Corporation Delta series Mass Spectrometer or similar, and with the ConFlo III, EA, TC/EA, and GasBench II peripherals. Ability to work effectively in an interdisciplinary environment, including ecologists, paleoecologists, geologists, and archeologists.

Salary

Commensurate with qualifications and experience; competitive benefits package. For more information, see posting at: http://www.isu.edu/humanr/joblist_files/NC0047.shtml

Application

Electronically submit a letter of interest, curriculum vitae, and names and contact information of three references to:
Idaho State University
Office of Human Resources
Analytical Research Chemist Search

Email: hr@isu.edu

Questions about the position may be directed to Bruce Finney (finney@isu.edu).

Review of applications will begin upon receipt; search will continue until position is filled. For further information about Idaho State University please visit www.isu.edu. Idaho State University is located in the western Rocky Mountains of SE Idaho with easy access to the Tetons, Yellowstone, the Sawtooths, and a range of outdoor activities.

Idaho State University is an AA/EEO Employer. Women, Minorities and Veterans are encouraged to apply. Idaho State University is committed to an environment of civility, respect, and tolerance within the University community.

The Department of Earth and Environmental Sciences at the University of Kentucky invites applications for a tenure-track faculty position at the Assistant Professor level in the broad field of sedimentary geology, beginning August 2010. Field- and modeling-oriented candidates working in areas such as basin analysis, tectonics and sedimentation, sedimentary petrology or geochemistry, stratigraphy, and carbon sequestration science are encouraged to apply.

We are seeking candidates interested in interdisciplinary research who would interact with our existing programs in tectonics, stable-isotope geochemistry, seismology and potential field geophysics, hydrogeology, and paleontology. A broad range of opportunities, including carbon sequestration research, exist for cooperation with other academics units, the Kentucky Geological Survey, the UK Center for Applied Energy Research, and the Tracy Farmer Institute for Sustainability and the Environment.

In addition to developing a rigorous, productive, externally funded research program, the new faculty member will be expected to teach courses at the introductory, major, and graduate levels. Applicants will be expected to demonstrate a track record of publication and funding; experience beyond the Ph.D. (academia or industry) is desirable. Interested applicants should submit via e-mail (merged pdf document): cover letter, curriculum vitae, brief statements of research

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and teaching interests, copies of relevant research publications, and contact information for at least three references to Prof. Dave Moecher (moker@uky.edu), Sedimentary Search Committee Chair. We will begin review of applications on January 5, 2010; however, applications will be accepted until the position is filled.

The University of Kentucky is an Affirmative Action/Equal Opportunity University that values diversity and is located in an increasingly diverse geographical region. UK is committed to becoming one of the top public institutions in the country. Women, persons with disabilities, and members of other underrepresented groups are encouraged to apply.

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Postdoctoral and Predoctoral Fellowships-The Department of Mineral Sciences, National Museum of Natural History, Smithsonian Institution, invites fellowship applications. Active areas of research include volcanology, meteorite and comet origin and evolution, planetary evolution, mineral spectroscopy, experimental petrology, mineral physics, and petrology/geochemistry. The department houses world-class experimental and analytical laboratories including electron microprobe, field emission variable pressure analytical SEM, XRD, FTIR, Time of Flight-SIMS, fluid inclusion heating/freezing unit, athodoluminescence microscope and spectrometer, wet chemistry lab, and experimental laboratories (gas-mixing, hydrothermal, piston-cylinder, diamond-anvil cell). The department also houses the National Meteorite Collection, the National Rock and Ore Collection and the National Gem and Mineral Collection and administers the Global Volcanism Program. A description of facilities, staff profiles, and collections resources can be found on our website:

<http://mineralsciences.si.edu>.

Application information for the museum-wide competition is available at <http://www.si.edu/ofg/Applications/SIFELL/SIFellowshipFillin.pdf>.

The application deadline is January 15th, 2010. The Smithsonian Institution is an Equal Opportunity Employer.

Jeffrey E. Post, Ph.D.
Curator, National Gem and Mineral Collection Smithsonian Institution
P.O. Box 37012 NMNH, MRC 0119 Washington, DC 20013-7012
PHONE: 202-633-1814
FAX: 202-357-2476
postj@si.edu

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POSTDOCTORAL POSITION- , Nuclear glass alteration, Univ. Grenoble, France: CHEMICAL AND STRUCTURAL EVOLUTION OF ALTERED NUCLEAR GLASSES

A postdoctoral position is available for the study of nuclear glass corrosion. The project is based on a detailed analysis of the chemical and structural evolution of glass interfaces that have been altered by aqueous fluids, which typically leads to the formation of altered surface layers and in situ secondary phases. The successful candidate will initially examine simple fluid-glass interfaces, followed by more complex interfaces involving glass-metal and metal-clay systems associated with simulated nuclear glass sequestration. The methodology to be used includes focused ion beam milling (FIB) for the preparation of ultrathin TEM foils, followed by micrometer to nanometer-scale chemical mapping using such techniques as TOF-SIMS and TEM (HRTEM, EFTEM, STEM-HAADF, EDX). The use of state-of-the-art high spatial resolution techniques applied to cross-sectional thin sections prepared by FIB should lead to novel results allowing for the development of more refined models describing nuclear glass corrosion and sequestration.

Qualifications:
§ Ph.D. in materials science, physics, chemistry, geochemistry

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- § experience in mineral or glass alteration
- § working knowledge of TEM and/or TOF-SIMS techniques
- § knowledge of French helpful, but not mandatory
- § the project will require travel to laboratories in France and Europe

Starting date: February, or at the latest, March, 2009

Duration of contract: 18 months, with a potential extension of 6 months

Interested candidates should send a CV, a statement of research experience, and a list of 3 referees to:

Roland Hellmann
Environmental Geochemistry Group
LGIT BP 53X
38041 Grenoble Cedex 9, France
tel: +33 4 76 63 51 89
e-mail: roland.hellmann@obs.ujf-grenoble.fr

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POSTDOCTORAL POSITION: MINERALOGY, PETROLOGY, GEOCHEMISTRY OF PLANETARY MATERIALS

A postdoctoral position is available in the Institute of Meteoritics, University of New Mexico in summer 2010. The successful candidate will have received the PhD degree and have experience in mineralogy, petrology, and/or geochemistry. Experience with some high-spatial resolution microbeam analytical techniques, for example EMP, SIMS, SEM, SXRF, microXANES, is a requirement. Although previous experience with research on planetary materials (meteorites, lunar samples) is desirable it is not required. Background in experimental phase equilibria is especially desirable.

The new hire will work in close collaboration with a group of four scientists on projects funded by the NASA Cosmochemistry and LASER programs. In this setting, the successful candidate will lead some projects and play a supporting role in others. Articulate written and verbal communication skills and the ability to complete manuscripts in a timely manner are firm requirements. Present funded projects include, 1) valence state partitioning (Cr, V, Eu) between silicate phases (pyroxene, olivine, plagioclase) and melt and Cl, F, OH, REE partitioning between melt/aqueous fluid and phosphates (merrillite, whitlockite, apatite) as a function of melt/ fluid composition and oxygen fugacity, 2) sulfide trace element chemistry in planetary basalts, 3) collaborative SIMS-TIMS studies of martian and lunar meteorites, and 4) the role of volatiles in lunar surface and magmatic processes.

Those interested and qualified should send their application To Charles "Chip" Shearer (cshearer@unm.edu), Institutes of Meteoritics, University of New Mexico by January 15, 2010. The application must include an up to date vitae, a statement of present and future research interests, and the names and e-mail addresses of three references that will be contacted for those candidates that make the "short list".

The initial appointment will be for one year and can be extended to three years depending on performance and funding. Beyond the three-year appointment, the possibility of a Senior Research Scientist position exists. The initial salary for a new PhD will be \$45,000 per year.

The University of New Mexico is an equal opportunity, affirmative action, employer.

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The University Of Texas At San Antonio -Department Of Geological Sciences, Low-Temperature Aqueous Geochemistry

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The University of Texas at San Antonio (UTSA) invites applications for a tenured position at the Associate Professor or Professor level, or a tenure-track position at the Assistant or Associate Professor level, depending upon qualifications. Beginning Fall 2010, in Low-Temperature Geochemistry with emphasis on stable isotopic applications in aqueous or environmental geochemistry. Pending budget approval. This faculty position is in the Department of Geological Sciences, which offers Bachelor's and Master's degrees in Geology. Faculty may also supervise students in Environmental Science M.S. program and in the Environmental Science and Engineering doctoral program. We encourage a multi-disciplinary approach and successful applicants will be expected to collaborate with faculty and students in Chemistry, Civil and Environmental Engineering, and Environmental Science as well as Geological Sciences in performing research, teaching, and service.

Responsibilities include: 1) research and multi-disciplinary and collaborative program development, 2) teaching courses in geology offered at either the UTSA Downtown Campus or the 1604 Campus at the graduate and undergraduate levels in the area of specialization and general education, and 3) service for the Department of Geological Sciences, the College of Sciences, and participation in the activities of the Center for Water Research as well as service in the UTSA community. Teaching responsibilities will include introductory geology courses, introductory geochemistry and related courses, and seminars of special interest to our multi-disciplinary scientific community.

Required qualifications for Assistant Professor: Applicants must have a Ph.D. in Geoscience or closely related discipline with experience in applications to geological problems.

Preferred qualifications: Research area in low-temperature geochemistry, especially aqueous, environmental, and stable isotopic geochemistry. Documentation of peer-reviewed scholarship, potential for success in grant activity, and potential for excellence in teaching low-temperature aqueous geochemistry and related subjects will be viewed favorably.

Required qualifications for Associate Professor: Applicants must have a Ph.D. in Geoscience or closely related discipline with experience in applications to geological problems.

Preferred qualifications: Research area in low-temperature geochemistry, especially aqueous, environmental, and stable isotopic geochemistry. Successful candidate will have a record of peer-reviewed publications, demonstrated successful grant activity, established successful research programs, an outstanding record of teaching geochemistry and other geological sciences at graduate and undergraduate levels, and a record of successful mentoring of graduate students.

Required qualifications for Full Professor: Applicants must have a Ph.D. in Geoscience or closely related discipline with experience in applications to geological problems.

Preferred qualifications: Research area in low-temperature geochemistry, especially aqueous, environmental, and stable isotopic geochemistry. Successful candidate will exhibit an outstanding record of peer-reviewed scholarship with national and international recognition, successful continuing research grant activity, extensive success of teaching and mentoring of graduate students, and a distinguished record of leadership in their field, including both research and service components.

Qualified applicants must submit: 1) an original signed letter of application including an indication of the level of position for which applying, 2) a curriculum vitae, 3) a statement of research and teaching interests and experience, 4) the names, addresses (postal and email), and telephone numbers of at least three references, and 5) submit no more than two representative publications if reprints are available. Applicants who are selected for interviews must be able to show proof that they will be eligible and qualified to work in the United States by time of hire.

Applicants must be sent by U.S. mail to: Chair, Aqueous Geochemistry Search, Department of Geological Sciences, The University of Texas at San Antonio, One UTSA Circle, San Antonio, TX 78249-0663. Review of completed applications will begin on 15 December 2009 and continue until position is filled.

Facilities and equipment include both aqueous geochemistry and stable isotope analytical laboratories with a broad range of instrumentation including an ion chromatograph with conductivity detector and autosampler (Dionex DX 500); isotope ratio mass spectrophotometer; gas chromatograph with FI and EC detectors and autosampler (Varian CP 3800); high performance liquid chromatograph with a variable length UV-Vis detector and autosampler (Varian ProStar); CHNS/O elemental analyzer and autosampler (Perkin Elmer PE 2400); atomic absorption spectrophotometer with graphic furnace and FIAS attachments and autosampler (Perkin Elmer PE 700); inductivity coupled plasma mass spectrometer and autosampler (Perkin Elmer ELAN 9000); a liquid scintillation counter (Beckman LS 6500); UV-visible light optical spectrophotometer with sipper attachment (Varian Cary 50); microplate spectrophotometer (Biorad

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Benchmark Plus); RoboCycler® gradient temperature cycler for PCR amplifications, nucleic acid, protein electrophoresis and gel-blot systems; gel-doc imaging system; optical spectrophotometer and colorimeter; and an anaerobic chamber.

UTSA is one of the largest public universities in south Texas serving more than 28,000 students. Nearby higher education and research institutions include the UT Health Science Center and the Southwest Research Institute. The city of San Antonio, the seventh largest city in the United States, blends cosmopolitan progress with a rich sense of history and tradition.

UTSA is an Affirmative Action/Equal Employment Opportunity Employer. Women, minorities, veterans, and individuals with disabilities are encouraged to apply. Further information about the department and UTSA is available on our Web page: <http://www.utsa.edu/geosci>

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UNIVERSITY OF MASSACHUSETTS – AMHERST -Post Doctoral Research Associate Position, Materials Science - Cosmochemistry

To employ electron microscopy (scanning electron microscopy, electron probe microanalysis and transmission electron microscopy) and optical microscopy to determine the microstructure and microchemistry of the metal and non-silicate phases in meteorites. To use computer simulation of the kinetics of phase reactions-transformations (Widmanstatten pattern, diffusion controlled growth, spinodal, etc) to determine the thermal history of meteorites and their parent asteroidal bodies. To study the effects of shock and thermal reheating on the micron and nm level to determine the environment in which these meteorites formed. Finally, to use the information gathered from these studies in order to investigate the early history of our solar system. The laboratories of UMass are well equipped to carry out this research project. The successful candidate will be working closely with Prof. Joseph I Goldstein whose has expertise in electron microscopy and meteorite microstructure. Applicants are to send a resume and cover letter to Dr. Goldstein at <<mailto:jig0@ecs.umass.edu>>. This research is supported by a grant from the NASA cosmochemistry program. The position is available starting 12-01

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Department Chair Position -Department of Geological & Environmental Sciences -Youngstown State University

The Department of Geological & Environmental Sciences (www.yzu.edu/ges) at Youngstown State University (www.yzu.edu) invites applications for the position of Department Chair to be appointed at the Associate or Full Professor level, available summer 2010. The successful candidate should qualify for tenure based on prior experience, and is expected to maintain a vigorous research program involving undergraduate and MS students A Ph.D. in the area of Environmental Science, Environmental Geology, Soil Science, or related fields is required. In addition to leading the Department, the successful candidate will be expected to lead an interdisciplinary team of Environmental Studies faculty into full recognition as a Center of Excellence at YSU. Please send a summary of past research achievements and future goals, statement of departmental leadership philosophy, statement of teaching philosophy, and curriculum vitae (highlighting past management and leadership experience) to the Search Committee Chair, Department of Geological & Environmental Sciences, Youngstown State University, One University Plaza, Youngstown, OH 44555. The position will remain open until filled. Inquiries about the position should be directed to the search committee chair: Dr Peter Norris; pnorris@ysu.edu; 330-941-3612. YSU is an affirmative action/equal opportunity employer committed to increasing the diversity of its faculty, staff and students.

******* HAVE A GREAT WEEKEND *******