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European Association for Geochemistry

EAG NEWS AND ANNOUNCEMENTS

Chemical Geology is the official journal of the European Association for Geochemistry. Members of the EAG can subscribe to *Chemical Geology* at discount member rates. *Chemical Geology* publishes top-rate manuscripts in all areas of geochemistry as well as regular special issues on emerging or hot topics in our field. The two most recent special issues are:

New Results in Fluid and Silicate Melt Inclusion Research – XVII European Current Research on Fluid Inclusions (ECROFI XVII), edited by Csabo Szabó, Alfons M. van den Kerkhof and Robert J. Bodnar (volume 223, issues 1–3, pages 1–178). This special issue presents 15 papers collected from the seventeenth biennial meeting of the European Current Research on Fluid Inclusions (ECROFI XVII), which was held on June 5–9, 2003 at the Eötvös University, Budapest, Hungary. Topics in this special issue include (1) new analytical and experimental techniques, (2) application of silicate melt inclusions to the study of igneous petrology, (3) the behavior of fluids during metamorphic processes, and (4) metal transport and deposition.

Shallow-water Hydrothermal Venting, edited by R.M. Prol-Ledesma, P.R. Dando and C.E.J. de Ronde (volume 224, issues 1–3, pages 1–182). This issue brings together contributions from several groups working on subaqueous hydrothermal activity occurring at shallow depths and is based on a thematic session at the 2003 annual meeting at the Geological Society of America. The focus of this volume is on vents in water less than 200 m deep, as deeper vents are dominated by vent-obligate fauna. Shallow-water vents provide accessible geological and chemical settings for studying the interaction of hydrothermal fluids with unconsolidated sediments, seawater and basement rocks. For example, in contrast to deeper vent sites, the lower pressures and consequently lower water-boiling temperatures lead to subsurface deposition of metals. The 11 papers published in this special issue present a survey of the current research being performed to characterize and better understand these unique geochemical systems.

UPCOMING EAG-SPONSORED SESSIONS

The EAG is co-sponsoring two sessions at the 2006 European Geosciences Union (EGU) General Assembly, which will be held on April 2–7, in **Vienna, Austria**. The meeting website is http://meetings.copernicus.org/egu2006.

Session GMPV15: Precipitation and dissolution of carbonates – mechanisms, kinetics, solid solution formation and fractionation effects

Co-convenors: Martin Dietzel and Stephan Kohler

The precipitation and dissolution behavior of carbonates plays a major role in hydrogeochemistry and the formation of sediments and sedimentary rocks. Mechanisms and kinetics are strongly related to the physicochemical conditions of the respective systems, specific reactions at the solid–liquid interface and mineralogy. Element and isotope signatures of carbonates can be used to decipher, for example, formation conditions, sources of compounds, evolution of past climate and carbonate fluxes in anthropogenic environments.

Areas to be covered in this session include (1) carbonate crystallization and solid solution formation; (2) aspects and techniques for studies of precipitation kinetics; (3) incorporation of trace elements; (4) carbon, oxygen, and metal isotopic fractionation and implications for e.g. natural aquatic systems; and (5) applications for carbonate precipitation and dissolution studies.

Session CL036: Physical and chemical weathering at diverse temporal and spatial scales

Convenor: K. Burton

Co-convenors: J. Gaillardet, S. Gislason, and F. von Blanckenburg

This symposium will focus on past and present physical, chemical and biological processes of weathering, from nano- to global scale. In particular we welcome field, experimental and modelling studies of weathering processes in soil, catchment areas and deltas and the coupling of climate, hydrology, vegetation, lithology, topography and weathering. New elemental and isotopic tracers of past and present weathering rates are especially welcome as well as studies of how chemical fluxes have varied through time as a function of tectonics and climate.

CALL FOR GEOSCIENTISTS INTERESTED IN INTERFACE MINERALOGY

Although crystal growth is a central theme in many areas of geosciences, it is surprising that there is relatively little interaction between the "crystal-growth community" and the "geosciences community". The preoccupation for producing pure and large crystals for crystallographic study and for industrial applications has gradually distanced the crystal growers from the mineralogists for whom solid solutions, impurities, and the problems of crystal growth in experimentally difficult geological environments are the norm. However, there is much we can learn from the crystal-growth community, considering the current geoscience interest in areas such as the mechanisms of crystal growth and dissolution at a molecular level, mineral replacement and reequilibration in a fluid phase, self-assembly of nanoparticles, crystallisation in extreme conditions such as in space, etc. The development of high-resolution in situ observation systems has also contributed considerably to a better understanding of crystal growth mechanisms.

In an attempt to bring together experts in crystal growth and geoscientists interested in phenomena associated with mineral growth and dissolution processes in nature, we have initiated a series of occasional workshops using the title "Interface Mineralogy". The first of these was held in Sendai, Japan, from 28 to 30 September 2005. The programme of the meeting can be downloaded from www.congre.co.jp/ima2006/index_e.html.

Further meetings are planned, and geoscientists interested in participating and in expanding on our embryonic project are welcome to contact Katsuo Tsukamoto and Andrew Putnis (ktsuka@mail.tains.tohoku.ac.jp and putnis@nwz.uni-muenster.de).

EUROPEAN GEOCHEMICAL NEWS BRIEFS

During the past several months, three different European networks aimed at improving our understanding of various geochemical processes have been organized and funded. These networks are described below.

Weathering Science Consortium

The WUN Weathering Science Consortium is a UK Natural Environment Research Council (NERC) funded grouping of three UK universities in partnership with government agencies and international institutions. This consortium is led by Steven Banwart of the University of Sheffield and includes Dr. Liane Benning of the University of Leeds and Vala Ragnarsdottir of the University of Bristol. In partnership with Pennsylvania State University and other associates in the USA, the consortium hopes to establish a global understanding of how weathering is affected by natural and human activities.

Research carried out by the consortium will develop new methods adopted from nanotechnology and molecular biology to improve the management of the whole life cycle of soil – from its formation to its depletion. The scientists will track how plant energy captured from sunlight is directed through roots and soil fungi to extract the elements that nourish ecosystems.

The four university partners are all members of the Worldwide Universities Network (WUN). The consortium seeks to integrate international weathering science and funding with a USA bid for a NSF-supported Critical Zone Exploration Network (CZEN). The CZEN will integrate field, laboratory and modelling research and many other activities from a wide range of natural environments on the Earth.

Additional information is available at /www.wun.ac.uk/wsc

Mineral Surface Science for Nanotechnology (Mission) – Marie Curie Early Stage Training Network

This Marie Curie Early Stage Training Network, based at the University of Bristol (UK), aims to understand reaction mechanisms and structures of organic and biogenic molecules on mineral surfaces, and at the same time provide graduate students with specific scientific and technological competencies in nanoscale surface research. MISSION has been conceived to underpin the revolution underway in science and technology, based on the ability to measure, manipulate and organize matter on the nanoscale (0.1 to 100 billionths of a meter). This project has been funded to provide up to eight three-year PhD fellowships.

A crucial feature of MISSION is that it will extend interdisciplinary collaborations in nanotechnology beyond the more usual physics/chemistry grouping to incorporate mineralogy and Earth sciences. Thus, the MISSION project as a whole will help to integrate diverse techniques in investigating a single, but highly complex, theme of scientific and technological importance. MISSION is led by Vala Ragnarsdottir and includes contributions from Terence McMaster, Walther Schwartzacher, Geoffrey Allen, and Keith Hallam. It will bring together five scientists with complementary and overlapping expertise in a contemporary research field, which will require the best inter- and cross-disciplinary interactions.

Further information on this network can be found at www.bris.ac.uk/mcest-mission

Mineral Surface Reactivity (MIR) – Marie Curie Early Stage Training Network

The Mineral–fluid Interface Reactivity (MIR) Early Stage Training Network (EST) brings together five research groups located in Germany, France, Spain, Denmark, and the United Kingdom and offers structured training for students pursuing PhD and Master's degrees. Funds have been provided for a total of 15 graduate fellowships. This training program is intended to produce young scientists to fill needs in industry, consulting engineering firms, regulatory agencies, and local governments, in addition to academic positions.

The core objective of the MIR network is the training and professional development of young scientists in the state-of-the-art field of mineral–fluid reactivity. Mineral–fluid reactions, including dissolution, adsorption, nucleation, precipitation, and solid-solution formation, are key to solving such pressing issues as the development of smart coatings on body implants or drug-delivery systems, minimizing risk in groundwater extraction, safer pesticide application, optimizing CO_2 sequestration, assuring drinking water quality, safe storage of radioactive waste products, and minimizing pollutant transport. The ability to accurately predict reactions in these systems is of utmost importance for municipalities and for industry in Europe today, but it relies on a detailed description of mineral–fluid reactions.

The MIR network is led by Eric Oelkers (Toulouse) and includes Susan Stipp (Copenhagen), Andrew Putnis (Munster), Manolo Prieto (Oviedo) and Liane Benning (Leeds).

Please send any potential items for inclusion in future 'EUROPEAN GEOCHEMICAL NEWS BRIEFS' to Eric Oelkers (oelkers@lmtg.obs-mip.fr)