

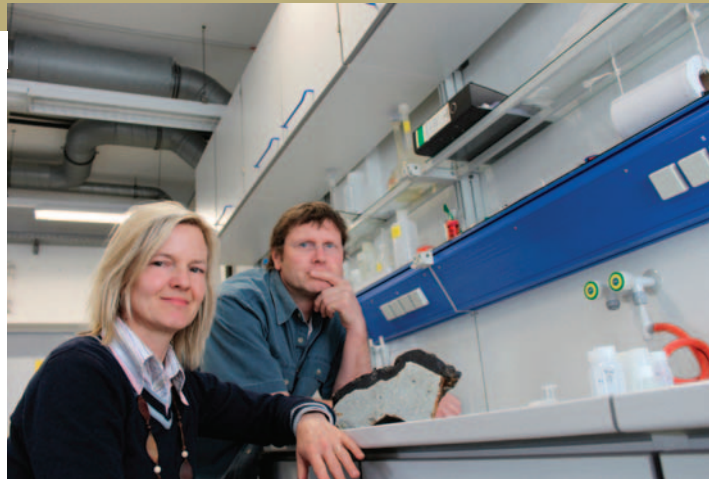
## GEOCHEMICAL JOURNAL AWARD FOR 2010 TO BAU AND KOSCHINSKY

The Geochemical Society of Japan, publisher of the *Geochemical Journal*, is proud to announce that the paper entitled “Oxidative scavenging of cerium on hydrous Fe oxide: Evidence from the distribution of rare earth elements and yttrium between Fe oxides and Mn oxides in hydrogenetic ferromanganese crusts” (*Geochemical Journal* 43: 37-47, 2009), co-authored by Prof. Michel Bau and Prof. Andrea Koschinsky of Bremen University, has been selected for the 2010 Geochemical Journal Award.

This award was created in 2003 to commemorate the 50<sup>th</sup> anniversary of the *Geochemical Journal* and was first awarded at the Goldschmidt Conference in Kurashiki. Every year, the Geochemical Journal Award honors the authors of outstanding research articles published during the previous year in the *Geochemical Journal*.

In their paper, Drs. Bau and Koschinsky present and discuss experimental data on the partitioning of redox-sensitive rare elements, such as cerium, between Fe and Mn oxides. The strongest point in this paper is that both the Mn oxides and the Fe oxides display pronounced positive Ce anomalies of almost identical size. This suggests that in the natural marine system oxidative scavenging of Ce from seawater is not restricted to Mn oxides but also occurs on hydrous Fe oxides, a phenomenon that was not previously well documented. Furthermore, preferential Ce removal from seawater does not result from the oxidation of dissolved Ce(III) within the marine water column; rather, Ce(III) is oxidized after its sorption at the metal (hydr)oxide surface.

This paper contributes to the understanding of the behavior of rare elements in ocean water, a field in which Dr. Bau is one of the leading geochemists. Understanding the behavior of peculiar rare elements, such as cerium, is fundamental for using them as paleoredox proxies.



Andrea Koschinsky and Michel Bau, Bremen University

It is therefore vital to correctly interpret Ce variations in ancient, chemically precipitated (or biogenic?) rocks such as Archean banded iron formations, for determining when and how oxygen first accumulated in the atmosphere–ocean system.

The conclusions in this paper go well beyond the field of REE geochemistry and have broad implications in the fields of astrobiology and Precambrian geology, as well as in the difficult but exciting search for pristine proxies of the environmental conditions of the young Earth.

For these reasons, the Geochemical Society of Japan has selected this remarkable work for the Geochemical Journal Award for the year 2010.

## “ELEMENTS 5” SPEAKERS AT IMA 2010

As part of *Elements*' 5<sup>th</sup> anniversary celebrations, IMA 2010 presented a series of plenary lectures by guest editors and authors of previous issues of the magazine. We extend our thanks to these contributors for having enthusiastically responded to Ian Parsons' and David Vaughan's invitation to join in this celebration. We also thank the organizers of IMA 2010 for having given prominence to these lectures.



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**Éva Valsami-Jones** (Natural History Museum, UK), co-guest editor of volume 4, number 2 (Phosphates and Global Sustainability), in the opening “Elements 5” lecture, summarized the

different aspects of the global phosphorus cycle and presented results of the study of apatite at the nanoscale.



**Rod Ewing** (University of Michigan, USA), founder of *Elements* and guest editor of volume 2, number 6 (The Nuclear Fuel Cycle), highlighted the role of mineralogy and geochemistry in the treatment of nuclear waste.



**Nigel Kelly** (Colorado School of Mines, USA) was a co-guest editor of volume 3, number 1 (Zircon). The zircon issue has the distinction of being the most heavily cited of all issues we have published so far. In his presentation, Nigel showed how research is helping to improve the interpretation of

zircon ages and gave an overview of the processes that can be traced with individual grains.



**Mihály Pósfai** (University of Pannonia, Hungary), an author in the Mineral Magnetism issue (volume 5, number 4), presented a talk on magnets in organisms and how they can help us understand the mechanisms of magnetic sensing by organisms.



**Nita Sahai** (University of Wisconsin–Madison, USA), guest editor of the Medical Mineralogy and Geochemistry issue (volume 3, number 6), gave a talk on mineral interactions with the human body—some medically beneficial and some harmful.



**Glenn Waychunas** (Berkeley Nanogeoscience Center, USA) spoke about mineral–water interfaces and nanoparticles. He was an author in the Nanogeoscience issue (volume 4, number 6).