

## 2014 ROBERT WILHELM BUNSEN MEDAL TO CHRIS HAWKESWORTH



The 2014 Robert Wilhelm Bunsen Medal of the European Geosciences Union (EGU) was awarded to **Chris J. Hawkesworth** of Bristol University (UK) for his outstanding contributions to a vast spectrum of geochemical subjects, most notably his work on the history and evolution of the continental crust.

Chris has addressed and answered an enormous range of geological questions using the powerful geochemical tools of trace elements and isotopes. His diverse interests have ranged from dating major archeological episodes, tracing brain disease using zinc isotopes, and monitoring the consequences of a "Snowball Earth" using isotopes of calcium. His chief focus, however, has been on global petrological problems, where his most prominent contributions have furthered our understanding of the history and evolution of the continents. He has elucidated the genesis of key crustal components, ranging from arc lavas to continental flood basalts and granites, both ancient and modern. He has documented the development and modification of the mantle lithosphere on which the continents rest, and he has unraveled the long-standing tangle of accretion and cannibalism in models of crustal growth.

Chris has often been at the forefront of the development of new techniques to solve old problems. He was one of the first to recognize and exploit the potential of neodymium isotopes to trace the rate and mechanism of crust formation. He used mass-spectrometric analysis of uranium-series disequilibrium to investigate the rates and styles of processes in subduction zones, and he has used osmium isotopes to explore the continental lithospheric mantle. Most recently, he has harnessed the power of laser-ablation hafnium analyses in zircon to reconstruct the evolution of the continental crust.

Chris has been involved in the creation and development of three influential isotope laboratories: at the Open University (UK); the University of St Andrews (UK); and his current place of work, Bristol University. These labs have trained and welcomed a huge number of researchers who are now active throughout the world. He has served the Earth science community through notable editorships, participation in many international review panels and the Council of the European Union of Geosciences (now EGU) from 1997 to 2003.

## 2014 EMU MEDAL FOR RESEARCH EXCELLENCE AWARDED TO ENCARNACIÓN RUIZ-AGUDO



The European Mineralogical Union (EMU) Medal for Research Excellence has been awarded to **Encarnación Ruiz-Agudo**, Department of Mineralogy and Petrology, University of Granada (Spain). She is awarded this medal in recognition of her important contributions to the field of mineral-water interactions and related phenomena. Her research topics range from weathering processes and geochemical proxies to crystal-growth processes and environmental remediation. The

awarding of this medal also recognizes Dr. Ruiz-Agudo's active involvement in mineralogical research and collaborations with scientists at the European level. Her stature in the international mineralogical community is underlined by her being a guest editor of the June 2013 issue of *Elements* ("The Mineral-Water Interface").

## IAN SWAINSON, SERIES EDITOR FOR RIMG



**Ian Swainson** has been named Series Editor for the Reviews in Mineralogy & Geochemistry (RiMG). The series is jointly published by the Mineralogical Society of America and the Geochemical Society, and, on occasion, with other groups.

Currently, Ian is the Letters Editor for *American Mineralogist* and will remain so. He has a broad interest in Raman, infrared, and neutron inelastic spectroscopy, as well as X-ray and neutron powder-diffraction applications to solid-state chemistry and physics, materials science, and Earth sciences. Born in Vancouver (British Columbia, Canada), Dr. Swainson grew up in the United Kingdom, mostly in North Wales. He has degrees from the University of Cambridge (UK), where he specialized in mineralogy, crystallography, and related fields, with a PhD on phonon-induced orientational disorder and the phase transition in cristobalite. Upon graduating, he moved to the Canadian neutron source at the National Research Universal Reactor, Chalk River, Ontario where he worked on the then-new C2 neutron powder diffractometer. He chaired the beam time review committee for powder diffraction at Chalk River, and has served on similar review committees for the Oak Ridge National Laboratory (Tennessee, USA), and the National Institute of Standards and Technology (NIST). He has coorganized several powder-diffraction workshops, primarily aimed at graduate and post-doctoral students. He helped develop the proposals for what became the Sylvia Fedoruk Canadian Centre for Nuclear Innovation, Saskatoon, Saskatchewan, and for the associated cyclotron and nuclear substance laboratory. Dr. Swainson replaces Dr. Jodi Rosso, who had been the RiMG Series Editor since 2000 and has moved into the position of executive editor of *Elements* magazine.

## GEOLOGICAL ASSOCIATION OF CANADA AWARDS



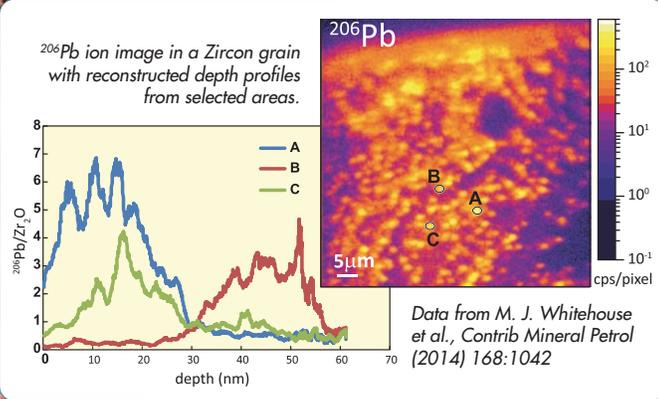
**Richard A. F. Grieve**, Natural Resources (Ottawa, Ontario), has been selected as the 2015 winner of the Logan Medal, the highest recognition of the Geological Association of Canada, awarded for sustained and distinguished achievement in Canadian Earth science. By bringing his meticulous studies of Canadian impact craters to the rest of the world, Richard Grieve has won international acclaim for his insights into impact processes to the benefit of terrestrial geology and

planetary sciences. As chief geoscientist and then chief scientist, he has worked tirelessly for the geoscience programs of the Earth Sciences Sector of Natural Resources Canada and for the general good of geoscience in Canada.



**Sandra M. Barr**, Acadia University (Nova Scotia), is the recipient of the Ambrose Medal for sustained and dedicated service to the Canadian Earth science community. For almost 40 years, Sandra Barr has devoted her time and energy to a variety of geoscience associations and institutions at local, national, and international levels, including the Atlantic Geoscience Society (AGS), the Association of Geoscientists for International Development, and the Geological Association of

Canada. She has received both of the AGS's major awards, as Distinguished Scientist and for Distinguished Service. She was also a coauthor of *The Last Billion Years: A Geological History of the Maritime Provinces of Canada*.



## IMS 1280-HR, NanoSIMS 50L

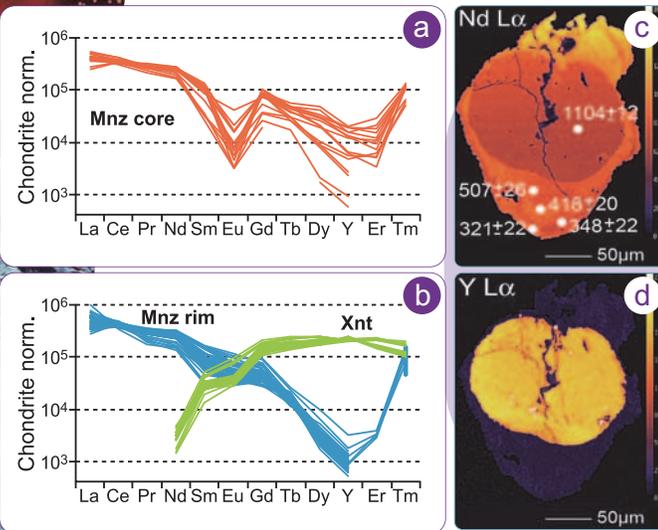
The world leading SIMS for geo & cosmochemists

**IMS 1280-HR** Ultra High Sensitivity multicollection SIMS: state-of-the-art instrument for U-Pb geochronology, trace elements, stable isotopes and nuclear particle analysis...



**NanoSIMS 50L** ion microprobe for high sensitivity, high lateral resolution analyses.

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## SXFive / SXFiveFE

CAMECA's fifth generation Electron Microprobe



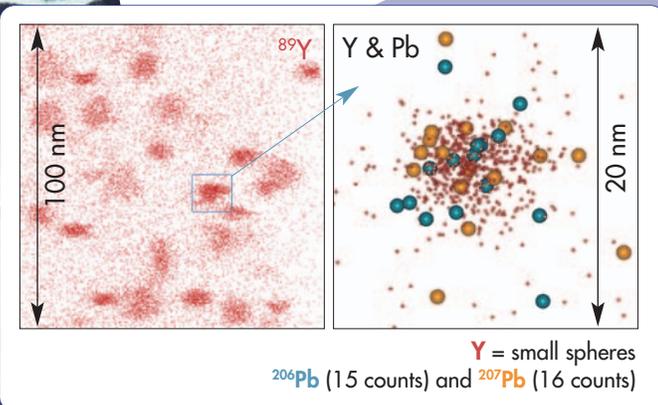
Quantitative microanalysis & X-ray mapping at sub-micron spatial resolution. Benchmark detection limits for trace and minor elements.

**a&b:** Chondrite-normalized REE profiles as determined by EPMA. Monazite cores contrast with monazite rims and associated xenotime.

**c&d:** WDS maps of Nd and Y distributions.

Points marked on the Nd map show EPMA age determinations in Ma, 2σ. Data acquired on the SX Ultrachron model, courtesy of Dr. Julien Allaz, Univ. of Colorado and Dr. Michael Jercinovic, Univ. of Massachusetts.

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## LEAP® 5000

CAMECA's new, cutting-edge Atom Probe Microscope!



**Atom Probe Tomography (APT)** is a powerful and promising technique for the nanoscale isotopic and elemental analysis of geological and extraterrestrial materials.

One of the hundreds of clusters analyzed from a zircon crystal from the Jack Hills of Western Australia showing the 3D distribution of 89Y and radiogenic 206Pb and 207Pb atoms at the nanometer scale. Analysis of the data confirm the 4.4 Ga age and a heating event that occurred ~1 Ga after its formation.

Courtesy of Valley, J. et al. Hadean age for a post-magma-ocean zircon confirmed by atom probe tomography. *Nature Geoscience* (2014).

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