

Meet the Authors



Gerhard P. Brey received a Diploma in mineralogy at the Friedrich Alexander-Universität of Erlangen in 1973 and a PhD in geochemistry from the Australian National University (Canberra) in

1976. From 1978 to 1994, he was a research assistant at the Max-Planck-Institut für Chemie in Mainz in the Division of Cosmochemistry. He taught at the Technische Universität Darmstadt where he fulfilled the requirements for the degree of Habilitation in 1990. Since 1995, he has been professor of petrology at the Johann Wolfgang Goethe-Universität in Frankfurt, where he continues his experimental work on geothermobarometry and the application to mantle xenolith suites and inclusions in diamonds from the upper and lower mantle. In January 2004 he was elected as Dr. *honoris causa* by the Russian Academy of Sciences in Moscow.



Pierre Cartigny obtained his PhD in 1997 at the Institut de Physique du Globe de Paris. After two years as a postdoc at the University of Göttingen (Germany), he joined the Stable Isotope Laboratory of

IPG-Paris as a CNRS researcher. His main interests focus on the geodynamic cycle of nitrogen and on the origin of the isotopic variability within Earth's mantle.



Yu-Chun Chen is a PhD student in the Department of Electrical and Computer Engineering at Auburn University and a predoctoral fellow at the Carnegie Institution of Washington. His fields of research include

fabrication and microelectronic applications of carbon nanotubes, microelectronics manufacturing, and CVD single-crystal diamond. He was born in Chang-Hua, Taiwan. He received his BS degree from the Department of Electronics Engineering at Feng-Chia University prior to entering the graduate program at Auburn in 2001. He has been a graduate research and teaching assistant and was selected as an Auburn University Graduate Research Fellow in 2004. His PhD advisor is Professor Yonhua Tzeng.



Rondi M. Davies is a postdoctoral fellow in the Department of Earth and Planetary Sciences at the American Museum of Natural History. She was educated in Papua New Guinea and Australia, where her benchmark

study of the origin of eastern Australian diamonds earned her the prestigious Voisey Medal. Rondi also studied the origins of deep-sourced ancient diamonds from the Slave craton, Canada. She is now researching the nature and history of Earth's mantle using high-pressure experimental techniques and is involved in the Museum's educational and outreach programs.



Subarnarekha De examined natural polycrystalline diamonds (PCD) using transmission electron microscopy for her PhD research at Princeton University. She has also performed high-pressure synthesis of

polycrystalline diamonds at the Geophysical Laboratory, Carnegie Institution of Washington, and she has contrasted synthetic compacts to natural PCD using various microscopic techniques. More recently, as an NRC Post-Doctoral Fellow at the NASA Ames Research Center, De investigated terrestrial carbonates and compared them to globules from Martian meteorite ALH84001 to shed light on the "life on Mars" question.



Jeffrey W. Harris, based at the University of Glasgow, has played an outstanding role in the development of research on diamond, making significant contributions in the fields of diamond

classification, inclusion identification and geochemistry, and age-determination techniques. He is author or coauthor of 109 peer-reviewed papers. He has acted as a diamond consultant to DeBeers Consolidated Mines Ltd for 29 years and on their behalf, coordinates, facilitates, and participates in joint research projects with other universities and research centres throughout the world. Currently this includes over 30 projects in Australia, Britain and other European centres, Canada, South Africa, and the United States. He is an Associate Editor of the *Journal of Gemmology*.



George E. Harlow is curator of minerals and gems in the Department of Earth and Planetary Sciences at the American Museum of Natural History. His research focuses on the chemistry

and structure of minerals as tools for understanding their origin and the record of geological processes they contain. Projects inspired by the museum's collections include the origin of jadeite rock (jade) in Guatemala and elsewhere, and the mineralogy of the Mogok Stone Tract, Myanmar, famous for rubies, spinels, and a complex mineralogy. Diamond inclusions led to study of and experiments on K-rich clinopyroxene and the behavior of large-ion lithophiles and volatile components in minerals at upper mantle conditions. He has curated the exhibitions *It's Gold* (1979–80), *Tiffany: 150 Years of Gems and Jewelry* (1988), *Global Warming* (1992), and *The Nature of Diamonds* (1997).



Peter J. Heaney received his PhD from Johns Hopkins University in 1989. He is currently an associate professor in the Department of Geosciences and the Materials Research

Institute at Penn State. Heaney has focused his research on mechanisms of mineral growth and transformation as revealed by real-time X-ray and electron diffraction techniques. His recent areas of interest include the origin of naturally occurring polycrystalline diamonds, the effects that atomic exchange exerts on mineral phase transition behavior, and the formation pathways followed by the many varieties of microcrystalline silica.



Russell J. Hemley is a staff scientist at the Geophysical Laboratory, Carnegie Institution of Washington. His research explores the behavior of materials over a broad range of thermodynamic

conditions from low to very high pressures and how this relates to problems in Earth and planetary science, physics, chemistry, materials science, and biology. He obtained degrees in chemistry (Wesleyan University, BA 1977; Harvard University, MA 1980, PhD 1983) before joining the Carnegie Institution in 1984. He is a fellow of the American Physical Society, the American Geophysical Union, and the American Academy of Arts and Sciences, and a member of the National Academy of Sciences.



Gary R. Huss is professor at the Hawai'i Institute of Geophysics and Planetology at the University of Hawai'i. He received his Bachelor's degree in geology at Rice University, his Master's degree in geology at the

University of New Mexico, and his PhD in geology at the University of Minnesota. He joined the laboratory of Edward Anders at the

University of Chicago in 1988 to study the newly discovered nanodiamonds in meteorites. Since, his research has covered many aspects of the early solar system, including nanodiamonds, various types of presolar grains, short-lived radionuclides, the timing of events in the early solar system, and the processes that led to the meteorites, asteroids, and planets.



Yoshihide Ogasawara, Dr. Eng., is professor of petrology at the Department of Earth Sciences, Waseda University, Tokyo. Since his doctoral dissertation, he has worked on low-pressure type dolomitic marbles and carried out related computer-assisted thermodynamic studies. In 1993, he began studying ultrahigh-pressure metamorphic rocks, with a focus on UHP carbonate rocks. Recently he has concentrated on the evolution of deeply subducted carbonate rocks and the formation of diamond in the metamorphic rocks of the Kokchetav Massif, northern Kazakhstan.



James E. Shigley is director of research at the Gemological Institute of America (GIA) in Carlsbad, California. Prior to joining GIA in 1982, Dr. Shigley studied geology as an undergraduate at the University of

California at Berkeley and later received his doctorate in geology from Stanford University. He is the author of various articles on diamonds and other gemstones and is a well-known speaker on gemological topics to both professional and general audiences. Dr. Shigley directs GIA's research activities, which include the identification of natural, synthetic, and treated diamonds, colored stones and pearls, and the evaluation of various characterization techniques for identifying gems.



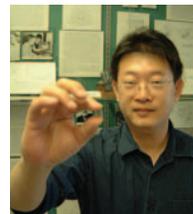
Thomas Stachel is professor and Canada Research Chair in Diamonds at the University of Alberta in Edmonton. He completed his PhD in 1991 at Würzburg University, Germany, on the

volcanology and petrology of the Ellendale lamproites, Western Australia. A first postdoctoral research project on the Gross Brückaros Caldera in Namibia still kept him in the field of volcanology. With a Marie Curie Fellowship of the European Union, he joined Jeff Harris at the University of Glasgow in 1994, where he became involved in research on diamonds and their inclusions. From 1996 to 2001 he was a lecturer at the Institute for Mineralogy at Frankfurt University where he completed his "habilitation" on diamond research in 1999. In the same year he was awarded the

Victor Moritz Goldschmidt Award of the German Mineralogical Society. He joined the University of Alberta in 2001.



Ed Vicenzi is a research geochemist and the director of the analytical laboratories in the Smithsonian Institution's Department of Mineral Sciences. He is actively involved in the application of electron and ion microbeam methods to Earth and planetary research. His current interests include mining information from combined Time of Flight-Secondary Ion Mass Spectrometry, X-ray microanalysis, and cathodoluminescence datasets. Before joining the National Museum of Natural History in 1999, he spent six years at the Princeton Materials Institute. Prior to this, he spent two years as a postdoc at Macquarie University in Australia. He received his PhD from Rensselaer Polytechnic Institute, a Master's degree from the University of Oregon, and a BSc from McGill University, all in Earth sciences.



Chih-Shiue Yan is a research scientist at the Geophysical Laboratory, Carnegie Institution of Washington. He was born and raised in Taiwan. In 1995, he began graduate work on CVD diamond under the direction of Professor Yogesh Vohra (University of Alabama at Birmingham, UAB) and Russell J. Hemley and Ho-kwang Mao (Carnegie Institution). During this period he developed techniques for the fabrication of single-crystal diamond by CVD and received his PhD in physics from UAB in 1999. He then became a research fellow and associate at Carnegie before assuming his current position in 2004.



The Clay Minerals Society will hold its Annual Meeting in Burlington, Vermont, U.S.A. June 11-15. Burlington is situated on the shores of Lake Champlain, located between the Green Mountains to the east and the Adirondack Mountains to the west. The meeting's theme "Green Mountain Clays", reflects both the ancient tectonic processes responsible for forming metamorphic chlorite, serpentine, talc and muscovite in deformed Paleozoic rocks of the Green Mountains, as well as the Pleistocene glaciation and deglaciation that led to the deposition of lacustrine and marine clay-rich deposits in the Champlain Valley.

IMPORTANT DEADLINES

Abstract Submission:
APRIL 1, 2005
Pre-registration: May 15, 2005
Hotel: May 20, 2005
For more information, see www.middlebury.edu/cms, or contact the conference chairs:

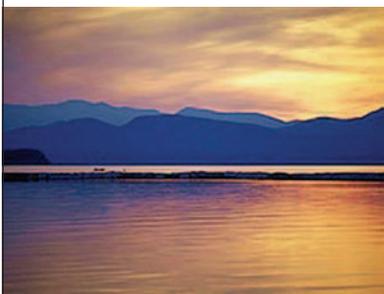
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One of the highlights of the 2005 meeting will be field trips that take advantage of these geological resources. One field trip will be to the Adirondack Mountains to examine glacial till spodosols and their associated weathering reactions and clay mineralogy (June 11), and the other will be to serpentinized peridotites in the Green Mountains to examine tectonic, mineralogical and environmental issues (June 15).

The conference will host numerous theme sessions and symposia, covering topics such as soil mineralogy and geochemistry, links between soils and sediments, clays and the environment, ceramic science, stable isotopes and clays, structural modeling and quantitative analysis, clays and climate, and a special session devoted to the pioneering research of Robert C. Reynolds in the areas of sedimentary basin analysis, hydrocarbon geology and structural analysis of clays.

The CMS Workshop "Characterization of Solid-Water Interface Reactions of Metals and Actinides on Clays and Clay Minerals" will be held on June 11 and is being organized by Andreas Bauer of Forschungszentrum Karlsruhe, Institut für Nukleare Entsorgung (INE), Karlsruhe, Germany; bauer@ine.fzk.de



Burlington is a small city of 40,000 inhabitants and is home to the University of Vermont, a thriving pedestrian-friendly downtown, museums and natural areas, and a working agricultural landscape renowned for world-class cheeses. The meeting will be held at the Wyndham hotel on the Burlington waterfront, a venue that is ideally-suited for a CMS meeting. We encourage you to attend, to meet old colleagues and friends, to strike up new professional relationships, to share knowledge and ideas, and to enjoy early summer on the shores of Lake Champlain.