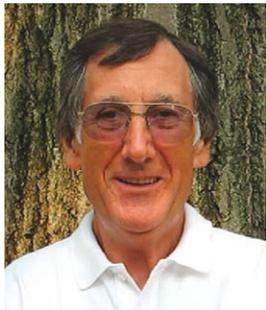


## PETER DEINES 1936–2009



Professor Peter Deines, an authority on isotope geochemistry, is well known for his research on the nature of diamonds, for his services to the Geochemical Society, and for his skilled editing of the Isotope Geoscience Section of *Chemical Geology* for nearly two decades. His passion was the precise measurement of isotope ratios and their evaluation for resolving deep geologic processes. He died at age 72 in State College, Pennsylvania, on February 2, 2009, after a protracted bout with cancer.

Born in Hann. Münden, Germany, he earned his Geologie Vordiplom at Friedrich Wilhelms University in Bonn, then an MSc and, in 1967, his PhD in geochemistry and mineralogy at Penn State University. Recognizing a gem, Penn State appointed him as a professor in geochemistry, a position he retained until his nominal retirement in 2004, after which he played an active role as Professor Emeritus. He carried an extraordinary level of academic responsibilities, including over 60 administrative posts and university committees, of which two were advisory to the president of the university. To support his teaching, he wrote two web books: *Solved Problems in Geochemistry* ([www.geosc.psu.edu/courses/Solved\\_Problems/index](http://www.geosc.psu.edu/courses/Solved_Problems/index)) and *Stable Isotope Geochemistry Course Notes* ([www.geosc.psu.edu/courses/Geosc518/Stable\\_Isotopes/index](http://www.geosc.psu.edu/courses/Geosc518/Stable_Isotopes/index)). The College Wilson Award was given to him in recognition of his consummate teaching of geochemistry.

In 1981, Peter was elected treasurer of the Geochemical Society and established its first budgeting and financial planning system, refining it until 1988. In appreciation of that contribution, he was awarded by the Society a unique Honorary Life Membership. Furthermore, he provided crucial service to all of geochemistry as chairman of the Goldschmidt Conferences of 1988–1990 and as cochair in 1991–1992 and 1994–1995.

Peter was internationally recognized and admired, especially for his fundamental contributions to our perception of the stable isotope geochemistry of the mantle. An exacting experimentalist, Peter maintained over four decades an exceptionally fruitful collaboration with Jeff Harris, University of Glasgow. Those investigations resulted in a comprehensive database of the C and O isotope profiles for all types of diamonds and some associated minerals from every kimberlite pipe in southern Africa and dozens more across the globe. Specifically, he determined C and O isotope ratios in a variety of mantle minerals, including diamond, graphite, carbonates, moissanite, and silicate solid solutions, and also in xenoliths, as well as C in organic compounds from the mantle and C in the mantle gases CO<sub>2</sub>, CH<sub>4</sub>, and CO of fluid inclusions.

These studies led to many seminal discoveries, such as the revelation at Jagersfontein of sublithospheric diamonds that were highly enriched in <sup>12</sup>C. He also made the first systematic study of C isotope geochemistry in diamonds with sulfide rather than oxide inclusions, a correlation that implied diamond crystallization from fluids rather than magmas. Another milestone was the discovery, made together with Steven Haggerty, that small-scale isotopic variations in ultradeep (>300 km) mantle xenoliths relate to metasomatic modification only a few million years prior to kimberlite eruption. Peter thought deeply about the large-scale implications of his findings, and when his isotope fractionation models contradicted popular hypotheses, he did not shy from controversy. In particular, Peter never accepted the concept that subduction of organic material generated the light C signatures ( $\delta^{13}\text{C} < -15\text{‰}$ ) observed in mantle xenoliths and diamonds with eclogitic inclusions.

## PROFESSOR HANS JÜRGEN RÖSLER 1920–2009



Prof. Hans Jürgen Rösler, internationally renowned mineralogist and geochemist, died peacefully in Freiberg, Germany, on 12 January 2009. Hans Jürgen Rösler made significant contributions to mineralogy, petrology, and geochemistry. His textbook on mineralogy and the “Geochemical Tables” by Rösler and

Lange were benchmark publications with multiple editions, and are still in use by many. *Spurenelemente in der Umwelt (Trace Elements in the Environment)*, published with Hans Joachim Fiedler from Tharandt in 1987, was an outstanding contribution, particularly when considering the conditions in the GDR.

The Professor Emeritus for Mineralogy and Honorary Senator of TU Bergakademie Freiberg was an appointed active member of the Saxonian Academy of Science, a member of the geosciences section of the Russian Academy of Sciences (St. Petersburg), an honorary member and a recipient of the Serge-von-Bubnoff Medal of the Gesellschaft für Geologische Wissenschaften of the GDR, as well as a recipient of many other awards and distinctions. Rösler started studying mining engineering at Bergakademie Freiberg in 1947, soon switched to geology, and later became the first alumnus of the newly introduced course in mineralogy. Following his PhD dissertation in 1954 on the geochemistry of anthracite, he took over the mineralogical and geochemical laboratories of the Geological Survey in Jena. He returned to TU Bergakademie Freiberg in 1959 to follow Prof. Friedrich Leutwein as the Chair of Mineralogy and Geochemistry. Hans Jürgen Rösler taught until 1985 and, in spite of the difficult conditions in the GDR, he developed the institute into a leading institution in the geosciences, with outstanding infrastructure and attractive research opportunities, even for international scientists. In the mid-1960s, the institute was among the finest academic institutions worldwide, with a permanent staff of 60 scientists and technicians and state-of-the-art infrastructure. Leadership in IAGOD and the IMA reflect this reputation. More than 300 scientific papers, 77 successful doctoral students, and 17 postdocs (habilitations) also mark his activities. The geoscience community will miss Hans Jürgen Rösler, an outstanding person, colleague, and friend.

**Jörg Matschullat, Jens Gutzmer,  
and Gerhard Heide, Freiberg**

In carefully written monographs that will endure as touchstones for decades to come, he steadfastly argued that the bimodal distribution of C isotopes in the mantle is unrelated to the introduction of crustal C; rather, he proposed that thermodynamic isotope effects, possibly involving C dissolved in mantle minerals, resulted in the generation of distinct C reservoirs.

Those of us who were privileged to work with Peter remember him for his modesty, his generosity, and his dedication to his science, students, and colleagues.

**Hu Barnes**, Penn State University  
**Thomas Stachel**, University of Alberta  
**Peter Heaney**, Penn State University