

## Obituary of Dr. Rolf Zeisler

Susan F. Heller-Zeisler<sup>1</sup>

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Dr. Rolf Zeisler, former Senior Research Chemist from the National Institute of Standards and Technology (NIST) in Gaithersburg, Maryland, passed away on December 16, 2017 from injuries sustained in a traffic accident. A NIST employee from 1978 to 2009, he had remained active as a Scientist Emeritus with the Chemical Sciences Division of NIST's Material Measurement Laboratory following his retirement.

Rolf was an internationally recognized expert in ultra-sensitive, high accuracy determinations of trace elements using nuclear methods. He extended the capabilities of nuclear metrology by creating multi-element assays, leading to the development of unique reference materials that enabled environmental testing (including evaluating air quality). His influential achievements range from pioneering cryogenic homogenization of biological tissues to developing novel radiochemical methods to separate individual elements and compounds from biological tissues, to establishing the accurate levels of trace elements in biological tissues and many other materials.

Originally from Weissenfels, Germany, he studied at the Technical University of Munich (TUM), receiving both his

Dipl. Chem. degree and his Ph.D. there. He pursued postdoctoral research at TUM, and spent another year of postdoctoral research at Texas A&M University in College Station. He was recruited into what was then known as the Activation Analysis section of NIST (then known as the National Bureau of Standards) in 1978.

Carrying out most of his research using the facilities at the NIST Center for Neutron Research, Rolf was known from optimizing analysis techniques to extract the maximum analytical information possible from often unique samples and samples of very limited availability. He provided technical leadership in development, analytical approach, and certification of NIST Standard Reference Materials (SRMs) as well as analytical data for value assignment for more than 50 NIST SRMs, as well as for additional international quality control materials. From 1979 to 1985, he was in charge of the Activation Analysis Group of NIST's Inorganic Analytical Research Division. He also served as program manager for the inorganic part of the U.S. National Environmental Specimen Bank from 1978 to 1990.

From 1991 to 1996, Rolf took a leave of absence from NIST to work at the International Atomic Energy Agency (IAEA), serving as head of the Chemistry Unit of the IAEA's Seibersdorf Laboratories in Austria. There he advanced the agency's programs in standards, nuclear forensics, and other areas. This included oversight of the production and analysis of intercomparison and reference materials, acting as Technical Officer on Agency cooperative projects, as well as analysis of environmental samples for the Agency's programs.

His extensive research accomplishments are recorded in more than 250 research papers, reports, and book chapters that he published in collaboration with more than 200 scientists worldwide. Rolf delivered more than 100 invited talks and some 200 additional professional presentations. He also led or served on numerous international organizing committees for scientific conferences. As a highly-regarded mentor, he regularly hosted students and scientists from around the globe and participated in tutorial workshops and courses.

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Rolf was posthumously awarded the George Hevesy Medal in a ceremony during the April 2018 conference on Methods and Applications for Radioanalytical Chemistry (MARC). In addition to this award, other honors received included the 1993 Commemorative Medal of Charles University in Prague, the 2007 NIST Analytical Chemistry Division's Chemical Metrology Award, and the American Nuclear Society's 2009 Radiation Science and Technology Award.

Rolf also pursued many interests outside of his laboratory work. He was a longtime sailor, both in dinghy racing

and later in larger sailboats for cruising. He was a leader in the racing of the 15-foot Albacore class of sailing dinghies. He was also an avid skier since his teenage years, and was still serving as a professional certified ski instructor at the Liberty Mountain ski area near Gettysburg, Pennsylvania.

Rolf will be sorely missed in the scientific community where he forged so many collaborations, by his many friends from sailing and skiing, and deeply by his family. From his family, survivors include his wife Susan, his three children from a previous marriage, Annette, Andreas and Albrecht, and eight grandchildren.