

Bruno John Zwolinski (1919 to 2010)



Bruno J. Zwolinski died peacefully on October 25, 2010, in College Station, Texas. Zwolinski was editor of the *Journal of Chemical and Engineering Data* between 1971 and 1990, director of the Thermodynamics Research Center from 1960 to 1979, and emeritus professor of Chemistry at Texas A&M University.

Born in Buffalo, New York, Zwolinski attended Canisius College, graduating with a B.S. in chemistry in 1941. He earned an M.S. in Physical Chemistry from Purdue University in 1944 and from Princeton University an M.A. in 1944 followed by a Ph.D. in 1947 both in physical chemistry. The Ph.D. was supervised by Henry Eyring. In 1944 Zwolinski accepted a position on the Manhattan Project at Columbia University with Paul Emmett and Willard Libby.

In 1948, Bruno was appointed assistant professor at the University of Utah where he worked primarily on reaction kinetics. In 1947 he published "The nonequilibrium theory of absolute rates of reaction", the first of eight papers on kinetics with Henry Eyring.

In 1953, as a senior physicist at the Stanford Research Institute (SRI), he worked primarily on the theory of explosives and equations of state at high temperatures and high

pressures. In 1954 he took leave from SRI to become the assistant director of the chemistry program of the newly established National Science Foundation.

In 1957, Bruno accepted a post of professor and assistant director of both the American Petroleum Institute Research Project 44 and the Manufacturing Chemists Association Research Project, then directed by Fredrick D. Rossini at the Carnegie Institute of Technology. His interests then turned to data evaluation and the problems involved in the storage and retrieval of scientific data. In addition, he organized the compilation of spectral data to extend the compilation efforts of the Manufacturing Chemists Association Research Project. In 1960, when Rossini accepted an appointment at the University of Notre Dame, Bruno was appointed director of the two projects and the Thermochemical Laboratory.

In 1961, Bruno relocated the two projects and the laboratory to Texas A&M University, where he accepted a professorship in the chemistry department. His research at Texas A&M focused primarily on the viscosity of hydrocarbon mixtures and theories of the thermodynamic and transport properties of fluids. As director of the Thermodynamics Research Center (TRC) he recruited an exceptional team of researchers to obtain, evaluate, and publish the most reliable recommended data on the thermophysical properties of hydrocarbons (required by the oil and gas industry) and nonhydrocarbons (required by the chemical and electronics industry). With Henry Kehiaian he founded the "International Data Series - Series A. Selected Data on the Thermodynamic Properties of Non-Reacting Systems of Organic Substances". He was editor-in-chief of the TRC Thermodynamic Tables (Hydrocarbons and Non-Hydrocarbons) as well as six TRC Series of Spectral Data (that included infrared, ultraviolet, mass, Raman, and ^1H and ^{13}C NMR).

During his tenure as editor-in-chief of the *Journal of Chemical and Engineering Data*, with able assistance from Randolph C. Wilhoit and Henry V. Kehiaian, the journal was elevated from a U.S. national to an international journal of high repute. Bruno retired from TRC in 1979 and from the chemistry department at Texas A&M in 1991. Bruno published over 100 refereed papers and over 300 serial data reports and book chapters. As already mentioned Bruno's earliest papers focused on kinetics, and this interest was extended to the thermodynamics properties of fluids while his final articles focused on the measurement and theory of the transport properties of simple mixtures.

Bruno was a member of a number of national and international committees. Among his many awards he received the

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Huffmann award from the U.S. Calorimetry Conference in 1977 and the ACS Crane-Patterson Award for contributions to chemical information science and documentation in 1985. He was a member of 23 scientific societies and professional organizations. Bruno was a fellow in the New York Academy of Sciences, the Texas Academy of Sciences, the American Institute of Chemists, and the American Association for Advancement of Science (AAAS). He was a member of the National Advisory Board for the National Academy of Science and National Research Council Office of Critical Tables, the NAS-NRC Subcommittee on Physicochemical Symbols and Terminology, the IUPAC Commission on Thermodynamics and Thermochemistry, and the Board of Directors of the Calorimetry Conference. He served as a consultant to the Division of Physical Chemistry, National Bureau of Standards. He was an exchange professor at the Institute of Physical Chemistry, Polish Academy of Sciences, Warsaw, Poland.

Bruno loved the desert southwest of the United States and was an avid collector of paintings depicting the region. He was a fan of the early big bands and enjoyed working on his 1.7 acres of land in College Station.

Bruno made a significant and lasting contribution to our understanding of the thermophysical properties of materials.

Bruno is survived by three children and one grandchild. His wife of 52 years, Margery, preceded him in 2005.

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