Edward Martin Barrall II, the 1973 recipient of the Mettler Award in Thermal Analysis and the President of NATAS in 1974, died peacefully on April 24, 2017, surrounded by his family. He is survived by his three children, seven grandchildren, one great grandson and his wife of 40 years, Mary Ann. A Celebration of Life Memorial Service was held Sunday, May 21 in San Jose, CA.

Ed was born in Louisville, KY on December 8, 1934. He attended elementary school in Louisville and was admitted to the University of Louisville as a Ford Foundation Scholar at age 16. He obtained a BS in Chemistry and an MS in Analytical Chemistry from there. After teaching for a year at the University of Georgia, he was admitted to the graduate program at MIT. He completed his PhD in Analytical Chemistry in 1961 and joined Chevron Research in Richmond, CA. In 1969 he joined IBM Research in San Jose, CA, and in 1980 the IBM Development Materials Laboratory, also in San Jose. He retired as manager of the Materials Lab and Senior Technical Staff Member.

His colleagues at Chevron included Roger Porter and Julian Johnson, with whom he coauthored several publications involving thermal analysis. His early research focused on the design of DTA cells, some of the first reporting of the thermal properties of liquid crystalline materials by thermal analysis, and the combination of depolarized light intensity with differential thermal analysis to study transitions in polyolefin polymers.

During his professional career he published or coauthored over 130 publications in refereed scientific journals and coauthored five books. He made numerous technical presentations at meetings of the American Chemical Society and similar organizations, including at the inaugural event of the Golden Gate Polymer Forum in 1980. He was visiting professor at the University of Connecticut and on the external advisory board of the University of Southern Mississippi.