

Bio of Richard Eisenberg



A native New Yorker, **Richard Eisenberg** was a member of the University of Rochester Department of Chemistry from July, 1973 until his formal retirement in 2015 and closure of his laboratory in 2018. Rich received his undergraduate (1963) and graduate (1964, 1967) degrees from Columbia University. During this time, he carried out research with Prof. Harry Gray at Columbia and Dr. James A. Ibers at Brookhaven National Laboratory in structural inorganic chemistry. At BNL he learned from Ibers single crystal x-ray diffraction and the determination of molecular structures using this method. At Columbia as part of the Gray lab, he set up a facility for carrying out single crystal structure determinations which included the first molecular structures of metal complexes having dithiolene and related redox active ligands. One of these structural studies revealed the first molecular complex having trigonal prismatic coordination.

Ei independent career commenced in 1967 at Brown University, where early studies focused on metal nitrosyl structures and bonding including a system having both linear and bent M-NO arrangements, and on the structures of metal complexes having redox active ligands. Other trigonal prismatic complexes were also prepared and characterized. In 1973, he joined the faculty of the University of Rochester and was promoted to the rank of Professor of Chemistry in 1976. In 1996 he was promoted to the Tracy Harris Professor of Chemistry, a title that he maintained until his retirement. Eisenberg also served as Chair of the UR Chemistry Department (1991-'94) and prior to that, he served briefly as an Associate Dean for Development in the College of Arts and Sciences in the University.

During his career at Rochester, Eisenberg conducted research on a number of subjects including inorganic and organometallic chemistry, photochemistry relating to solar energy conversion, and catalysis. Some of his specific research projects included the photogeneration of hydrogen from water using systems based only on more common metallic elements, luminescent square planar complexes and their incorporation into molecular assemblies for photoinduced charge separation, catalysis, the light-driven functionalization of C-H bonds, parahydrogen induced polarization for H₂ addition reactions to both metal complexes and organic substrates, discovery of new luminescent gold and copper complexes for application in electroluminescent devices, the design of new electrophilic catalysts for electrocyclizations and tandem organic transformations, and the development of hybridized quantum dots for the light-driven

reduction of aqueous protons to molecular H_2 . The last of these has direct relevance to solar driven production of H_2 from water. Overall, Eisenberg mentored more than eighty PhD and postdoctoral research students, as well as numerous undergraduates during his career.

Teaching was also of critical importance to Eisenberg. In addition to the usual compliment of inorganic chemistry courses at the undergraduate and graduate levels, he teamed with faculty colleague James Farrar to develop a curriculum for introductory chemistry based on energy and the environment. The year-long course was initially teamed with two other courses outside of the Chemistry curriculum and was presented as an integrated whole that was viewed as highly successful.

Foremost among his other activities in the chemistry community, Eisenberg was the Editor-in-Chief of *Inorganic Chemistry* and an Associate editor of the *Proceedings of the National Academy of Sciences*. He also served as Chair of the ACS Inorganic Division (DIC), Chair of the Organometallic Subdivision of DIC, Chair of the Gordon Research Conference on Organometallic Chemistry and as a member of the editorial advisory boards of the Journal of the American Chemical Society and Accounts of Chemical Research among others. He was the recipient of the 2003 ACS Award for Distinguished Service in the Advancement of Inorganic Chemistry and shared the 2011 ACS Nobel Laureate Signature Award in Graduate Education with his student Ping-Wu Du. In 2010, he received the Lifetime Achievement Award for Graduate Education from the University of Rochester. He was elected a Fellow of the American Association for the Advancement of Science in 2005, a Fellow of the American Academy of Arts and Sciences in 2009, and a Member of the U. S. National Academy of Sciences in 2010. Eisenberg also served on the NAS Board on Chemical Sciences and Technology.

On the personal side, Rich married Marcia Landau on August 6, 1966 and has been happily married ever since. His first meeting with Marcia occurred in December, 1962 within the same two week period that he met Harry Gray. He considers that the stars were aligned at that time to meet the two most important people in his life in such a short time. Rich and Marcia have two sons, Alan and Rob, who are married respectively to Shalla and Daniel, and two granddaughters, Michayla and Isabella, who live in Arlington, Va. with Alan and Shalla. From a previous marriage, Dan has a daughter who in turn is married to Brian Conner and they have a daughter Elle who refers to Rich and Marcia as Zaidy and Bubby, rereffhbe612 000000i(ried)JTJET912 0 612 792 reWv9

