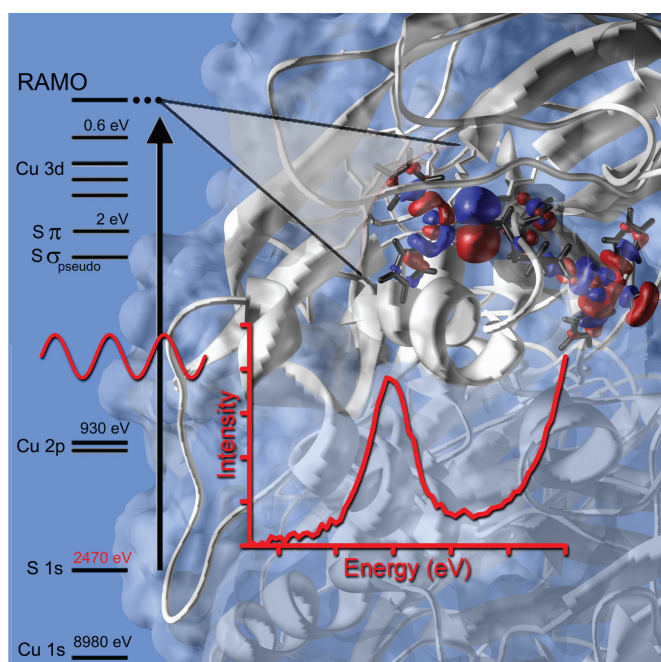


Edward I. Solomon

Bioinorganic Spectroscopy: Activating Metal Sites for Biological Electron Transfer

Metal sites in biology often exhibit unique spectroscopic features that reflect novel geometric and electronic structures imposed by the proteins that are key to reactivity. The Blue copper active site involved in long-range, rapid biological electron transfer is a classic example. This talk presents an overview of both traditional and synchrotron-based spectroscopic methods and their coupling to electronic structure calculations to understand the unique features of the Blue copper active site and their contributions to function. The relation of this active site to other biological electron transfers sites is further developed.



Edward I. Solomon received his Ph.D. from Princeton and was a postdoctoral fellow at the Ørsted Institute in Denmark and Caltech. He started his career at MIT, became a full professor in 1981, and joined the faculty at Stanford in 1982, where he is now the Monroe E. Spaght Professor of Humanities and Sciences, and Professor in Photon Science at SLAC National Accelerator Laboratory. Prof. Solomon's research is in the fields of Physical-Inorganic, Bioinorganic, and Theoretical-Inorganic Chemistry. His focus is on spectroscopic elucidation of the electronic structure of transition metal complexes and its contribution to reactivity. He received ACS National Awards in Inorganic Chemistry, Distinguished Service in the Advancement of Inorganic Chemistry, the Alfred Bader Award in Bioinorganic or Bioorganic Chemistry, the Ira Remsen Award and the Kosolapoff Award, the Centenary Medal from the Royal Society of Chemistry (UK), the Wheland Medal from the University of Chicago, the Bailar Medal from the University of Illinois, the Frontiers in Biological Chemistry Award from the Max-Planck-Institute (Mülheim), the Chakravorty Award from the Chemical Research Society of India, and the Dean's Award for Distinguished Teaching at Stanford among others. He is a member of the National Academy of Sciences, the American Academy of Arts and Sciences, and a Fellow of the American Association for the Advancement of Science and the American Chemical Society.

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