

2001 Thomas Jefferson Award

Royce W. Murray

In 1960, the Department of Chemistry decided to hire a young instructor in the field of analytical chemistry, Royce Murray, a native of Birmingham, Alabama. Royce was off to a fast start: he had finished college at age 20, completed a Ph.D. in three years at Northwestern University, and certainly didn't waste time with a postdoctoral position. One wonders when he walked into the front door of Venable Hall, the door that must be approached over a bridge as if crossing a moat, whether he was already thinking of the changes that he was going to catalyze across the campus and throughout science. Whatever was on his mind more than 40 years ago, the contributions of Royce Murray have had a major impact on this University as well as the international scientific community.

Royce Murray's career has been marked by an outstanding set of contributions to science. His contributions in electrochemistry and in the chemistry of new materials are recognized worldwide. His insightful and deliberate way of approaching novel chemical problems is unique and has been extremely successful. Among the awards that he has received for his research accomplishments are the Fisher Award, given by the American Chemical Society for outstanding contributions in analytical chemistry, and the Palladium Award of the Electrochemical Society, its highest honor. He is a member of the National Academy of Sciences.

His research has repeatedly advanced new ways to observe and manipulate chemical phenomena. His contributions have departed from prevailing traditional modes of thinking about chemical reactions and have greatly influenced the directions of research of other chemists. An

important aspect in all of these innovations has been his ability to evaluate the importance of new and unanticipated discoveries. Royce Murray introduced the concept of chemically modified electrodes, tools that have been very important as chemical sensors, fuel cells, and in solar energy conversion. An important thread in Murray's work has been the invention of new ways to study and observe electrochemical reactions in novel environments. His most recent investigations concern electron transfer dynamics in semi-solid molecular melts and nanoparticles coated with molecular monolayers. These materials are a pioneering representation of the nanoscience so often talked about in the popular press.

In the spirit of Jefferson, Royce not only advances new, revolutionary ideas, but he is an exceptional educator. His instruction extends beyond the classroom to his laboratory that has served as a training ground for an outstanding group of alumni. Countless undergraduates have been introduced to research in his laboratory, including Larry Menard, a winner of the Goldwater Scholarship this year. As one of more than 55 Ph.D. graduates that Royce has directed, I got to experience his mentoring first hand, receiving my degree in 1974. More than 20 % of his graduate students and 40 % of his postdoctoral research associates have followed his example and pursued academic careers.

In addition to research, his service to the Department of Chemistry, this University, and the scientific community are truly noteworthy. In the Department of Chemistry he has served as Undergraduate Advisor and he was Chair from 1980 to 1985. While Vice-Chair in the early 1970's, he oversaw the construction of Kenan Laboratories. Recently, he has been a strong proponent of the new Science Complex on this campus and he is actively leading its planning which includes demolition of Venable Hall and its moat. He was an initial proponent of the Applied Sciences Curriculum for UNC-CH and served as its Chair (1995-2000). He was Program Director for Chemical Analysis at the National Science Foundation (1971-1972). He

has been chief editor of the journal Analytical Chemistry since 1990. He serves on various National Research Council boards that have significantly affected the way that science is approached.

Professor Royce Murray is a superb scientist and teacher who has given immeasurable service to our University and our country. Now, in 2001, two hundred years after Thomas Jefferson began his Presidency of the United States of America, it is a pleasure to recognize Royce Murray as a scholar and devoted servant of science and this University.

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Prepared and Read by Mark Wightman