LECTURE ABSTRACT

Materials with high number densities of molecules that exhibit large real third-order optical nonlinearities and that also have low linear and nonlinear loss mechanisms may be of utility for a range of all optical signal processing applications. To date, most molecules and polymers that have large real

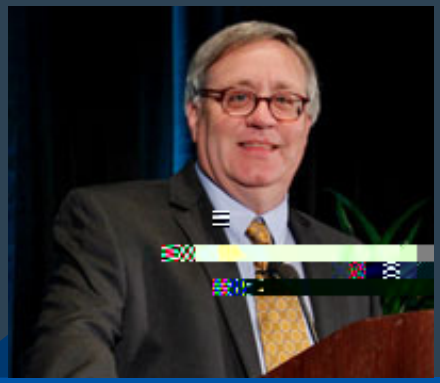
Dr. Dawson served in several academic positions in Illinois, Wisconsin, Nebraska and Louisiana and also worked on the Manhattan Project as a Research Chemist and Group Leader in the Metallurgical Laboratory at the University of Chicago. In 1946, he was awarded the War Department's Certifcate of Merit and a U.S. Patent for his efforts on the Manhattan Project, which led to the discovery of a fundamental process for the extraction and purifcation of the elements plutonium and neptunium. He was a member of the committee that organized the Oak Ridge Institute of Nuclear Studies and was a council member of the Institute.

Professor Dawson came to the University of Kentucky in 1945 as Head of the Department of Chemistry. He provided key leadership in initiating and building the doctoral program in chemistry at the university. For example, in his frst decade in the department, he individually obtained the major portion of extramural research support. During his twenty-fve years with the department, he held contracts for fundamental chemical research with the U.S. Army, the National Science Foundation and the Atomic Energy Commission.

He directed or co-directed seventeen Ph.D. dissertations and nine M.S. theses. He was a talented research director and had a special ability to imbue his students with a concise, clear and complete scientifc writing style. He published more than ffty research papers dealing with the chemistry of nonaqueous solutions and coauthored a reference book on the subject.

Dr. Dawson was a master teacher both in the classroom and in less formal conferences and discussions. His leadership and mentoring led many graduate teaching assistants and junior faculty members to become more effective teachers. His uncompromising devotion to high achievement standards in course-work, research, education and training set the tone for our department for years to come.

Another significant contribution to the department was Professor Dawson's indefatigable advocacy for a new chemistry building. His leadership in soliciting and designing



Seth Marder is the Georgia Power Chair of Energy Efficiency and Regents' Professor of Chemistry and Materials Science and Engineering, (courtesy) at the Georgia Institute of Technology. He has published over 450 peer reviewed papers with over 32,000 citations, and has edited several proceedings and books including two a volume set with Jean-Luc Bredas entitled The WSPC Reference on Organic Electronics: Organic Semiconductors. Among his recognitions and awards, Dr. Marder was a recipient of an NSF Special Creativity Award, the ACS Arthur C. Cope Scholar Award, Georgia Tech Outstanding Faculty Research Author, and the MRS Mid Career Award. He is a Fellow of the American Association for the Advancement of Science, the Optical Society of America, SPIE, the Royal Society of Chemistry the American Physical Society and the Materials Research Society.