

Resolution on the Retirement of Karl H. Illinger
Read by Jonathan P. Kenny, Department of Chemistry

To be adopted by the Faculty of Arts, Sciences and Engineering of Tufts
University
May 18, 2005

The faculty of the Department of Chemistry join others of the Faculty of Arts and Sciences to record our heartfelt respect and appreciation for our colleague of many years on the occasion of his retirement. Tufts University has benefited greatly from his service, teaching and scholarship over these past forty-five years, years during which time the University has transformed itself.

Karl received his undergraduate A.B. degree from the University of Pennsylvania in 1956. In the next four years at Princeton, he managed to complete a master's degree, a doctorate, and a post-doc. In 1960, he arrived at Tufts as Instructor and took up residence in Brown House, making him one of the few among the faculty who ever resided on Professor's Row. Karl asked then-chair of Chemistry, Kent Wilson, what he had to do to get on the tenure track; he replied, "Publish a paper from Tufts." This he promptly accomplished, which started a forty-three year career in the professoriate in the fall of 1962.

Karl's early work was in the areas of intermolecular forces and collisional perturbation of molecular spectra, with special expertise in microwave spectroscopy. He extended his investigations to the topic of infrared intensities shortly after he arrived at Tufts. Over the years he became an expert in the field of biological effects of radiation, co-authoring the Report of the National Academy of Sciences-National Research Council on the Navy's Nonionizing Radiation Research Program in 1974. In 1981, he edited the highly cited book *Biological Effects of Nonionizing Radiation*, which was published as part of the American Chemical Society's Symposium Series. More recently, he has turned his attention to the problem of global warming, involving both theoretical and experimental work on the infrared radiative forcings of a wide range of industrial gases proposed as replacements for ozone-damaging chlorofluorocarbons. A significant publication in the interdisciplinary *Journal of Geophysical Research* resulted from this work. His most recent work, the subject of a voluminous sabbatical report and now being prepared for publication, returns to a topic of interest to Karl since his graduate school days: atomic charges in molecules and their relationship to infrared intensities. He has been a long-time member of the American Physical Society and the American Chemical Society.

Karl's dedication to teaching resulted in several innovative courses for their time, including the department's first-ever environmental chemistry course in the 1970's and a writing course for graduate students in the '90's. Earlier, he ran NSF-funded summer workshops for chemistry teachers. Karl showed his dedication to his students by providing them with memorable quantities of handouts and by producing publication-quality graphics on the blackboard, often depicting intersections of multidimensional surfaces to help them visualize key relationships.

Karl is a true gentleman, known for his thoughtfulness for others' feelings. Never was this trait more valuable to the department than during his term as chair, as he guided the department through a challenging period of growth and six tenure cases in four years.

Karl brought a highly refined sense of culture to the department and shared with others his love of classical music, opera in particular, and fine wines. He has a great, often wry, sense of humor and loves the companionship of others as much as they love his. We salute him for his many contributions to Tufts and to the professional community, and send our warmest wishes for a happy and productive retirement on the south shore with his dear wife Jane.

Be it resolved that this resolution be spread on the minutes of the faculty of Arts, Sciences and Engineering and that a copy be handed to Professor Illinger.