IN MEMORIAM

Orville L. Chapman

Professor of Chemistry and Biochemistry
Los Angeles
1932–2004

After a year-long battle with lung disease, Orville Lamar Chapman passed away at the UCLA-Santa Monica Health Hospital on January 22, 2004. Orville was internationally recognized as a brilliant, creative scholar and an intellectual leader in various fields of endeavor. He was a trailblazer and innovator in photochemistry, matrix isolation spectroscopy, reaction intermediates, chemical communication, the mechanism of olfactory perception, polymers, and materials design. His intellect, creativity, and personality attracted tremendously talented students and postdoctoral fellows to his research group, which was a fountain of ideas and inspiration. As a long-term consultant for Mobil Chemical, he participated in the invention of many of their industrial processes. He also achieved a worldwide reputation for bringing the best of information technology to higher education.

Orville was born in New London, Connecticut June 26, 1932. He spent his early childhood in Panama, where his father, a navy seaman, was stationed in the Panama Canal Zone. Returning to the United States with his parents as a youngster, he attended elementary school in Washington D.C. while his father served as chief engineer on President Franklin Roosevelt's yacht. At the end of World War II, the family moved to San Diego where Orville attended the first two years of high school before the family moved to Norfolk, Virginia, where he graduated from Granby High School in 1950. Turning down a nomination to the Naval Academy in Annapolis, Orville chose to attend Virginia Polytechnic Institute, graduating four years later with a double major in English and Chemistry. He continued in Chemistry at Cornell University and in 1957 received his Ph.D. under the mentorship of Jerrold Meinwald who cultivated Orville's enduring fascination for organic synthesis.

After completing his Ph.D., Orville began a faculty position at Iowa State University. During the next seven years he quickly moved through the professorial ranks, establishing a world-wide reputation as a pioneer in the emerging field of organic photochemistry. As editor of the first three volumes of *Organic Photochemistry* during this time, he nurtured the field and in 1972 co-authored with Charles DePuy a seminal monograph, *Molecular Reactions and Photochemistry*, a text that was subsequently translated into seven languages and is still in print. Orville was elected to the National Academy of Sciences in 1974.

Orville moved from Iowa State to UCLA that same year, on the heels of his exciting successes in applying matrix isolation spectroscopy to the characterization of cyclobutadiene and benzyne. The years at UCLA were an extremely productive period for the investigation of a wide variety of organic reactive intermediates such as carbenes, nitrenes, propadienones, silenes, carbonyl oxides, and strained alkynes. At UCLA, Orville's ideas concerning the novel molecule, C60, germinated in 1980, and in 1981 he initiated efforts directed at the chemical synthesis of C60. This work was but one part of a new effort in the synthesis and characterization of various types of strained, non-planar aromatic compounds. In retrospect, these efforts are now recognized as pioneering contributions to materials chemistry, and are being pursued by many research groups.

Love of the English language and concern for clear writing were never far below the surface. In 1976 Orville participated in campus-wide discussions to improve writing in the undergraduate curriculum and shortly afterwards created an adjunct writing course for the junior-level organic chemistry laboratory. In 1985, he, with his UCLA colleague Arlene Russell, designed a graduate level technical writing course for the department. A decade later they conceived Calibrated Peer Review (CPR), an integrated set of network tools that manages the submission and evaluation of written student work regardless of the class size. CPR has become a major educational tool for many different disciplines at numerous colleges and universities.

In 1984, Orville began to devote his energy and remarkable intellect to innovations in education. As Associate Dean for Educational Innovation at UCLA he led the UCLA Science Challenge, a case study-based approach to revamping lower-division science education. In 1995, this work brought national recognition to UCLA with the ComputerWorld Smithsonian Institute Award for the best use of computers in education and academia.

Orville also received many national and international awards for his scientific endeavors, including the Pure Chemistry Award and the Arthur C. Cope Medal from the American Chemical Society, the Havinga Medal from the Stichtung Havinga, Leiden, the Netherlands, the Texas Instruments Foundation Founders'

Prize, and five patents for new industrial processes.

On September 27, 2004, the undergraduate computer center on the fourth floor of Young Hall was dedicated in his honor. The Orville L. Chapman Learning Center now stands as a permanent reminder of the life and achievements of this creative scientist and visionary educator.

Christopher S. Foote
Kendall N. Houk
Arlene A. Russell