

MEMORIAL RESOLUTION

CARL ROBERT NOLLER (1900 - 1980)

Carl Robert Noller, Emeritus Professor of Chemistry, a distinguished scientist and educator, died on October 20, 1980, at the Stanford Hospital after a heart attack and subsequent heart surgery. He was 79 years old and had been in good health, active in traveling, gardening and other pursuits at his Los Altos Hills home until he entered the hospital on October 11. Carl joined the faculty of the Stanford Department of Chemistry in the autumn of 1929 and became emeritus in 1966 after 37 years of service to the Stanford community.

Carl was born on November 10, 1900 in St. Louis, Missouri. His father, a wagon-maker, and his mother, maiden name Laessig, were of German descent. He grew up in St. Louis and obtained his B.S. and M.S. degrees in 1922 and 1923, respectively, at Washington University, St. Louis, and his Ph.D. degree (1926) under Professor Roger Adams at the University of Illinois. After serving as an Instructor at Northwestern University during 1926-27, he spent two years with Eastman Kodak Co., in Rochester, New York, and then, in 1929, accepted an appointment as Assistant Professor of Chemistry at Stanford. He became Associate Professor in 1935 and Professor in 1939. He was awarded a Guggenheim Fellowship in 1933 for study in Munich and Zurich-, during the academic years 1938-39 he held the post of Visiting Lecturer at Harvard University

In addition to his work at Stanford, Carl served both his profession and his local community. He was Chairman of the California Section of the American Chemical Society in 1938 and served as a Councilor for that body from 1940 until 1947. While living in Menlo Park in the early 1940s he was elected to the City Council, and after he moved to Los Altos Hills in 1954 his civic-mindedness again prompted him to be active in the planning affairs of that (as then) new community.

Professor Noller was probably most widely known for his textbooks in Organic Chemistry. His text for chemistry majors, Chemistry of Organic Compounds, was first published in 1951, and was followed by second and third editions in 1957 and 1965. There were also two shorter versions, his Textbook of Organic Compounds (also three editions) and Structure and Properties of Organic Compounds. Approximately 10,000 Stanford students between 1951 and 1970 were introduced to organic chemistry through his books. His texts were rapidly adopted for the organic chemistry courses in a large number of universities in the United States and held this favored position for many years. They were recognized internationally by editions in Spanish (Argentine and Mexican editions), Chinese (Asian edition), Yugoslavian, and German. The Noller text was the first to embrace the modern molecular orbital treatment of chemical bonding, an innovation which had an immediate and world-wide impact on the teaching of organic chemistry. His text for chemistry majors included a wide range of examples of industrial products and processes, and, by virtue of the inclusion of chapters on special topics, innumerable historical references and generous footnotes, this volume was encyclopedic in its scope. Because of these features and its meticulously prepared index, the text also served as a major reference

work and is still widely used for this purpose. Professor Noller's texts have served his students and colleagues as models of clarity, factual integrity, nomenclature and style for scientific writing.

Professor Noller's research interests were extraordinarily wide, a fact which undoubtedly contributed to the effectiveness, comprehensive treatment and broad appeal of his textbooks. He coauthored over one hundred scientific papers with his students. The subjects of these studies evolved over the years, but the central theme interwoven into his broadly ranging research endeavors was the investigation of natural products of plant origin. This interest began with his Ph.D. thesis problem, which dealt with the proof of structure and synthesis of chaulmoogric acid, a substance isolated from chaulmoogra oil which was being used at that time as a topical treatment for leprosy. Subsequent studies included the first total synthesis of oleic and elaidic acids and the isolation of erucic acid from rape seed oil, followed by investigations in the areas of steroidal saponin and triterpenes. His final major research effort in the natural product field was the investigation of the toxic, bitter constituent of man-root (*Echinocystis fabracea*), a member of the gourd family found on the Stanford lands. Extracts of this plant, reportedly used by the California Indians as fish poisons, proved to contain as active components the clicubitacins, which were both chemically and pharmacologically most interesting.

His interest in the chemistry of plant products and in gardening led Professor Noller to become an amateur botanist with a broad knowledge of local flora. In addition to his research on natural products, Noller and his students conducted experiments on the nature of the Grignard reagent, the mechanism of the Friedel-Crafts reaction, ozonolysis and catalytic reduction reactions, basic problems in stereochemistry, the synthesis of pyridine and piperidine derivatives, and the use of zinc alkyls, mercury alkyls and phosphate esters in organic synthesis. His interest in and dedication to teaching also led him to publish demonstrations, especially in the area of stereochemistry.

Professor Noller demanded high standards of performance from himself and he expected the same from his undergraduate and graduate students, both in the classroom and the laboratory. He was intolerant of slipshod thinking and sloppy work of any kind, and his stern and forceful, yet wise and far-sighted, influence on the Department of Chemistry has left its mark. His colleagues are grateful for the many contributions he has made to the Department of Chemistry and to the life of Stanford and local communities. He will be sorely missed.

The Nollers had three children, Robert, Eric, and Martha, whom they outlived. We extend our sympathies to his wife Edna, to his daughters-in-law, Ellen and Jan, and to his grandchildren, David, Karen, and Lawrence.

Harry S. Mosher, Chairman
William A. Bonner
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