



## Norman Rabjohn

May 1, 1915 - September 2, 2000

Norman Rabjohn was an organic chemist of great insight and ability, a highly respected teacher, and a wonderfully reliable friend. At the time of this death in Columbia, Missouri, at the age of 85, he had held the title of Professor Emeritus of Chemistry of the University of Missouri for 17 years. His major contributions to *Organic Syntheses* were in his roles as Secretary during the period 1949-1959, as Treasurer from 1976 to 1980, and as Editor of Collective Volume IV (1963) of this series.

Norman was born in Rochester, New York, attended public schools there and also the University of Rochester, from which he received his B.S. degree in Chemistry in 1937, Magna cum Laude, and was elected to Phi Beta Kappa and Sigma Xi. During the following year, he worked at Eastman Kodak Company. It will be remembered that Eastman was the main commercial source of laboratory organic chemicals in the first half of the 20th century. The skill that Norm developed in organic synthesis was put to good use during the time that he spent at the University of Illinois, where he earned his M.S. and Ph.D. degrees (1939 and 1942, respectively). With his mentor, Professor R. C. Fuson, he published seven papers plus one preparative submission to *Organic Syntheses*, all of which described derivatives of mesitylene, including the first of the stable enols. These stable ends or vinyl alcohols, as they are called alternatively, are still of structural, theoretical, and experimental interest. Norm remained at Illinois for two years as an Instructor in Organic Chemistry and a participant in the Rubber Reserve Program of the War Production Board under the direction of Professor C. S. Marvel. He impressed me, when we were together at Illinois, as a builder of apparatus, e.g., for his study of the vapor-phase chlorination of aliphatic ketones, while his contributions to the Rubber Program included emulsion polymerization at high temperature and structure determination of butadiene polymers by ozonolysis.

During the years 1944-1948, Norm continued research in polymer chemistry at the Goodyear Tire and Rubber Company, where he coauthored three patents with Paul J. Flory on the vulcanization and curing of rubber at low temperature, along with four papers on the dependence of elastic properties and tensile strength of vulcanized rubber

of the degree of cross-linking. Dr. Flory was later to receive the Nobel Prize in Chemistry following academic appointments at Cornell and Stanford Universities. Norman Rabjohn left Goodyear in 1948 to become Associate Professor of Chemistry at the University of Missouri and was advanced to Professor four years later. He maintained a long, distinguished and balanced career in research, teaching, and service at Missouri.

His academic research was focused to provide training for the 50 Ph.D. students who benefited from his tutelage. Work on the synthesis and reactions of azodicarboxylic esters that had been started at Goodyear was continued, fl-dialkylaminoethyl esters of sterically hindered alkyl-substituted benzoic acids were made that had longer local anaesthetic action than Procaine, and azo-nitrogen analogs of unsaturated acids and their derivatives were studied for potential antineoplastic activity. There was general interest in synthesis, product distribution in reactions, and occurrence or non-occurrence of rearrangements. Particular emphasis was placed on the synthesis and physical and chemical properties of highly substituted compounds, including dissymmetric tetrasubstituted methanes and compounds containing adjacent quaternary carbons. Compounds within these categories undergo reactions and rearrangements that depend upon the bulk and conformations of the groups involved. In the final instance, Kolbe electrolysis was used in an imaginative way to effect coupling of the bulky acid and ketoacid precursors. In addition, a timely study provided the  $^{13}\text{C}$  NMR spectra of all of the highly branched acyclic compounds that had resulted from earlier syntheses. Norm wrote a definitive chapter on selenium dioxide oxidation for *Organic Reactions* early in his career and then capped this off more than two decades later with another chapter on the same subject in the same series, bringing us complete information on the reagent and its effective usage.

At one time or another, Norman taught all of the courses offered in organic chemistry at the University of Missouri. He had the gift of making the subject matter interesting, with emphasis on practical applications. He served two terms as department chair and two terms on the faculty council, and he was a key member of many university committees. Missouri honored him for his many contributions with the Faculty-Alumni Award in 1976. His colleagues, family, and former students established a professorship in his name at the University of Missouri, Columbia, in 1994. The first Rabjohn Distinguished Professor of Organic Chemistry, Michael Harmata, was appointed in 1999.

Norm was a veteran member of the American Chemical Society and a very active one. A most significant service to that organization was his term as chair of the national publications committee. He was involved in many of the planning sessions when Chemical Abstracts was making the transition to computer-searchable data bases. He took a turn as a member of the editorial board of *Chemical Reviews* and maintained membership in the American Association for the Advancement of Science, Phi Lambda Upsilon, Alpha Chi Sigma, the Missouri Academy of Science, and the MU Jefferson Club.

Norm is survived by his wife of nearly 57 years, Dora Rabjohn of Columbia, and by his son, James Rabjohn, of Aptos, California. He is remembered fondly by all his colleagues, past and present, on the Board of Organic Syntheses, Inc.

Nelson J. Leonard  
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