



Louis F. Fieser

April 7, 1899 - July 25, 1977

Louis Frederick Fieser, one of the most prolific contributors to *Organic Syntheses*, as well as a member of the Advisory Board and Editor-in-Chief of Volume 17, died on July 25, 1977, of pneumonia at his home in Belmont, Massachusetts. He is survived by his wife, Mary.

Born in Columbus, Ohio, on April 7, 1899, he was the son of Louis Frederick Fieser and Martha Victoria Kershaw Fieser. He attended Douglas School and East High in Columbus, and then Williams College, where he received the A.B. degree in 1920. Although his major was chemistry, he was also strongly attracted to English and Philosophy, and he was a member of the unbeaten varsity football team of 1919. He completed work for the Ph.D. degree at Harvard in three and one-half years, then continued working for a year and a half with his major professor, James Conant, on biochemical research. Immediately thereafter, in 1924, he spent a short time doing research in Germany, then at Oxford, before accepting a teaching position at Bryn Mawr College, where he remained an assistant and associate professor until 1930, when he was invited to join the Harvard faculty.

At this time Mary Peters, a member of his second class at Bryn Mawr, entered Radcliffe College to do graduate work under his direction. Her formal candidacy for the Ph.D. degree was brought to a close by their marriage in 1932; however, she continued to do research and was appointed Research Fellow of the Department of Chemistry.

In 1937 Fieser was promoted to full professor, and in 1939 he became the Sheldon Emery Professor of Organic Chemistry, a position he held until 1968, when he became Professor Emeritus.

During his early years as an academician Fieser became one of the world's leading experts in quinone chemistry, his most notable achievement in this area being an elegant synthesis of Vitamin K₁ in 1939. He also developed an interest in the cancer problem, and by 1938 he had a large group of collaborators engaged in the synthesis of

carcinogenic and related hydrocarbons in an effort to discover how these substances act. Out of this study came a facile synthesis of the potent carcinogen methylcholanthrene. He had occasion to prepare a comparison specimen of this substance with his own hands, according to the classical method, starting with the bile acid desoxycholic acid. Thus his interest in steroids was engendered, paving the way for a course, then a book, "Natural Products Related to Phenanthrene," which covered this exciting new field. He never lost interest in this area, and later, after two further editions of the phenanthrene book (the last jointly authored with Mary), Louis and Mary Fieser published the famous book entitled "Steroids," a classic in the field.

With the advent of World War II Fieser was obliged to suspend all previous research and teaching to work on problems for the National Defense Research Committee. Thus for three and one half years he was involved with the development of new incendiaries (e. g., Napalm), antimalarials, and syntheses of cortisone. He became especially interested in the antimalarial program, which included a large number of collaborators, and which yielded some extremely potent new substances in the naphthoquinone series.

Professor Fieser always had a very strong interest in teaching, and his dynamic and vibrant personality, along with his original and colorful style of lecturing in the elementary organic course, served to communicate to students his love of science and the pleasure to be derived from a well-executed experiment. Many of his former students remember this course as a great influence on their scientific careers. From his teaching evolved the widely adopted textbook "Organic Chemistry," written in collaboration with his wife, which went through several editions and was translated into eight foreign languages. An expanded version of this book was called "Advanced Organic Chemistry."

The Fiesers proved to be an extraordinarily effective writing team, producing some of the most important scientific books of the century. Other Fieser and Fieser books include "Style Guide for Chemists" (1960), "Topics in Organic Chemistry" (1963), "Current Topics in Organic Chemistry" (1964), and "Reagents for Organic Syntheses," Vol. 1 (1967), Vol. 2 (1970), Vol. 3 (1972), Vol. 4 (1974), Vol. 5 (1975), and Vol. 6 (1977). The "Reagents" series has proved to be extraordinarily important to the practicing synthetic chemist. Fortunately Mrs. Fieser has been continuing the work and has just sent Vol. 7 to the publisher.

As a practicing organic chemist who loved to work with his hands, Louis Fieser published 40 papers based on his own experimentation and, naturally, he took great interest in laboratory courses. He is famous for designing the Martius yellow sequence, named after the yellow dye that was the first of seven compounds obtained from 5 g of starting material; this became the basis of an annual prize competition in his class. When successful preparation of all seven compounds in 3-4 hours came to be regarded as a superior performance, Fieser began entering the competition each year along with the students. His best time was 1 hour and 59 minutes, the record for many years. He enjoyed devising new and interesting experiments for the students, and his laboratory manuals ("Experiments in Organic Chemistry" and "Organic Experiments"), published in six editions, were possibly the best available. In these, particularly, he communicates his skill as a virtuoso experimentalist.

In his constant search for better methods of teaching he made a 60-minute color-sound movie "Techniques of Organic Chemistry," and developed a set of precise plastic molecular models, which are larger than, but have the same relative dimensions as, Dreiding models. Unlike the latter, however, the Fieser models have been so inexpensive to manufacture that even undergraduate students have been able to afford a set.

Because of his expertise in carcinogens, Fieser was, in 1962, appointed by the Surgeon General to a committee to study the matter of the relationship of smoking to health. In 1964, after intensive study and deliberation, his committee submitted the now famous 387-page report expressing the unanimous opinion that "cigarette smoking is a health hazard of sufficient importance to warrant remedial action." Ironically Fieser, himself a chain smoker, had to undergo surgery for lung cancer the next year. He was very ill from emphysema and bronchitis too, and might not have survived had he not been endowed with an extraordinarily strong constitution. Having recovered, he was able to continue his productive writing career beyond his retirement from Harvard in 1968. In the spring semester of 1968 he was appointed Nielson Professor at Smith College.

Fieser published a total of 341 research papers, 36 of which with Mary, and over 20 books (the majority with Mary) which represent some of the very best writing found in science - clear, highly readable, elegant, and exciting.

He received an honorary D.Sc. degree from Williams in 1939 and was elected to the National Academy of Sciences in 1940. Other awards included the Katherine Berkham Judd prize for Cancer Research (1941), D. Pharm Honoris Causa, University de Paris (1953), Manufacturing Chemists Association Award for Teaching (1959), Norris Award for Teaching (1959), and the William H. Nichols Medal (1963),

One of his most distinguished colleagues characterized Fieser as a man of extraordinary zeal, whose powerful and energetic constitution allowed him to transform that zeal into action. Not only was his colorful presence a feature of the Harvard scene for decades, but his influence through books and scientific contributions remains worldwide.

William S. Johnson
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