



Henry Gilman

May 9, 1893 - November 7, 1986

Henry Gilman was one of the dominant figures in American organic chemistry of the 20th century. A man of exceptional will and foresight who made prodigious and seminal contributions to chemistry, at the time of his death he was 93 and the oldest living member of the Advisory Editorial Board of *Organic Syntheses*. He joined the Editorial Board in 1924 and was Editor-in-Chief in 1926.

Gilman was born in Boston on May 9, 1893 and graduated *summa cum laude* from Harvard in 1915, working for part of his undergraduate period in close association with Roger Adams, who was then instructor. Gilman obtained his A.M. and Ph.D. at Harvard with E. P. Kohler in 1917 and 1918, respectively, and also spent some time at Zurich with Staudinger, as well as brief interludes at the Sorbonne and Oxford. Gilman was instructor at Harvard in 1917-1918 and then Associate at Illinois before moving to Iowa State in 1919, where he spent the rest of his academic career.

Gilman's greatest contributions were to organometallic chemistry and he worked in this field in the broadest sense. Starting with Grignard reagents, he covered the periodic table rather generally from lithium to uranium, back in the days when there were few, if any, glove boxes and almost no good way to characterize highly reactive substances, except by their reaction products. Many organic chemists have used the Gilman color test for formation of Grignard reagents and employed his procedures for the preparation and reactions of organolithium compounds.

Less well-known is his early work on cadmium and copper compounds; the latter, in the form of cuprates, have been adapted in many laboratories for use in synthetic procedures for many otherwise difficultly accessible substances. Although much early work was done by F. S. Kipping and F. C. Whitmore on silicon compounds, Gilman made very substantial contributions to this field as well, and these were recognized by the first Kipping award. Gilman also made the initial discoveries of rearrangements in nucleophilic aromatic substitution reactions by lithium amides, which were later demonstrated to involve arynes as intermediates. Another of his important interests

was in heterocyclic chemistry, especially the chemistry of furans and thiophenes. All in all, he published just over 1000 research papers. The multivolume treatise, *Organic Chemistry*, which ran through several editions, starting in 1938, was the bible for several generations of graduate students studying for their written or oral examinations.

Gilman epitomized the work ethic in organic research. Not only did he work hard himself, he expected at least as much from his students. With quite a reputation as a laboratory slave driver, he turned out a coterie of very well-trained and highly successful students, while at the same time gaining their respect and affection.

Besides the Kipping Award, Gilman received many honors; among them were membership in the National Academy of Sciences, foreign member of the Royal Society, the Midwest Award and the Priestly Medal of the American Chemical Society.

That half of his papers were published after he lost almost all of his sight as the result of a detached retina and glaucoma in 1947 is quite a tribute to his will and tenacity, both of which were greatly reinforced by the substantial efforts of Ruth, his charming wife of 57 years, who literally acted as his eyes for almost forty years of their life together. Henry Gilman died on November 7, 1986 and his wife just shortly thereafter on January 28, 1987. His many contributions to Iowa State University are fittingly memorialized by a chemistry building, Gilman Hall, by a Gilman Graduate Fellowship Fund, and by annual Gilman Lectures.

John D. Roberts
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