

Nils Wiberg (1934–2007)

Recently, the chemical community has lost a number of outstanding chemists who have made major contributions to modern inorganic chemistry: Frank



Albert Cotton, Frank Basolo, and Harry Sisler. Most recently, on Thursday, April 5, Nils Wiberg passed away.

Nils Wiberg was well known for his ingenious and highly original research, which opened new fields in main-group chemistry, as well as for his textbook “Lehrbuch der Anorganischen Chemie”, known also simply as “Holleman–Wiberg”, which still has an enormous influence on chemistry students in Germany. Following on from his father Egon Wiberg as an author, he started with the 91st edition in 1985. Just a few days before he died, he held in his hands the first copy of the thoroughly revised latest edition, the 102nd.^[1]

Nils Wiberg was born in Karlsruhe on October 6, 1934. He became a student of chemistry at the University of Munich in 1954 and received his doctoral degree in 1961. Beginning in 1961 he developed his own research work, first in the field of nitrogen hydrides, and then in the chemistry of silicon, an element which shaped his research work in the following years. After he was appointed Professor of Chemistry in 1978, he stayed in Munich for the rest of his career.

In his earlier work, he was the first to isolate diazene (HN=NH) on a prepa-

rative scale at low temperature (1972). He then elucidated the chemistry of the parent molecules diazene, triazene, tetrazene etc. and of their silyl, germyl, and stannyl derivatives. Later, he turned his attention to multiple bonds at silicon and the heavier Group 14 elements, starting with silaethenes. The first true silaethene $\text{Me}_2\text{Si}=\text{C}(\text{SiMe}_3)_2$ was isolated in his laboratory. The compound $t\text{Bu}_2\text{Si}=\text{N}(\text{Si}t\text{Bu}_3)$ was the first iminosilane that is stable at ambient temperature. The “supersilyl” ligand $\text{Si}t\text{Bu}_3$ proved to be the key to novel unsaturated silicon species, such as supersilyl derivatives of disilene and cyclotetrasilene, and also tin species, such as supersilyl derivatives of cyclotristannene and tristannaallene (1999). An absolute highlight was the first synthesis of a derivative of disilyne, $\text{HSi}=\text{SiH}$, with a silicon–silicon triple bond (2001). With his results on unsaturated silicon species, he strongly helped to modify the traditional so-called “double-bond rule”.

The supersilyl ligand also allowed the synthesis of novel polyhedral molecules. Perhaps the most outstanding of these are the supersilyl derivatives of tetrasilatetrahedrane (1993), tetragallatetrahedrane, and hexastannaprismane, as well as clusters of gallium, indium, and tin with eight or more skeletal atoms. Besides these clusters, hitherto unknown derivatives of dialane ($\text{H}_2\text{Al}-\text{AlH}_2$) and the corresponding dialanyl radical $\text{H}_2\text{Al}-\text{AlH}$ could be synthesized with the aid of the supersilyl ligand, and the same is true for the corresponding gallium species.

Nils Wiberg’s results were published in more than 200 original papers and review articles and presented in plenary lectures at a series of meetings in Germany and abroad. His impressive and highly original work was honored

with the Wacker Silicon Award (1988) and the Frederic Stanley Kipping Award (1992). He also built a monument for himself with his textbook, which is in fact more than just a help for students: it is a comprehensive study, covering the whole of modern inorganic chemistry. It is incredible that a single person could develop such an encyclopedic knowledge in addition to his outstanding research work!

Nevertheless, chemistry was only one chapter in his life. The other was classical and contemporary music. He practiced chamber music as a piano player and also tried his skill as a composer. He worked his way through Richard Wagner’s operas as an expert, and his record collection is legendary. Besides music, he loved the cultural attractions of Munich, including the beer gardens, and he liked the Alps for skiing and mountaineering. Apart from chemistry, music, and Bavarian attractions, he certainly loved his family—his three children and his wife Christel, who was a substantial help to him in writing his scientific texts.

The chemical community owes Nils Wiberg a lot. He will be missed.

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[1] A. F. Holleman, E. Wiberg, N. Wiberg, *Lehrbuch der Anorganischen Chemie*, 102nd ed., W. de Gruyter, Berlin, 2007.

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