

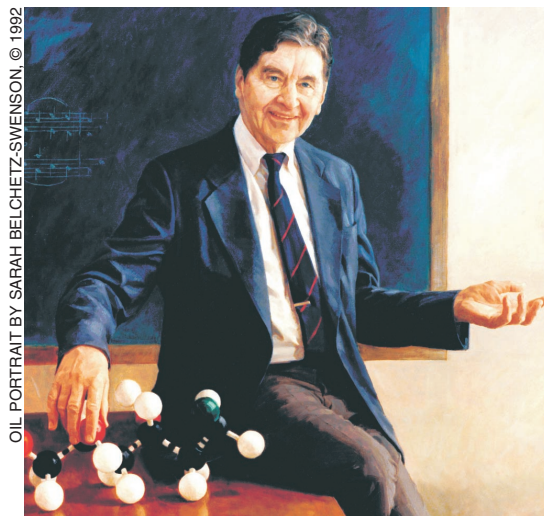
Walter Hugo Stockmayer

Walter Hugo Stockmayer, professor emeritus at Dartmouth College, died on 9 May 2004 at his home in Norwich, Vermont. One of the pioneers and leaders of polymer science in the past century, he will be particularly remembered for his landmark contributions to gelation theory, his work in elucidating the effects of molecular weight distributions on polymer solubility, and his contributions to the development of light scattering theory for multi-component systems.

Stockmayer, called Stocky by all who knew him, was born in Rutherford, New Jersey, on 7 April 1914. He received his bachelor's degree in chemistry in 1935 from MIT and a BSc in 1937 from Oxford University as a Rhodes scholar. He earned his PhD in chemistry in 1940, under MIT's James A. Beattie, for a study of thermodynamic properties of polar gases and their mixtures, work that led to what became known as the Stockmayer potential.

He began his academic career in 1941 at Columbia University, where his interest in theory deepened as he developed close personal and collegial relationships with Joseph and Maria Goeppert Mayer. He was recruited back to MIT in 1943 and rose through the ranks to become a professor nine years later. During the mid-1940s, he also started work as a technical consultant to the central research division of the DuPont company, a relationship that lasted for more than half a century. He also consulted for American Chicle Co, Humble Oil Co, and the US Army-Picatinny Arsenal.

In 1961, Stocky moved to Dartmouth College and continued his active roles in teaching, research, and public service until 2002, although his nominal retirement took place in 1979. With Frank A. Bovey, he was a founding associate editor of the American Chemical Society's journal *Macromolecules*, first published in 1968. Field Winslow was the editor. Stocky served continuously in that position until 1994, when he stepped down after contributing more than a quarter of a century of devoted, selfless, and time-consuming editorial service to the scientific community. It is widely accepted that Stocky's insistence on scientific excellence, coupled with his caring and tireless guidance to authors, made the publication the premier macromolecular journal in



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Walter Hugo Stockmayer

the field.

Shortly after Stocky's interest in polymers first developed at Columbia, and long before circular DNA was known, Stockmayer and Homer Jacobson estimated the entropy penalty for cyclization of a linear Gaussian chain, but that work was not published until 1950. Stocky was, in his own words, "Not a real whiz-bang in getting things out on time." He met his match in Ronald Koningsveld, who proposed in 1972 that they write a textbook on phase equilibria in polymer solutions. Stocky had made a big impact on that field with a one-page note on heterogeneous polymers published in 1949, and was proud when the book, *Polymer Phase Diagrams* (Oxford U. Press), was finally published in 2001, with Koningsveld and Erik Nies as coauthors. Other major works included papers with Bruno Zimm on the size of branched polymers in 1949, on dielectric and nuclear magnetic relaxation with Alan Jones and Keizo Matsuo at Dartmouth in 1972 and later, and on quasielastic light scattering with Walther Burchard and Manfred Schmidt at the University of Freiburg and at Dartmouth in 1979 and later.

Honored by the physics and chemistry communities, Stocky received numerous awards, including the NSF's National Medal of Science in 1987. In 2001, he won the German Chemical Society's Hermann Staudinger Prize and at that time was the only non-German national to have been so honored.

Kurt Vonnegut Jr, in his book *Breakfast of Champions: Or, Goodbye Blue Monday!* (Cape, 1973), describes Stocky as a renaissance man with a number of interests beyond science. They had met and become friends

through Kurt's brother Bernard, a fellow graduate student with Stocky in physical chemistry at MIT. Bernard later became a prominent cloud physicist. Stocky's two special passions were music and mountain climbing; he pursued both with his usual enthusiasm. He was an accomplished pianist with a delicate touch who enjoyed playing at different venues, including various Gordon conferences and, until a few months before his death, at his Vermont home. His favorite pieces were of the Romantic period—Brahms, Liszt, and Schumann, in particular.

Consistent with his generous character, Stocky shared his love of the White Mountains of New Hampshire with many friends, colleagues, and students. One of his

students' most memorable highlights was climbing with Stocky to a summit, where they would share sips of Old Grand Dad whiskey. Befitting his other achievements, he climbed all 48 peaks in the White Mountains that were taller than 4000 feet and repeated the feat when he was in his seventies.

Stocky had a wonderful sense of humor. His limericks were memorable but unrepeatable, and he appreciated a well-thought-out practical joke. One of his own practical jokes took place at a remote mountain shelter. In response to a message posted there imploring all who passed to maintain and improve the shelter, Stocky—who was quietly scrupulous about such things—answered with the installation of an electrical socket and a posted request not to exceed the power rating of a mythical turbine in the nearby stream.

Stocky was a man of immense goodwill toward all he knew. We in the physics community are indebted to him for his empathy and caring. He has left a long legacy of treating all his colleagues, from undergraduates to faculty, with respect. In addition, his memory for, and concern with, his colleagues' interests and circumstances was legendary. Scarcely anyone came away from visiting with him without a sense of being uplifted, enlightened, and ennobled, whether the topic was science or life in general. He was a great scientist, a dedicated teacher, and above all a towering human being. We were blessed by knowing him.

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