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Walter Hugo Stockmayer (1914−2004)

Copyright 1992 Sarah Belchetz-Swenson, Oil, 42″ × 40″, Dartmouth College

On May 9, 2004, about a month after his 90th birthday, Walter Hugo Stockmayer passed away peacefully at his home in Norwich, VT. He served as Associate Editor of *Macromolecules* from its foundation in 1968 until 1994, with a short break in 1974−1975, and shared credit with Frank Bovey and Field Winslow for the rapid rise of this journal to its preeminent position.

Stockmayer's scientific career centered on the Massachusetts Institute of Technology and on Dartmouth College at Hanover, NH. From the former he received an S.B. in 1935 and a Ph.D. in physical chemistry in 1940 under J. A. Beattie's guidance. Between the two MIT degrees, during 1935−1937, he completed a Rhodes scholarship and a B.Sc. at Oxford University. An instructorship at Columbia University starting in 1941 loosened his ties to MIT, and when he returned there in 1943 it was with a much deeper knowledge of theory and an entirely new interest in polymers. At MIT he rapidly ascended the academic ranks and became well-known in the worlds of physical and polymer chemistry.

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In 1961 he transferred to Dartmouth College and continued an active life of research and teaching until 2002, virtually unaffected by his nominal retirement in 1979.

Stockmayer, "Stocky" to everyone who knew him, devoted his scientific life to physical and polymer chemistry, initially through studies with Beattie of the thermodynamic properties of gases and gas mixtures that led to the well-known Stockmayer potential of polar gases (1941). During Stocky's instructorship at Columbia[1] his interest in theory deepened through contact with Joseph and Maria Mayer, and an interest in polymers was stimulated through contact with Charles Beckmann and his graduate student Tom Fox. From these personal contacts, and above all Stocky said, from reading Flory's paper on gelation, Stocky "fell into polymer science" and applied the statistical mechanical methods that he had learned from the Mayers to the gelation problems of polymerization. Stocky's own contributions to gelation theory immediately cemented his reputation as a theorist and provided the foundation of his subsequent committment to polymer research. He was one of the earliest workers to recognize the importance of molecular-size distribution in polymers, and his work culminated in two basic papers on the solubility of heterogeneous polymers (1949) and on light scattering in multicomponent systems (1950), both milestones of polymer science. The former represented the starting point for the Ph.D. work of one of us (R.K.) and finally led to a textbook[2] in the writing of which Stockmayer played a central role. Other landmarks of his career include his papers on the size, shape, and virial coefficients of macromolecules in solution, on polymerization mechanisms, and on the dielectric properties of polymer solutions. Light scattering remained a lifelong fascination for him. His work in these fields has had and still has a significant impact on polymer science.

Sabbatical leaves in France (Strasbourg, 1954), Japan, (Tokyo and Kyoto, 1966), Holland (Dutch State Mines, 1972), and Germany (Freiburg, 1978) may be mentioned. Professional activities and memberships proliferated. Numerous honors came to him of which we mention the following appointments and awards: Fellow, American Academy of Arts and Sciences (1946), Member, National Academy of Sciences (1956), ACS Award in Polymer Chemistry (1966), ACS Peter Debye Award in Physical Chemistry (1974), American Physical Society High Polymer Physics Prize (1975), Honorary Fellow, Jesus College, Oxford UK (1976), National Medal of Science (1987), Honorary Member of The Society of Polymer Science, Japan (1992). In 2000 he was the first non-German recipient of the Hermann Staudinger Prize of the German Chemical Society. He received honorary doctorates from the Universities of Strasbourg (1972), Dartmouth College (1983), and the University of Massachusetts, Amherst (1996).

Apart from science, Stocky had quite a number of other interests, all pursued with his usual enthusiasm. He loved to climb mountains with his friends and was very happy on the day when he could say that he had been on top of every 4000 foot mountain in New Hampshire, some 48 in number. When one of us (M.F.) climbed his last 4000 footer in Stocky's company, Stocky pulled a heavy bottle of champagne from his backpack and revived his companions. And Stocky ascended all the 4000 footers again in his 70's. He was an accomplished pianist with a delicate touch. Many scientific friends, as well as purely musical ones, recall with pleasure and satisfaction their sessions together. A close inspection of his portrait by Sarah Belchetz-Swenson will reveal that the blackboard symbols are not abstruse equations but bars of music. He urged special music to be composed to alleviate the dull seriousness of scientific meetings and played his parts enthusiastically on many occasions around the world. His wife Sylvia, who was his companion in all this for 64 years, passed away in 2002. They had two sons, Ralph and Hugh, and eight grandchildren. Not long ago the first great-grandchild was warmly welcomed.

With Stocky's departure the scientific world, and polymer science in particular, has lost a unique person who will be missed very painfully. Both his family and the multitude of friends all over the world whom he attracted during his long life feel bereaved, and some of his friends as well as his children feel orphaned. Many of those friends came to him as students or colleagues and never failed to be warmly welcomed and to profit greatly from his council, his assistance, his intuition, his modesty, and his kindness. He was one of the most beloved persons we ever knew, a truly gentle man.

We thank the artist, Sarah Belchetz-Swenson, for giving permission to use a reproduction of the portrait she created in 1992. It characterizes him exactly as he was and how he will remain in our memory.

References and Notes

(1) Stockmayer, W. H.; Zimm, B. H. *Annu. Rev. Phys. Chem.* **1984**, *35*, 1−21.
(2) Koningsveld, R.; Stockmayer, W. H.; Nies, E. *Polymer Phase Diagrams;* Oxford University Press: Oxford, 2001.

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