



## IN MEMORIAM

William George McMillan, Jr.  
Professor of Chemistry, Emeritus  
Los Angeles  
1919–2002

William G. McMillan, Jr. died of a heart attack November 25, 2002, after more than 60 years of association with UCLA.

A native Californian, Bill was born October 19, 1919, and attended Montebello High School, where he was greatly influenced by his chemistry teacher, Leon Brook. After high school, he entered UCLA, graduating with a B.A. in chemistry in 1941. He continued his studies at Columbia University where he received an M.S. in chemistry in 1943 and a Ph.D. in chemical physics in 1945. Bill's dissertation research in statistical mechanics with Joseph E. Mayer was concerned with the theory of solutions. The results, known as the McMillan- Mayer theory, are still widely cited. From 1944 to 1946, still at Columbia, he was a research chemist on the Manhattan Project, working on the separation of U235.

Upon receiving a Guggenheim Fellowship in 1946, Bill carried out research in nuclear physics at the University of Chicago with Edward Teller. In 1947, he came to UCLA as an assistant professor and rose to the rank of full professor in 1959. Bill became chair of the department in 1959 and served until 1965. He led the department through a period of rapid growth and development of its research and teaching programs, as well as established a strong infrastructure. His strong leadership was instrumental in bringing the department to national attention.

Bill always felt a strong commitment to government service. Unlike many in academe (whom he frequently criticized as parochial), he thought the country was continually in mortal danger from the Soviet Union. He worked for the RAND Corporation as a consultant to the U.S. military and helped form the SAGE Advisory Committee that reported on weapons tests. At UCLA, he established defense science seminars (1964-66) to help revitalize the contact between young scientists in the universities and those in government service and in the defense community. While on leave from the University, Bill served from 1966 to 1968 years as science adviser to General William Westmoreland in Vietnam, developing concepts for artillery and military reconnaissance. After contracting hepatitis in Vietnam, he researched the disease and developed a physico-chemical description of it.

Although much of his time was spent in service to the government, service that gave rise to many specialized reports, some still classified, his academic publications deal with a wide variety of topics. These range from the early work on multicomponent systems to later statistical mechanical and quantum mechanical studies on the Thomas- Fermi model of the atom, transitions in two- dimensional adsorbed layers, dispersion forces between molecules, a comprehensive review of the virial theorem, and applications to ions in solution.

In 1971, Bill founded McMillan Science Associates, which he built up over subsequent decades as a wide-ranging consulting company for high technology and military projects. He was interested in topics as diverse as traffic flow, global warming, ozone depletion, and atmospheric studies of Venus. Always a part- time faculty member in his later years, he continued his many activities after retirement in 1990.

Over several decades, Bill served on numerous advisory boards and committees dealing with national security. Among his many citations and awards are an Alfred P. Sloan Fellowship (1957-61); the

Distinguished Civilian Service Award, Department of the Army (1968); Knight of the National Order of Vietnam (1969); and the Exceptional Civilian Service Award, Department of the Air Force (1984).

Bill had a brilliant mind and could talk and write about anything from planetary physics to the thermodynamics of solutions. He was an enthusiastic and well-organized teacher in courses ranging from first-year chemistry to graduate courses in quantum chemistry and statistical mechanics. He would astonish students in a computer age with quick “back of the envelope” calculations. For years he contributed a challenging and broad ranging question called “Chemystery” to our “This Week in Chemistry” (now “This Week in Chemistry and Biochemistry”). Veteran department faculty and staff remember his trenchant memo “What’s Important”, which emphasized that furthering good teaching and research must override everything else in department priorities.

Bill is survived by his wife Nancy, three children, and six grandchildren.

Robert L. Scott  
Charles M. Knobler