



IN MEMORIAM

Alan Winn Searcy
Professor of Ceramic Engineering, Emeritus
UC Berkeley
1925-2012

Alan Winn Searcy was an outstanding scholar, a caring teacher and mentor, and a true gentleman. His quiet demeanor and modest ways belie the immense contributions he made over more than fifty years to his field of science and to the University he loved. He died on November 5, 2012, at the age of 87.

Alan was born in Covina, California, on October 12, 1925, the only child of dentist Claude Searcy and his wife, Esther Searcy. He attended Pomona College, and after an interruption due to service in the U.S. Army from 1944 to 1946, graduated with a B.A. in Chemistry in 1946. He then studied for his Ph.D. in the College of Chemistry at Berkeley under the tutelage of Professor Leo Brewer, graduating in 1950. Alan then accepted a faculty position at Purdue University in the Department of Chemistry and taught there until 1954 when he moved back to Berkeley as a faculty member in the Division of Mineral Technology, following the organization of the College of Engineering at that time (the College was organized into divisions at that time, rather than departments). He was promoted to the rank of Full Professor in 1958 at the age of 32, making him one of the youngest faculty to achieve this rank at Berkeley.

Professor Searcy was a dedicated teacher and an excellent and well-organized lecturer. In his first year back at Berkeley, he was a member of the College of Engineering Committee in charge of creating a new fundamental materials course, which resulted in the foundational sophomore course: Properties of Materials. Alan taught this course several times at the outset. Because of his abiding interest in the welfare of new students, he originated and initiated the Freshman Cluster Program, mainly in L&S, whereby freshmen were grouped in clusters that would have the same advisor over the years in order to give the students a sense of being part of a small college.

Despite having a thriving research program and extensive teaching commitments, Alan was always ready to help with administrative responsibilities. His dedication and strong commitment to his college and campus made him a natural for the many positions he occupied. He served as Associate Division Head of the Inorganic Materials Division of the Lawrence Radiation Laboratory (1960), as Assistant to the Chancellor (1961-1964), and as the first Vice Chancellor for Research during the tumultuous years of the FSM (1964-1967). Alan was the Chair of the College of Engineering Faculty (1969-1970) and Acting Chair of his department (1973). Between 1976 and 1980 he was first a member and then for two years Chair of the UC Berkeley Campus Committee on Budget and Interdepartmental Relations (the Budget Committee); subsequently, in the 1980's, he was a member and then Vice-Chair and Chair of the corresponding University System-wide Committee on Academic Personnel. He also served as Associate Director of LBL and Head of the Materials and Molecular Research Division (1980-1984).

Always modest, Alan rarely spoke of the recognition and many accolades he received. He was a Fulbright Fellow in 1960, spending time as a lecturer at the Institute of Physics in Bariloche, Argentina. He was a Guggenheim Fellow in 1967-1968. In 1970-71, Alan was named a Miller Research Professor at Berkeley. In 1990 he was elected a Charter Member of the International Academy of Ceramics (now the World Academy of Ceramics). He was a Fellow of the American Association for the Advancement of Science (AAAS) and Fellow of the American Ceramic Society.

When Alan retired in 1991, the University awarded him the Berkeley Citation, an honor bestowed on those whose attainments significantly exceed the standards of excellence in their fields and who had rendered distinguished or extraordinary service to the University.

Alan's expertise was often sought after by industrial and research organizations. He was a consultant for many companies including General Motors Technology Center (1956-1964), Union Carbide (1956-1972), and General Atomics (1957-1972).

His professional service was equally impressive. He served on NRC's High Temperature Chemistry Committee (1961-1970) and was a member of the editorial boards of many journals including High Temperature High Pressure, High Temperature Science, Advances in High Temperature Chemistry, Materials Chemistry and Physics, and Reactivity of Solids.

Alan's contributions to science in the form of research publications are the hallmark of a creative mind that never sought the easy problems but always went after some of the most challenging ones. In his early years at Berkeley, Alan focused his research on high temperature chemistry, with an emphasis on evaporation using the Knudsen and Langmuir torsion methods. Using the Langmuir expression he calculated maximum vaporization rates, a contribution that has become part of textbooks and is routinely used in current high temperature research. His predictions on the stability of oxides, nitrides, carbides, and silicides at high temperatures have guided and continue to guide many in the field. It is widely acknowledged that Alan Searcy and Leo Brewer set the foundations of high temperature chemistry. These foundations continue to be the basis for research in such current areas as high temperature oxidation/ corrosion, lamp chemistry, geochemistry, coating development, and others.

His work on evaporation led to studies on decompositions and the attendant surface topography changes. In more recent years he focused on the thermodynamics and kinetics of sintering, examining such topics as the effect of stress on particle- particle bonding and development of equilibrium particle shapes. Most recently, Alan focused on developing a partial equilibrium theory for capillary rise. Although Alan was primarily an experimentalist and worked closely and published jointly with his students and postdoctoral fellows, he published a remarkable number of papers in which he was the sole author, dealing with new approaches, models, and theories which he had originated himself or which he felt needed a new examination.

Alan loved his work; he loved science. Long after his retirement he was developing theories and writing papers. He loved to talk about these with his former students and colleagues. Many of his students remember his ambidextrous blackboard work and his wonderful sense of humor. They still remember Alan's two "laws" of high temperature chemistry: The first law: At high temperatures everything reacts with everything, and the second law: the higher the temperature the more everything reacts with everything. These humorous "laws", though still anchored in science, have been quoted at countless meetings — often by those not fortunate enough to have worked with the master himself. Alan also loved nature and was an avid birder, sharing stories of his latest sightings with his similarly inclined former students. He developed strong friendships with many of them. He became part of their personal and professional lives, always giving freely of his time to help and advise them. They loved him and admired him immensely. And they will miss him very much.

Alan was married to Gail Vaught for 65 years until she died in 2010. They are survived by three children: Gay, William, and Anne.

Zuhair A. Munir
Douglas W. Fuerstenau