28. Vivian Stannett

Otto Vogl, University of Massachusetts - Amherst
Susanne S. Stannett

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Personalities in Polymer Science

Vivian Thomas Stannett

Honoring Professor Vivian Stannett on his 80th Birthday

Vivian Stannett has been and is a world leader in radiation chemistry of high polymers and in radiation polymerization. He has also made major contributions to transport phenomena in polymers, to membrane technology, and to textile chemistry.

Vivian Thomas Stannett was born on September 1, 1917 in Langley, England, as the only child of Ernest and Dorothy Grace (Rastell) Stannett. He was raised in Stokes Poges, Buckinghamshire, England and went to Elementary School in Stokes Poges from 1923 to 1928 and to the Grammar School in Slough, Buckinghamshire from 1928 to 1935.

Young Vivian grew up on a farm, but, much to his father’s distress, he never had any desire to take up farming. He was interested in chemistry from an early age and used to carry out experiments on his own in an abandoned railway carriage which was somewhere on his father’s property. In 1936, he started fulfilling his dream to become a scientist by enrolling at the London Polytechnic to study chemistry; he graduated with a B.S. degree in 1939.

After obtaining his degree, Vivian worked for the government from 1939 to 1947, first as a shift manager of the cellulose acetate film plant at the British Celanese Corp. Because of the war, cellulose acetate films were in great demand for gas masks and other military uses. In 1941, Vivian was moved to the Army Laboratories at Woolwich Arsenal to work on detonator inspection and research. Eventually the Arsenal was severely bombed and Vivian was moved to a large ordnance plant and laboratories in Liverpool. When the bombing ceased, he was moved back to Woolwich, only to have his laboratory destroyed by a V-2 rocket. He returned to another cellulose acetate plant.

When the war ended, Vivian started to consider studying for a Ph.D. in chemistry. He had followed the activities of Professor Herman Mark at the Polytechnic Institute of Brooklyn and applied at this institution. Although like all universities at the time, the Polytechnic Institute of Brooklyn was crowded with students because many soldiers came back from the war, Vivian was accepted in 1947, as a graduate student. He was offered by Professor Mark a place without a fellowship but promised one if he did well the first semester. This turned out to be the case and Vivian obtained a fellowship the following January. In 1950, he received his Ph.D. in physical chemistry and returned to London.

In 1951, Vivian Stannett accepted a position as Research Chemist at the Koppers Company and became a Research Associate at the Mellon Institute in Pittsburgh. He and his wife moved permanently to the United States; they became U.S. citizens in 1957.

In 1952, Vivian Stannett was offered and accepted an appointment as Assistant Professor of Forest Chemistry at the College of Forestry at Syracuse, N.Y. He became a Full Professor in 1957. In 1958 he took one year of sabbatical leave at the University of Paris where he became associated with Professors Michel Magat and Andrade Chapiro, leaders in the field of radiation grafting and the radiation chemistry of high polymers. After returning from Paris, Vivian Stannett continued this field of work in Syracuse and later in North Carolina.

In 1961, Vivian Stannett was offered the position of Associate Director of the newly formed Camille Dreyfus Laboratory for Polymer Research at the Research Triangle Institute. This laboratory had as its Director Professor Anton Peterlin.

While working at the Camille Dreyfus Laboratory, Vivian kept his academic credentials intact by becoming Adjunct Professor of Chemistry at Duke University and later also at North Carolina State University. In early 1967, he left the Research Triangle Institute and joined North Carolina State University as Professor in the Chemical Engineering Department. He was later named Camille Dreyfus Professor. Vivian Stannett officially retired in 1988; 70 years of age was then the mandatory retirement age of a Professor at North Carolina State University; he continued working with graduate students until 1992. Vivian Stannett still goes to his office at the University regularly. The Research Triangle Institute has also retained Vivian part-time as the Camille Dreyfus Scientist.

During his academic and scientific career Vivian Stannett also assumed important administrative positions. He was appointed Vice Provost and Dean of the Graduate School from 1975–1982.

From 1982–84 he worked in London as Liaison Scientist for the Office of Naval Research. – ONR Europe.

Vivian Stannett’s field of research and specialization includes the modification of fibers and the applications of high polymers, the chemistry of textiles, pulp and paper, the effects of high energy radiation on high polymers, radiation induced polymerization, the transport of gases, water and small molecules through high polymers, barrier properties in polymers and membrane technology.

Stannett has published over 800 papers and reviews on various aspects of polymer science and technology. He is on the Editorial Board of 7 of the most prestigious polymer related journals.

It comes as no surprise that Vivian Stannett has received many honors. He is a Fellow of the Royal Institute of Chemistry (1948), New York Academy of Sciences (1960), TAPPI (1968) and the Royal Society of Chemistry (1980). Other honors include the Silver Medal from TAPPI (1967), the ACS Award for Polymer Chemistry (1987), the Borden Award from the ACS (1974), the ACS Anselm Payen Medal (1974), the International Award and Gold Medal of the Society of Plastics Engineers (1978) and the Otway Medal of the American Association of Textile Chemists and Colorists (1995). He also received the Distinguished Alumnus Award of the

Vivian Stannett was highly honoured in the State of North Carolina where he spent much of his professional life: He received the ACS North Carolina Distinguished Speaker Award (1983), the Alcoa Foundation Distinguished Research Award from the North Carolina State University School of Engineering (1980), the North Carolina Science Award and Gold medal (1981), the University of North Carolina Board of Governor O. Max Gardner Award (1984), the North Carolina Distinguished Chemistry Award from the American Institute of Chemists (1999), and the Holladay Medal from North Carolina State University (1992).

In 1995, Vivian Stannett was elected a Member of the U.S. National Academy of Engineering. Since 1990, he is an Honorary Member of the Society of Fiber Science and Technology (Japan).

Stannett has been active in various professional groups and organizations. He was the Chairman of the North Carolina Section of the ACS (1970), the Chairman of the ACS Division of Polymer Chemistry (1977), and the General Secretary of the Macromolecular Secretariat (1979). He was involved with TAPPI, the Society of Chemical Industry, Phi Kappa Phi and Phi Lambda Upsilon. He has also held the positions of Chairman for the Gordon Conferences on "Polymers" (1972) and on "Chemistry and Physics of Paper" (1967).

Over the years, Vivian Stannett was an avid reader; he likes walking and was an enthusiastic traveller, which was necessary in his professional life. He is also interested in foreign cultures and watches foreign movies whenever he can.

On May 30, 1946, Vivian Stannett married the former Flora Susanne Salzbacher. Susanne holds an honors degree in textile chemistry from Queens University in Belfast. Vivian and Susanne worked together on a military research program toward the end of the war. They have one daughter, Rosemary Anhila who is married to Christopher Royce. Vivian and Susanne have three grandsons: Julian and the twins Trevor and Liam.

This article was prepared by Otto Vogl, Herman F. Mark Professor of Polymer Science Emeritus, University of Massachusetts, Amherst, MA 01003, in cooperation with Susanne S. Stannett of Raleigh, North Carolina.