

## **Peter Plesch**

*Born February 14, 1918; died March 5, 2013, aged 95*

Peter Plesch was known scientifically for his lifelong studies of cationic polymerisation. He was also prominent as a collector of glass and ceramic artefacts. However, seen in a wider context, Peter Plesch's death marks the end of an era not only for Keele University (he was the last surviving member of staff from the early 1950s and an advocate throughout life of multi-disciplinary university education), but for the wider intellectual history of Europe. For he was one of the last surviving members of the European Jewish diaspora of intellectuals forced to escape Nazism in the 1930s and '40s. His contributions should be evaluated in this context.

Peter Hariolf Plesch was born in Frankfurt am Main in 1918, to Janos and Melanie Plesch. His German mother came from the family that owned the Cassella dye factory, while his Hungarian father was an eminent doctor whose patients included Albert Einstein and, after the family moved to England, John Maynard Keynes. Peter told a nice story of how, on one occasion, the visiting Einstein gently explained the practical difficulties of young Peter's ingenious design for a perpetual motion machine.

In the early 1930s the Plesch family fled the Nazis and moved to England. Peter went to Harrow School then Trinity College, Cambridge, where he studied natural sciences. There he spent several summers working in the recently established Department of Colloid Science under Jack Schulman. He joined the British Ceramic Research Association in 1940, moving to Cefoil in 1942 where he was involved in developing a low-density, rigid foam with properties similar to balsa wood for use in fighter aircraft. In 1944 he enrolled for a PhD at the University of Manchester and worked in the group of Michael Polanyi, the renowned theoretical chemist and polymath, who had known his father in Berlin. While there, working on the polymerisation of isobutene catalysed by titanium tetrachloride, he realised that water was a co-catalyst and this led to his lifelong interest in cationic polymerisation.

In 1951, Peter was appointed to the new University College of North Staffordshire, being one of the first non-professorial staff. Together with his Professor, H.D. Springall, he helped devise the chemistry part of the multi-disciplinary curriculum, for which Keele was rightly famous. The Keele Foundation Year was made for him with its weekly discussion groups between students and staff from a broad spread of subjects, and the variety of contacts and activities allowed his influence to spread well beyond Chemistry.

In the Department, he taught physical chemistry; he had an inimical style of lecturing but it is not unfair to say that generations of students found his lectures a bit of a challenge. However this was more than balanced by the practical course which he devised and ran for the whole of his time at Keele. The heart of his method was to go through the writing up with a toothcomb, in order to encourage the student to appreciate fully what he or she had done. His rigorous approach earned him much respect; when one met students long after they had left Keele, Peter was always remembered.

He built up a thriving research group, working on aspects of cationic polymerisation. The principal experimental problem at that time was the control of the catalytic water concentrations and his group devised all sorts of ingenious glass devices for keeping water out while manipulating the reagents and products under vacuum. He and most of his co-workers became accomplished scientific glassblowers. However the experiments are just the start of the problem - the reactions proceed via short lived intermediates and Peter was imaginative enough to incorporate newer electrochemical concepts to gain an insight into the reaction mechanisms and actually to observe some of the intermediates. He was also adept at manipulating the complex mathematical equations describing these systems.

He published about 150 research papers and, in 1963, a book on polymerization, *The Chemistry of Cationic Polymerisation*. As a referee, he was known to be a vigorous defender of the English language and a ruthless critic of sloppy science. But he was also most helpful to non-English speaking scientists, sometimes essentially re-writing their papers for them.

In his extensive work he was ably supported by some forty research students and post-doctoral workers, whose appreciable contributions he was glad to acknowledge, and who remained friends and colleagues for the rest of his life. And he had numerous contacts with colleagues across the world; both Peter and his wife, Traudi, were clearly welcome guests throughout the world. He was a titled visiting professor in several universities and companies. He received a higher doctorate from his Alma Mater, Cambridge, and a Personal Chair from Keele in 1978.

On retirement he persevered with his writing and also with organising his papers. The scientific papers are deposited in the Deutsches Museum in Munich and those of his family in the Holocaust Museum in Berlin. In his eighties he published a book on *Developments in the Theory of Cationoid Polymerisations*. Then, in 2005, he published a book on experimental techniques, *High Vacuum Techniques for Chemical Synthesis and Measurements*: he had the feeling that the techniques and apparatus which he and his generation had developed would be lost if someone involved did not record them carefully. He published his last scientific paper just after his ninetieth birthday.

While Peter was rightly known as a polymer chemist, many people knew him better though his and Traudi's wonderful collections of Roman Glass and beautiful artefacts from the Far East. Many may be surprised to learn that he was twice in the Guinness Book of Records - once in 1959, for the highest price ever paid for any kind of ceramic - and then in 1970 when that piece was sold. He also applied his science to studies of ceramics and glass, and was author of several learned papers in this field.

However it was Peter's attitude to his collections that enthralled me; he really wanted you to enjoy what he had and to share his enthusiasm. Anyone who saw the beautifully arranged collection at Sutherland Drive will have felt that, for Peter, the importance was not the value - he wanted you to appreciate, as he did, the look, the feel, the intricacy and the art of his pieces.

The dichotomy between chemistry and collecting manifested itself when, in his fifties, he was offered a chair of physical chemistry in Germany and the Curatorship of a Gallery of Oriental Art in the United States. Happily he preferred to remain at Keele.

Peter was a positive and enthusiastic colleague, interested in everything scientific, and always looking to the future. However he was clearly conscious of his own good fortune and that of his family in coming to England and so escaping the dreadful fate of so many of their compatriots. Asked once by a colleague, why he remained so positive and enthusiastic about almost everything, his reply was both illuminating and humbling: "I live my life to the full for all those whose lives were taken. My duty to them forbids anything less." There can be no better epitaph for him.

Peter is survived by his second wife, Traudi Plesch OBE, two sons and a daughter from his first marriage and a stepson from his second.

*I am grateful to Dr Christopher Harrison and Dr Melanie Thorne for their perceptive contributions to this memoir. Additional detail was obtained from the Christie's Catalogue (2009), Polymer News (2005) and the Times (2013).*

*Peter Borrell, P&PMB Consultants, Honorary Fellow, Keele University, March 2013*

Published: <http://www.rsc.org/Membership/AboutRscMembership/Obituaries/obituary-peter-plesch.asp>