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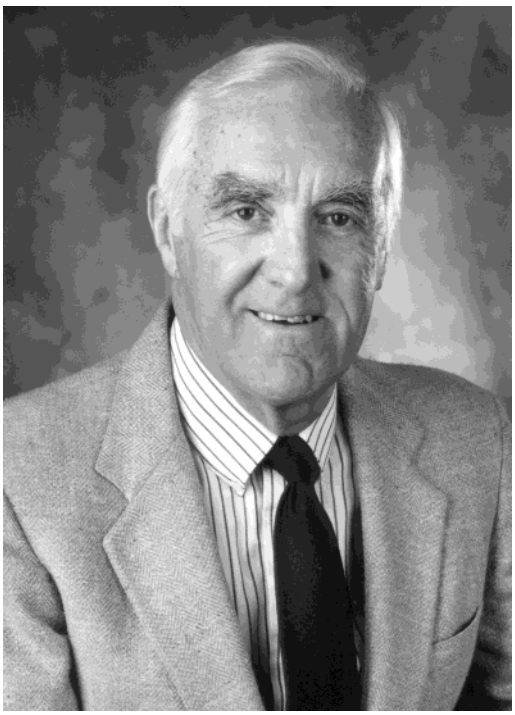
Robert W. Lenz



On April 28, 2001, Robert W. Lenz, Professor Emeritus of Polymer Science & Engineering at the University of Massachusetts at Amherst (UMass), celebrated his 75th birthday. Earlier this year, he stepped down as Editor of *Macromolecules* after 7 years in that post and after serving as an Associate Editor of *Macromolecules* from 1982 to 1994. His Managing Editor, Bonnie Webster, is also retiring after nearly 20 years of service to the journal. Under his guidance, the journal has grown substantially in size, adding six new Associate Editors to handle the increasing number of submissions, reflecting its status as the premier journal dedicated to the chemistry and physics of macromolecules. During his tenure *Macromolecules* has increasingly focused on the fundamental aspects of macromolecular science and the interface of this field with chemistry, physics, biology, and materials science.

Robert Lenz is recognized internationally as one of the leading synthetic polymer scientists of the past half century, having contributed to the study of many new classes of polymers including high performance thermoplastics, liquid crystalline polymers, conducting polymers, and biomacromolecules. He is also known as a great educator in the discipline of polymer science. His landmark monograph,[1] *The Organic Chemistry of Synthetic High Polymers*, has been the model for textbooks in the field since it was first published in 1967 and as a result has been translated into several languages. Bob supervised 78 Ph.D.'s in the UMass departments of Chemistry, Chemical Engineering, and Polymer Science and Engineering and worked with over 100 postdoctoral associates. Most of these scientists and engineers are still working in the polymer community today with many at prestigious universities around the world.

A graduate in Chemical Engineering from Lehigh University in 1949, he continued his studies at the Institute of Textile Technology where he received a M.S. degree in 1951. He earned a Ph.D. in Polymer Chemistry from both the SUNY College of Forestry and Syracuse University in 1956. As a graduate student Lenz largely supervised his own thesis, as a result of the departure of his research advisor during his graduate studies, and collaborated instead with Professor Michael Szwarc. Following graduation he worked in the textile and polymer industry, spending several years with the Dow Chemical Company at both the Polymer Research Laboratory and the Eastern Research Labs. While living in Massachusetts, he served as a visiting lecturer at MIT, teaching polymer chemistry.

His academic career began formally in 1966 when he joined the Chemical Engineering department at UMass. He has been teaching and carrying out research since then, with an eventual move to the Department of Polymer Science & Engineering. At Amherst his research group pioneered research in a number of important areas including liquid crystalline polymers, conducting polymers, and most recently polymers made via bacterial polymerization.

Early research from UMass included work on poly(benzyl)[2] and poly(phenylene)[3] using a variety of polymerization mechanisms. The mechanism of crystallization-induced reaction[4] was also explored and catalyzed his entry into the field of polyesters. The notion that crystallization could favor certain chemical sequences in polymers, particularly those that form liquid crystalline (LC) structures, led to a systematic study of the structure−property relations of LC polyesters.[5] A significant body of work resulted that outlined the factors

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necessary for the design of thermotropic main chain LC polymers.[6]

The study of conjugated poly(phenylene) later evolved into creative studies of poly(phenylene vinylene) and involved the synthesis and the electrical property measurements of chemically doped polymers.[7] Many important contributions were made to the formation of new polymer structures based on this polymer backbone.

In the major research area of his recent academic career, Lenz and his group turned to a new area of polymer research in the study of microbially produced poly(*β*-hydroxyalkanoates). His interest in such polyesters stemmed from his early work on lactone polymerization that produced polymers surprisingly similar to those formed by bacterial synthesis.[8] From his expertise in the preparation of aliphatic polyesters from lactones, Lenz designed a new family of bacterially grown polymers using natural and synthetic monomers to create biologically and environmentally friendly polymers with properties ranging from crystalline to elastomeric.[9]

In his distinguished career, he has served as an organizer of several Gordon Research Conferences, been a member of the IUPAC Macromolecular Division, and won not only the ACS Award in Polymer Chemistry, but he has also been awarded both the Society of Polymer Science Japan Award for Distinguished Service in the Advancement of Polymer Science and served as Eminent Scientist at the Institute for Chemical and Physical Research, Saitama, Japan. Most recently he was recognized for his outstanding research and leadership in polymer science by receiving the Herman F. Mark Polymer Chemistry Award.

Robert Lenz has collaborated with many of the most eminent international researchers in polymer chemistry and physics, with his strongest collaborations coming with scientists from Korea, Italy, Germany, Japan, and China. His research, represented here by a few early citations in the fields he has pioneered, has taken him around the globe as an invited lecturer. He has interacted with representatives from most of the major international polymer research institutes, resulting in a group of appreciative friends and associates too great to list in this short article.

Bob, as he is known to his friends, served as an excellent teacher, role model, and mentor to graduate students and postdoctoral associates alike. An avid traveler, he was a frequent winner of the UMass Polymer Science & Engineering Globe Trotter award, given to the faculty member who traveled the most. Held in great affection by his colleagues and group members, he encouraged his students to spend time in collaborating international laboratories, and these exchanges frequently resulted in marriages and overseas careers. Now with time to visit their children and growing numbers of grandchildren, Bob and his wife Madge have also become enthusiastic golfers. Undoubtedly, his interest is in the polymers used in the golf ball. So while formally retired from both UMass and *Macromolecules* and frequently found on the links, Bob is sure to continue to contribute to the study of polymers and the development of this most important field of chemistry and physics.

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