



## Professor Emeritus Darrell Reneker

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Darrell H. Reneker

It is with great sadness that we write today to all of you, the polymer and fiber community that Darrell H. Reneker dedicated his career to serve, that he passed away on October 17, 2021, aged 91.

Darrell H. Reneker, Emeritus Professor of Polymer Science at The University of Akron, was the recipient of the 2nd “**Qian Baojun**” Fiber Award Distinguished Achievement in 2019, for his pioneering work in electrospinning technology, especially the use of this technology to prepare nanofibers. This biennial award was initiated by the State Key Laboratory for Modification of Chemical Fibers and Polymer Materials, Donghua University in 2017.

Prof. Reneker obtained B.S. in Electrical Engineering from Iowa State University (Ames, USA) in 1951, then

worked at Bell Telephone Laboratories from 1951 to 1953. He then obtained M.S. and Ph.D. in solid state physics from The University of Chicago in 1955 and 1959. At Dupont company as Research Physicist from 1959 to 1969, he began working on polymer single crystals using electron microscopy to observe morphological features of the newly discovered folded chain lamellar crystals. This result has been included in many text and reference books, and recognized as one of the most important achievements in polymer crystal physics. The following years Prof. Reneker focused on single crystal defects and chain mobility in polymer crystals.

He then served as Section Chief of Polymer Division, National Bureau of Standards, and later the Deputy Director, Center for Materials Science, National Institute of Standards and Technology from 1969 to 1985. He received the Silver Medal Award of the Department of Commerce for outstanding research on dispirations. From 1985 to 1989, he served at the Executive Office of the President Ronald Reagan as Executive Secretary of the Committee on Materials of the White House Science Office.

Prof. Reneker stayed at The University of Akron since 1989 and Emeritus in 2019. He began research on electrospinning of polymer nanofibers.

In 1989 Professor Reneker came to The University of Akron as a professor of polymer science, served as Director of the Maurice Morton Institute of Polymer Science from 1989 to 1994, and retired in 2019 at the position of distinguished professor. In The University of Akron, his research works included electrospinning of polymer nanofibers, electromechanical effects, and atomic scale electron microscopy of thin polymer nanofibers. His research made him as the internationally recognized leader in polymer nanofiber and electrospinning, a process that creates an electrified fluid jet that coils and eventually solidifies as a continuous thin fiber. His technique has been widely used to create innovations such as high efficiency filter media, bandages that release medicine, biomedical implants, and scaffolds for cell growth.

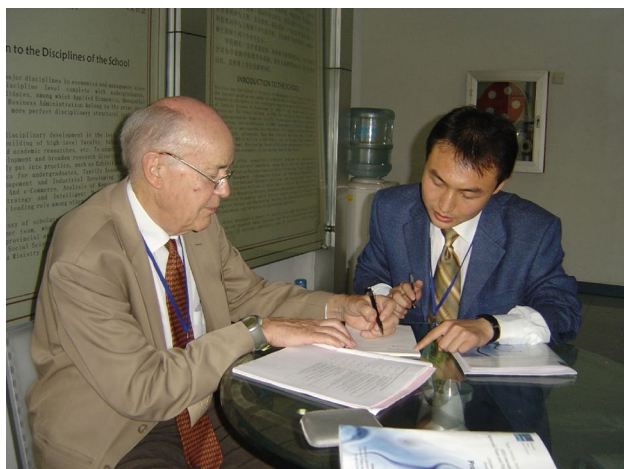
He advised 24 Ph.D., 4 M.Sc., and 12 Postdocs. He has 22 issued U.S. patents and 52 international patents. He has over

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130 publications. He was a Fellow of the American Physical Society, and a Fellow of the National Academy of Inventors.

His legacy will live on through the polymer and fiber community.



Darrell H. Reneker (left) and Xinwei Wang (right)

Stephen Z. D. Cheng, Ph.D., Professor Emeritus/Adjunct, Frank C. Sullivan Distinguished Research Professor, Robert C. Musson Professor, Trustees Professor, Editor-In-Chief of GIANT, College of Polymer Science and Polymer Engineering, The University of Akron.

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