



DIVISION OF POLYMERIC MATERIALS: SCIENCE & ENGINEERING

Cooperative Research Award in Polymer Science and Engineering

Sponsored by the Eastman Kodak Company

2001 Award Winners

Anne Hiltner

Case Western Reserve University

P.S. Chum

Dow Chemical Company



Professor Anne Hiltner of the Chemical Engineering Department at Case Western Reserve University and Dr. P.S. Chum of the Dow Chemical Company are the winners of the 2001 Award for Cooperative Research in Polymer Science and Engineering presented by the American Chemical Society's (ACS) Division of Polymeric Materials: Science and Engineering (PMSE). This award was given for their collaborative research into understanding structure/property relationships of new polyolefin copolymers made possible by use of Dow metallocene catalysts. The PMSE Cooperative Research Award Committee announced the award, which has been presented annually since 1992. This award was endowed by a gift to PMSE from the Eastman Kodak Company.

Prof. Hiltner and Dr. Chum worked on a variety of structure property relationships related to metallocene polyolefin synthesis, co-authoring a number of papers. These polymers were a result of a new class of metallocene catalysts and processes developed at the Dow Chemical Company. These new polymers had well-defined unique comonomer distribution which resulted in significant effects on many polymer properties. Their teams collaborated to study key structure property relationships which resulted, include crystal morphology, tie chain formation, modulus, and optical properties. Their work developed key molecular architecture tools for designing new polyethylene products such as elastomers, plastomers, and enhanced polyethylenes.

Dr. Steve Chum obtained his B.S. from Hong Kong Baptist University in 1970 and his Ph.D. from Oregon State University in 1978 for work on organotitanium catalyst chemistry. Between 1978 and 1980, he was a research chemist at Owens-Corning Fiberglass Inc. In 1980, he joined the Central Research organization of The Dow Chemical Company in Midland. Since then, he has had several research assignments at Dow in the areas of foam, film, and polyolefin technologies. He is currently a research fellow at Dow and a society fellow of the Society of Plastics Engineers. Dr. Chum is the co-author of 42 journal publications, an author on a book on metallocene polymer technology, and co-inventor on 27 issued US patents.

Professor Anne Hiltner earned a BA from Reed College and a PhD from Oregon State University in chemistry. She was Case Western Reserve's first female professor of engineering. In 1981, she founded the Center for Applied Polymer Research (CAPRI), an organization that encouraged collaboration across disciplines and between industry and academic researchers. Prof. Hiltner has collaborated with many other companies, including B.F. Goodrich, Firestone, and Goodyear. She served as an Alternate Councilor in 1978, being a member of the Executive Committee



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in the Division of Polymer Chemistry from 1979 until 1981. Anne has published over 100 articles in peer-reviewed journals and was the recipient for the Roon Award from the Federation of Societies of Coatings Technology in 1999.

The awards, which each include a \$1500 prize, will be presented at PMSE's awards luncheon at the Spring 2001 American Chemical Society meeting.