



OFFICE OF THE CHANCELLOR

UNIVERSITY OF CALIFORNIA, SANTA BARBARA

January 5, 2015

Dear Members of our Campus Community,

I am deeply saddened to share with you the news that Professor Edward John Kramer passed away in his sleep in the early morning hours of December 27. He was at home with his family and surrounded by those who loved him.

In meeting with his daughter, Jeanne, and son, Eric, they told me that on December 26, he had expressed to them how blessed and lucky he felt to have had so many wonderful years at UC Santa Barbara. But truly it is we who were blessed and lucky to have benefited from Ed's collegiality and legendary contributions to our academic community over the past 17 years.

Dr. Kramer first joined our faculty in 1997, and held a joint appointment in Materials and Chemical Engineering. He came to UC Santa Barbara from Cornell University, where he was the Samuel B. Eckert Professor of Materials Science and Engineering. Prior to that he was a NATO Postdoctoral Fellow at Oxford with Sir Peter Hirsch, FRS. He received his B.Ch.E. in chemical engineering from Cornell University in 1962, and a Ph.D. in metallurgy and materials science from Carnegie-Mellon University in 1966.

Dr. Kramer was widely renowned for his pioneering work to advance understanding of the fundamentals that control the structure, properties, and processing of polymers. His early research focused on the understanding of flux lattice pinning by dislocations, small precipitates, grain boundaries, and surfaces in model superconductors. His paper in *The Journal of Applied Physics* in 1973 showing that the flux pinning force depends on both the elastic and plastic deformation of the flux lattice is one of the most highly cited in this field. More recently, his research centered on polymer deformation, fracture, and diffusion, particularly in understanding the mechanisms of polymer crazing. His work has also been influential in establishing block copolymer lithography as a potential method to extend optical lithography to smaller feature sizes, and his research on the interaction of polymer-coated nano-particles with the interfaces of block copolymers led to the exciting discovery that these nano-particles can behave as surfactants, bringing dramatic changes in block copolymer morphology at even small volume fractions.

Professor Kramer was highly regarded by his peers around the world, as evidenced by the numerous honors he received for his achievements and contributions. He was a Fellow of the American Physical Society, the Materials Research Society, and the American Association for the Advancement of Science. He received a Senior Scientist Award of the Alexander von Humboldt Stiftung in 1987 and was a Guggenheim Fellow in 1988. He was elected to the National Academy of Engineering in 1989, and to the American Academy of Arts and Sciences in 2012. Included among his many prestigious accolades are the Polymer Physics Prize of the American Physical Society, the Swinburne Medal of the Institute of Materials, the Polymeer Technologie Nederland Medema Award of the Dutch Polymer Society, and the Polymer Materials: Science and Engineering, Cooperative Research Award of the American Chemical Society.

Dr. Kramer's scholarly contributions were outstanding and will have lasting impact in the field. He helped to elevate the stature of our university and our top-ranked Materials and Chemical Engineering departments, and provided exemplary leadership and service to our campus community in many other ways as well, including co-chairing the search advisory committee for our current Dean of Engineering and serving on the committee for the previous Dean. He was a beloved teacher and mentor, and an admired role model for students and colleagues alike.

I still vividly remember the symposium held in his honor in 2004, as we celebrated the endowment of the Edward Noble Kramer Chair in Materials, established in honor of his father. It was tremendously touching and inspiring to hear the tributes of so many of his former students who flourished under his guidance and went on to establish distinguished careers of their own, thus becoming part of his enduring legacy.

Professor Kramer will be dearly missed by our entire UC Santa Barbara family. Our hearts and thoughts go out to Ed's wife of 51 years, Gail; to his children, Jeanne and Eric; and to his wide circle of family and friends. Plans are underway for a campus memorial to be held in his honor in the late spring, and our campus flag is lowered today in his memory.

Sincerely,

Henry T. Yang
Chancellor