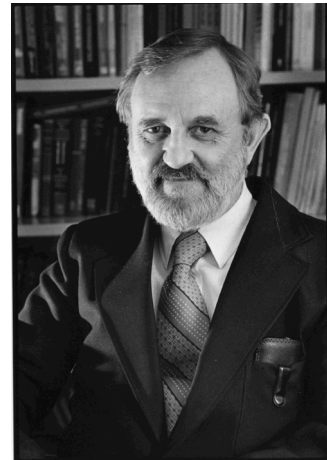


## Leslie Eric Cross

L. Eric Cross (1923-2016) passed away peacefully on the 29<sup>th</sup> of December. He was an Evan Pugh Professor Emeritus of Electrical Engineering, Penn State, a member of the US National Academy of Engineering, and a founding member of the Penn State Materials Research Laboratory. He was a world-leader in the field of ferroelectrics from a fundamental perspective, as an inventor of new characterization techniques, and in materials applications. He was beloved for his intelligence, vision, wit and humanity, as well as the charm with which he shared his fascination with ferroelectrics and his newest ideas. He was also an excellent mentor, and many of his students and postdoctoral researchers went on to scientific leadership position themselves.

He came to the field of ferroelectricity in its infancy, and this to the objection of his advisor A.F. Stoner, "Who referred to it as a trivial lattice phenomenon!" Stoner was famed for his contributions to magnetism. World War II interrupted Cross's undergraduate education at Leeds University (UK). During the war, he worked for the British Admiralty on a program using high frequency direction finding to track German U-boats, which ultimately allowed convoys to cross the Atlantic unharmed. Just two weeks after his transfer to that assignment, the boat that Cross previously serving on was sunk in Atlantic, with no survivors. Ever after, Prof. Cross thought of himself as a lucky man. He was very proud of his long association with the Department of Defense and particularly the U.S. Navy, which supported much of his work in the field of sonar undersea transducers. He and his colleagues made many other societal contributions such as the piezoelectric transducer used in almost all modern medical ultrasound machines.



Professor L. E. Cross



Eric and his wife Cilla

During his career, Professor Cross was honored by many professional organizations. He was a Fellow of the Materials Research Society, the American Physical Society, the Optical Society of America, the American Ceramics Society, and IEEE. In 1983, he was elected to the National Academy of Engineering for his contributions to the development of electroceramic, dielectric, and piezoelectric materials. He was also the 2010 recipient of the Von Hippel award of the Materials Research Society, its highest honor. Cross joined Penn State as a senior research associate in 1961, rose through the ranks, and in 1985, was named Evan Pugh Professor of Electrical Engineering; an Evan Pugh Professorship is the highest distinction that the University can bestow on a faculty member. He is the author or coauthor of more than 850 refereed papers; he held 20 patents, and published a comprehensive text book, "Domains in Ferroic Crystals and Thin Films". At Penn State he mentored > 50 graduate students from across the world – including Prof. Yao Xi: the first Chinese Ph.D. (1982) educated in the US following the cultural revolution.

He will be sadly missed by all that knew him and worked with him. He shared his ideas freely with everyone that he met at scientific conferences, from graduate students to senior leaders in the field. He and his family, (wife Priscilla (Cilla) – a reluctant but gracious member of the ferroelectrics community by osmosis, and children Peter, Matthew, Daniel, Rachel, and Elizabeth) opened their home to generations of students and colleagues.

Very nice memories of the scholar, passion and personality of Professor Cross can be appreciated at <http://ethw.org/Oral-History:L. Eric Cross.>