

SOME SELL THAT AS THE ORIGINAL

Getting copied is a safe indicator for a good product – in art as well as in technology. Good copies are business promoters, inspiring creativity and innovation. However, for the discerning customer even the best copy lacks one essential feature: originality. Without it, the copy is a dead-end lane.

For the past two decades, Hecus products have kept the copyists busy. Poor copies have stimulated our own drive for innovation – to the benefit of our customers.



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A history of innovation

Hecus X-Ray Systems is the leading, specialized innovator in the field of small-angle X-ray scattering, SAXS, transferring it from an esoteric science affair into a practical analytical tool for non-destructive laboratory testing. A number of key innovations have originally resulted from this pursuit:



- 1993: SWAXS - simultaneous small- and wide-angle scattering
 - 2000: SAXS for process control in chemical industry
 - 2006: 'True SAXS', ultra-high brilliance microfocus SAXS S3-MICRO
 - 2007: Thin-film, grazing-incidence SAXS, X-ray reflectometry
 - 2009: 'Absolut SAXS', S3-MICROpix
- And there is more to come...

Our business model focussed on SAXS as our main product line made us the fastest growing player in this competitive field – and the copyists desperate.



News of MRS Members/Materials Researchers

Robert Everest Newnham, 80, Alcoa Professor Emeritus of Solid State Science at the Pennsylvania State University, passed away April 16, 2009. He retired from Penn State in 1999 after serving eight years as associate director of the Materials Research Laboratory and 18 years as director of the Intercollege Program on Solid State Science.



Robert E. Newnham

A graduate of four universities, Bob studied mathematics at Hartwick College (BS degree, 1950), physics at Colorado State University (MS degree, 1952), physics and mineralogy at Penn State (PhD degree, 1956), and crystallography at Cambridge University (PhD degree, 1960). Prior to joining the Penn State faculty in 1966, he was an I.C.I. Research Fellow at the Cavendish Laboratory of Cambridge University and taught in the Electrical Engineering Department of the Massachusetts Institute of Technology for 10 years.

Bob was active in several professional societies, serving as editor of the *Journal of the American Ceramic Society*, secretary of the Materials Research Society, president of the American Crystallographic Association, and Distinguished Lecturer for the Institute of Electrical and Electronic Engineers. Among his many awards was the John Jeppson Medal, the E.C. Henry Award, the Bleining Award, the W. David Kingery Award of the American Ceramic Society, the third Millennium Medal and Ultrasonics Achievement Award of the IEEE, the Centennial Award of the Japan Ceramics Society, the David Turnbull Lectureship of the Materials Research Society, the Adaptive Structures Prize of the American Society of Mechanical Engineers, the Benjamin Franklin Medal for Electrical Engineering from the Franklin Institute, and the Basic Research Award of the World Academy of Ceramics. He was also a member of the National Academy of Engineering.

Bob Newnham wrote five books, more than 500 research papers, and 20 patents. His early career revolved around crystallography and structure-property relations. During the past 40 years, Bob and his long-time colleague Eric Cross, pioneered new piezoelectric and electrostrictive materials for use as sensors, actuators, and capacitors. They were the first to carry out a complete classification of primary and secondary ferroics with examples of each. The composite piezoelectric transducers developed in his laboratory revolutionized the quality of ultrasound images in cardiology, obstetrics, and underwater sonar.

In his spare time, Bob was an ardent mineral collector and model airplane builder. He loved the smell of airplane glue.

He was a great scientist, teacher, colleague, friend, and person. His life is an inspiration to all of us.

Donations may be made to the Robert E. Newnham Graduate Fellowship in Material Science and Engineering (checks can be made payable to Penn State with "Robert Newnham Fellowship" noted and mailed to One Old Main, University Park, PA 16802). The family also encourages friends to honor his memory by attending local peace vigils.

SUSAN TROLIER-MCKINSTRY
Pennsylvania State University

The Materials GatewaySM
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