Prof. D. M. Rowe, OBE, 1939-2012

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News Category: In Passing

Professor David Michael Rowe.

OBE BSc MSc PhD DSc FIET CEng FInstP CPhys

Honorary Research Professor at Cardiff School of Engineering
Research Director of BabRow Thermoelectric Consultants Limited

We have had word from his family that Prof. Mike Rowe has passed away after battling cancer these past six months. He was known, respected and admired throughout the international thermoelectric community, which he did so much to help shape through his long career and many contributions to the field.

Personal comments on Prof. Rowe may be posted online here:
http://www.its.org/content/prof-d-m-rowe-obe-2012

Professor Mike Rowe held a University of Wales Personal Chair in Thermoelectrics and was Director of the NEDO Centre for Electronic Energy Conversion at Cardiff University. He held two graduate degrees from the University College Swansea, Pure Mathematics (1962) and BSc with honours in Physics (1963). His MSc post graduate training was undertaken at H.H.Wills Physics laboratory, University of Bristol (1963-65) followed by a PhD at what was then the University of Wales Institute of Science and Technology, Cardiff (1966-67). He spent three months as a British Council Visiting Scientist to India (1975), Visiting Scientist at the California Institute of Science and Technology Jet Propulsion Laboratories, Pasadena, USA (1989), Kunming Institute of Physics, China (1990) and three months as a Visiting Professor at Science City’s Electro- Technology Laboratory, Japan (1991). Professor Rowe was promoted to University Reader (1988) and in 1995 was awarded a Personnel Professorial Chair for his research into thermoelectric materials.

His career started in 1965 as a United Kingdom Atomic Energy Research Fellow and he was the first to demonstrate that boundary scattering in micron/submicron particle size compacts effectively reduced the lattice thermal conductivity of...
thermoelectric alloys- the forerunner of thermoelectric nanotechnology. His research interests were in all aspects of thermoelectric energy conversion and he served as a consultant on energy matters relating to thermoelectrics to numerous universities, organisations and industries in Europe, USA and the Middle and Far East. In 1984 he established a consulting company ‘ BabRow Thermoelectric Consultants Limited’. Over 40 years he built up a research reputation in thermoelectrics of international standing and was recipient of the ITS’s best conference paper award on two occasions (1989 and 2000). The first miniature thermoelectric ICT multi-couple was invented and patented by Professor Rowe in 1986 and is the for-runner of the multitude of miniature generator and coolers subsequently developed.

In 1991 Professr Rowe and his co-researcher Dr M Muraki (Kawasaki steel, Japan) patented the preparation of nano-particle size lead telluride thermoelectric material from solution. The precipitation method was a significant development as it facilitated the deposition of thin-film layered semiconductor structures without the need for expensive vacuum deposition equipment. In 1994 a substantial research grant from the Japanese Ministry of International trade and Industry established the Cardiff NEDO Centre for Electronic Energy Conversion with Professor Rowe as its Director. The Cardiff group has pioneered low temperature thermoelectric waste heat recovery and a 100Watt(e) generating system powered by warm water was demonstrated at the Kyoto Energy Summit on Global warming.

Professor Rowe served on committees of the Institute of Physics and Institution of Electrical Engineers and was a member of the UK Government appointed Watt Committee on Energy and of the US Department of Energy Frontiers Centres review panel. He authored more than three hundred scientific papers, three books, and the two best-selling texts on Thermoelectrics published by CRC Press. He Edited four International Conferences on Thermoelectrics and was an Editorial Board Member of four International refereed journals.

Professor Rowe was a founder member of the ITS in 1987 and co-founder the same year of the European Thermoelectric Society of which he was Vice President (1984-). He was elected President of the International Thermoelectric Society (1997-2001) and served as a Board Member and its Secretary up to his passing. He was a Fellow of the Institute of Physics and of the Institution of Electrical Engineers and an Honorary Member and gold medal recipient of the International Academy of Refrigeration. He was also an honorary member of the International Thermoelectric Academy and in 2009 was awarded its Golden Prize for outstanding achievements in thermoelectricity.

In 2007 Her Majesty Queen Elisabeth 11 appointed him an Officer of the Order of the British Empire, in recognition of services to Technology.

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