



Professor David Michael Rowe.

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Honorary Research Professor at Cardiff School of Engineering
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Professor Mike Rowe holds a University of Wales Personal Chair in Thermoelectrics and is Director of the NEDO Centre for Electronic Energy Conversion at Cardiff University. He holds 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 are in all aspects of thermoelectric energy conversion and has 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 has 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 has 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 has authored more than thee hundred scientific papers, three books, and the two best-selling texts on Thermoelectrics published by CRC Press. He has Edited four International Conferences on Thermoelectrics and is an Editorial Board Member of four International refereed journals.

Professor Rowe was a founder member of the ITS in 1987and co-founder the same year of the European Thermoelectric Society of which he is Vice President (1984-). He was elected President of the International Thermoelectric Society (1997-2001) and is currently a Board Member and its Secretary. He is 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 is 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.

