

ALAN ERNEST OWEN
PhD(Sheff), DSc(Edin), FRSC, FInstP, FIEE

Alan Owen was born on 7 October 1928 in Hastings, Sussex. He was a student at Brighton College of Technology from 1949 to 1953. In 1953 he joined English Clays Research Laboratories at St Austell, Cornwall, to work on the physical chemistry of clays and mineral processing and then in 1955 moved to the Mullard Research Laboratories to research on photoconductors. In 1956 he joined the Department of Glass Technology in the University of Sheffield where he obtained a PhD studying the dielectric properties of glass. From 1959 to 1962 Alan worked at the Westinghouse Research Laboratories in Pittsburgh, Pennsylvania, researching on crystal growth, oxidation and diffusion in semiconductors. He returned in 1962 to the University of Sheffield as a Lecturer in the Department of Glass Technology and pursued research in electronic conduction in vitreous semiconductors with grants from the UK Research Council and the Ministry of Defence. In 1967 he joined the University of Edinburgh as a Senior Lecturer in the Department of Electrical Engineering; he became a Reader in 1969 and Professor of Physical Electronics in 1981. He was Head of Department from 1989 to 1994 having previously held the special position of Research Professor for three years. This post was funded by British Petroleum International Limited and involved close liaison with BP scientists and engineers on a broad range of company interests concerned with aspects of solid state electronics.

In a period spanning more than 30 years, he became the Edinburgh Department's most eminent researcher - recognised by academics and industrialists from across the world for the strength and quality of his contribution to the science of electronic materials and devices. His work was recognised in many ways. In 1981 he was elected FRSE and he was also a Fellow of the Royal Society of Chemistry, of the Institute of Physics and of the Institution of Electrical Engineers - a clear indication of the breadth of his work that enabled him to link his basic science directly to the needs of the engineering industry. His attitudes and approach to academic life still permeate the Department and undoubtedly have a lot to do with its current very successful position.

Alan and Barbara Owen spent several periods working overseas. They included a year at the Laboratoire d'Automatique et d'Analyse des Systemes in Toulouse, France where Alan investigated metal-insulator-semiconductor switching devices; and two spells at Arizona State University where he investigated the all-vacuum fabrication of large scale integrated circuits and researched amorphous semiconductors and their device applications. It is difficult to imagine two better ambassadors for Scottish Higher Education than Alan and Barbara.

Alan had over thirty-five years experience of research and development, with periods in leading British and American industrial electronics laboratories working on the electrical properties of materials and solid-state devices. He supervised over 30 successful PhD students. He was Editor for the Society of Glass Technology with responsibility for the *Journal of Physics and Chemistry of Glasses* for 30 years. His own publications exceeded 140. Alan received recognition for the contribution he made to engineering when in 1993 he received an award from the Edinburgh International Science Festival for "Conspicuous Contributions to Engineering Research in Scotland".

Everyone in the Department greatly respected Alan's scientific achievements and the leadership he gave as a researcher, Professor and Head of Department. As Head of Department he steered the Department through some difficult periods. He was loved by everyone for his quiet authority and the youthful zest that he maintained throughout his career and into retirement.

It is impossible to talk about Alan Owen without mentioning squash. In the early 70s, he was well into his game; a very active player. Unfortunately he had back problems. An early memory of Alan was seeing him make painful progress along the corridor in the office block with his back at 45 degrees to the vertical. A terrible advertisement for squash and the end of squash for Alan - or so everyone thought. This assessment took no account of Alan's determination to overcome any problem. He quickly found somebody who manipulated his back to return it to the vertical without pain. So squash continued - in fact it continued to the very end - which pleased Alan very much. Alan's determination was very apparent on the squash court - he was a competent and competitive player.

Alan's determination not to be beaten showed through in other ways. Throughout his career he was very successful in having research grant applications accepted by UK Research Councils. However not all applications were successful and often apparently dubious reasons were offered for not awarding a grant. This upset Alan and caused him to write letters pointing out the perceived deficiencies of the Research Council and the injustice of his rejection. These were prolonged campaigns - he did not give up easily. Somewhere in the filing cabinets of the Research Council at Swindon there must be a thick Alan Owen file!

Alan retired in September 1996 but did not see this as a barrier to further progress. Back in February 1996 he was writing to outline his plans for the future. A paragraph from one of his letters reveals the continuing strength of his commitment to the University:

"My basic position is that after almost 30 years at Edinburgh University seeing the Department grow from a small, purely teaching and largely unrecognised Department into a major player in its field with all-round strengths, I feel a strong attachment to the place. It is sad to witness what has been happening to Higher Education over the past few years and I would like to do what little I can to help. One way would be to give two or three years to trying to re-establish a core of basic materials and devices research."

He achieved his goal three years later when he was awarded an Emeritus Fellowship by the Leverhulme Trust. The Department now has a new leading-edge research collaboration with Napier and Dundee Universities, funded by the UK Research Council and with strong support from industry.

Alan made an outstanding contribution and his colleagues would be very happy to achieve a fraction of the scientific contribution and personal respect that he did. Alan died of a heart attack, suddenly and unexpectedly, on 28 January 1999 in Edinburgh. He will be remembered and missed by everyone.

Based on an appreciation by J R JORDAN