



**To: School of Chemistry
Dean, Faculty of Mathematics & Physical Sciences
Emeritus Professors
Life Fellows
Pro-Chancellor *et al***

14 June 2012



Professor Peter Gray, DSc, FRSC, FRS

We are very sorry to let members know that Professor Peter Gray, FRS, former Professor and Head of the School of Physical Chemistry, died on 7 June 2012.

Professor Stephen Scott, a close friend and colleague, has provided the following obituary:

Peter Gray was born in Newport in 1926. He took his first degree in Natural Sciences and PhD in Chemistry at Cambridge in 1946 and 1949 respectively before holding a number of fellowships in Chemistry and Chemical Engineering there. Peter moved to Leeds in 1955 as a Lecturer. He was promoted to Reader in 1959 and then to a Personal Chair in 1962. He became Head of Physical Chemistry in 1965 in succession to Lord Dainton, a post he held for 23 years. In 1988, Peter was unable to resist the lure of his old college, Gonville & Caius, returning as Master, being succeeded at Leeds by Mike Pilling. He retired from the Mastership in 1996 remaining as a Life Fellow of the College.

Peter's early research involved the detonation of liquid explosives under impact (causing some consternation with the fellowship funders that he might blow himself up) and the theme of combustion ran throughout his life's work. At Leeds, Peter's research broadened to include gas-phase studies. Alongside a large group of PhD students and postdoctoral workers he also began to assemble one of the strongest academic teams in the UK (and indeed world-wide) capable of studying combustion systems from a wide range of approaches combining fundamental kinetics, thermodynamics and transport properties. 1967 onwards saw the recruitment of Brian Gray (no relation), John Griffiths, Peter Laye, Terry Boddington and Tony Clifford and also the establishment of the Centre for Combustion with Derek Bradley, Alan Williams and Graham Dixon-Lewis, linking research in Chemistry, Mechanical Engineering and Fuel Science. Seminal work at this time included the study and understanding of 'cool flames' and low temperature oxidation, notably through the introduction of well-stirred flow reactors, as well as definitive contributions to the field of thermal explosion. This work led to a series of major awards and prizes, including the Meldola Medal (1956), Marlow Medal (1959), the

Bernard Lewis Gold Medal "for brilliant research in the field of combustion, particularly on theoretical and experimental thermochemistry of combustion" (1978) and the Italgas Prize (1988). Peter was elected a Fellow of the Royal Society in 1977 and held all the major officer posts of the Faraday Council of the Royal Society of Chemistry, serving as President between 1983 and 1985.

Peter's work on the oscillatory nature of cool flames and his knowledge of the chemistry and chemical engineering literature – and in particular of Russian combustion literature – positioned the group at Leeds as a leading centre in the 1980s and 90s in the emerging field of chemical instabilities and chaos through studies of thermokinetic feedback and chemical autocatalysis. Peter was instrumental in the creation of the Centre of Nonlinear Dynamics with David Crighton, John Brindley and John Merkin, fostering interdisciplinary research across a wide range of departments.

Peter also served with distinction in University administration both at Leeds and Cambridge, and was President of the Local AUT at Leeds from 1961 to 1963. He was a leading figure in the international Combustion Institute and served on several government committees. He held visiting professorships and was awarded honorary degrees from many overseas universities and received an honorary DSc from Leeds in 1997.

So much for the basic facts and personal achievements: beyond these remain a remarkable number of co-workers, ex-students and colleagues who have themselves progressed to senior positions and major awards in universities or research establishments worldwide – all of whom would evidence the critical and selfless support and encouragement from Peter at key stages in their career.

Peter is remembered with fondness and gratitude by colleagues across the world. His work will remain firmly established in textbooks for future generations of chemists and combustors.

Peter was also a strong family man, father of four with his first wife Barbara who was also a member of this University. Barbara's untimely death in 1992 was a great sadness, but Peter subsequently enjoyed a very successful second marriage to Rachel, who survives him.

The Funeral will take place at the Chapel of Gonville and Caius College, Cambridge, on Friday 22 June at 12.00 noon. No flowers, please, but donations may be made to Camsight or East Anglia's Children's Hospices c/o R Skeates Funeral Directors, 45 Moorfield Road, Duxford, Cambridge, CB22 4PP (tel: 01223 833463). As a mark of the University's esteem, the flag on the Parkinson Building will be flown at half-mast on the day of the funeral.

G BRASSAY