



Prof., Baron George Porter

**Professor of Chemistry, Royal Institution of Great Britain,
London, UK**



Most important awards, prizes and academies

Nobel Prize for Chemistry (1967); Davy Medal of the Royal Society (1971); Kalinga Prize, UNESCO (1976); Rumford Medal of the Royal Society (1978). Fellow of the Royal Society (1960), President since 1985; Foreign Assoc. of the National Academy of Sciences, Washington (1974); Corr. Member of the Göttingen Acad. of Sciences (1974); For. Corr. Member of La Real Academia de Ciencias, Madrid (1978); For. Hon. Member of the American Acad. of Arts and Sciences (1979); American Philosophical Society, Japan Academy, Portuguese Academy, Pontifical Academy of Sciences.

Summary of scientific research

His research in the last forty years of his life was mainly in the area of photochemistry and the study of very fast chemical reactions. In 1949 he introduced the technique of flash photolysis for the study of chemical events in the microsecond region and, over the years, has extended this, by using pulsed lasers, into the nanosecond and picosecond regions. These methods led to observations of many new free radicals and on the triplet states of both gases and liquids. He also introduced the technique of 'trapped atoms and radicals in a glass cage', which subsequently

became known as matrix isolation. Recently his principal application of these techniques has been to the primary processes of photosynthesis. Studies *in vivo* have elucidated the mechanism of light harvesting and he has devoted much attention to making models of the photosynthetic system *in vitro* with the ultimate objective of providing a practical artificial system for solar energy collection and storage.

Main publications

Flash photolysis and spectroscopy. A new method for the study of free radical reactions.

«P.R.S.», A200, 284 (1950); *The absorption spectroscopy of Sub. of short life*. «D.F.S.», 9, 60 (1950); *Studies of free rad. reactivity by the methods of flash photolysis. The photochemical reactn. btw. chlorine and oxygene.* (with F.J. Wright). «D.F.S.», 14, 23 (1953); *Trapped atoms and radicals in rigid solvents* (with I. Norman). «P.R.S.», A230, 399 (1955); *Prim. photochem. Proc. in aromatic molecules. Part 3. Absorptn. spectra of benzyl, anilino, phenoxy & rel. free radicals* (with F.J. Wright). «T.F.S.», 51, 1469 (1955); *Intramolecular & intermolecular energy conv. involving change of multiplicity.* (with M.R. Wright). «D.F.S.», 27, 18 (1959); *Acidity const. in the triplet state* (with G. Jackson). «P.R.S.», A260, 13 (1961); *Energy trans. from the triplet state* (with F. Wilkinson). «P.R.S.», A264, 1 (1961); *Mechn. of third-order recomb. reactions*. «D.F.S.», 33, 198 (1962); *Prim. photochem. proc. in arom. molecules. Part. 10. Photochem. of substituted benzophenones* (with A. Beckett). «T.F.S.», 59, 2051 (1963); *Reactivities of $n-\pi^*$ and charge-transfer states in the photo pinacolisation of ketones* (with P. Suppan). «P.C.S.», 191 (1964); *The electronic spectra of phenyl radicals* (with B. Ward). «P.R.S.», A287, 457 (1965); *Reactivity, radiationless conv. and electron distr. in the excited state*. Proc. of the 13th Conf. on Chem. at the University of Brussels, 1965, Interscience Pub., London 1967, p. 79; *Nanosecond flash photolysis* (with M.R. Topp). «P.R.S.», A315, 163 (1970); *Picosecond time-resolved energy transfer in porphyridium cruentum. Part. 1. In the inact alga* (with C.J. Tredwell, G.F.W. Searle and J. Barber). «Bioch. Bioph. Acta», 501, 232 (1978); *Trans. and Strorage of Chem. and Radn. Potn.* «J.C.S., Fara.», Tr. 2, 79, 473 (1983); *Prim photoproc. in quinones and dyes. I. Spectroscopic detn. of intermed.* (with N.K. Bridge). «P.R.S.», A244, 259 (1958).