

Aston Medal 1990

Allan Maccoll

(1914-1999)



Professor Allan Maccoll received the first Aston Medal in 1989 as recognition for his considerable contribution to mass spectrometry. He was born in Edinburgh, Scotland, in 1914 and moved with his family to Sydney, Australia, in 1922. In 1936, he was awarded a First Class Honours degree in Chemistry and Mathematics at the University of Sydney and an M.Sc. in 1937, representing that university in swimming, and serving as President of the Sports Union.

He became a member of staff at the University of Sydney, then after the Second World War (1945) Allan, like many of his scientific compatriots, came to the UK to broaden his experience. He came to University College London (UCL), funded by an ICI grant to work on the kinetics of gas phase reactions with Sir Christopher Ingold. In 1947 he was appointed to a Lectureship in Physical Chemistry at UCL, where he was to spend the remainder of his academic career. He obtained his PhD in 1949 and in 1953 became a Reader, and then Professor of Chemistry in 1963 and retired (at least nominally) in 1981. It was, of course, well known throughout the mass spectrometry community that, even in retirement, Allan would still be in his lab every morning before 8am and that a conversation on mass spectrometry and a cup of coffee would be guaranteed to any visitor. Allan was an enthusiast for the science and for the people who practised it and he always did all that he could to encourage young people who were new to the field.

During his time at UCL he established a successful and active research group. A two-page 1955 paper in Nature "A Correlation Between the Rates of Unimolecular Pyrolysis of Alkyl Halides in the Gaseous Phase and SNI Rates in Solution" published with his student P. J. Thomas summarised what came to be known as the Maccoll-Thomas theory of gas phase thermal elimination reactions. He came late to mass spectrometry, his first mass spectrometer, an AEI MS9 double focusing instrument being installed in 1963. His main interests lay in the mechanisms of primary fragmentation processes and their thermochemistry. He was particularly interested in electron ionization spectra at low electron energies and the information given on the primary modes of decomposition of molecular ions. A large number of organic compounds were studied, including natural products from Allan's many contacts established in his travels to Africa, the West Indies, South America and other corners of the globe. But more significantly, this started a long and fruitful relationship between Allan and the energetics of unimolecular gas phase decompositions of ions studied by mass spectrometry. Despite his late start, he threw himself whole-heartedly into the mass spectrometry world and became a guiding force in the creation of the British Mass Spectrometry Society (BMSS), of which he was the first Chair in 1965 at its first public meeting held at UCL that year. Thus, Allan was in many ways the founder of mass spectrometry as a distinct scientific discipline in the UK. The Plenary Lecture at the BMSS Annual Meeting is named the Allan Maccoll Lecture to recognise both the importance of the fundamentals of mass spectrometry and Allan's contribution to their elucidation

It was to honour Allan's contribution to the BMSS that for the Society's Silver Jubilee meeting in 1990 we returned to UCL and Allan played a full part in that meeting. Allan was also prominent in founding new journals that would cater for the research interests of the mass spectrometry community. In 1968 he became founding Editor-in-Chief of Organic Mass Spectrometry, that for over 25 years was one of the major journals in the field and was the immediate predecessor to the Journal of Mass Spectrometry. Then in 1995, he wrote the first editorial in the European Journal of Mass Spectrometry as Chairman of its Managing Board. Allan remained active in research until his death at age 85.

*Taken from John Monaghan's article in BMSS Mass Matters April 2006
& Mike Baldwin's article in BMSS Mass Matters August 2007*

