

L.H. Sutcliffe Symposium on Magnetic Resonance

24 March 1995, University of Surrey, Guildford, UK

by Jenny Cossham

This meeting was organised under the auspices of the NMR Discussion Group and the ESR Group of The Royal Society of Chemistry and was held to recognise the contribution Professor Sutcliffe has made to spectroscopy over the last forty years.

The morning session was chaired by Professor Alwyn Davies, Chairman of the ESRDG, and following Professor Peter Butterworth's, Vice Chancellor of Surrey University, welcome to the ninety delegates to Guildford, the first speaker was Professor Martin Symons (*Essex University*) whom the audience was told has published more than one thousand research papers to-date, mostly on ESR. Professor Symons presented an interesting talk entitled "Radicals I have loved" which focused on inorganic radicals produced by ionising radiation. He discussed the possible ways of classifying radicals and covered interesting monoatomic, diatomic, triatomic and quadratomic species with specific focus on quadratomic phosphorus species. Dr Keith Preston (*Steacie Institute for Molecular Sciences, Ottawa*) then spoke on "Cluster Nitrosyls: an EPR enigma" explaining that compounds such as iron nitrosyls are of particular interest to biochemists in relation to iron-sulphur proteins which exhibit anti-microbial activity. Dr John Morton, also at the Steacie Institute, discussed the "EPR spectra of RC60 radicals", compounds that are believed to exist in interstellar space.

After lunch the theme switched from ESR to NMR with Professor John Lindon, Chairman of the NMRDG, in the chair. Professor Peter Belton (*Institute of Food Research, Norwich*) began with a fascinating lecture on "Multinuclear NMR studies of food materials" in which he explained some of the benefits of NMR including its attraction as a non-invasive technique. He then presented examples of proton, deuterium and phosphorus spectra for such diverse foods as sausages, milk and pear juice. Professor Jim Feeney (*National Institute for Medical Research, London*) then presented an interesting discussion of the NMR of protein-ligand complexes, with emphasis on the enzyme dihydrofolate reductase, and showed how to gain information on specificity, structure and dynamics. Dr Jim Emsley (*University of Southampton*) wound up the pre-tea session with a lecture on "Fun with liquid crystals" through NMR studies

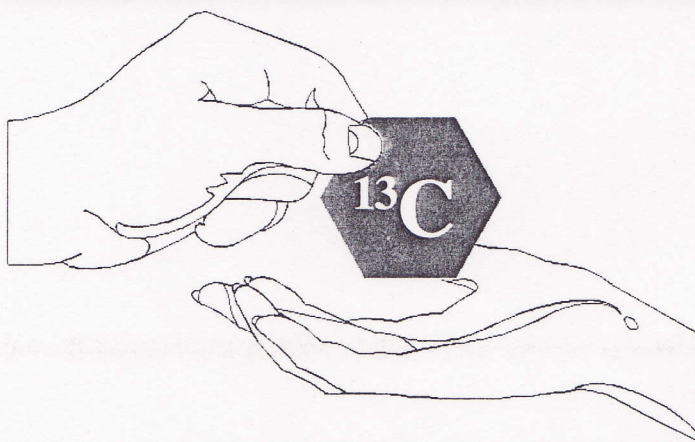
in which he mentioned a few methods for simplifying spectra including partial deuteration and deuterium decoupling, spin-echo refocussing, multiple quantum spectra and multiple quantum symmetry selected spectra.

The penultimate lecture was given by Professor Neville Boden (*University of Leeds*) who presented "Magnetic resonance spectra for ion channel design". This was followed by Dr Duncan Gillies, current co-worker of Professor Sutcliffe, who discussed "Working under pressure" with emphasis on their research work into the molecular

motion of lubricants, food, surfactants and traction fluids using NMR and ESR techniques.

All speakers throughout the day paid tribute to Les and his dedication to his work. The meeting was concluded by Professor Jones, Head of the Department of Chemistry at the University of Surrey, with acknowledgement of Les' work and his extensive contributions to the university since moving, with Dr Gillies, from Royal Holloway College four years ago.

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