

## 7<sup>th</sup> International Meeting, University of Cambridge, 8-12 July 1985

### SCIENTIFIC PROGRAMME

The scientific sessions will take place in Lecture Theatre 1 at the University Chemical Laboratory, Lensfield Road. Coffees and teas will be served in the Ground Floor, Part 1 Laboratory and the First Floor Part 1 Laboratory, at the times stated in the programme.

All seven symposia, which make up the meeting, have plenary lectures and shorter talks associated with them, and each is in the charge of its chairman.

In addition, the main themes of the meeting will be supported by an extensive poster session which will allow a wide coverage of related current activity and provide a forum for informal discussion. It will be mounted on Monday 8 July and be on exhibition throughout the week (see later under Posters for details).

The detailed programme for the meeting is as follows:

#### **SUNDAY 7 JULY**

20.00 Inaugural Reception in Queens' College for all participants both resident and non-resident

#### **MONDAY 8 JULY**

09.00 Welcome to the University of Cambridge

#### **SYMPOSIUM; NMR IN INORGANIC CHEMISTRY**

Chairman: Dr O.W. Howarth (University of Warwick)

09.10 **INVITED LECTURE:** The Impact of Multinuclear NMR on the Study of Inorganic Solids and their Surfaces. J.M. Thomas (University of Cambridge)

10.00 Dealumination of Mordeite: Application of High-Resolution Solid State NMR Spectroscopy. J.B. Nagy, P. Bodart, Z. Gabelica and G. Debras (University of Namur, Belgium)

10.20 COFFEE

10.50 **INVITED LECTURE:** Multinuclear NMR Measurements under Ambient and High Pressures of Gas. B.T. Heaton (University of Kent at Canterbury)

11.40 NMR Studies of Lithiated Organo-Phosphorus Compounds. I.J. Colquhoun, W. McFarlane and P. Patel (City of London Polytechnic)

12.10 A Novel Application of INEPT and DEPT to  $\{^{31}\text{P}\}^{109}\text{Ag}$  NMR. S.J. Berners Price, P.J. Sadler (Birkbeck College, London) and C. Brevard, A. Pagelot (Bruker Spectrospin SA, Wissembourg, France)

12.30 LUNCH

**SYMPOSIUM: NMR IN BIO-ORGANIC CHEMISTRY**

Chairman: Dr D.H. Williams (University of Cambridge)

14.00 **INVITED LECTURE:** Biosynthetic Studies using Stable Isotope NMR. D. Cane (Brown University, Rhode Island, USA)

14.55 Enzyme Mechanisms by in vivo NMR. R.P. Mason and J.K.M. Sanders (University of Cambridge)

15.20 TEA

15.45 "SIMPLE" NMR. D.B. Davies and J. Christophides (Birkbeck College, London)

16.05 **INVITED LECTURE:** 2D NMR Investigation of the Cyclic Decapeptide Antanamide. H. Kessler (University of Frankfurt, FRG)

17.00 Close

20.30 Wine and Cheese Reception in the Guildhall

**TUESDAY 9 JULY**

**SYMPOSIUM: NMR IN INDUSTRY**

Chairman: Dr A.M. Chippendale (ICI Organics Division, Manchester)

09.00 **INVITED LECTURE:** 30 Years of Industrial NMR in Europe - On the Way to Automated Multidimensional Spectroscopy. W. Bremser (BASF, Ludwigshafen, FRG)

09.55 **INVITED LECTURE:** Applications of in vivo NMR to Pharmaceutical Research  
J.C. Waterton (ICI Pharmaceuticals Division, Alderley Park)

10.30 COFFEE

11.00 **INVITED LECTURE:** NMR and Molecular Graphics Techniques Applied to Drug Design. W.A. Thomas (Roche Products, Welwyn Garden City)

11.35 Solid State <sup>29</sup>Si NMR: Industrial Applications in Materials Science and Coal. N.J. Clayden, J.R. Barnes, A.D.H. Clague, R.B. Jones (Shell Research, Chester) and C.M. Dobson, S.A. Rodger (University of Oxford)

11.55 The Role of Cation Binding in Polysaccharide Food Gels Studied by Multinuclear NMR. P.S. Belton, S.F. Tanner and V.J. Morris (AFRC Food Research Institute, Norwich)

12.15 LUNCH

**SYMPOSIUM; NEW EXPERIMENTAL TECHNIQUES**

Chairman: Dr P. Hore (University of Oxford)

- 14.00 **INVITED LECTURE:** NMR without the M. A. Pines (University of California, Berkeley, USA)
- 14.50 Two-Dimensional Perversity. G.A. Morris (University of Manchester)
- 15.10 Positional Isotope Analysis of Organic Compounds. E. Bengsch, G. Deleuze, H.L. Schmidt and J. Ph. Grivet (CNRS Orleans, France)
- 15.30 **TEA AND POSTER SESSION**
- 20.30 Organ Recital in King's College Chapel

**WEDNESDAY 10 JULY**

**SYMPOSIUM; SOLID STATE NMR**

Chairman: Dr D.G. Gillies (Royal Holloway and Bedford Colleges, London)

- 09.00 **INVITED LECTURE:** Use of Proton and <sup>13</sup>C Spin Diffusion to Examine Polymer Morphology. D.L. Vanderhart (National Bureau of Standards, Washington, USA)
- 10.00 Magic Angle Sample Spinning NMR Studies of Alkalides and Electrides. J.L. Dye, S. Dawes, A. Ellaboudy and M. Tinkham (Michigan State University, USA)
- 10.25 COFFEE
- 10.55 **INVITED LECTURE:** Chemical Applications of Solid State NMR. C.M. Dobson (University of Oxford)
- 11.55 Solid State Studies of Platinum and Tin Compounds. P. Reams, R.K. Harris (University of Durham) and K.J. Packer (BP Research Centre, Sunbury-on-Thames)
- 12.20 LUNCH
- P.M. EXCURSIONS

**THURSDAY 11 JULY**

**SYMPOSIUM; LARGE MOLECULE NMR**

Chairman: Dr I.D. Campbell (University of Oxford)

- 09.00      **INVITED LECTURE:** Sequence-Specific NMR Assignments and Structure, Dynamic and Intermolecular Interactions of Proteins and Nucleic Acids. K. Wüthrich (ETH, Zurich, Switzerland)
- 10.00      NMR Determination of the Repeating Units of the Capsular Polysaccharides from the Organism "Pasteurella Haemolytica". J.C. Lindon, J.M. Williams, C. Adlam and J.M. Knights (Wellcome Research Laboratories)
- 10.30      COFFEE
- 11.00      **INVITED LECTURE:** The Properties of Kringles. R.J.P. Williams (University of Oxford)
- 11.50      The Determination of the Three-Dimensional Structures of Oligonucleotides in Solution by NMR: Refinement on the Basis of Inter-Proton Distances. G.M. Clore and A.M. Gronenborn (Max-Planck Institute, Munich, FRG)
- 12.30      LUNCH

### **SYMPOSIUM: NEW EXPERIMENTAL TECHNIQUES II**

Chairman: Dr P. Hore (University of Oxford)

- 14.00      **INVITED LECTURE:** Recent Developments in Two-Dimensional NMR. R.R. Ernst (ETH, Zurich, Switzerland)
- 14.50      A Versatile NMR Imaging System. T. Frenkiel, A. Jasinski and P.G. Morris (National Institute for Medical Research, London)
- 15.10      Maximum Entropy Data Processing of Phase-Sensitive 2D NMR Spectra. E.D. Laue, J. Skilling and J. Staunton (University of Cambridge)
- 15.30      **TEA AND POSTER SESSION**

19.30 for 20.00 Conference Dinner in Queens' College

### **FRIDAY 12 JULY**

#### **SYMPOSIUM: IN VIVO NMR**

Chairman: Dr D.G. Gadian (Royal College of Surgeons)

- 09.00      **INVITED LECTURE:**  $^{31}\text{P}$ ,  $^{13}\text{C}$  and  $^1\text{H}$  NMR Studies of Metabolism in vivo R.G. Shulman (Yale University, USA)
- 09.50      Assessment of Human Liver Metabolism by  $^{31}\text{P}$  Magnetic Resonance Spectroscopy. R. Oberhansli, G. Galloway and D. Taylor, G.K. Radda (University of Oxford)
- 10.30      COFFEE

11.00      **INVITED LECTURE:** Developments in NMR Imaging. E.R. Andrew  
(University of Florida, Gainesville, USA)

11.50      Proton NMR Studies of Plasma and Urine: Disease Diagnosis and Drug  
Metabolism. P.J. Sadler (Birkbeck College, London)

12.15      CLOSURE AND LUNCH

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