



FIFTH INTERNATIONAL SYMPOSIUM
ON MAGNETIC RESONANCE

CONFERENCE BOOK

TATA INSTITUTE OF FUNDAMENTAL RESEARCH
BOMBAY, INDIA

January 14-18, 1974

MONDAY MORNING, JANUARY 14

OPENING CEREMONY

Inauguration of the Symposium

9.00 Chairman: **Prof. A. K. Saha**

Chief Guest: **Prof. M.G.K. Menon**, Director, TIFR & Chairman, Electronics Commission, Government of India

ISMR AWARD

9.30 Presentation of the Award of the International Society of Magnetic Resonance for Distinguished Service in the Advancement of Magnetic Resonance and its Applications

Dr. Daniel Fiat, Chairman, International Society of Magnetic Resonance—In the Chair

Award Presentation by **Prof. Felix Bloch**, Chairman, Award Committee

A Tribute to the Recipient of the Award by **Prof. Charles P. Slichter**

Award Address

10.45 – 11.30 Coffee

11.30 – 12.15 (Plenary Session)

Session 2P

1. **Molecular Structure Determination by NMR Spectroscopy:**
A. D. Buckingham*

12.15 – 14.15 Lunch

MONDAY AFTERNOON, JANUARY 14

14.15–15.45

(Session 3)

Session 3A: Interaction of Metal Ions with Biological Molecules

- 1 **Dynamic Properties of Paramagnetic Metallo-porphyrins:**
G. N. LaMar*
- 2 **Paramagnetic Perturbing Probes and the Structure and Conformation of Ligand Binding Sites of Phosphofructokinase;** **R. Jones, R. A. Dwek* and I. O. Walker**
- 3 **The Use of Aromatic Residues to Probe the Iron-Sulphur Clusters of Clostridium Acidi-Urici and Clostridium Pasteurianum Ferredoxins:** **L. Packer*, H. Sternlicht, E. T. Lode and J. C. Rabinowit**
- 4 **An ESR Study of Metal Ion-Guanosine Monophosphate Interaction:** **S. K. Podder*, S. Kasthuri Rengan and R. Navalgund**
- 5 **A NMR Study of Calcium Binding Proteins, the Parvalbumins:** **J. Parello***

Session 3B: Shift Reagent

- 1 **NMR Shift**
- 2 **Conformational Reagents:** **K**
- 3 **PMR Conformational Studies on a (N,N'-Dialkyl)amine:** **P. Ganguli,**
- 4 **The Effect of Solvent on the NMR of trans-(Phenyl)olefins:** **and A. J. N**
- 5 **Paramagnetic Shift Reagents in NMR Spectroscopy:** **M. Brunelli**

Session 3C: Metals I

- 1 **NMR in Liquids:** **L**
- 2 **Nuclear Magnetic Resonance in Liquids:** **Rate of Liquid Motion:** **B.**
- 3 **Anomalous NMR Shifts in Liquids:** **B.**
- 4 **NMR in Liquids:** **L. H. Benn**
- 5 **NMR in Liquids:** **Andrew, W**

Session 4A: Membrane

- 6 **Molecular Crystals:** **J**
- 7 **Deuteron Magnetic Resonance in Membranes:** **Hydration**
- 8 **High Resolution NMR of Membranes:** **Hen's Egg Membrane and K. R.**
- 9 **Structure of Membranes:** **J. K. Blas**

WEDNESDAY MORNING, JANUARY 16

8.45—10.15

(Plenary Session)

Session 9P:

- 4 Spin Polarization near Iron Group Atoms in Cu: J. B. Boyce, T. Aton, T. Stakelon and C. P. Slichter*
- 5 Magnetic Resonance Zeugmatography: P. C. Lauterbur*

10.15—10.30 Coffee

10.30—12.15

(Session 10)

Session 10A: Molecular Dynamics as Studied by Relaxation

- 27 Electron Spin Lattice Relaxation Study of 2,5-Ditertiary—Butyl Semiquinone Ion in Acetonitrile and Tetrahydrofuran: S. Kasthuri Rengan*, M. P. Khakhar, B. S. Prabhananda and B. Venkataraman
- 28 Proton Spin Lattice Relaxation and Reorientational Characteristics of Methyl groups in Some Liquids: P. K. Mishra* and B. D. Nageswara Rao
- 29 Proton Magnetic Relaxation in Crystalline Amino Acids: E. R. Andrew*, W. S. Hinshaw and M. G. Hutchins
- 30 On the Application of Broad Line NMR Technique to the Study of Amino Group Rotation in Organic Solids: R. C. Gupta and A. K. Banerji*
- 31 NMR Behaviour of the Clathrate Hydrate of Tetrahydrofuran: S. K. Garg*, D. W. Davidson and J. A. Ripmeester
- 32 Transverse Relaxation Rates Controlled by Chemical Exchange in Paramagnetic Solutions: J. Granot* and D. Fiat
- 33 Selective Proton Magnetic T_1 Measurements on Substituted Benzenes: J. Smidt*
- 34 Preparation and ESR Spectra of New Alkoxy polynitrophenylaminyl Free Radicals: N. Negoita, R. Baican* and A. T. Balaban

Session 10B: ESR : Metal Complexes

- 31 Crystal Symmetry and Magnetic Resonance: J. A. Weil*, J. E. Clapp and T. Buch
- 32 Electronic Structure and EPR Spectra of Bis (1-methyl 3-(2-chloro-6-methyl) Phenyl Triazine 1-oxide) Cobaltate (I): V. P. Chacko* and P. T. Manoharan

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