

Proceedings of the Indian National Science Academy

Vol. 45, Part A, No. 5

September 1979

CONTENTS

CHEMISTRY

- | | <i>Page</i> |
|--|-------------|
| Valence-Electron Studies with the use of Atomic Fues Potential within FSGO Formalism : Some Homonuclear Diatomics
S. P. Mehandru and N. K. Ray | 367 |
| A New Method for the Calculation of Thermal Conductivity of Binary Gas Mixtures
J. D. Pandey and S. R. Prajapati | 372 |
| Micro-Determination of some Hydrazine Derivatives with N-Bromo-saccharin
Ravi Prakash and I. C. Shukla | 383 |

CRYSTALLOGRAPHY

- | | |
|--|-----|
| Quick Enumeration of Independent Tensor Components of Physical Properties of Crystals in Trigonal and Hexagonal Point Groups
B. K. Ray and G. D. Nigam | 387 |
| Imperfections in MoSe ₂ M. K. Agarwal, T. C. Patel and H. B. Patel | 392 |

PHYSICS

- | | |
|--|-----|
| Microwave Measurements on some Indian Coal Samples
R. Singh, K. P. Singh and R. N. Singh | 397 |
| Excitation of a Corrugated Dielectric Rod
Glory John | 406 |
| Matrix Elements for Calculating Transitions among the 1s, 2s, 2p, 3s, 3p and 3d States of Atomic Hydrogen by the Faddeev Approach
R. Lal and S. K. Joshi, F.N.A. | 413 |
| Application of Morse Potential to Metals in the Molecular-Metallic-Framework
K. S. Sharma and C. M. Kachhava | 423 |
| SU(5) and the Magnetic Moment of ($\frac{1}{2}$) ⁺ 40-Plet (Mixed) Baryons
Mubarak Ahmad, G. Q. Sofi, M. S. Jallu and Abdul Samad | 432 |
| Phase-Amplitude Method for a separable Non-Local Optical Potential
B. Talukdar, U. Das, S. Chakravarty and P. Banerjee | 436 |
| Electrical Conductivity of Zinc Oxide at High Fields
D. K. Jain and J. C. Garg | 443 |
| Electrical Conductivity of Seeded Hydrocarbon Combustion Products
A. Chandra, B. K. Sawhney, S. Q. Hussain and M. S. Sodha, F.N.A. | 449 |

SOIL PHYSICS

- | | |
|---|-----|
| Determination and Analysis of the Variation of Soil Moisture at Various Depths by Ra-Be Neutron Scattering Probe
Kiran Shankar, Bhishm Kumar and B. P. Singh. | 476 |
|---|-----|