

A new North-Holland publication in

Biochemistry, Molecular Biology, Virology

Nucleic Acid-Protein Interactions and Nucleic Acid Synthesis in Viral Infection

Miami Winter Symposia, Volume 2

Edited by D. W. RIBBONS, J. F. WOESSNER, Department of Biochemistry, University of Miami School of Biochemistry, University of Miami School of Medicine, and J. SCHULTZ, Papanicolaou Cancer Research Institute and University of Miami School of Medicine, Miami, Fla.

1971. 490 pages. Dfl. 65.00 (ca. \$ 18.00) ISBN 0 7204 4099 8

Symposia on biochemical topics have been arranged by the Department of Biochemistry and the Program in Cellular and Molecular Biology of the University of Miami for a number of years. In January 1969 the Department of Biochemistry joined with the University-affiliated Papanicolaou Cancer Research Institute to continue this tradition by presenting pairs of Symposia on closely related biochemical topics which attracted national interest. The full report of the 1970 meeting was published as the first volume of a continuing series under the title: *Miami Winter Symposia*. The present volume, the second in this series, contains the report of the January 1971 Symposia and includes all discussions as well as the full text of the reports.

CONTRIBUTORS: B. M. Alberts, V. G. Allfrey, J. J. Anderson, W. Anderson, D. Baltimore, J. S. Beckman, J. L. Campbell, E. Canaan, B. Chen, J. E. Cleaver, J. Coffin, S. S. Cohen, V. Daniel, B. De Crémbrugghe, A. Dion, L. M. Downey, D. R. Dubbs, P. Duesberg, R. A. Fleischman, S. W. Fox, S. Fujioka, R. C. Gallo, H. S. Ginsberg, A. R. Goldberg, A. F. Graham, M. Gottesman, M. Green, E. H. Grell, K. v. d. Helm, F. Herrera, J. Hurwitz, K. B. Jacobson, D. R. Joseph, B. S. Jarmark, S. Kit, A. Kornberg, J. C. Lacey, Jr., U. Z. Littauer, S. Millward, S. Mizutani, R. E. Moses, K. H. Muench, T. Nakashima, F. C. Neidhardt, P. Nissley, J. Parks, I. Pastan, R. L. Perlman, C. C. Richardson, B. Roizman, S. Sarid, R. G. Smith, D. Smoler, A. G. So, P. G. Spear, M. Straub, H. M. Temin, C. S. Teng, C. T. Teng, R. C. Ting, S. B. Weiss, R. K. Werner, S. S. Yang.

AMSTERDAM NORTH HOLLAND PUBLISHING CO. NETHERLANDS
P.O. BOX 346

Sole distributors for the U.S.A. and Canada: American Elsevier Publishing Company, Inc., 51 Vanderbilt Avenue, New York, N.Y. 10017

Journal of Molecular Structure
Elsevier Publishing Company, Amsterdam. Printed in the Netherlands

REVIEW

THE EFFECT OF PHASE AND PRESSURE CHANGES ON VIBRATIONAL SPECTRA

J. E. D. DAVIES

Department of Chemistry, University of Lancaster, Lancaster, Lancs. (England)

(Received March 16th, 1971)

CONTENTS

1. Introduction	1
2. Phase changes	2
A. Introduction	4
B. Diatomic molecules	6
C. Triatomic and 2-coordinate species	8
D. Tetra-atomic and 3-coordinate species	9
E. Penta-atomic and 4-coordinate species	12
F. Hexa-atomic and 5-coordinate species	13
G. Species with seven or more atoms	15
H. Compounds of phosphorus(V), selenium(IV) and tellurium(IV)	15
I. Miscellaneous studies	15
(i) Benzene, substituted benzenes and condensed aromatics	16
(ii) Heterocyclic compounds	17
(iii) Cycloalkanes	17
(iv) The Raman spectra of adsorbed species	18
(v) The Raman spectra of black compounds	20
3. Pressure changes	22
References	22

1. INTRODUCTION

This review is concerned with the effect of phase and pressure changes on infrared and Raman vibrational spectra. The review will be concerned with work published between 1963 and 1970 inclusive and it is worth while first of all to mention some of the significant spectroscopic advances which have occurred during the period under review.

The most significant development has undoubtedly been the introduction of the laser as a Raman source and the consequent availability of commercial Raman spectrometers. As a result of this development many publications now