

Meetings

Optical Rotation and Rotatory Dispersion

A symposium, sponsored by the Office of Naval Research, on optical rotation and rotatory dispersion was held at The Inn, Rancho Santa Fe, Calif., from 19 to 22 January. The conference featured three major aspects of this subject (i) the use or application of optical rotation and rotatory dispersion techniques in the elucidation of the conformation and configuration of inorganic, organic, and biochemical molecules; (ii) the application of quantum theory to optical rotation and rotatory dispersion; and (iii) the problems involved in developing instrumentation important to this discipline. The conference was organized by B. H. Levedahl (University of California, Los Angeles) and was dedicated to the memory of J. G. Kirkwood and W. Moffitt.

The keynote speaker at the opening dinner was Werner Kuhn of the University of Basel (Switzerland). Kuhn discussed rotatory dispersion and the vibrating momentum of optically active absorption bands applied to both organic and inorganic molecules. His particular concern was with anomalous dispersion associated with circular dichroism.

Carl Djerassi (Stanford University) discussed the applications of anomalous optical rotatory dispersion to organic chemical problems. Djerassi, who has recently edited a book in the area of interest of this symposium, emphasized the great value of rotatory dispersion in the speedy resolution of steroid conformational problems by application of the octant rule.

W. Klyne (Postgraduate Medical School, London) further emphasized the applicability of rotatory dispersion in structural and stereochemical studies, also emphasizing the application of the octant rule, in the development of which Moffitt had been actively interested.

A. Moscowitz (University of Minnesota) discussed the application of the Kronig-Kransers theorem to optical activity.

The second session was introduced

with a paper presented by E. R. Blout (Polaroid Corporation and Harvard Medical School) in which new evidence on the helical sense in synthetic polypeptides and proteins was discussed. This work, in which the cotton effect associated with the binding of dye molecules to polypeptides is utilized, represents an important breakthrough for the possible assignment of a helical sense to polypeptides and proteins. A theoretical approach to superposition rules in optical rotation was presented by Walter Kauzmann (Princeton University). This paper emphasized the importance of second-order interactions to the assignment of rotations to optical isomers.

A paper by Jacques Fresco, who was unable to attend, was read by Jen Tsi Yang. This paper was concerned with the rotatory dispersion of synthetic polynucleotides. Yang cited the recent accomplishment of the Harvard group who have been able to partially reverse the denaturation of deoxyribonucleic acid.

J. H. Brewster (Purdue University) considered the application of the principles of conformational asymmetry to various steroids and ketones.

Optical rotation and polypeptide structure as well as the rotatory dispersion of polypeptides and proteins was discussed by Ignacio Tinoco (University of California, Berkeley) and Jen Tsi Yang (Dartmouth Medical School). The principal problem highlighted in these two papers was the importance of assigning a value to the helices present in a specific protein or polypeptide. Tinoco's utilization of electrostatic fields to obtain oriented systems for such studies was of considerable interest.

Bruno Jirgensons (Anderson Hospital and Tumor Institute, University of Texas) applied optical rotation to the classification of globular proteins. He emphasized the importance of the convergence of λ_0 values upon denaturation for specific classes of proteins.

The presentation of John A. Schellman (University of Oregon) on the rotatory dispersion of amino acids and proteins provided an excellent background for the discussions.

These sessions were followed by a panel discussion on instrumentation in which representatives of various instrument manufacturers participated. The Rudolph Polarimetry Company was represented by R. Bruce, the Applied Physics Corporation by R. C. Hawes, Photovolt Corporation by G. Levy, and Perkin-Elmer Corporation by A. Savitsky. The need for high-quality instrumentation and greater wavelength penetration was thoroughly discussed and evaluated.

Short papers were presented by Paul Tso (California Institute of Technology), on the optical properties of nucleic acids in nonaqueous solvents, and by Conmar Robinson (Courtaulds, Ltd., England), on the orientation of proteins in liquid crystals. Also of interest was the paper by G. L. Eichorn (Institute of Public Health, Baltimore) on the cotton effects found in some of the metal-containing proteins and in vitamin B₁₂.

Leon Jones (University of Utah) brought the conference to a close with his discussion of some theories of optical rotation.

Subjects of discussion at the conference ranged from the quantum mechanical basis of optical rotation and rotatory dispersion to applications in specific chemical problems. The exhaustive discussion of the papers presented was an indication both of the timeliness of the conference and of the growing interest in this field.

The proceedings of this conference will be published by Pergamon Press.

THOMAS W. JAMES

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Forthcoming Events

May

9-13. Society of Photographic Scientists and Engineers, natl. conf., Santa Monica, Calif. (SPSE, Box 1609, Main Post Office, Washington, D.C.)

10-12. Farm Electrification, conf., Omaha, Neb. (N. S. Hibsham, AIEE, 33 W. 39 St., New York 18)

10-12. Severe Storms, American Meteorological Conf., St. Louis, Mo. (K. C. Spengler, AMS, 45 Beacon St., Boston 8)

10-13. Fuel Element Fabrication, symp., Vienna, Austria. (Intern. Atomic Energy Agency, 11 Kärntner Ring, Vienna)

11. Society of Medical Psychoanalysts, annual, New York, N.Y. (M. Ross, American Psychiatric Assoc., 1700 18 St., N.W., Washington 9)

11-13. American Assoc. of Genito-Urinary Surgeons, Dearborn, Mich. (W. J. Engel, 2020 E. 93 St., Cleveland 6, Ohio)

11-13. American Assoc. of Physical Anthropologists, Washington, D.C. (E. E. Hunt, Jr., Peabody Museum, Harvard Univ., Cambridge 38, Mass.)

11-13. American Assoc. for Thoracic Surgery, 40th annual, Miami Beach, Fla. (H. T. Langston, 7730 Carondelet Ave., St. Louis 5, Mo.)

11-13. American Inst. of Chemists, Minneapolis, Minn. (L. Van Doren, AIC, 60 E. 42 St., New York 17)

11-13. International Acetylene Assoc., annual, Seattle, Wash. (IAA, 30 W. 42 St., New York 17)

11-13. Quinones in Electron Transport, symp. (by invitation only), London, England. (G. E. W. Wolstenholme, Ciba Foundation, 41 Portland Pl., London, W.1)

11-13. Rare Earths in Biochemical and Medical Research, conf., Ames, Iowa. (J. G. Graca, College of Veterinary Medicine, Iowa State Univ., Ames)

11-14. American Helicopter Soc., annual, Miami Beach, Fla. (H. M. Lounsbury, AHS, 2 E. 64 St., New York 21)

11-14. National Science Fair-International, Indianapolis, Ind. (Science Service, 1719 N St., Washington 6)

12. Protein and Amino Acid Supplementation, Chicago, Ill. [J. T. Sime (Assoc. of Vitamin Chemists), Evaporated Milk Assoc., 228 North La Salle St., Chicago 1]

12-14. American Assoc. for Cleft Palate Rehabilitation, Denver, Colo. (D. C. Priestestersbach, University Hospitals, Iowa City, Iowa)

12-14. American Inst. of Industrial Engineers, annual, Dallas, Tex. (F. J. Tittler, AIIE, 145 N. High St., Columbus 15, Ohio)

12-14. Virginia Acad. of Science, Rich-

mond. (P. M. Patterson, Hollins College, Va.)

13-14. Proctological Latina, 2nd intern., Rome, Italy. (G. B. E. Simonetti, Via S. Raffaele 3, Milano, Italy)

15-18. American Soc. of Maxillo-facial Surgeons, Los Angeles, Calif. (E. C. Hinds, 1508 Medical Towers, Houston 25, Tex.)

15-18. International College of Surgeons, 12th biennial conf., Rome, Italy. (ICS, 1516 Lake Shore Drive, Chicago, Ill.)

15-20. American Water Works Assoc., annual conv., Miami Beach, Fla. (H. E. Jordan, AWWA, 2 Park Ave., New York 16)

15-19. Institute of Food Technologists, 20th annual, San Francisco, Calif. (C. S. Lawrence, IFT, 176 W. Adams St., Chicago 3)

15-20. National Tuberculosis Assoc., Los Angeles, Calif. (J. C. Stone, 1790 Broadway, New York 19)

16-17. Society of American Military Engineers, natl. conv., Washington, D.C. (D. A. Sullivan, SAME, 140 S. Dearborn St., Chicago, Ill.)

16-18. American Ophthalmological Soc., Colorado Springs, Colo. (M. C. Wheeler, 30 W. 59 St., New York 19)

16-18. American Trudeau Soc., Los Angeles, Calif. (F. W. Webster, 1790 Broadway, New York 19)

16-19. American Urological Assoc., Chicago, Ill. (W. P. Didusch, 1120 N. Charles St., Baltimore 1, Md.)

16-20. Medical Library Assoc., Kansas

City, Mo. (Miss N. A. Mehne, Upjohn Co. Library, 301 Henrietta St., Kalamazoo, Mich.)

16-21. American Assoc. on Mental Deficiency, annual, Baltimore, Md. (N. A. Dayton, P.O. Box 51, Mansfield Depot, Conn.)

17-18. Superconductive Technique for Computing Systems, symp., Washington, D.C. (Miss J. Leno, Code 430A, Office of Naval Research, Washington 25)

17-20. American Assoc. of Plastic Surgeons, Milwaukee, Wis. (T. D. Cronin, 6615 Travis St., Houston 25, Tex.)

18-19. Agricultural Meteorology, 3rd conf., Kansas City, Mo. (K. C. Spengler, American Meteorological Soc., 45 Beacon St., Boston, Mass.)

18-20. Society for Experimental Stress Analysis, spring, Indianapolis, Ind. (W. M. Murray, SESA, P.O. Box 168, Central Square Station, Cambridge 39, Mass.)

18-27. Wool Conf., intern., Harrogate, Yorkshire, England. (A. W. Bennett, Textile Inst., 10 Blackfriars St., Manchester 3, England)

21-22. Society for Economic Botany, 1st annual, Lafayette, Ind. (Q. Jones, New Crops Research Branch, Beltsville, Md.)

22. Maryland Acad. of Sciences, Baltimore. (J. W. Easter, Owings Mills, Md.)

22-26. Air Pollution Control Assoc., 53rd annual, Cincinnati, Ohio. (C. W. Gruber, 2400 Beekman St., Cincinnati 14)

22-26. Oil and Gas Power Conf., Kansas City, Mo. (D. B. MacDougall, ASME, 29 W. 39 St., New York 18)

23-25. American Soc. for Quality

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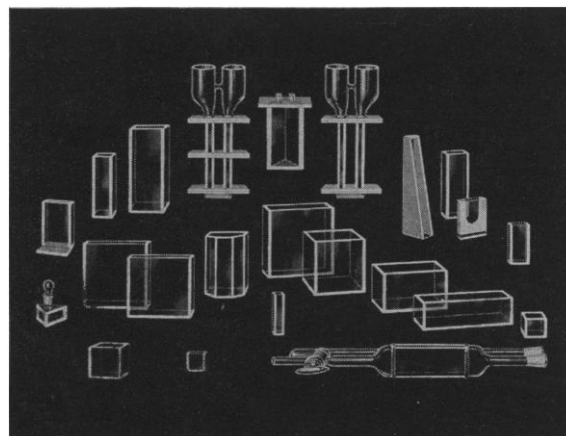
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Control, annual conv., San Francisco, Calif. (W. P. Youngclaus, Jr., ASQC, 161 W. Wisconsin Ave., Milwaukee 3, Wis.)

23-25. National Telemetering Conf., Santa Monica, Calif. (A. F. Denham, American Rocket Soc., 925 Book Bldg., Detroit 26, Mich.)

23-25. Technical Assoc. of the Paper and Pulp Industry, Chicago, Ill. (J. Winchester, TAPPI, 155 E. 44 St., New York 17)

23-26. Design Engineering Conf., New York, N.Y. (D. B. MacDougall, ASME, 29 W. 39 St., New York 18)

23-28. American College of Cardiology, 9th annual conv., Indianapolis, Ind. (G. F. Greco, ACC, 114-08 Linden Blvd., Ozone Park 16, N.Y.)

23-28. Instruments, Electronics, and Automation Exhibition, Olympia, London, England. (Industrial Exhibitions Ltd., 9 Argyll St., London, W.1, England)

23-28. International Ceramic Cong., 7th, Great Britain. (G. N. Hodson, Organizing Council, c/o Hathernware Ltd., Loughborough, England)

23-28. International War—Prophylaxis Cong. for Physicians, Noordwijk aan Zee, Netherlands. (M. Knap, 46 Schubertstraat, Amsterdam, Netherlands)

25-26. Refractory Metals and Alloys, symp., Detroit, Mich. (E. O. Kirkendall, AIME, 29 W. 39 St., New York 18)

25-5. International Federation for Housing and Town Planning, cong., Puerto Rico. (IFHTP, Park Hotel, Molenstraat 53, The Hague, Netherlands)

26-27. Psychophysiological Aspects of Space Flight (School of Aviation Medicine, USAF Aerospace Medical Center), symp., San Antonio, Tex. (J. Harmon, Southwest Research Inst., 8500 Culebra Rd., San Antonio 6)

26-28. Society of Naval Architects and Marine Engineers, spring, Washington, D.C. (W. N. Landers, SNAME, 74 Trinity Pl., New York 6)

29-2. Chemical Inst. of Canada, 43rd annual conf., Montreal, Quebec, Canada. (CIC, 18 Rideau St., Ottawa, Ontario, Canada)

29-4. American Soc. for Horticultural Science, 8th annual of Caribbean Region, San Juan, Puerto Rico. (E. H. Cásseres, Londres 40, O.E.E., Mexico 6, D.F.)

29-5. International Commission on Irrigation and Drainage, 4th cong., Madrid, Spain. (D. Diaz-Ambrona, Comité Nacional Español, c/o Ministerio de Obras Públicas, Agustín de Bethencourt, 4, Madrid, Spain)

30-1. American Gynecological Soc., Williamsburg, Va. (A. A. Marchetti, Georgetown Univ. Hospital, Washington 7)

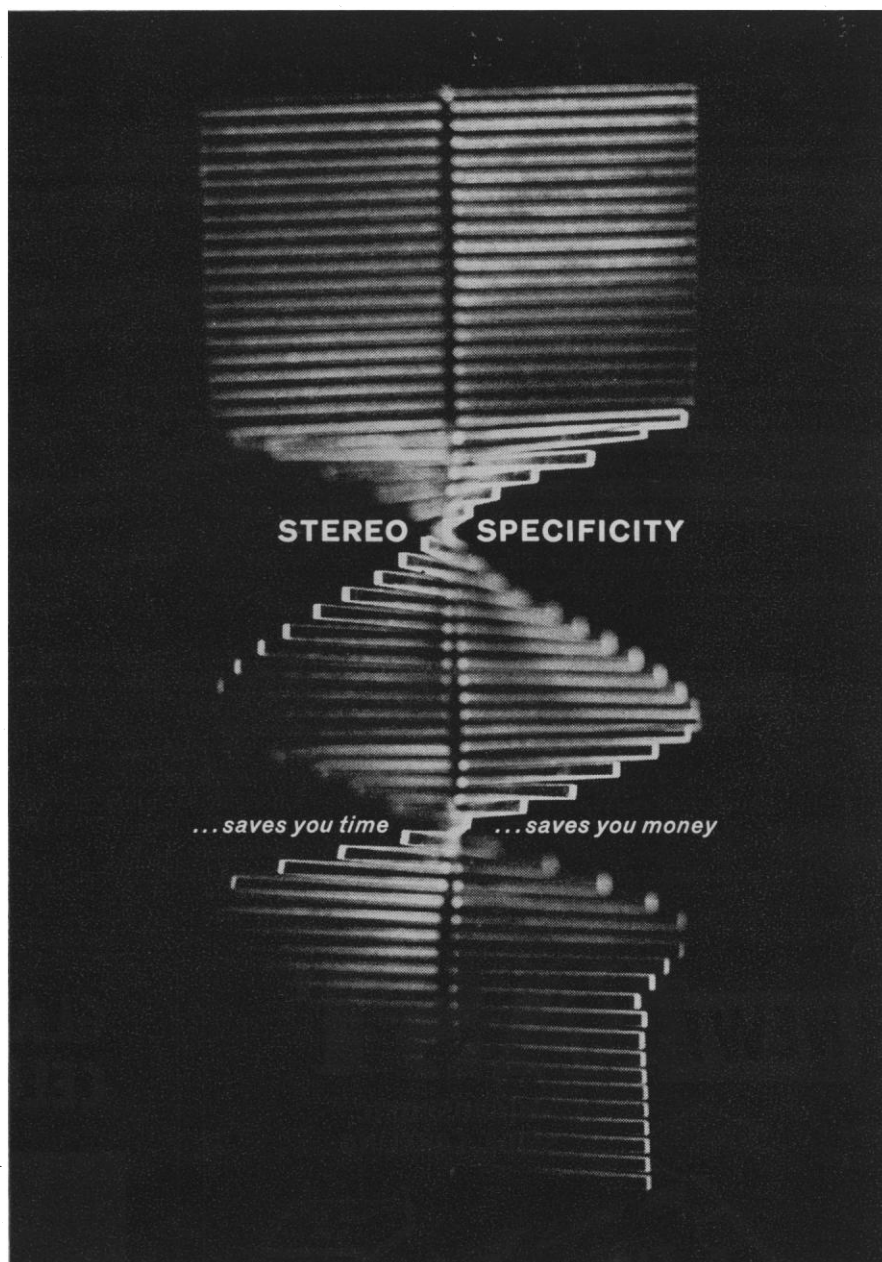
30-2. American Orthopaedic Assoc., Hot Springs, Va. (L. R. Straub, 535 E. 70 St., New York 21)

30-3. Asian-Pacific Cong. of Cardiology, 2nd, Melbourne, Australia. (A. E. Doyle, Alfred Hospital, Melbourne, S.1, Victoria, Australia)

30-3. Fibre Science, annual conf., London, England. (A. W. Bennett, Textile Inst., 10 Blackfriars St., Manchester 3, England)

30-4. Reactivity of Solids, 4th intern. symp., Amsterdam, Netherlands. (Ir. G. van Gijn, Secretary, 4th Intern. Symp. on the Reactivity of Solids, Technisch Hogeschool, Eindhoven, Netherlands)

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1-3. Instrumental Methods of Analysis, annual symp., Montreal, Quebec, Canada. (W. H. Kushnick, Instrument Soc. of America, 313 Sixth Ave., Pittsburgh 22, Pa.)

1-5. Irrigation and Drainage, 4th intern. cong., Madrid, Spain. (D. Diaz-Ambrona, Comité Nacional Espanol de la Comision Internacional de Riegos y Drenajes, Ministerio De Obras Publicas, Agustin De Bethencourt 4, Madrid)

2-4. American Assoc. of Bioanalysts and California Assoc. of Clinical Laboratories, annual, San Francisco, Calif. (Mrs. M. K. Higgins, 75 Buena Vista Ave., San Francisco 17, Calif.)

2-4. Drugs Affecting Lipid Metabolism, intern. symp., Milan, Italy. (S. Garattini, c/o Institute of Pharmacology, Via del Sarto 21, Milan, Italy)

3-8. Pan American Medical Women's Alliance, 7th cong., San Juan, Puerto Rico. (Mrs. S. D. Rosekrans, 504 Newett St., Nullsville, Wis.)

5-8. Special Libraries Assoc., 51st annual, Cleveland, Ohio. (B. M. Woods, SLA, 31 E. 10 St., New York 3)

5-9. American Soc. of Mechanical Engineers, summer annual and aviation conf., Dallas, Tex. (L. S. Dennegar, ASME, 29 W. 39 St., New York 18)

5-9. World Power Conf., Madrid, Spain. (D. J. Pérez, Pozualo, Spanish National Committee, General Pardinás, 55, Madrid, Spain)

5-10. National Conf. on Social Welfare,

annual, Atlantic City, N.J. (Natl. Conf. on Social Welfare, 22 West Gay St., Columbus 15, Ohio)

5-14. XXV Cold Spring Harbor Symp. on Quantitative Biology, Cold Spring Harbor, N.Y. (A. Chovnick, Biological Laboratory, Long Island Biological Assoc., Cold Spring Harbor)

6-10. International Conf. on Live Poliovirus Vaccines, Washington, D.C. (Secretariat, Pan American Health Organization/World Health Organization, 1501 New Hampshire Ave., NW, Washington 6, D.C.)

7-11. Microwave Tubes, intern. cong., Munich, Germany. (Nachrichtentechnische Gesellschaft im VDE (NTG), Frankfurt-am-Main, Osthafenplatz 6, Germany)

7-13. Dosimetry in Health Physics, symp., Vienna, Austria. (International Atomic Energy Agency, 11 Kärntner Ring, Vienna 1, Austria)

7-15. Partial Differential Equations and Continuum Mechanics, intern. conf., Madison, Wis. (R. E. Langer, Mathematics Research Center, U.S. Army, Univ. of Wisconsin, Madison 6)

8-9. Selenium in Nutrition, conf., Ithaca, N.Y. (K. C. Beeson, U.S. Plant, Soil, and Nutrition Laboratory, Ithaca, N.Y.)

8-10. Canadian Federation of Biological Societies (Canadian Physiological Soc., Pharmacological Soc. of Canada, Canadian Assoc. of Anatomists, Canadian Biochemical Soc.), 3rd annual, Winnipeg, Manitoba. (E. H. Bensley, Montreal General Hospital, 1650 Cedar Ave., Montreal 25, P.Q.)

8-11. National Soc. of Professional En-

gineers, annual, Boston, Mass. (P. H. Robbins, NSPE, 2029 K St., NW, Washington 6)

8-12. American College of Chest Physicians, Miami Beach, Fla. (M. Kornfeld, 112 E. Chestnut St., Chicago 11, Ill.)

9-10. American Geriatrics Soc., Miami Beach, Fla. (R. J. Kraemer, 2907 Post Rd., Warwick, R.I.)

9-11. Acoustical Soc. of America, Providence, R.I. (W. Waterfall, ASA, 335 E. 45 St., New York 17)

9-11. Endocrine Soc., Miami Beach, Fla. (H. H. Turner, 1200 N. Walker, Oklahoma City 3, Okla.)

9-11. National Speleological Soc., annual, Carlsbad, N.M. (G. W. Moore, U.S. Geological Survey, Menlo Park, Calif.)

9-12. American Medical Women's Assoc., Miami Beach, Fla. (Mrs. L. T. Majally, 1790 Broadway, New York 19, N.Y.)

9-12. American Rheumatism Assoc., annual, Hollywood-by-the-Sea, Fla. (F. E. Demartini, Presbyterian Hospital, 622 W. 168 St., New York 32)

9-12. American Therapeutic Soc., Miami Beach, Fla. (O. B. Hunter, Jr., 915 19 St., NW, Washington 6)

10-12. American College of Angiology, Miami Beach, Fla. (A. Halpern, 11 Hampton Court, Great Neck, N.Y.)

10-12. American Electroencephalographic Soc., Boston, Mass. (G. A. Ulett, 1420 Gratten St., St. Louis 4, Mo.)

10-12. Society for Biological Psychiatry, Miami Beach, Fla. (G. N. Thompson, 2010 Wilshire Blvd., Los Angeles 57, Calif.)



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