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LOW TEMPERATURE SPECTROSCOPY

OPTICAL PROPERTIES OF MOLECULES IN MATRICES, GLASSES AND MIXED CRYSTALS

BIBLIOGRAPHY FROM 1888 TO JANUARY 1969

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This bibliography contains articles from the field of low temperature optical and infrared spectroscopy of molecules and atoms at temperatures at or below 77°K. The references cover the period from 1885 to January 1969. Newer references were included when easily available, but older references, especially to not yet translated Russian papers, might be missing. Occassionally, references to related material are included.

The bibliography is listed alphabetically according to the name of the first author. When one author has published several papers, the listing is chronological, with the oldest paper first.

At the end of the bibliography is a listing of eight arbitrarily selected names who appear in many papers, but not always as first authors. For these selected active researchers, we have listed all of their co-authored papers according to the name of the first author and the year of the publication, under which the full reference can be found in the main bibliography.

This bibliography is part of a literature compilation which will appear in a book entitled LOW TEMPERATURE SPECTROSCOPY OF MOLECULES IN MATRICES, GLASSES AND MIXED CRYSTALS, by B. Meyer and J. J. Smith; American Elsevier, New York, 1970. The listing was prepared, compiled

and typed at the University of Washington as part of work which relates to interests of a joint project between the Inorganic Materials Research Division, Lawrence Radiation Laboratory, University of California, Berkeley, and Prof. Meyer's group in Seattle.

A

N. Acquista, L.J. Schoen and D.R. Lide, Jr., J. Chem. Phys. 48, 1534 (1968) "Infrared Spectrum of the Matrix-Isolated OH Radical".

F.C. Adam and W.T. Simpson, J. Mol. Spectry. 3, 363 (1959) "Electronic Spectrum of 4,4'-bis-Dimethylamino Fuchsone and Related Triphenylmethane Dyes".

M.N. Adamov, Zhur. Eksptl. i Teoret. Fiz. 22, 120 (1952) "Remarks on the Scheme of Temperature Damping of the Luminescence of Crystalline Phosphors Proposed by E.I. Adirovich".

A.H. Adelman and G. Oster, J. Am. Chem. Soc. 78, 3977 (1956) "Long-lived States in Photochemical Reactions. II. Photoreduction of Fluorescein and its Halogenated Derivatives".

F.J. Adrian, E.L. Cochran, and V.A. Bowers, J. Chem. Phys 36, 1661 (1962) "ESR Spectrum and Structure of the Formyl Radical".

F.J. Adrian, E.L. Cochran and V.A. Bowers, J. Chem. Phys. 47, 5441 (1967) "ESR Spectrum of HO_2 in Argon at 4.2°K".

F.J. Agee, Jr., R.J. Manning, J.S. Vinson and F.L. Hereford, Phys. Rev. 153, 255 (1967) "Inhibition of the Scintillation of Stationary and Rotating He".

V.M. Agranovich, Opt. & Spect. 9, 421 (1960) "Letter to the Editor".

V.M. Agranovich, Opt. & Spect. 9, 113 (1960) "The Transfer of Electronic Excitation Energy with the Aid of a Virtual Exciton Mechanism".

V.M. Agranovich and V.L. Ginzburg, Interscience Monographs and Texts in Physics and Astronomy, 18 (1966) "Spatial Dispersion in Crystal Optics and the Theory of Excitons".

K. Akasaka, J. Chem. Phys. 45, 90 (1966) "Spin-Lattice Relaxation in Organo-Sulfur Radicals".

I.A. Akimov and G.A. Korsunovskii, Opt. & Spect. 8, 223 (1960) "Influence of Some Electronic Compounds on the Absorption and Luminescence Spectra of Magnesium Phthalocyanin Solutions".

A.C. Albrecht and W.T. Simpson, J. Chem. Phys. 23, 1480 (1955) "Low Resolution Electronic Spectrum of Crystalline para-Dimethoxybenzene with Application to Benzene".

W.G. Alcock and G.C. Pimentel, J. Chem. Phys. 48, 2373 (1968) "Infrared Spectrum of Dichlorine Dioxide, $(ClO)_2$".

A.N. Aleksandrov, A.N. Sidorov, and N.G. Yaroslavskii, Opt. & Spect. 22, 307 (1967) "Long-Wavelength Infrared Absorption Spectra of Phthalocyanines".

P.W. Alexander, A.R. Lacey and L.E. Lyons, J. Chem. Phys. 34, 2200 (1961) "Absorption and Luminescence Origins in Anthracene Crystals".

M.V. Alfimov and Yu. B. Shekk, Khim. Vys. Energ. 1, 235 (1967) "Comparative Study of the Radio- and Photoluminescence of Solid Organic Solutions".

E.J. Allin, W.F.J. Hare and R.E. MacDonald, Phys. Rev. 98, 554 (1955) "Infrared Absorption of Liquid and Solid Hydrogen".

E.J. Allin, T. Feldman and H.L. Welsh, J. Chem. Phys. 24, 1116 (1956) "Raman Spectra of Liquid and Solid Hydrogen".

J.B. Allison and R.S. Becker, J. Chem. Phys. 32, 1410 (1960) "Effect of Metal Atom Perturbations on the Luminescence Spectra of Porphyrins".

E.D. Aluker and I.P. Mezina, Opt. & Spect. 22, 428 (1967) "The Mechanism of the Low-Temperature Decrease of Radioluminescence Yield".

L.L. Ames, D. White and D.E. Mann, J. Chem. Phys. 38, 910 (1963) "Infrared Absorption Spectra of Carbon Suboxide and Malononitrile in Solid Argon Matrices".

J.L. Amoros and M. Amoros, Molecular Crystals: Their Transformations and Diffuse Scattering, John Wiley, N.Y. (1968)

A. Anderson and G.E. Leroi, J. Chem. Phys. 45, 4359 (1966) "Far-Infrared Spectra of Crystalline Nitrogen and Carbon Monoxide".

E.A. Andreeshchev and I.M. Rozman, Opt. & Spect. 8, 435 (1960) "Fluorescence Quantum Yield of Certain Substances in Polystyrene".

E.A. Andreeshchev, S.F. Kilin, I.M. Rozman and V.I. Shirokov, Bull. Acad. Sci. USSR 27, 530 (1963) "Electronic Excitation Energy Transfer in Solid Solutions of Organic Substances".

W.L.S. Andrews, Ph.D. Thesis, University of California, Berkeley (1967) "Spectroscopic Studies of Reactions of Lithium Atoms in Inert Gas Matrices".

W.L.S. Andrews and G.C. Pimentel, J. Chem. Phys. 44, 2527 (1966) "Infrared Detection of Methyl Radical in Solid Argon".

W.L.S. Andrews and G.C. Pimentel, J. Chem. Phys. 44, 2361 (1966) "Infrared Spectrum, Structure, and Bonding of Lithium Nitroxide, LiON".

W.L.S. Andrews, J. Phys. Chem. 71, 2761 (1967) "Infrared Detection of Trichloromethyl Radical in Solid Argon".

L. Andrews, J. Chem. Phys. 47, 4834 (1967) "Infrared Spectrum of Methyl Lithium Monomer in Solid Argon".

L. Andrews and G.C. Pimentel, J. Chem. Phys. 47, 3637 (1967) "Infrared Spectrum of the Methyl Radical in Solid Argon".

L. Andrews and G.C. Pimentel, J. Chem. Phys. 47, 2905 (1967) "Visible Spectra of Lithium in Inert-Gas Matrices".

L. Andrews, J. Chem. Phys. 48, 979 (1968) "Infrared Spectrum of Dichlorocarbene in Solid Argon".

L. Andrews, J. Chem. Phys. 48, 972 (1968) "Infrared Spectrum of the Trichloromethyl Radical in Solid Argon".

L. Andrews, Tetrahedron Letters 12, 1423 (1968) "On the Infrared Spectra of Dichlorocarbene and the Trichloromethyl Radical in Solid Argon".

V.V. Antonov-Romanovskii, Bull. Acad. Sci. USSR, 21, 483 (1957) "New Results in the Field of Phosphorescence Research".

A.V. Aristov and B.Ya. Sveshnikov, Bull. Acad. Sci USSR, 27, 639 (1963) "Effect of Temperature on the Probability for Transition of Molecules to the Phosphorescent State".

A.V. Aristov and E.V. Viktorova, Opt. & Spect. 22, 340 (1967) "Determination of Certain Luminescent and Spectral Characteristics of Organic Phosphors in Binary Solvents".

A.V. Aristov and E.N. Viktorova, Opt. & Spect. 24, 283 (1968) "Phosphorescence and Fluorescence of Two-Component and Multicomponent Solutions of Biphenyl Derivatives".

A. Arkell, R.R. Reinhard and L.P. Larson, J. Am. Chem. Soc. 87, 1016 (1965) "Matrix Infrared Studies of OF Compounds".

A. Arkell, J. Am. Chem. Soc. 87, 4057 (1965) "Matrix Isolated Studies of OF Compounds. II. The O_2F Radical".

A. Arkell and I. Schwager, J. Am. Chem. Soc. 89, 5999 (1967) "Matrix Infrared Study of the ClOO Radical".

K. de Armond and L.S. Forster, Spectrochim. Acta 19, 1403 (1963) "Electronic Transitions in Chromium (III) Complexes. II. Emission Spectra and Π-Delocalization Parameters".

R.L. Armstrong, J. Chem. Phys. 44, 530 (1966) "Repulsive Interactions and Molecular Rotation in Inert-Gas Lattices".

R.A. Arndt and A.C. Damask, J. Chem. Phys. 45, 4627 (1966) "Conductivity and Polarization Phenomena in Phenanthrene Crystals".

G.M. Arnold and R. Heastie, Chem. Phys. Let. 1, 51 (1967) "Far Infra-red Absorption in Each Solid Phase of HCl and DBr".

L.B. Arnold, Jr., and G.B. Kistiakowsky, J. Am. Chem. Soc. 54, 1713 (1932) "Absorption Spectra in Solution at Low Temperatures".

R.K. Asundi, M. Jan-Khan and R. Samuel, Proc. Roy. Soc. Lond. 157A, 28 (1936) "Spectra of SeO and SeO_2".

P.W. Atkins and M.C.R. Symons, The Structure of Inorganic Radicals: An Application of Electron Spin Resonance to the Study of Molecular Structure, Elsevier, N.Y. and Amsterdam, (1967).

M. Atoji, J. Chem. Phys. 46, 1891 (1967) "Magnetic and Crystal Structures of CeC_2, PrC_2, NdC_2, TbC_2 and HoC_2 at Low Temperatures".

M.R. Atwood, M. Jean-Louis and H. Vu, J. Phys. 28, 31 (1967) "Agregation pour des Solutions de HCl et de HBr dans l'Argon Solide a -196°C et Spectres Infrarouges d'Absorption des Polymeres et des Copolymeres de ces Molecules".

A. Austin and H. Pelzer, Nat. 157, 693 (1946) "Linear 'Curves of Best Fit'".

I.G. Austin, B.D. Clay, C.E. Turner and A.J. Springthorpe, Solid State Commun. 6, 53 (1968) "Near and Far Infrared Absorption by Small Polarons in Semiconducting Nickleous Oxide and Cobaltous Oxide".

L. Azarraga, T.N. Misra and S.P. McGlynn, J. Chem. Phys. 42, 3720 (1965) "Delayed Fluorescence of Mixed Crystals".

T. Azumi and S.P. McGlynn, J. Chem. Phys. 37, 2413 (1962) "Polarization of the Luminescence of Phenanthrene".

T. Azumi and S.P. McGlynn, J. Chem. Phys. 38, 2773 (1963) "Delayed Fluorescence of Solid Solutions of Polyacenes".

T. Azumi and S.P. McGlynn, J. Chem. Phys. 39, 1186 (1963) "Delayed Fluorescence of Solid Solutions of Polyacenes. II. Kinetic Considerations".

T. Azumi and S.P. McGlynn, J. Chem. Phys. 39, 3533 (1963) "Delayed Fluorescence of Solid Solutions of Polyacenes. IV. The Origin of Excimer Fluorescence".

T. Azumi and H. Azumi, Bull. Chem. Soc. Japan 39, 1829 (1966) "The Energy of Excimer Luminescence of Naphthalene under a Variety of Geometrical Configurations".

T. Azumi and H. Azumi, Bull. Chem. Soc. Japan 39, 2317 (1966) "Lifetime of Excimer Fluorescence of Naphthalene".

T. Azumi and H. Azumi, Bull. Chem. Soc. Japan 40, 279 (1967) "A Simple Hueckel Treatment of the Energy of Excimer Luminescence".

T. Azumi, Y. Udagawa, M. Ito and S. Nagakura, J. Chem. Phys. 47, 4850 (1967) "Zeeman Splitting of the Phosphorescence of Pyrazine Crystal".

T. Azumi, M. Ito and S. Nagakura, Tech. Rep. of Inst. Solid State Phys., U. of Tokyo, series A, no. 290 (1967) "Zeeman Effect of Phosphorescence. II. Intensity Considerations on Pyrazine Crystal".

T. Azumi and S. Nagakura, Tech. Rep. of Inst. Solid State Phys., U. of Tokyo, series A, no. 309 (1968) "Zeeman Effect of Phosphorescence. III. Theory of Photoselection for Zeeman Split Phosphorescence".

T. Azumi and Y. Nakano, J. Chem. Phys. 50, 539 (1969) "Spin Polarization as a Probe to Measurements of Radiative and Radiationless Decay Constants for Each of the Three Triplet Subcomponents; Quinoxaline".

B

A. Baczynski und M. Czajkowski, Bull. Acad. Polon. Sci., Ser. Sci. Math., Astron., Phys. 7, 357 (1959) "The Metastable State of Dye Molecules".

Kh. S. Bagdasar'yan, R.I. Milyutinskaya and Yu. V. Kovalek, Khim. Vys. Energ. 1, 127 (1967) "Luminescence at Low Temperatures of γ-Irradiated Organic Glasses".

L. Bajema, M. Gouterman and B. Meyer, J. Mol. Spectry. 27, 225 (1968) "Spectra of Porphyrins. XI. Absorption and Fluorescence Spectra of Matrix Isolated Phthalocyanines".

N.G. Bakhshiev, Bull. Acad. Sci. USSR, 26, 1252 (1963) "Influence of the Solvent on the Intensity and Position of the Bands in the Electronic Spectra of Molecules".

N.G.Bakhshiev and I.V. Piterskaya, Opt. & Spect. 20, 437 (1966) "Universal Intermolecular Interactions and their Effect on the Positions of the Electron Spectra of Molecules in Two-Component Solutions. XII. The Dependence of the Absorption and Fluorescence Spectra of Phthalimide Derivatives on the Temperature and Aggregation State of the Solvent (+20 to -196°C)".

N.G. Bakhshiev and V.N. Korovina, Opt. & Spect. 22, 17 (1967) "Relationship Between the Observed and True Absorption Spectra of Molecules in Condensed Media. VI. Electronic Absorption Spectra of Certain Organic Dyes in Various States of Aggregation".

N.G. Bakhshiev, O.P. Girin and V.S. Libov, Opt. & Spect. 22, 124 (1967) "Relationship Between the Optical Characteristics of Condensed Media and the Spectroscopic Parameters of their Component Molecules".

J.D. Baldeschwieler and G.C. Pimentel, J. Chem. Phys. 33, 1008 (1960) "Light-Induced cis-trans Isomerization of Nitrous Acid Formed by Photolysis of Hydrazoic Acid and Oxygen in Solid Nitrogen".

G. Baldini, Phys. Rev. 128, 1562 (1962) "Ultraviolet Absorption of Solid Argon, Krypton, and Xenon".

G. Baldini, Phys. Rev. 136A, 248 (1964) "1s-2p Transition of H and D in Solid Argon".

B.A. Baldwin and H.W. Offen, J. Chem. Phys. 49, 2933 (1963) "Environmental Effects on Phosphorescence. III. Oxygen Quenching of Naphthalene Triplets in Compressed Polymethylmethacrylate".

B.A. Baldwin and H.W. Offen, J. Chem. Phys. 46, 4509 (1967) "Effects of High Pressures on the Phosphorescence of Aromatic Hydrocarbons".

B.A. Baldwin and H.W. Offen, J. Chem. Phys. 48, 53 (1968) "Environmental Effects on Phosphorescence. II. 'Activation Volumes' for Triplet Decay of Aromatic Hydrocarbons".

B. A. Baldwin and H. W. Offen, J. Chem. Phys. 48, 53 (1968) "Environmental Effects On Phosphorescence. II. 'Activation Volumes' For Triplet Decay of Aromatic Hydrocarbons".

B. A. Baldwin and H. W. Offen, J. Chem. Phys. 49, 2933 (1968) "Environmental Effects On Phosphorescence. III. Oxygen Quenching of Naphthalene Triplets in Compressed Polymethylmethacrylate".

B. A. Baldwin and H. W. Offen, J. Chem. Phys. 49, 2937 (1968) "Environmental Effects on Phosphorescence. IV. Triplet Decay of Halonaphthalenes in Compressed PMMA".

M. Balkanski, P. Moch and M. K. Teng, J. Chem. Phys. 46 1621 (1967) "Infrared Lattice Vibrations of $KNiF_3$ from Reflection Data at 300° and 90°K".

C. J. Ballhausen, Introduction To Ligand Field Theory, McGraw Hill, New York (1962).

E. Banks and R. Ward, J. Electrochem. Soc. 96, 297 (1949) "Luminescence and Conduction in Solid Solutions of Cerium Sulfide in Strontium Sulfide".

E. Banks, M. Greenblatt and S. Holt, J. Chem. Phys. 49, 1431 (1968) "80°K Crystal Spectrum of $Ca_2(CrO_4, PO_4)Cl$".

R. L. Barger and H. P. Broida, J. Chem. Phys. 37, 1152 (1962) "Absorption Spectrum of Carbon Vapor in Solid Argon at 4° and 20°K".

R. L. Barger and H. P. Broida, NBS Report 8200 (1963) "Absorption Spectrum and Intensity Effects of Barium in Solid Argon at 4°K".

R. L. Barger, Ph.D. Thesis, 1964, University of Colorado and NBS Report 8290, June 4, 1964, "Spectra of C_2 and C_3 in Frozen Gases at 4°K and 20°K".

R. L. Barger and H. P. Broida, J. Chem. Phys. 43, 2364 (1965) "Spectra of C_3 in Solidified Gases at 4° and 20°K".

C. S. Barrett, L. Meyer and J. Wasserman, J. Chem. Phys. 44, 998 (1966) "Argon-Oxygen Phase Diagram".

C. S. Barrett, L. Meyer and J. Wasserman, J. Chem. Phys. 45, 834 (1966) "Crystal Structure of Solid Hydrogen and Deuterium, and of Neon-Hydrogen and Neon-Deuterium Mixtures".

R. F. Barrow, M. W. Bastin and B. Longborough, Proc. Phys. Soc. 92, 518 (1967) "Rotational Analysis of Some Bands of Gaseous BaF".

E. Barsis and A. Taylor, J. Chem. Phys. 45, 1154 (1966) "Lattice Disorder In Some CaF_2-Type Crystals".

N. Basco and K. K. Yee, Chem. Comm. 24, 1255 (1967) "Spectrum of the AsCl Free-Radical".

N. Basco and K. K. Yee, Chem. Com. 21, 1146 (1961) "Spectrum of the PCl Free-Radical".

A. M. Bass and H. P. Broida, J. Mol. Spectry. 2, 42 (1958) "Absorption Spectra of Solids Condensed at Low Temperatures from Electric Discharges".

A. M. Bass and H. P. Broida, NBS monograph 12 (August 1,1960) "Stabilization of Free Radicals at Low Temperatures".

C. D. Bass and G. C. Pimentel, J. Am. Chem. Soc. 83, 3754 (1961) "Hydrogen Abstraction from Hydrocarbons by Methyl Radicals from the Photolysis of Methyl Iodide in Solid Nitrogen".

A. M. Bass and D. E. Mann, J. Chem. Phys. 36, 3501 (1962) "Absorption Spectrum of CF_2 Trapped in an Argon Matrix".

J. M. Bassler, P. L. Timms and J. L. Margrave, J. Chem. Phys. 45, 2704 (1966) "Evidence for the Existence of BF_3 Dimers in Argon and Krypton Matrices".

B. Batscha, Deut. Chem. Ges., Berichte 58, 187 (1925) "Uber die Phosphorescenz-Fahigkeit des Fluoresceins".

F. Baumgartner, E. Gunther and G. Scheibe, Z. Elektrochem. 60. 570 (1955) "Uber Stereoisomerie und angeregte Zustande einfacher Polymethinfarbstoffe".

R. S. Becker and M. Kasha in F. H. Johnson, The Luminescence of Biological Systems, AAAS, Wash. D. C. (1955) p.25, "Luminescence Spectroscopy of Molecules and the Photosynthetic System".

R. S. Becker and M. Kasha, J. Am. Chem. Soc. 77, 3669 (1955) "Luminescence Spectroscopy of Porphyrin-like Molecules Including the Chlorophylls".

E. D. Becker and G. C. Pimentel, J. Chem. Phys. 25, 224 (1956) "Spectroscopic Studies of Reactive Molecules by the Matrix Isolation Method".

E. D. Becker, G. C. Pimentel and M. Van Thiel, J. Chem. Phys. 26, 145 (1957) "Matrix Isolation Studies: Infrared Spectra of Intermediate Species in the Photolysis of Hydrazoic Acid".

R. S. Becker, Theory and Interpretation of Fluorescence and Phosphorescence, Interscience, N.Y. (1969).

J. Becquerel, Compt. Rend. 144, 132 (1907) "The Changes Produced in the Absorption Bands of Tysonite Crystals by a Magnetic Field".

M.M. Benarroche, Compt. Rend. 254, 1406 (1962) "Spectre d'Absorption du 2,6-Dimethylnaphtalene a Basse Temperature".

M.M. Benarroche, Compt. Rend. 254, 3520 (1962) "Spectres d'Absorption et de Fluorescence du Fluorene Cristallise pur a 4°K".

C. F. Bender and E. R. Davidson, J. Chem. Phys. 70, 2675 (1966) "A Natural Orbital Based Energy Calculation for Helium Hydride and Lithium Hydride".

J. E. Bennett, B. Mile and A. Thomas, Symp. on Combust. 11, 853 (1966) "Studies of the Formation, Structure and Reactivity of Peroxyl Radicals at Low Temperatures With a Rotating Cryostat".

S. W. Benson and J. H. Buss, J. Chem. Phys. 27, 1382 (1957) "Halogen-Catalyzed Decomposition of N_2O and the Role of the Hypohalite Radical".

S. W. Benson and K. H. Anderson, J. Chem. Phys. 31, 1082 (1959) "On the Trapping of Free Radicals of Oxygen and Chlorine".

K. W. Benz and H. C. Wolf, Z. Naturforsch. 19 a, 181 (1964) "Fluoreszenz und Energieubertragung in Phenanthren-Kristallen".

M. Beer and H. C. Longuet-Higgins, J. Chem. Phys 23, 1390 (19 (1955) "Anomalous Light Emission of Azulene".

M. Beer, J. Chem. Phys. 25, 745 (1956) "Electronic Spectra of Polyacetylenes".

R. L. Belford and J. W. Carmichael, Jr., J. Chem. Phys. 46, 4515 (1967) "Bis(3-Phenyl-2,4-Pentanedionato)Copper. II. Polarized Crystal Spectra".

A. A. Belyaeva, Yu. B. Predtechenskii and L. D. Shcherba, Opt. Spectry (USSR)(English Transl.) 24, 233 (1968) "Absorption Spectra of Lithium Atoms Stabilized in Noble-Gas Matrices".

M. U. Belyi and B. A. Okhrimenko, Ukrayin, Fiz. Zh. (USSR), Vol.9, No.10, 1059-67 (1964) "Effect of Temperature on the Luminescence and Absorption Spectra of Heavy Metal Salt Solutions. II. Investigations of Tin-Salt Solutions".

M. U. Belyi and B. A. Okhrimenko, Ukrayin. Fiz. Zh. (USSR), Vol. 9, No. 10, 1063-73 (1964) "Effect of Temperature on the Luminescence and Absorption Spectra of Heavy Metal Salt Solutions. III. Interpretation of the Spectra of Solutions Containing Tl^{+}, Pb^{2+}, Sn^{2+}, Sn^{4+} Ions".

W. Berdowski, Bull. L'Acad. Polon. de Sci. 11, 227 (1963) "Vibrational Levels and Eigenfunction of the HgA van der Waals Molecule".

I. B. Berlman, Int. Conf., N.Y. (1962) p. 62 "Luminescence of Organic and Inorganic Materials".

I.B. Berlman, Handbook of Fluorescence Spectra of Aromatic Molecules, Academic Press, N.Y. (1965).

A. Berne, G. Boato and M. De Paz, Nuovo Cimento 24, 1179 (1962) "Self-Diffusion Coefficient in Solid Argon".

E. R. Bernstein and S. D. Colson, J. Chem. Phys. 45, 3873 (1966) "Observation of the Second Triplet of Solid Benzene Using NO Perturbation".

E.R. Bernstein, S.D. Colson, R. Kopelman and G.W. Robinson, J. Chem. Phys. 48, 5596 (1968) "Electronic and Vibrational Exciton Structure in Crystalline Benzene".

E. R. Bernstein, S. D. Colson, D. S. Tinti and G. W. Robinson, J. Chem. Phys. 48, 4632 (1968) "Static Crystal Effects on the Vibronic Structure of the Phosphorescence, Fluorescence, and Absorption Spectra of Benzene Isotopic Mixed Crystals".

J. B. Birks, Proc. Phys. Soc. (London) 79, 494 (1962) "The Fluorescence and Scintillation Decay Times of Crystalline Anthracene".

J. B. Birks and L. G. Christophorou, Proc. Roy. Soc. (London) A 277, 571 (1964) "'Excimer' Fluorescence. IV. Solution Spectra of Polycyclic Hydrocarbons".

J. B. Birks and A. A. Kazzaz, Chem. Phys. Lett. 1, 307 (1967) "Experimental Determination of the Pyrene Crystal Excimer Interaction Potential".

J. B. Birks and I. H. Munro, Prog. Reaction Kinetics 4, 239 (1967) "The fluorescence Lifetimes of Aromatic Molecules".

G. Bischoe, Chem. News 53, 205 (1886) "Dr. Koch's Gelatin-Peptone Water-Test".

D. C. Biswas, Indian J. Phys. 30, 143 (1956) "Fluorescence of p-chlorotoluene in the Solid State at Low Temperature".

E.R. Bernstein and G.W. Robinson, J. Chem. Phys. 49, 4962 (1968) "Vibrational Exciton Structure in Crystals of Isotopic Benzenes".

H. J. Berstein and W. G. Schneider, J. Chem. Phys. 26, 157 (1957) "Proton Magnetic Resonance Spectrum of Naphthalene".

R. Bersohn and J. Isenberg, J. Chem. Phys 40, 3175 (1964) "Phosphorescence in Nucleotides and Nucleic Acids".

J. E. Bertie and E. Whalley, J. Chem. Phys. 46, 1271 (1967) "Optical Spectra of Orientationally Disordered Crystals. II. Infrared Spectrum of Ice Ih and Ice Ic from 360 to 50 cm^{-1}".

M. L. Bhaumik, H. Lyons and P. C. Fletcher, J. Chem. Phys. 38, 568 (1963) "Fluorescence Decay Times of Rare Earth Chelates".

M. L. Bhaumik and C. L. Telk, J. Opt. Soc. Am. 54, 1211 (1964) "Fluorescence Quantum Efficiency of Rare Earth Chelates".

M.L. Bhaumik and M.A. El-Sayed, J. Chem. Phys. 42, 787 (1965) "Mechanism and Rate of the Intramolecular Energy Transfer Process in Rare-Earth Chelates".

M.L. Bhaumik and M.A. El-Sayed, J. Phys. Chem. 69, 275 (1965) "Studies on the Triplet-Triplet Energy Transfer to Rare Earth Chelates".

G. Binsch, E. Heilbronner, R. Jankow and D. Schmidt, Chem. Phys. Lett. 1 135 (1967) "On the Fluorescence Anomaly of Azulene".

M.L. Bhaumik and M.A. El-Sayed, Appl. Optics Suppl. 2 of Chemical Lasers, 214 (1965) "Mechanism of Energy Transfer in Some Rare-Earth Chelates".

J. B. Birks and W. A. Little, Proc. Phys. Soc. (London) A 66, 921 (1953) "Photo-Fluorescence Decay Times of Organic Phosphors".

D. C. Biswas, Indian J. Phys. 30, 565 (1956) "Fluorescence Spectra of Methyl Benzoate m-Chlorotoluene and m-Bromotoluene"

D. C. Biswas, Indian J. Phys. 30, 407 (1956) "On the Fluorescence of Para-bromotoluene, Ortho-bromo and Ortho-chlorotoluene in the Solid State at Low Temperature".

D. C. Biswas, Indian J. Phys. 29, 503b (1955) "Raman Spectra of a Few Monosubstituted Benzene Compounds in the Solid State at Different Low Temperatures".

M. Bixon and J. Jortner, J. Chem. Phys. 48, 715 (1968) "Intramolecular Radiationless Transitions".

G. Black, Org. Finishing 7, 9 (1946) "Luminescence - Fluorescence - Phosphorescence".

M. Blackman, A. Egerton and E. V. Truter, Proc. Roy. Soc. 194, 147 (1948) "Heat Transfer by Radiation to Surfaces at Low Temperatures".

L. A. Blackwell, Y. Kanda and H. Sponer, J. Chem. Phys. 32, 1465 (1960) "Triplet-Singlet Emission Spectra of Xylenes in Crystalline State at 4.2° and 77°K, And in EPA at 77°K".

Yu. P. Blagoi, A. E. Butko, S. A. Mikhailenko and V. V. Yakuba, Russ. J. Phys. Chem. 41, 908 (1967) "Velocity of Sound in Liquid Krypton, Xenon and Methane".

N. W. Blake, D. S. McClure and H. Winston, Phys. Rev. 85, 754 (1952) "Electronic States of Molecular Crystals".

N. W. Blake and D. S. McClure, J. Chem. Phys. 29, 722 (1958) "Delayed Singlet-Singlet Emission from Molecular Crystals".

M. J. Blandamer, T. A. Claxton and M. F. Fox, Chem. Phys. Lett. 1, 203 (1967) "Thermal Anomalies in the Temperature Dependence of the Energy of the First Absorption Band Maximum of Iodide in Water".

G. Blasse and A. Bril, J. Chem. Phys. 45, 2350 (1966) "On the Eu^{3+} Fluorescence in Mixed Metal Oxides. III. Energy Transfer in Eu^{3+}-Activated Tungstates and Molybdates of the Type Ln_2WO_6 and Ln_2MoO_6".

G. Blasse, J. Chem. Phys 45, 2356 (1966) "On the Eu^{3+} Fluorescence of Mixed Metal Oxides. IV. The Photoluminescent Efficiency of Eu^{3+}-Activated Oxides".

G. Blasse and A. Bril, J. Chem. Phys. 45, 3327 (1966) "On the Eu^{3+} Fluorescnece in Mixed Metal Oxides. V. The Eu^{3+} Fluorescence in the Rocksalt Lattice".

G. Boato, Cryog. 4, 65 (1964) "The Solidified Inert Gases".

E. Boesman and D. Schoemaker, J. Chem. Phys. 37, 671 (1962) "Paramagnetic Resonance of the I_2-Center in KCl Doped with KI".

C. Bojarski, Acta Phys. Polon. 30, 169 (1966) "Resonance Quenching of Solid Solution Luminescence".

T. N. Bolotnikova, Izvest. Akad. Nauk S.S.R., Ser. Fiz. 23, 29 (1959) "Fluorescence Spectra of Frozen Crystalline Solutions of Simple Aromatic Hydrocarbons".

T. N. Bolotnikova, Opt Spectry. (USSR)(English Transl.) 7, 24 (1959) "On the Question of Interpretation of the Fluorescence Spectrum of Naphthalene".

T. N. Bolotnikova, Opt. Spectry. (USSR)(English Transl.) 7, 138 (1959) "Spectroscopy of Certain Simple Aromatic Hydrocarbons in Frozen Crystalline Solutions".

T. N. Bolotnikova, L. A. Klimova, G. N. Nersesova and L. F. Utkina, Opt. Spectry. (USSR)(English Transl.) 21, 237 (1966) "A Study of the Quasiline Fluorescence and Absorption Spectra of Anthracene at 77.3 and 4.3°K".

T. N. Bolotnikova, T. M. Naumova, F. I. Gurov and V. G. Kazachkov, Opt. Spectry. (USSR)(English Transl.) 24, 291 (1968) "Concentration Effect on the Decay Time of the Naphthalene and Phenanthrene Phosphorescence".

A. M. Bonch-Bruevich and A. V. Burlakov, Soviet Phys. Sol. State 8, 1034 (1966) "Electroluminescence Due to Unipolar Voltage Pulses and Mechanism of Luminescence Excitation".

R. Bonn, R. Metselaar and J. Van Der Elsken, J. Chem. Phys. 46, 1988 (1967) "Infrared-Absorption Spectra of Solid Solutions: The Rotatory Motions of Nitrate and Nitrite Ions in Alkali Halides".

R. Bonneau, J. Faure and J. Joussot-Dubien, Chem. Phys. Lett. 2, 65 (1968) "Singlet-Singlet Absorption and Intersystem Crossing From the $^1B_{3u-}$ State of Naphthalene".

V. A. Borgman, I. A. Zhmyreva, V. V. Zelinskii and V. P. Kolobkov, Soviet Phys. Doklady (English Transl.) 5, 324 (1960) "The Influence of Heavy Halogens on the Probability of Transition to a Metastable State and the Probabilities of Disactivation of This State".

M. D. Borisov and V. N. Vishnevski, Bull. Acad. Sci. USSR, Phys. Ser. (English Transl.) 20, 459 (1956) "Absolute Photoluminescence Efficiency of Anthracene and Naphthalene Crystals".

R. F. Borkman and D. R. Kearns, Chem. Comm. 48, 446 (1966) "Investigation of Singlet-Triplet Transitions by the Phosphorescence Excitation Method. Spectroscopic Determination of Intersystem Crossing Quantum Yields and Extinction Coefficients of Singlet-Triplet Transitions".

R. F. Borkman and D. R. Kearns, J. Chem. Phys. 46, 2333 (1967) "Heavy-Atom and Substituent Effects on S-T Transitions of Halogenated Carbonyl Compounds".

O. Bostanjoglo and L. Schmidt, Phys. Lett. 22, 130 (1966) "Excitons in Solid Argon".

S. Boudin, J. Chim. Phys. 27, 285 (1930) "Phosphorescence Des Solutions Glyceriques D'Eosine Influence Des Iodures".

L. F. H. Bovey and G. B. B. M. Sutherland, J. Chem. Phys. 17, 843 (1949) "Infrared Evidence for Free Rotation in the Solid State".

E. J. Bowen and A. H. Williams, Trans. Faraday Soc. 35, 765 (1939) "The Photo-Oxidation of Hydrocarbon Solutions".

E. J. Bowen, The Chemical Aspects of Light, Clarendon Press, Oxford (1946).

E. J. Bowen and E. Coates, J. Chem. Soc. (London) 1947, 105 "Solvent Quenching of Fluorescence".

E. J. Bowen and B. Brocklehurst, J. Chem. Soc. (London) 1954, 3875 "The Fluorescence Spectra of Coronene and 1:12 Benzoperylene at Low Temperatures".

E. J. Bowen and B. Brocklehurst, J. Chem. Soc. (London) 1955, 4320 "The Emission Spectra of Aromatic Hydrocarbons in Crystalline Paraffins at -180°".

E. J. Bowen, Ciba Rev. 12, 2 (1960) "Luminescence".

E. J. Bowen, Adv. in Photochem. 1, 23 (1963) "The Photochemistry of Aromatic Hydrocarbon Solutions".

M. T. Bowers and W. H. Flygare, J. Chem. Phys. 44, 1389 (1966) "Vibration-Rotation Spectra of Monomeric HCl, DCl, HBr, D Br, and HI in the Rare-Gas Lattices and N_2 Doping Experiments in the Rare-Gas Lattices".

M. T. Bowers, G. I. Kerley and W. H. Flygare, J. Chem. Phys. 45, 3399 (1966) "Vibration-Rotation Spectra of Monomeric HCl in the Rare-Gas Lattices. II.".

G. D. Brabson, Unpublished (1965) "Perturbation of the Equilibrium Internuclear Distance of S_2 by Frozen Inert Gas Matrices".

G. D. Brabson, Ph.D. Thesis, Univ. of California, Berkeley, (August, 1965) and UCLRL-11976, "Spectroscopic Investigation of High Temperature Species Isolated in Inert Gas Matrices".

H. Bradley, Jr. and A. D. King, Jr., J. Chem. Phys. 47, 1189 (1967) "Solubilities of Benzene, Naphthalene, and Anthracene in Compressed Argon and Oxygen: Evidence for Zero Stabilization of Aromatic-Oxygen Charge-Transfer Complexes".

J. W. Brasch and R. J. Jakobsen, Spectrochim. Acta 20, 1644 (1964) "The Use of a Polyethylene Matrix for Studying Dilution and Low-Temperature Effects in the Far-Infrared".

J.W. Brasch, Spectrochim. Acta 21, 1183 (1965) "High-Pressure Effects on Organic Liquids. Production and Infrared Spectra of Single Crystals".

A. Bree and R. Zwarich, J. Chem. Phys. 49, 3355 (1968) "Absorption Spectrum of Carbazole in a Fluorene Matrix".

R. G. Breene, Jr., The Shift and Shape of Spectral Lines, Pergamon Press, N. Y. (1961).

L. Brewer, B. Meyer and G. D. Brabson, J. Chem. Phys. 43, 3973 (1965) "Ultraviolet Absorption Spectrum of Mercury in Low-Temperature Matrices".

L. Brewer, G. D. Brabson and B. Meyer, J. Chem. Phys. 42, 1385 (1965) "Uv Absorption Spectrum of Trapped S_2".

L. Brewer, Nat. Acad. Sci.-Nat. Res. Counc., Publ. No. 1470, 3 (1967) "Future Developments in the Spectroscopy of High-Temperature Molecules".

L. Brewer, B. A. King, J. L. Wang, B. Meyer and G. F. Moore, J. Chem. Phys. 49, 5209 (1968) "Absorption Spectrum of Silver Atoms in Solid Argon, Krypton and Xenon".

A. Bril and W. L. Wanmaker, Phillips Tech. Rev. 27, 22 (1966) "New Phosphors for Colour Television".

J. S. Brinen and W. G. Hodgson, J. Chem. Phys. 47, 2946 (1967) "Application of Electron Spin Resonance in the Study of Triplet States. II. Effect of Triplet-Triplet Reabsorption of Quantitative Phosphorescnece Measurements".

B. Brocklehurst and G. C. Pimentel, J. Chem. Phys. 36, 2040 (1962) "Thermoluminescence of Solid Nitrogen after Electron Bombardment at 4.2°K".

M. S. Brodin, V. N. Vatuly'ov and S. V. Zakrevskyi, Ukrayin Fiz. Zh. (USSR) 9, 1150 (1965) "The Luminescence Appearing Under the Acid of a Ruby Laser Beam on Sodium-Uranyl-Acetate Crystals".

M. S. Brodin and S. V. Marisova, Opt. Spectry. (USSR) (English Transl.) 19/2, 132 (1965) "The Oscillator Strength of the First Electronic Transition of Crystalline Anthracene".

W.M. Brobeck and D.T. Scalise, University of California, Lawrence Radiation Laboratory, Berkeley, UCRL-3687 (1957) "UCRL Design Data of General Interest".

M. Brith and O. Schnepp, J. Chem. Phys. 39, 2714 (1963) "Removal of Orbital Degeneracy in an Asymmetric Molecular Environment".

M. Brith and D. White, Phys. Lett. 11, 203 (1964) "The Crystal Structure of Solid Deuterium".

M. Brith and O. Schnepp, Mol. Phys. 9, 473 (1965) "The Absorption Spectra of Solid CO and N_2".

M. Brody and H. Linschitz, Science 133, 705 (1961) "Fluorescence of Photosynthetic Organisms at Room and Liquid Nitrogen Temperatures".

H. P. Broida, in The Threshold of Space, M. Zelikoff, ed., Pergamon Press, N. Y. (1957) p.194, "Spectroscopic Studies of Solids Condensed at 4.2°K from Electric Discharge Through Nitrogen, Oxygen, Hydrogen, Water and Ammonia".

H. P. Broida and M. Peyron, J. Chem. Phys. 28, 725 (1958) "Evaporation of Active Species Trapped in a Solid Condensed from 'Discharged' Nitrogen".

H. P. Broida and M. Peyron, J. Chem. Phys. 32, 1068 (1960) Emission Spectra of N_2, O_2 and NO Molecules Trapped in Solid Matrices".

H. P. Broida and R. W. Nicholls, J. Chem. Phys. 32, 623 (1960) "Phosphorescence of Nitrogen and Nitrogen-Argon Deposited Films at 4.2°K".

H. H. Brongersma and L. J. Oosterhoff, Chem. Phys. Lett. 1, 169 (1967) "High Resolution Singlet-Triplet Excitation Spectra by Low Energy Electron Impact Spectroscopy".

V. L. Broude, V. S. Medvedev and A. F. Prikhot'ko, Fiz. Sbornik. 1, 14 (1957) "Spectral Study of Benzene Crystals at 20.4°K".

V. L. Broude, A. V. Prikhot'ko and E. I. Rashba, Soviet Phys.-Usp. (English Transl) 2, 38 (1959) "Some Problems of Crystal Luminescence".

V. L. Broude, E. F. Sheka and M. T. Shpak, Bull. Acad. Sci. (USSR) 27, 597 (1963) "Exciton Luminescence of Molecular Crystals".

D. M. Brown and F. S. Dainton, Trans. Far. Soc. 62, 1139 (1966) "Matrix Isolation of Unstable Lower Valency States of Metal Cations".

F. H. Brown, M. Eurst and H. P. Kallmann, J. Chim. Phys. 55, 688 (1958) "Energy Transfer in Liquid and Rigid Organic Systems".

H. W. Brown and G. C. Pimentel, J. Chem. Phys. 29, 883 (1958) "Photolysis of Nitromethane and of Methyl Nitrite in an Argon Matrix; Infrared Detection of Nitroxyl, HNO".

I. M. Brown and D. J. Sloop, Chem. Phys. Lett. 1, 579 (1968) "The Direct Process in the Spin-Lattice Relaxation of DPPH In a Rigid Matrix".

M. R. Brown, H. Thomas and J. S. S. Whiting, J. Chem. Phys. 50, 881 (1969) "Experiments on Er^{3+} in Sr F_2. I. Fluorescence Quantum Efficiencies and Lifetimes".

M. R. Brown, K. G. Roots and J. M. Williams, J. Chem. Phys. 50, 891 (1969) "Experiments on Er^{3+} in SrF_2. II. Concentration Dependence of Site Symmetry".

S. B. Broyde and S. S. Brody, J. Chem. Phys. 46, 3334 (1967) "Emission Spectra of Chlorophyll-α In Polar and Nonpolar Solvents".

L. C. Brunel and M. Peyron, C. R. Acad. Sci., Ser. C, 262, 1297 (1966) "Infrared Absorption of HCl Trapped in Solid Matrices".

J. Brynestad, H. L. Yakel and G. Pedro Smith, J. Chem. Phys. 45, 4652 (1966) "Temperature Dependence of the Absorption Spectrum of Nickel (II)-Doped $KMgCl_3$ and the Crystal Structure of $KMgCl_3$".

A. B. Buchler and W. Klemperer, J. Chem. Phys. 29, 121 (1961) "Infrared Spectra of the Alkaline-Earth Halides. I. Beryllium Fluoride, Beryllium Chloride, and Magnesium Chloride".

A. D. Buckingham, Proc. Roy. Soc. A 248, 169 (1958) "Solvent Effects in Infra-Red Spectroscopy".

A. D. Buckingham, Proc. Roy. Soc. A 255, 32 (1960) " A Theory of Frequency, Intensity and Band-Width Changes Due To Solvents in Infra-Red Spectroscopy".

P. Budininkas, Dissertation Abstr. 28 B (4), 1442 (1967) "Dissociation Energies of Gaseous Diatomic Sulfur, Selenium and Tellurium".

M. O. Bulanin and N. D. Orlova, Opt. Spectry. (USSR)(English Transl.) 15, 112 (1963) "Shapes of Infrared Absorption Bands and the Rotational Motion of Molecules in Liquids. Carbon Monoxide Solutions".

M. O. Bulanin, M. G. Melnik and M. V. Tonkov, Opt Spectry. (USSR)(English Transl.) 22, 389 (1967) "Induced Absorption Spectra of Condensed Systems: Theory of the Translation-Vibrational Branches in the Spectra of Liquid Hydrogen and Its Solutions".

J. Bullot, A. Deroulede and F. Kieffer, Int. Symp on Luminescence, Munich (1965). Verlag K Thiemig, Munich (1966) p.173 "Thermoluminescence Spectra of Some Gamma-Irradiated Molecular Solids at 77°K".

V. I. Burkov, V. A. Kizel, Yu. I. Krasilov, and V. N. Shamraev, Opt. Spectry. (USSR)(English Transl.) 22, 127 (1967) "Luminescence of Crystals and Solid Solutions of Benzyl".

E. A. Burshtein and Yu. A. Vladimirov, Biophys. 9, 193 (1964) "Measurement of the Absorption Spectra and the Spectra of Excitation of Luminescence of Biological Specimens in the Shortwave Ultraviolet Region".

V. T. Burtsey, R. A. Karasev and A. M. Samarin, Eksp. Tekh. Metody Vysokotemp. Izmer., Akad. Nauk SSSR, Inst. Met. 1966, 73 (Russ.) "Evaporation of Sulfur From Iron-Carbon-Sulfur Melts".

V. A. Butlar and D. M. Grebenshchikov, Opt. Spectry. (USSR) (English Transl.) 22, 413 (1967) "Phosphorescence Spectra of Coronene and Triphenylene in Carbon Tetrachloride".

J. P. Byrne, E. F. McCoy and I. G. Ross, Australian J. Chem. 18, 1589 (1965) "Internal Conversion in Aromatic and N-Heteroaromatic Molecules".

C

A. Cabana, G.B. Savitsky and D.F. Hornig, J. Chem. Phys. 39, 2942 (1963) "Vibration-Rotation Spectra of CH_4 Impurities in Xenon, Krypton and Argon Crystals".

B.R. Cairns and G.C. Pimentel, J. Chem. Phys.43, 3432 (1965) "Infrared Spectra of Solid α-and β-Oxygen".

M. Calvin and G.D. Dorough, Science 105, 433 (1947) "The Phosphorescence of Chlorophyll and Some Chlorin Derivatives".

A. Carelli and P. Pringsheim, Z. Physik 18, 317 (1923) "Uber die Photolumineszenz von Farbstoffen in Zahen Losungsmitteln.".

G.A. Carlson and G.C. Pimentel, J. Chem. Phys. 44, 4053 (1966) "Infrared Detection of Gaseous Trifluoromethyl Radical".

G. Castro and R.M. Hochstrasser, J. Chem. Phys. 44,412(1966) "Singlet-Triplet Absorption Spectra of Single Crystals of the ρ-Dihalogenated Benzenes".

G. Castro and R.M. Hochstrasser, J. Chem. Phys. 45, 4352 (1966) "Triplet State Excimers".

G. Castro and R.M. Hochstrasser, J. Chem. Phys. 46, 3617 (1967) "Singlet-Triplet Transitions in ρ-Dihalogenated Benzenes".

G. Castro and G.W. Robinson, J. Chem. Phys. 50, 1159 (1969) "Singlet-Triplet Absorption of Crystalline Naphthalene by High-Resolution Photoexcitation Spectroscopy".

E. Catalano and D.E. Milligan, J. Chem. Phys. 30, 45 (1959) "Infrared Spectra of H_2O, D_2O, and HDO in Solid Argon, Krypton, and Xenon".

E. Catalano, R.H. Sanborn and J.W. Frazer, J. Chem. Phys. 38, 2265 (1963) "On the Infrared Spectrum of Hydrazine Matrix-- Isolation Studies of the System NH_2NH_2:N_2. I.".

E. Catalano and R.H. Sanborn, J. Chem. Phys. 38, 2273 (1963) "On the Infrared Spectrum of Hydrogen Peroxide Matrix-- Isolation Studies of the System H_2O_2:N_2. II.".

R.F. Chaiken and D.R. Kearns, J. Chem. Phys. 45, 3966 (1966) "Intrinsic Photoconduction in Anthracene Crystals".

E.A. Chandross and J. Ferguson, J. Chem. Phys. 45, 3564 (1966) "Photodimerization of Crystalline Anthracene. The Photolytic Dissociation of Crystalline Dianthracene".

S.W. Charles and K.O. Lee, Trans. Faraday Soc. 61, 2081 (1965) "Interpretation of the Matrix-Induced Shifts of Vibration and Band Frequencies".

S.W. Charles, P.H.H. Fischer and C.A. McDowell, Chem. Phys. Letters 1, 451 (1967) "Electron Spin Resonance Study of the Photolytic Decomposition of CF_3I in Inert Matrices Between 4.2°K and 35°K".

J. N. Chaudhuri and S. Basu, Trans. Faraday Soc. 54, 1605 (1958) "Magnetic Perturbation of Triplet Transitions".

N.K. Chaudhuri and S.C. Ganguly, Proc. Roy. Soc. (London) A 259, 419 (1960) "The Absorption and Fluorescence Spectra of Naphthalene Molecules in Anthracene Crystals".

N.K. Chaudhuri and M.A. El-Sayed, J. Chem. Phys. 42, 1947 (1965) "Concentration Depolarization of the Phosphorescence Emission".

N.K. Chaudhuri and M.A. El-Sayed, J. Chem. Phys. 43, 1424 (1965) "Host-Crystal Effects on the Mechanism of the Phosphorescence Process of Aromatic Hydrocarbons".

N.K. Chaudhuri and M.A. El-Sayed, J. Chem. Phys. 43, 1424 (1965) "Out-of-Plane Polarization in the Fluorescence Emission of Naphthalene-d_8 in Durene".

N.K. Chaudhuri and M.A. El-Sayed, J. Chem. Phys. 44, 3728 (1966) "Host-Crystal Effects on the Mechanism of the π,π* Phosphorescence. II. N-Heterocyclics".

S. Cheng-Tsai and G.W. Robinson, J. Chem. Phys. 49, 3184 (1968) "Phosphorescence and the True Lifetime of Triplet States in Fluid Solutions".

A.S. Cherkasov. Bull. Acad. Sci. USSR, Phys. Ser. 20 (1956) "Absorption and Fluorescence Spectra and the Quantum Efficiency of Fluorescence of Certain Meso-Derivatives of Anthracene".

A.S. Cherkasov, Opt. & Spect. USSR (Engl. trans.) 7, 211 (1959) "Absorption Spectra, Fluorescence Spectra and Quantum Yields of Fluorescence of Some Methyl-and Methyl-meso-arylanthracenes".

A.S. Cherkasov and T.M. Vember, Opt. & Spect. USSR (Engl. trans.) 4, 319 (1959) "The Influence of Oxygen on Photochemical Transformations and the Concentration Quenching of Fluorescence of some Anthracene Derivatives".

G.T.J. Chilton, Spectrochim. Acta 16, 979 (1960) "Dewar Vessel for the Infrared Spectroscopy of Solids at Low Temperature".

D.A. Chisholm and H.L. Welsh, Can. J. Phys. 32, 291 (1954) "Induced Infrared Absorption in Hydrogen and Hydrogen-Foreign Gas Mixtures at Pressures up to 1500 Atmospheres".

E.V. Chisler, Opt. & Spect. 22, 313 (1967) "Temperature Dependence of the Intensity of Raman Spectra of Crystals. Second-Order Spectra".

Z.A. Chizhikova and M.D. Galanin, Soviet Phys. JETP 3, 115 (1956) "Gamma and Photoluminescence Yields in Organic Crystals".

C.W. Cho, E.J. Allin and H.L. Welsh, J. Chem. Phys. 25, 371, (1956) "Structure of the Infrared 'Atmospheric' Bands in Liquid Oxygen".

D.P. Chock and S.A. Rice, J. Chem. Phys. 49, 4345 (1968) "Cooperative Excitons in a Crystal with Two Molecules per Unit Cell".

D.P. Chock, J. Jortner and S.A. Rice, J. Chem. Phys. 49, 610 (1968) "Theory of Radiationless Transitions in an Isolated Molecule".

H. Chomse, Z. Anorg. u. Allgem. Chem. 233, 140 (1937) "Uber Organo-Phosphore mit Anorganischem Grundmaterial. I. (Phosphore auf der Basis von Mono-Erdalkaliphosphaten und Freien Phosphorsauren)".

H. Chomse, Z. Anorg. u. Allgem. Chem. 233, 145 (1937) "Uber Organo-Phosphore mit Anorganischem Grundmaterial. II. (Sauerstoffempfindliche Borsaure-Phosphore)".

H. Chomse and W. Lutzenberger, Z. Anorg. u. Allgem. Chem. 238, 236 (1938) "Uber Organo-Phosphore mit Anorganischem Grundmaterial. III. Lumineszenzfahige Erdalkalikarbonate".

Chowdhury, M. and L. Goodman, J. Chem. Phys. 38, 2979 (1963) "Nature of S-Tetrazine Emission Spectra".

T.L. Chu and S.I. Weissman, J. Chem. Phys. 22, 21 (1954) "Symmetry Classification of the Energy Levels of Some Triarylmethyl Free Radicals and Their Cations".

I. Chu-Cheng and G.M. Barrow, J. Chem. Phys. 43, 1430 (1965) "Trapping of Neutral Molecules in Ionic Matrices".

A. Ciais, Compt. Rend. 250, 1243 (1960) "Un Modèle Classique Simple de l'Exciton Organique".

A. Ciais, J. Chim. Phys. 58, 190 (1961) "Structure Fine des Spectres de Luminescence de Molécules Organiques en Solutions Cristallisées".

R.H. Clarke and R.M. Hochstrasser, J. Chem. Phys. 46, 4532 (1967) "Electronic Zeeman Effect in Anthracene".

R.H. Clarke and R.M. Hochstrasser, J. Chem. Phys. 49, 3313 (1968) "Electronic Zeeman Effect in the Naphthalene Crystal".

T.A. Claxton, D.P. Craig and T. Thirimamachandran, J. Chem. Phys. 35, 1525 (1961) "Crystal Splitting of the Anthracene 3800 Å System".

E. Clementi and M. Kasha, J. Chem. Phys. 26, 956 (1957) "Spin-Orbital Perturbation in Cyanine Dyes Absorbed on Surfaces Containing High-Z Atoms".

E. Clementi and M. Kasha, J. Mol. Spectry. 2, 297 (1958) "Spin-Orbital Interaction in N-Heterocyclic Molecules. General Results in a Cylindrical Potential Approximation".

M. Clouter and G.P. Gush, Phys. Rev. Letters, 15, 200 (1965) "Change in the Crystal Structure of Solid Normal Hydrogen Near 1.5°K".

E.L. Cochran, F.J. Adrian and V.A. Bowers, J. Chem. Phys. 36, 1938 (1962) "ESR Detection of the Cyanogen and Methylene Imino Free Radicals".

E.L. Cochran, F.J. Adrian and V.A. Bwoers, J. Chem. Phys. 40, 213 (1964) "ESR Study of Ethynyl and Vinyl Free Radicals".

R. Coffman and D.S. McClure, Can. J. Chem. 36, 48 (1958) "The Electronic Spectra of Crystalline Toluene, Dibenzyl, Diphenylmethane, and Biphenyl in the Near Ultraviolet".

B.J. Cohen and L. Goodman, J. Chem. Phys. 46, 713 (1967) "Radiationless Paths in the Diazines".

E.H. Coker and D.E. Hofer, J. Chem. Phys. 48, 2713 (1968) "Infrared Spectra of Borohydride Ions in Alkali Halide Single Crystals".

T. Cole, H.O. Pritchard, N.R. Davidson and H.M. McConnell, Molec. Phys. 1, 406 (1958) "Structure of the Methyl Radical".

S.D. Colson and E.R. Bernstein, J. Chem. Phys. 43, 2661 (1965) "First and Second Triplets of Solid Benzene".

S.D. Colson, J. Chem. Phys. 45, 4746 (1966) "Absorption Spectra of Strained Benzene Crystals at Low Temperature".

S.D. Colson, R. Kopelman and G.W. Robinson, J. Chem. Phys. 47, 27 (1967) "Frenkel Exciton Selection Rules for $k \neq 0$ Transitions in Molecular Crystals".

S.D. Colson, D.M. Hanson, R. Kopelman and G.W. Robinson, J. Chem. Phys. 48, 2215 (1968) "Direct Observation of the Entire Exciton Band of the First Excited Singlet States of Crystalline Benzene and Naphthalene".

S.D. Colson, J. Chem. Phys. 48, 3324 (1968) "Location of the Fourth, Forbidden Factor Group Component of the $^1B_{2u}$ State of Crystalline Benzene".

S.D. Colson and G.W. Robinson, J. Chem. Phys. 48, 2550 (1968) "Trap-Trap Triplet Energy Transfer in Isotopic Mixed Benzene Crystals".

J.J. Comeford, Ph.D. Thesis, Georgetown University, 1966 "Low Temperature Molecular Spectroscopy of Matrix Isolated Systems".

J.G. Conway, J. Inorg. Nucl. Chem. 14, 303 (1960) "Absorption Spectrum of Pm^{+3} in D_2O, DCl".

J.G. Conway and J.B. Gruber, J. Chem. Phys. 32, 1586 (1960) "Luminescence Spectrum of $PmCl_3$".

J.G. Conway, J.B. Gruber, E.K. Hulet, R.J. Morrow and R.G. Gutmacher, J. Chem. Phys. 36, 189 (1962) "Absorption and Self-Luminescence Spectra of $Cf^{3+}(5f^{9})$".

J.G. Conway, B. Meyer, J.J. Smith and L.J. Williamson, J. Chem. Phys. 51, (1969) "Zeeman Effect on Phosphorescent Lifetime of Matrix Isolated SO_2".

D.H. Cooper, Rev. Sci. Instr. 37, 1407 (1966) "Estimation of Fluorescent Decay Times".

R.M.J. Cotterill and M. Doyama, Phys. Let. 25A, 35 (1967) "Formation Energies of Vacancies and Interstitials in Solid Krypton".

C. Coupron, R. Lochet, J. Meyer and A. Rousset, Compt. Rend. 250, 3095 (1960) "Luminescence Moleculaire du Benzène en Solution Étendue dans le Cyclohexane à la Temperature de l'Azote Liquide".

R.F. Cozzens and R.B. Fox, J. Chem. Phys. 50, 1532 (1969) Intramolecular Triplet Energy Transfer in Poly (1-vinylnaphthalene)".

A. Crane and H.P. Gush, Can. J. Phys. 44, 373 (1966) "The Induced Infrared Absorption Spectrum of Solid Deuterium and Solid Hydrogen Deuteride".

G.A. Crosby and M. Kasha, Spectrochim. Acta 10, 377 (1958) "Intramolecular Energy Transfer in Ytterbium Organic Chelates".

G.A. Crosby, R.E. Whan and R.M. Alire, J. Chem. Phys. 34, 743 (1961) "Intramolecular Energy Transfer in Rare Earth Chelates. Role of the Triplet State".

G.A. Crosby, ACS 24th Northwest Regional Meeting, Salt Lake City,(June, 1969) "Charge Transfer Luminescence".

D.R. Crosley and R. Bersohn, J. Chem. Phys. 45, 4353 (1966) "Detection of Hydrogen Atoms and Free Radicals During the Photolysis of Ethane".

D. Cubicciotti, Nat. Acad. Sci. - Nat. Res. Counc., Publication no. 1470, 53 (1967) "Problem Areas in High-Temperature Chemistry".

W.R. Cullen and R.M. Hochstrasser, J. Mol. Spectry. 5, 118 (1960) "The Electronic Spectra of the Arylarsines. Part I. The Nature of the Transitions in the Phenylarsines and the Relative Influence of $-CH_3$ and $-CF_3$ Groups".

W.R. Cullen, B.R. Green and R.M. Hochstrasser, J. Inorg. Nucl. Chem. 27, 641 (1965) "Spectra of Arylarsines--II. Spectral Manifestations of Charge Transfer Character".

B.B. Cunningham, D.M. Gruen, J.G. Conway and R.D. McLaughlin, J. Chem. Phys. 24, 1275 (1956) "Fluorescence Spectrum of Pu^{+3} in $LaCl_3$".

M. Curie, Fluorescence and Phosphorescence, Hermann et Cie, Paris (1946).

J. Czekalla, G. Briegleb, W. Herre and H.J. Vahlensieck, Z. Elektrochem. 63, 715 (1959).

W.G. Dauben, G.C. Pimentel and C.W. Vaughan, Jr., J. Am. Chem. Soc. 77, 2886 (1955) "The Infrared Intensity of the C-D Stretching Vibration in Deuterobenzene, m-Deuteronitrobenzene and m-Deuteroaniline".

A.S. Davydov, Zhur. Esksp. Teor. Fiz. 18, 210 (1948) "Theory of Absorption Spectra of Molecular Crystals".

A.S. Davydov, Izvest. Akad. Nauk SSSR, Ser. Fiz. 15, 605 (1951) "Theory of Luminescence of Molecular Crystals".

A.S. Davydov, Theory of Molecular Excitons, translated from the Russian text by M. Oppenheimer, Jr., and M. Kasha, McGraw-Hill, N.Y. (1962).

W.R. Dawson, J.L. Kropp and M.W. Windsor, J. Chem. Phys. 45, 2410 (1966) "Internal-Energy-Transfer Efficiencies in Eu^{3+} and Tb^{3+} Chelates Using Excitation to Selected Ion Levels".

W.R. Dawson and J.L. Kropp, J. Phys. Chem. 73, 693 (1969) "Radiative and Radiationless Processes in Aromatic Molecules (77°K up)".

P. Day and Chr. K. Jørgensen, Chem. Phys. Letters 1, 507 (1968) "Electron Transfer Bands of Hexachloro-Iridate (IV) at 20°K".

P. Debye and J.O. Edwards, Science 116, 143 (1952) "A Note on the Phosphorescence of Proteins".

M.S. De Groot and J.H. Van der Waals, Mol. Phys. 3, 190 (1960) "Paramagnetic Resonance in Phosphorescent Aromatic Hydrocarbons. II. Determination of Zero-Field Splitting from Solution Spectra".

M.S. De Groot and J.H. Van Der Waals, Mol. Phys. 4, 189 (1961) "The Effect of Deuterium and Chlorine Substitution on Triplet→ Singlet Transition Probabilities in Napthalene".

M.S. De Groot, I.A. M. Hesselmann and J.H. Van Der Waals, Mol. Phys. 10, 91 (1965) "Electron Resonance of Phosphorescent Mesitylene".

M.S. De Groot, I.A.M. Hesselmann and J.H. Van Der Waals, Mol. Phys. 13, 583 (1967) "Electron Resonance of Phosphorescent Benzene in a Single Crystal".

M.S. De Groot, I.A.M. Hesselmann and J.H. Van Der Waals, Mol. Phys. 12, 259 (1967) "Phosphorescence and Spin Polarization. A Preliminary Report".

M.S. De Groot, I.A.M. Hesselmann and J.H. Van der Waals, Int. Coll. #164, "La Structure Hyperfine Magnetique des Atomes et des Molecules", Paris (1966), CNRS, ed. p. 385 (1967).

M.S. De Groot, Mol. Phys. 16, 61 (1969) "ESR in Phosphorescent Aromatic Hydrocarbons. V. Benzene in Perdeutero Benzene".

M.S. De Groot, I.A.M. Hesselmann and J.H. Van Der Waals, Mol. Phys. 16, 61 (1969) "ESR in Phosphorescent Aromatic Hydrocarbons. VI. Mesitylene in B-Trimethylborazole".

R.L. De Groot and G.J. Hoytink, J. Chem. Phys. 46, 4523 (1967) "Triplet-Triplet Transitions in Naphthalene".

S.R. De Groot and C.A. Ten Seldam, Physica 12, 669 (1946) "On the Energy Levels of a Model of the Compressed Hydrogen Atom".

C.W. DeKock and D.M. Gruen, J. Chem. Phys. 49, 4521 (1968) "Charge-Transfer Spectra of Matrix-Isolated 3d Transition-Metal Dichlorides".

C. Deloupy, J. Barcelo and G. Volat, J. Phys. (Paris) Suppl. 5-6, 49 (1966) "Adaptation of an Infrared Spectrometer to Obtain Reflection Spectra at Low Temperature".

W.B. DeMore, Ph.D. Thesis, California Institute of Technology, Pasadena, Calif. (1958) "Chemical Processes in Rigid Media at Low Temperatures".

W.B. DeMore and N. Davidson, J. Am. Chem. Soc. 81, 5869 (1959) "Photochemical Experiments in Rigid Media at Low Temperatures. I. Nitrogen Oxides and Ozone".

W.B. DeMore, H.O. Pritchard and N. Davidson, J. Am. Chem. Soc. 81, 5874 (1959) "Photochemical Experiments in Rigid Media at Low Temperatures. II. The Reactions of Methylene, Cyclopentadienylene and Diphenylmethylene".

M. Denariez, J. Chim. Phys. 62, 323 (1965) "Etude par Spectroscopie IR des Bandes de Vibration CH du Chloroforme et du Chloroforme Deutere a l'Etat Solide".

L.G. De Shazer and L.G. Komai,J. Am. Opt. Soc. 55, 940 (1965) "Fluorescence Conversion Efficiency of Neodymium Glass".

D. Detry, J. Drowart, P. Goldfinger, H. Keller and H. Rickert, Z. Phys. Chem 55, 314 (1967) "Zur Thermodynamik von Schwefeldampf. Massenspektrometrische Untersuchungen mit der Elektrochemischen Knudsen-Zelle".

H. DeVoe, J. Chem. Phys. 41, 393 (1964) "Optical Properties of Molecular Aggregates. I. Classical Model of Electronic Absorption and Refraction".

J. Dewar, Proc. Roy. Soc. (London) 55, 340 (1895) Oral communication, April 19, 1895 meeting.

J. Dewar, Proc. Roy. Inst. (London) 14,665 (1895)

J. Dewar, Rev. Am. Chem. Res. 7, 150 (1901)

J. Dewar, Proc. Roy. Soc. (London) 68, 360 (1901) "The Nadir of Temperature, and Allied Problems".

D.L. Dexter, J. Chem. Phys. 21, 836 (1953) "A Theory of Sensitized Luminescence in Solids".

D.L. Dexter and J.H. Schulman, J. Chem. Phys. 22, 1063 (1954) "Theory of Concentration Quenching in Inorganic Phosphors".

D.L. Dexter, Sol. State Phys. 6, 355 (1958) "Theory of Optical Properties of Imperfections in Nonmetals".

D.L. Dexter, Rad. Res. 20, 118 (1963) "Optical Absorption by a Pair of Ions".

D.L. Dexter and R.S. Knox, Excitons, Interscience, N.Y. (1965)

Y. Diamant, R.M. Hexter and O. Schnepp, J. Mol. Spectry. 18, 158 (1965) "The Near Ultraviolet Spectra of Benzene in Inert Solid Solutions".

V.E. DiGiorgio and G.W. Robinson, J. Chem. Phys. 31, 1678 (1959) "Rotational Fine Structure in the $^3A_2 \leftarrow {}^1A_1$ $\Pi^* \leftarrow \eta$ Transition of Formaldehyde".

C. Dijkgraaf and G.J. Hijtink, Tetrahedron Let. Suppl. 2, 179 (1963) "Environmental Effects on Singlet-Triplet Transitions in Aromatic Molecules".

P.P. Dikun and B.Ya. Sveshnikov, Zhur. Eksptl. Teoret. Fiz. 19, 1000 (1949) "Phosphorescence Spectra of Benzene and its Methyl Derivatives".

P.P. Dikun and V.Ya. Sveshnikov, Doklady Akad. Nauk SSSR 65, 637 (1949) "The Phosphorescence Spectrum of Benzene".

P.P. Dikun, A.A. Petrov and B.J. Sveshnikov, Zh. Eksperim. i Teor. Fiz. 21, 150 (1951) "Duration of the Phosphorescence of Benzene and its Derivatives"

R.N. Dixon. Proc. Int. Spectroscopy Conf., Bombay, India (1967) p. 176

E.R. Dobbs and B.F. Figgins, Nature 178, 483 (1956) "Density and Expansivity of Solid Argon".

E.R. Dobbs and G.O. Jones, Repts. Progr. Phys. 20, 516 (1957) "Theory and Properties of Solid Argon".

P.B. Dorain and R.G. Wheeler, J. Chem. Phys. 45, 1172 (1966) "Optical Spectrum of Re^{4} in Single Crystals of K_2PtCl_6 and Cs_2ZrCl_6 at 4.2°K".

P.B. Dorain, H.H. Patterson and P.C. Jordan, J. Chem. Phys. 49, 3845 (1968) "Optical Spectra of Os^{4+} in Single Cubic Crystals at 4.2°K".

G.D. Dorough and K.T. Shen, J. Am. Chem. Soc. 72, 3939 (1950) "A Spectroscopic Study of N-H Isomerism in Porphyrin Free Bases".

F. Dorr, Z. Elektrochem. 61, 950 (1957) "Absorptions und Lumineszenzspektren von Ketonen".

F. Dorr and H. Gropper, Z. Elektrochem. 67, 193 (1963) "Die Polarization der Triplett-Singulett-Phosphoreszenz Einiger Aromaten und Heterocyclen".

A.E. Douglas, Astrophys. J. 114, 466 (1951) "Laboratory Studies of the λ 4050 Group of Cometary Spectra".

A.E. Douglas, J. Chem. Phys. 45, 1007 (1966) "Anomalously Long Radiative Lifetimes of Molecular Excited States".

P. Douzu, J.C. Franco, M. Haus and M. Ptak, J. Chim. Phys. 58, 926 (1961) "Les Approches Expérimentales du Comportement Supra-moleculaire des Acides Nucléiques: Leur Luminescence de Longue Durée".

D.A. Dows, G.C. Pimentel and E. Whittle, J. Chem. Phys. 23, 1606 (1955) "Infrared Spectra of Intermediate Species in the Formation of Ammonium Azide from Hydrazoic Acid".

D.A. Dows, E. Whittle and G.C. Pimentel, J. Chem. Phys. 23, 1475 (1955) "Infrared Spectrum of Solid Ammonium Azide: A Vibrational Assignment".

H. Dreeskamp and M. Burton, Phys. Rev. Letters 2, 45 (1959) "Measurement of Fast Luminescence Decay Times".

K. Dressler and D.A. Ramsay, Phil. Trans. Roy. Soc. Lond. 251A, 553 (1959) "The Electronic Absorption Spectra of NH_2 and ND_2".

K. Dressler and O. Schnepp, J. Chem. Phys. 33, 270 (1960) "Absorption Spectra of Solid Methane, Ammonia, and Ice in the Vacuum Ultraviolet".

K. Dressler, J. Quant. Spect. Rad. Trans. 2, 683 (1962) "Absorption Spectroscopy of Condensed Gases at Low Temperatures".

I.B. Dubinskii, Bull. Acad. Sci. USSR, Phys. Ser. (Engl. trans.) 23, 111 (1959) "Photoluminescence of Phthalic Acid and Benzoic Acid Esters".

J. Duchesne and B. Rosen, Physica 8, 540 (1941) "Recherches sur le Spectre d'Absorption de la Molecule SeO_2".

J. Duchesne and B. Rosen, J. Chem. Phys. 15, 631 (1947) "Contribution to the Study of Electronic Spectra of Bent Triatomic Molecules".

W.W. Duley, Phys. Let. 19, 361 (1965) "Vacuum-Ultraviolet Absorption Spectra of Mercury Atoms Trapped in Inert-Gas Matrices at Low Temperatures".

W.W. Duley, Nature 210, 624 (1966) "Absorption Spectra of Cadmium and Zinc Atoms Trapped in Noble Gas Matrices".

W.W. Duley, Proc. Phys. Soc. 88, 1049 (1966) "Crystal Field Parameters from the Ultra-violet Absorption Spectra of Mercury-Doped Inert-Gas Matrices".

W.W. Duley, Proc. Phys. Soc. 91, 976 (1967) "The Spectroscopy of Metal Atoms Trapped in Low-Temperature Matrices of the Inert Gases: Cadmium and Zinc".

and W.R.S. Garton,
W.W. Duley, Proc. Phys. Soc. 92, 830 (1967) "The Spectroscopy of Metal Atoms Trapped in Low-Temperature Matrices of the Inert Gases: Indium".

W.W. Duley, Proc. Phys. Soc. 90, 263 (1967) "The Spectroscopy of Metal Atoms Trapped in Low-Temperature Matrices of the Inert Gases: Mercury".

A.B.F. Duncan in Chemical Applications of Spectroscopy, W. West, ed., Interscience, N.Y. (1956) p. 581 "Electronic Spectra in the Visible and Ultraviolet Regions".

T.M. Dunn, in Modern Coordination Chemistry: Principles and Methods, J. Lewis, ed., Interscience, N.Y. (1960) p. 229, "The Visible and Ultra-Violet Spectra of Complex Compounds".

F. DuPre and A. Daniels, Signal (September, 1965) "Miniature Refrigerator Opens New Possibilities for Cryo-Electronics".

J.R. Durig, S.F. Bush and F.G. Baglin, J. Chem. Phys. 49, 2106 (1968) "Infrared and Raman Investigation of Condensed Phases of Methylamine and Its Deuterium Derivatives".

R.H. Dyck and D.S. McClure, J. Chem. Phys. 36, 2326 (1962) "Ultraviolet Spectra of Stilbene, p-Monohalogen Stilbenes, and Azobenzene and the trans to cis Photoisomerization Process".

J.W. Eastman, J. Chem. Phys. 49, 4617 (1968) "Fluorescence of Benzene. The Effects of Solvent and Temperature on the Quantum Yield".

W.A. Eaton and R.M. Hochstrasser, J. Chem. Phys. 46, 2533 (1967) "Electronic Spectrum of Single Crystals of Ferricytochrome-c".

A.J. Eatwell and B.L. Smith, Phil. Mag. 6, 461 (1961) "Density and Expansivity of Solid Xenon".

R. Eckert and H. Kuhn, Z. Elektrochem. 64, 356 (1960) "Richtungen der Übergangsmomente der Absorptionsbanden von Polyenen, Cyaninen und Vitamin B_{12} aus Dichroismus und Fluoreszenzpolarisation".

P. Ehret, Ph.D. Thesis, "Elektron-Kern-Doppelresonanz-Untersuchung am metastabilen Triplett-Zustand des Naphthalin Moleküls", Stuttgart (1968).

P. Ehret, G. Jesse and H.C. Wolf, Z. Naturforsch. 23, 195 (1968) "ENDOR-Untersuchungen am Metastabilen Triplett-Zustand des Naphthalin-Moleküls".

K.B. Eisenthal and M.A. El-Sayed, J. Chem. Phys. 42, 794 (1965) "Heavy-Atom Effects on Radiative and Radiationless Processes in Charge-Transfer Complexes".

M.A. El-Bayoumi and M. Kasha, J. Chem. Phys. 34, 2181 (1961) "Energy Transfer in Hydrogen-Bonded N-Heterocyclic Complexes and Their Possible Role as Energy Sinks".

Y. Elkana, J. Feitelson and E. Katchalski, J. Chem. Phys. 48, 2399 (1968) "Effect of Diffusion on Transfer of Electronic Excitation Energy".

T.B. El-Kareh and H.C. Wolf, Z. Naturforsch. 22a, 1242 (1967) "Die Abklingdauer der Fluoreszens von Naphthalin-Kristallen".

Z.M. El Saffar, J. Chem. Phys. 45, 4643 (1966) "Study of the NMR Results in Some Crystalline Hydrates".

M.A. El-Sayed and G.W. Robinson, J. Chem. Phys. 34, 1840 (1961) "Excitation Transfer Splitting in the $n \rightarrow \pi$ Transitions of the Diazines".

M.A. El Sayed and G.W. Robinson, Mol. Phys. 4, 273 (1961) "Intramolecular Excitation Transfer. The Lowest $n \rightarrow \pi$ Transitions in Pyrazine".

M.F.A. El-Sayed and M. Kasha, J. Chem. Phys. 34, 334 (1961) "Ionization Potentials of Benzene, Hexadeuterobenzene, and Pyridine from Their Observed Rydberg Series in the Region 600-2000Å.

M.A. El-Sayed, J. Chem. Phys. 37, 1568 (1962) "Proposed Effect of High Pressures on the Radiationless Processes".

M.A. El-Sayed, Bull. Am. Phys. Soc. 7, 499 (1962) "S→T Radiationless Process and the Emission Properties of Nitrogen Heterocyclics".

M.A. El-Sayed, J. Chem. Phys. 36, 573 (1962) "The Radiationless Processes Involving Change of Multiplicity in the Diazenes".

M.A. El-Sayed, M.T. Wauk and G.W. Robinson, Mol. Phys. 5,205 (1962) "Retardation of Singlet and Triplet Excitation Migration in Organic Crystals by Isotopic Dilution".

M.A. El-Sayed, J. Chem. Phys. 38, 3032 (1963) "Comments on Contaminating the Ground State with Triplet Character".

M.A. El-Sayed and M.L. Bhaumik, J. Chem. Phys. 39, 2391 (1963) "Inter-Intra-(Intera) Molecular Energy Transfer to Rare-Earth Ions in Chelates".

M.A. El-Sayed and T. Pavlopoulos, J. Chem. Phys. 39, 1899 (1963) "Intramolecular Heavy-Atom Effect on the Polarization of Naphthalene Phosphorescence".

M.A. El-Sayed, Nature 197, 481 (1963) "Origin of the Phosphorescence Radiation in Aromatic Hydrocarbons".

M.A. El-Sayed and R.G. Brewer, J. Chem. Phys. 39, 1623 (1963) "Polarization of the $\pi^* \rightarrow \pi$ and $\pi^* \rightarrow n$ Phosphorescence Spectra of N-Heretocyclics".

M.A. El-Sayed, J. Chem. Phys. 38, 2834 (1963) "Spin-Orbit Coupling and the Radiationless Processes in Nitrogen Heterocyclics".

M.A. El-Sayed, J. Phys. Chem. 68, 433 (1964) "A New Class of Photochromic Substances: Metal Carbonyls".

M.A. El-Sayed, J. Chem. Phys. 41, 2462 (1964) "Vanishing First- and Second-Order Intramolecular Heavy-Atom Effects on the ($\pi^* \rightarrow n$) Phosphorescence in Carbonyls".

M.A. El-Sayed, J. Chem. Phys. 43, 2864 (1965) "Theoretical Considerations Concerning the Intramolecular Heavy-Atom Effect on the Phosphorescence Process: C_{2v} Symmetric Dihalonaphthalene".

M.A. El-Sayed and S. Siegel, J. Chem. Phys. 44, 1416 (1966) "Method of 'Magnetophotoselection' of the Lowest Excited Triplet State of Aromatic Molecules".

M.A. El-Sayed, Proc. Int. Conf. on Luminescence, 373 (1966) "Theoretical Considerations Concerning the Intramolecular Heavy-Atom Effect on the Phosphorescence Process".

M.A. El-Sayed, J. Chem. Phys. 47, 2200 (1967) "Medium Effects on the Phosphorescence Mechanism of Aromatic Hydrocarbons".

M.A. El-Sayed and W.R. Moomaw, in Excitons, Magnons and Phonons in Molecular Crystals, A.B. Zahlan, ed., Cambridge University Press (1968) p. 103, "The Effect of Phonons on the Pyrazine Phosphorescence".

M.A. El-Sayed, Acta Phys. Polon. 34 (1968) "Recent Studies on Triplet-Singlet Transitions in Aromatic Molecules".

M.A. El-Sayed, L. Hall, A. Armstrong and W.R. Moomaw, University of California at Los Angeles, Office of Naval Research Contract Nonr-4756(07), Task No. NR 015-816, (1968) "Spin Polarization and Spin-Lattice Relaxation in the Lowest Triplet State of Pyrazine at 1.6°K".

M.A. El-Sayed, Accounts of Chem. Research 1, 8 (1968) "The Triplet State: Its Radiative and Nonradiative Properties".

M.A. El-Sayed, W.R. Moomaw and D.S. Tinti, J. Chem. Phys. 50, 1888 (1969) "Time-Resolved Polarization Measurements of the Phosphorescence from the Different Zero-Field Multiplets of the Lowest Triplet State".

M.D. Erlitz and G.C. Nieman, J. Chem. Phys. 50, 1479 (1969) "Temperature Dependence of the Phosphorescence Lifetime of Mesitylene".

V.L. Ermolaev, Opt. & Spect. USSR 1, 523 (1956) "Luminescence of Aromatic Aldehydes and Ketones".

V. Ermolaev, A. Terenin, J. Chim. Phys. 55, 698 (1958) "Transfert d'Energie Entre Niveaux de Triplets".

V.L. Ermolaev, Opt. & Spect. USSR (Engl. trans.) 6, 417 (1959) "Dependence of the Probability of Energy Transport in Sensitized Phosphorescence on the Oscillator Strength of a Triplet-Singlet Transition in an Energy Acceptor Molecule".

V.L. Ermolaev and K.K. Svitashev, Opt. & Spect. USSR (Engl. trans.) 7, 399 (1959) "Quantum Yields of Phosphorescence and Fluorescence of some 1-Derivatives of Naphthalene in Solutions at -196°C".

V.L. Ermolaev, I.P. Kotlyar and K.K. Svitashev, Bull. Acad. Sci. USSR Phys. Ser. (English transl.) 24, 499 (1960) "Internal Conversion from the Fluorescence to the Phosphorescence Level in Naphthalene Derivatives".

V.L. Ermolaev and A.N. Terenin, Soviet Phys.-Usp. (Engl. trans.) 3, 423 (1960) "Intramolecular Energy Transfer Between Triplet Levels".

V.L. Ermolaev, Opt. & Spect. USSR (Engl. trans.) 11, 266 (1961) "The Luminescence of Simple Derivatives of Benzene. I. The Aromatic Amines".

V.L. Ermolaev, Opt. & Spect. USSR (Engl. trans.) 13, 49 (1962) "Mesaurement of the Quantum Yields of Sensitized Phosphorexcence as a Method of Investigating the Quenching Processes at the Triplet Level of Organic Molecules".

V.L. Ermolaev and E.B. Sveshnikova, Bull. Acad. Sci. USSR 26, 29 (1962) "Nonradiative Energy Transfer Between the Triplet and Singlet Levels of Organic Molecules".

V.L. Ermolaev, Soviet Phys.-Doklady (Engl. trans.) 6, 600 (1962) "Spheres of Quenching in Case of Energy Transfer Between Triplet Levels".

V.L. Ermolaev, Soviet Phys.-Uspekhi 80, 333 (1963) "Energy Transfer in Organic Systems Involving the Triplet State. III. Rigid Solutions and Crystals".

V.L. Ermolaev and E.B. Sveshnikova, Opt. & Spect. USSR (Engl. trans.) 21, 78 (1966) "Radiationless Transitions in Perfluorinated and Perchlorinated Aromatic Compounds".

V.L. Ermolaev, E.A. Saenko, G.A. Domrachev, Yu. K. Khudenskii, and V.G. Aleshin, Opt. & Spect. USSR (Engl. trans.) 22, 466 (1967) "Study of the Mechanism of Intermolecular Energy Transfer in Rare-Earth-Chelates".

J.N. Esposito, L.E. Sutton and M.E. Kenney, Inorg. Chem. 6, 1116 (1967) "Infrared and Nuclear Magnetic Resonance Studies of Some Germanium Phthalocyanines and Hemiporphyrazines".

D.F. Evans, Proc. Chem. Soc. (London) 378 (1963) "Effect of Nitrogen under Pressure on the Rydberg Spectra of Polyatomic Molecules; the Nature of the Long-wavelength Olefin Bands".

D.F. Evans, J. Chem. Soc. 5575 (1963) "Solvent Shifts of Nuclear Spin Coupling Constants due to Hydrogen Bonding".

T.F. Ewanizky and H.H. Theissing, J. Chem. Phys. 45, 79 (1966) "Growth and Impurity Effects on Fluorescence and Reduction of $CaF_2:Sm^{3+}$, Y^{3+}".

G.E. Ewing, W.E. Thompson and G.C. Pimentel, J. Chem. Phys. 32, 927 (1960) "Infrared Detection of the Formyl Radical HCO".

G.E. Ewing and G.C. Pimentel, J. Chem. Phys. 35, 925 (1961) "Infrared Spectrum of Solid Carbon Monoxide".

G.E. Ewing and S. Trajmar, J. Chem. Phys. 41, 814 (1964) "Infrared Induced Absorption of Dilute Solutions of H_2 and D_2 in Liquid Argon".

G.E. Ewing and S. Trajmar, J. Chem. Phys. 42, 4038 (1965) "Induced Infrared Absorption of Solutions of H_2 and D_2 in Liquid Neon".

I.I. Ezhik, G.D. Mokhov and V.A. Bazakutsa, Opt. Spectry. (USSR) (English transl.) 21, 288 (1966)"The Visible and Near Infrared Luminescence of Selenium Treated with Mercury Vapor".

M.S. Fadeeva, Bull. Acad. Sci. USSR, Phys. Ser. (English transl.) 23, 139 (1959) "Phosphorescence Spectra of Some Aromatic Hydrocarbons at Different Temperatures".

M.S. Fadeeva, Bull. Acad. Sci. USSR (English transl.) 29, 1441 (1965) "Phosphorescence of Organic Phosphors and the Influence of Temperature on the Afterglow".

A.N. Faidysh and O.P. Kharitonova, Dopovidi Akad. Nauk. Ukr. R.S.R. 1951, 324 (1951) "Excitation of Luminescence of Naphthacene in Solutions".

A.N. Faidysh and I. Ya. Kucherov, Ukrain. Fiz. Zhur. 2, 68 (1957) "The Quantum Yields of the Luminescences of Solid Solutions of Condensed Hydrocarbons as a Function of the Temperatures".

R.J. Fallon, J.T. Vanderslice and E.A. Mason, J. Chem. Phys. 32, 1453 (1960) "Potential Energy Curves for Lithium Hydride".

J.B. Farmer, C.L. Gardner and C.A. McDowell, J. Chem. Phys. 34, 1058 (1961) "Energy Transfer between Triplet States Detected by Electron Spin Resonance Spectroscopy".

V.M. Farmer and D.P. Forse, Infrared Phys. 8, 37 (1968) "Improved Cooling Techniques for Detectors".

W.G. Fateley, H.A. Bent and B. Crawford, Jr., J. Chem. Phys. 31, 204 (1959) "Infrared Spectra of the Frozen Oxides of Nitrogen".

E. Faure, F. Valadier, R. Bergeon and J. Janin, J. Phys. 28, C 3-143 (1967) "Luminescence du Benzene Excite dans des Matrices d'Azote et d'Argon Solides".

V.N. Fedosov and A.P. Nadol'skii, Tr. Irkutsk. Politekh. Inst. 27, 80 (1966) "Dependence of the Vapor Pressure of Scandium Oxide on Temperature".

C. Feldman and M.L. Klein, Phil. Mag. 17 , 145 (1968) "On the Elastic Constants of Polycrystalline Argon".

N.A. Fenina, Opt. Spectry. (USSR) (English transl.) 20, 428 (1966) "A Study of the Quasi-Line Spectra of 1,2-Benzanthracene and its Methyl Derivatives. I. The Quasi-Line Luminescence and Absorption Spectra of 1,2 Benzanthracene at 77°K".

J. Ferguson and H.J. Tinson, Chem. Soc. (London) 1952, 3083 (1952) "The Phosphorescence Emission of Benzophenone".

J. Ferguson, T. Iredale and J.A. Taylor, J. Chem. Soc. 1954, 3160 (1954) "The Phosphorescence Spectra of Naphthalene and Some Simple Derivatives".

J. Ferguson, H.J. Guggenheim and Y. Tanabe, J. Chem. Phys. 45, 1134 (1966) "Absorption of Light by Pairs of Exchange-Coupled Manganese and Nickel Ions in Cubic Perovskite Fluorides".

J. Fernandez and R.S. Becker, J. Chem. Phys. 31, 467 (1959) "Unique Luminescences of Dry Chlorophylls".

R.W. Fessenden and R.H. Schuler, J. Chem. Phys. 45, 1845 (1966) "Isotropic ESR Spectra of Fluorine-Containing Radicals in SF_6 Matrices".

B.F. Figgins and B.L. Smith, Phil. Mag. 5, 186 (1960) "Density and Expansivity of Solid Krypton".

P.H.H. Fischer, S.W. Charles and C.A. McDowell, J. Chem. Phys. 46, 2162 (1967) "Electron Spin Resonance Study of the Photolytic Decomposition of HN_3 in Inert Matrices at 4.2°K".

J. Fiutak and M. Frackowiak, Bull. Acad. Polon Sci. 11, 175 (1963) "The HgA Van der Waals Molecule".

W.F. Flygare, J. Chem. Phys. 39, 2263 (1963) "Molecular Rotation in the Solid State. Theory of Rotation of Trapped Molecules in Rare-Gas Lattices".

G. v. Foerster, Z. Naturforsch. 18a, 620 (1963) "Triplett-phosphoreszenz und Elektroenspinresonz-absorption einiger Organischer Moleküle in Glasigen Lösungen".

G. v. Foerster, J. Chem. Phys. 40, 2059 (1964) "Studies of the Phosphorescence of Organic Substances in Crystalline Form or in Frozen Solutions".

W.T. Foley and P.A. Giguere, Science 113, 754 (1951) "Radio-active Tracers in Solid Solution Investigations".

G.R. Fonda, J. Electrochem. Soc. 98, 35c (1951) "Review of Articles on Luminescence for 1950".

G.R. Fonda, J. Electrochem. Soc. 102, 129c (1955) "Review of Articles on Luminescence for 1953-1954".

G.R. Fonda, J. Electrochem. Soc. 104, 525 (1957) "Review of Articles on Luminescence for 1955-1956".

S.N. Foner, E.L. Cochran, V.A. Bowers and C.K. Jen, J. Chem. Phys. 32, 963 (1960) "Multiple Trapping Sites for Hydrogen Atoms in Rare Gas Matrices".

L.S. Forster, S.A. Greenberg, R.I. Lym and M.E. Smith, Spectrochim. Acta 16, 128 (1960) "Luminescence and Internal Conversion in Biacetyl Solutions".

L.S. Forster and D. Dudley, J. Phys. Chem. 66, 838 (1962) "The Luminescence of Fluorescein Dyes".

Th. Förster, Ann. Physik 2, 55 (1948) "Zwischenmolekulare Energiewanderung und Fluoreszenz".

Th. Förster, Z. Naturforsch. 4a, 322 (1949) "Experimentalle und Theoretische Untersuchung des Zwischenmolekularen Übergangs von Elektronenanregungsenergie".

Th. Förster, Naturwissenschaften 36, 240 (1949) "Neuere Untersuchungen über die Phosphoreszenz Organischer Stoffe in Festen Lösungen".

Th. Förster, Fluoreszenz Organischer Verbindungen, Vandenhoeck & Ruprecht, Gottingen (1951).

Th. Förster and K. Kasper,Z. Elektrochem. 59, 976 (1955) "Ein Konzentrationsumschlag der Fluoreszenz des Pyrens".

Th. Förster, Discussions Faraday Soc. 22, 7 (1959) "Transfer Mechanisms of Electronic Excitation".

Th. Förster, Rad. Rev. Suppl. 2, 326 (1960) "Transfer Mechanisms of Electronic Excitation Energy".

Th. Förster, Z. Elektrochem. 64, 157 (1960) "Zwischenmolekularer Übergang von Elektronenanregungsenergie".

Th. Forster and K. Rokos, Chem. Phys. Letters 1, 279 (1967) "A Deuterium Isotope Solvent Effect on Fluorescence".

Th. Forster, Compreh. Biochem. 22, 61 (1967) "Mechanisms of Energy Transfer".

D. Fox and O. Schnepp, Phys. Rev. 96, 1196 (1954) "Exciton Bands in Crystalline Benzene".

D. Fox and R.M. Hexter, J. Chem. Phys. 41, 1125 (1964) "Crystal Shape Dependence of Exciton States in Molecular Crystals".

M. Frackowiak, Acta Phys. Polon. 16, 63 (1957) "Decay of Phosphorescence of Rigid Solutions".

M. Frackowiak, Bull. Acad. Polon. Sci. 5, 809 (1957) "Further Investigations on the Decay of Phosphorescence of Rigid Solutions".

H.S. Franck, Int. Symp. on Luminescence, Munich (1965; Munich: Verlag Karl Thiemig KG, 1966) p. 155 "Triplet-Singlet Luminescence from Methylated Benzenes in the Crystalline State and in Rigid Glass Solutions".

J.L. Franklin and H.P. Broida, Am. Rev. Phys. Chem. 10, 145 (1959) "Trapped Energetic Radicals".

F.H. Frayer and G.E. Ewing, J. Chem. Phys. 46, 1994 (1967) "Spectroscopic Observation of Nuclear Spin Conversion in Methane".

F.H. Frayer and G.E. Ewing, J. Chem. Phys. 48, 781 (1968) "Nuclear-Spin Conversion and Vibration-Rotation Spectra of Methane in Solid Argon".

S. Freed, J.H. Turnbull and W. Salmre, Nature 181, 1731 (1958) "Proteins in Solutions at Low Temperatures".

S. Freed and M.H. Vise, Anal. Biochem. 5, 338 (1963) "On Phosphorimetry as Quantitative Microanalysis with Application to Some Substances of Biochemical Interest".

S. Freed, Science 150, 576 (1965) "Chemical-Biochemical Signal and Noise".

H. S. Freedhoff, Proc. Phys. Soc. 92, 505 (1967) "Molecular Features in the Spectra of Atoms Trapped in Inert Gas Matrices".

M. Freibert, A. Ron and O. Schnepp, J. Phys. Chem. 72, 3526 (1968) "The Low Frequency Spectra of Lithium Halide Molecular Species".

H. Friedmann and S. Kimel, J. Chem. Phys. 41, 2552 (1964) "Interpretation of the Spectra of HCl and DCl in an Argon Matrix".

H. Friedmann and S. Kimel, J. Chem. Phys. 43, 3925 (1965) "Theory of Shifts of Vibration-Rotation Lines of Diatomic Molecules in Noble-Gas Matrices. Intermolecular Forces in Crystals".

H. Friedmann and S. Kimel, J. Chem. Phys. 44, 4359 (1966) "Rotation-Translation Coupling Spectrum of Matrix-Isolated Diatomic Molecules in the Near and Far Infrared".

H. Friedmann and S. Kimel, J. Chem. Phys. 47, 3589 (1967) "Rotation-Translation Coupling Effect in Noble-Gas Crystals Containing Molecular Impurities".

R.P. Frosch and G.W. Robinson, J. Chem. Phys. 41, 367 (1964) "Emission Spectrum of NO in Solid Rare Gases: The Lifetime of the a $^4\pi$State and the Spectrum of the a $^4\pi \rightarrow$ X $^2\pi$ and B $^2\pi \rightarrow$ X $^2\pi$ Transitions".

R.P. Frosch, Dissertation Abstracts 26, 3646 (1966) "I. The Emission and Absorption Spectra of Some Simple Molecules Trapped in Solid Rare Gases. II. Theory of Electronic Relaxation in the Solid Phase", Ph.D. Thesis, 1965.

J. Fruwert, E. Kowasch and G. Geiseler, Z. Physik. Chem. 232, 415 (1966) "Temperature Dependence of Infrared Band Intensity".

R. Fuchs, K.L. Kliewer and W.J. Pardee, Phys. Rev. 150 , 589 (1966) "Optical Properties of an Ionic Crystal Slab".

I. Ya. Fugol, Ukr. Fiz. Zh. 3, Suppl. 1, 40 (1958) "Absorption and Luminescence of Crystalline Solutions of Stilbene in Toluene".

A. Fukuda, Oyo Butsuri 36, 223 (1967) "Spectroscopic Measurement at Low Temperatures".

M. Furst, E. Levin and H. Kallman, Int. Symp. on Luminescence, Munich,(1965). (Munich: Verlag Karl Thiemig KG, 1966). p. 24, "Fluorescence and Energy Transfer from 300°K to 550°K".

K. Fussgaenger, W. Martienssen and H. Bilz, Phys. Stat. Sol. 12, 383 (1965) UV Absorption of Ag^+ Doped Alkali Halide Crystals".

G

A.S. Gaevskii, V.G. Roskolodko and A.N. Faidysh, Opt. Spectry. (USSR) (English transl.) 22, 124 (1967) "The Effect of the Phase State on the Phosphorescence of Benzophenone and the Transfer of Electron Excitation Energy in Solid Solutions".

A.S. Gaevskii, V.G. Roskolodko and A.N. Fidysh, Opt. Spectry. (USSR) (English transl.) 24, 113 (1968) "Transfer of Triplet Level Energy in Benzophenone Crystals Containing Phenanthrene and Phenazine".

A.Z. Gadzhiev, Opt. i Spekt. (USSR) 23, 722 (1967) "Dependence of the Infrared Absorption Band Frequency on the Local Intermolecular Interaction".

J.R. Gaines, E.M. de Castro and D. White, Phys. Rev. Letters 13, 425 (1964) "Observation of the λ Anomaly in Solid D_2 by Nuclear Magnetic Resonance".

M.D. Galanin, Soviet Phys. JETP, 1, 317 (1955) "The Problem of the Effect of Concentration on the Luminescence of Solutions".

G. Gallus and H.C. Wolf, Z. Naturforsch. 23a, 1333 (1968) "Excitonendiffusion in Naphthalin-Aufdampfschichten".

G. Gallus, Ph.D. Thesis, "Naphthalinaufdampfschichten Lumineszenz und Exzitonendiffusion", Stuttgart (1968).

W.B. Gandrud and H.W. Moos, J. Chem. Phys. 2170 (1968) "Rare-Earth Infrared Lifetimes and Exciton Migration Rates in Trichloride Crystals".

S.C. Ganguly and N.K. Choudhury, J. Chem. Phys. 21, 554 (1953) "Polarized Fluorescence of Molecules of Some Single Organic Crystals".

G.F. Garlick, Endeavour 15, 144 (1956) Some Aspects of Luminescence".

L. Gausset, G. Herzberg, A. Lagerqvist and B. Rosen, Discussions Faraday Soc. 35, 113 (1963) "Spectrum of the C_3 Molecule".

L. Gausset, G. Herzberg, A. Lagerqvist and B. Rosen, Astrophys. J. 142, 45 (1965) "Analysis of the 4050 Å Group of the C_3 Molecule".

M.Z. Gavrilov and I.N. Ermolenko, Zh. Priklad. Spektrosk. (USSR) 5, 762 (1966) "Investigation of Cellulose Luminescence".

N. Geacintov, M. Pope and F. Vogel, Phys. Rev. Letters 22, 593 (1969) "Effect of Magnetic Field on the Fluorescence of Tetracene Crystals: Exciton Fission".

A.R. Gee and G.W. Robinson, J. Chem. Phys. 46, 4847 (1967) "Raman Spectrum of Crystalline Benzene".

H.F. Geisler and K.H. Hellwege, Z. Physik 136, 293 (1953) "Spektrum und Leuchtprocess von Kristallinem Terbiumbromat".

H. Gerding and J.W. Ypenburg, Rec. Trav. Chim. Pays-Bas 86, 458 (1967) "The Vibrational Spectra of Liquid and Solid Sulfur Dioxide".

Ya.I. Gerlovin, Opt. Spectry. (USSR) (English transl.) 9, 349 (1960) "A Method for Determination of the Radiation Probability of Gases and Vapors".

L. Gero, G. Herzberg and R. Schmid, Phys. Rev. 52, 467 (1937) "On the Cameron Bands ($^3\Pi$---$^1\Sigma$) of Carbon Monoxide".

S. Geschwind, R.J. Collins and A.L. Schawlow, Phys. Rev. Letters 3, 545 (1959) "Optical Detection of Paramagnetic Resonance in an Excited State of Cr^{3+} in Al_2O_3".

P.A. Giguere, J. Chem. Phys. 22, 2085 (1954) "Spectroscopic Evidence for Stabilized HO_2 Radicals".

P.A. Giguere and K.B. Harvey, J. Chem. Phys. 25, 373 (1956) "On the Presumed Spectroscopic Evidence for Trapped HO_2 Radicals".

F.Z. Gilfanov, A.M. Levshin and A.L. Stolov, Opt. Spectry. (USSR) (English transl.) 22, 323 (1967) "Spectrum of the Gd^{3+} Ion in a $CaWO_4$ Single Crystal".

P.W. Gilles, Nat. Acad. Sci.-Nat. Res. Counc., publ. no. 1470, 82 (1967) "Future Investigations in High-Temperature Chemistry Suggested by Vaporization Studies".

E.H. Gilmore, G.E. Gibson and D.S. McClure, J. Chem. Phys. 20, 829 (1952) "Absolute Quantum Efficiencies of Luminescence of Organic Molecules in Solid Solution".

E.H. Gilmore, G.E. Gibson and D.S. McClure, J. Chem. Phys. 23, 399 (1955) "Errata: Absolute Quantum Efficiencies of Luminescence of Organic Molecules in Solid Solution".

E.H. Gilmore and E.C. Lim, J. Phys. Chem. 63, 15 (1959) "A Method for Evaluating Rate Constants in the Jablonski Model of Excited Species in Rigid Glasses".

W. Gissler and H. Stiller, Naturwissenschaften 52, 512 (1965) "Zur Kristallstruktur des Methans".

J.A. Glasel, J. Chem. Phys. 34, 1649 (1961) "Near-Infrared Absorption Spectrum of Solid Methane at the λ Point".

P.E. Glaser, Cryogenic Eng. News 4, 16 (1969) "Effective Thermal Insulation: Multilayer System".

L. Glowacki and R. Pohoski, Bull. Acad. Polon. Sci. 7, 301 (1959) "Quenching of Photoluminescence of Liquid and Solid Solutions".

V.I. Glyadovskii, L.A. Klimova and G.N. Nersesova, Opt. Spectry. (USSR) (English transl.) 23, 219 (1967) "Spectroscopy of Aromatic Hydrocarbon Mixtures in Frozen Crystalline Solutions. II.".

G.V. Gobov, Bull. Acad. Sci. USSR 27, 13 (1963) "Absorption and Luminescence Spectra of Stilbene and Diphenyl Acetylene in Frozen Solutions at 77°K".

G.V. Gobov, Opt. Spectry. (USSR) (English transl.) 15, 194 (1963) "Spectroscopy of Frozen Crystalline Solutions of Diphenylpolyenes and Polyphenyls. II.".

H. Gobrecht and D. Hahn, Z. Physik 135, 523 (1953) "Die Lumineszenz der Erdalkalipolysulfide".

A. Gold, Phys. Rev. 124, 1740 (1961) "Calculation of Excitation Energies in 'Tightly-Bound' Solids".

A. Gold and R.S. Knox, J. Chem. Phys. 36, 2805 (1962) "Line Shape of Ultraviolet Absorption in Crystalline Rare Gases".

T.D. Goldfarb and G.C. Pimentel, J. Chem. Phys. 33, 105 (1960) "Chemiluminescence of Ethylene Formed Probably from Methylene in an Inert Matrix".

T.D. Goldfarb and G.C. Pimentel, J. Am. Chem. Soc. 82, 1865 (1960) "Spectroscopic Study of the Photolysis of Diazomethane in Solid Nitrogen".

T.D. Goldfarb and B.N. Khare, J. Chem. Phys. 46, 3379 (1967) "Infrared Spectra of Solid and Matrix-Isolated $(CH_3)_3N$, $(CD_3)_3N$, and $(SiH_3)_3N$".

T.D. Goldfarb and B.N. Khare, J. Chem. Phys. 46, 3384 (1967) "Infrared Studies of Dimethylsilylamine and Methyldisilylamine by the Matrix-Isolation Technique".

H. Goldring, J. Kwok and G.W. Robinson, J. Chem. Phys. 43, 3220 (1965) "Infrared Spectra and Intensity Enhancements in Solutions of Hydrogen Halides in Liquid Xenon".

E. Goldstein, Physik Z. 12, 614 (1911) "Über die Untersuchung der Emissionsspektra fester Aromatischer Substanzen mit dem Ultraviolettfilter".

E. Goldstein, Physik Z. 13, 188 (1912) "Über die Emissionsspektra Aromatischer Verbindungen in Ultraviolettem Licht, in Kathodenstrahlen, Radiumstrahlen und Kanalstrahlen".

H.W. Goldstein, E.F. Neilson, P.N. Walsh and D. White, J. Phys. Chem. 63, 1445 (1959) "The Heat Capacities of Yttrium Oxide (Y_2O_3), Lanthanum Oxide (La_2O_3) and Neodymium Oxide (Nd_2O_3) from 16 to 300°K".

H.W. Goldstein, P. Walsh, D. White, J. Phys. Chem. 64, 1087 (1960) "On the Use of Tantalum Knudsen Cells in High Temperature Thermodynamic Studies of Oxides".

H.W. Goldstein, P.N. Walsh and D. White, J. Phys. Chem. 65, 1400 (1961) "Rare Earths. I. Vaporization of La_2O_2 and Nd_2O_3: Dissociation Energies of Gaseous LaO and NdO".

O.D. Gonzalez, D. White and H.L. Johnston, J. Phys. Chem. 61, 773 (1957) "The Heat Capacity of Solid Deuterium Between 0.3 and 13°K".

L. Goodman and M. Kasha, J. Mol. Spectry. 2, 58 (1958) "The Observation and Assignment of the Lowest Multiplicity-Forbidden Transition in Pyrazine".

R.G. Gordon, J. Chem. Phys. 39, 2788 (1963) "Molecular Motion and the Moment Analysis of Molecular Spectra in Condensed Phases. I. Dipole-Allowed Spectra".

V.K. Gorshkov and N.D. Zhevandrov, Zh. Prikl. Spektrosk. 6, 267 (1967) "Changes of Luminescence Spectra of Anthracene Single Crystals with the Naphthacene Admixture under Cooling to Liquid Helium Temperatures".

R.K. Gosavi and C.N.R. Rado, Indian J. Chem. 5, 126 (1967) "Rotation of Guest Molecules in Host Lattices of Clathrates and Inclusion Compounds".

T. Goto, M. Ueta and T. Yashiro, J. Phys. Soc. Japan 20, 870 (1964) "An Emission Spectrum of CuBr at 4°K".

P. Goudmand and O. Dessaux, J. Chim. Phys. 64, 135 (1967) "Formation de Molécules NS et NSe Électroniquement Excitées dans les Reactions de l'Azote Actif sur les Chlorures de Soufre et de Sélénium".

M. Gouterman, J. Chem. Phys. 30, 1369 (1959) "Calculations on the Zero-Field Splittings in Triplet States of Various Aromatic Hydrocarbons. II.".

M. Gouterman, J. Chem. Phys. 36, 2846 (1962) "Radiationless Transitions: A Semiclassical Model".

A. Grabowska, Spectrochim. Acta 19, 307 (1963) "Enhancement of the Singlet-Triplet Absorption Band of α-Chloronaphthalene in the Presence of Xenon under High Pressure".

R. Graham, R.A. Howald, E.M. Layton Jr., ACS 24th Northwest Regional Meeting for Phys. Chem., Salt Lake City (June, 1969) "Singlet Triplet Absorption Spectra of Charge Transfer Complexes of Naphthalene".

I.J. Graham-Bryce and J.M. Corkhill, Nature 186, 965 (1960) "Use of Solvents Containing Ethyl Iodide in the Investigation of Phosphorescence Spectra of Organic Compounds".

L. Grajcar and S. Leach, Compt. Rend. 252, 3577 (1961) "Étude Spectroscopique de la Photolyse du Toluene en Solution Rigide à 77°K".

L. Grajcar and S. Leach, Compt. Rend. 252, 1014 (1961) "Sur les Spectres d'Emission et d'Absorption vers 4600 Å du Radical Benzyle à 77°K".

L. Grajcar and S. Leach, th Int. Symp. on Free Radicals, Cambridge University (1963) "The Fluorescence Spectra of Benzyl Type Radicals in Cyclohexane. Crystalline Phase Studies Using a Trapped Radical Probe".

L. Grajcar and S. Leach, J. Chim. Phys. 1523 (1964) "Analyse du Spectre d'Emission du Radical Benzyle et de Certains de ses Isotopes Deuteres".

D.M. Grebenshchikov, V.A. Butlar and V.V. Solodunov, Opt. Spectry. (USSR) (English transl.) 21, 147 (1966) "On the Phosphorescence of Two Types of Luminescent Centers of Coronene in Paraffin Solutions".

W.H. Green and A.B. Harvey, J. Chem. Phys. 49, 3586 (1968) "Vibrational Spectra and Structure of Dimethyl Diselenide and Dimethyl Diselenide-d_6".

R.L. Greene and D.D. Sell, Phys. Rev. 171, 600 (1968) "Impurity-Induced Optical Fluorescence in MnF_2".

G. Grenier and D. White, J. Phys. Chem. 61, 1681 (1957) "The Heat of Solution of Sodium Metaborate at 0°".

G. Grenier and D. White, J. Chem. Phys. 37, 1563 (1962) "λ Anomaly in the Heat Capacity of Para Enriched Solid Deuterium".

G. Grenier and D. White, J. Chem. Phys. 49, 3015 (1964) "Heat Capacities of Solid Deuterium (33.1%-87.2% Para) from 1.5°K to the Triple Points. Heats of Fusion and Heat Capacity of Liquid".

G. Grenier and D. White, J. Chem. Phys. 40, 345 (1964) "Heat Capacity of Solid HD".

V.I. Gribkov, N.D. Zhevandrov and E.I. Chebotareva, Bull. Acad. Sci. USSR, Phys. Ser. 27, 513 (1963) "Variation of the Polarization of the Luminescence of Stilbene Single Crystals as a Function of the Wavelength at Liquid Nitrogen Temperature".

D. Griessbach, Z. Naturforsch. 15a, 296 (1960) "Fluoreszenz-messungen an Cyclohexan-Mischkristallen".

J. Grindley in Lattice Dynamics, R.T. Wallis, ed., Pergamon Press (1965) p. 129.

(1967) "Dielectric Properties of Hydrogen Halides. III. High-Frequency Dispersion in Solid Phases of HI and HBr".

H. Gropper and F. Dorr, Z. Elektrochem. 67, 46 (1963)

E.F. Gross and L.G. Suslina, Soviet Phys. Sol. St. 6, 2949 (1965) "Mirror Symmetry of Absorption and Luminescence Spectra of ZnTe Crystals".

E.F. Gross, S.A. Permogorov and B.S. Razbirin, Soviet Phys. Sol. St. 8, 1180 (1966) "Motion of Free Excitons and their Interaction with Phonons".

J.B. Gruber and J.G. Conway, J. Chem. Phys. 36, 191 (1962) "Absorption Spectrum and Zeeman Effect of Am^{3+} in $LaCl_3$".

J.B. Gruber, J.R. Henderson, M. Muramoto, K. Rajnak and J.G. Conway, J. Chem. Phys. 45, 477 (1966) "Energy Levels of Single-Crystal Erbium Oxide".

J.B. Gruber, W.R. Cochran, J.G. Conway and A.T. Nicol, J. Chem. Phys. 45, 1423 (1966) "Optical Spectra of Tripositive Curium-244 in Lanthanum Trichloride".

D.M. Gruen, J.G. Conway, R.D. McLaughlin, J. Chem. Phys. 25, 1102 (1956) "Color Centers and Luminescence in Single Crystals of Lanthanum Trichloride Containing Dipositive Europium".

D.M. Gruen, J.G. Conway, R.D. McLaughlin and B.B. Cunningham, J. Chem. Phys. 24, 1115 (1956) "Fluorescence Spectrum of Am^{+3} in $LaCl_3$".

D.M. Gruen, J.R. Clifton and C.W. DeKock, J. Chem. Phys. 48, 139 (1968) "Fluorescence Spectrum of Matrix-Isolated $NiCl_2$".

S. Gryglewicz, Acta Phys. Polon. 6, 210 (1936) "Über den Einfluss der Temperature auf die Fluoreszenzausbeute einer Anthrazenlösung in Paraffinöl".

J. Gryzywacz and R. Pohoski, Acta Phys. Polon. 26, 393 (1964) "The Phosphorescence of Plexigassphosphors in Liquid Air".

J.G. Gualtieri and T.R. AuCoin, J. Chem. Phys. 45, 4348 (1966) "Crystal-Field Term Symbols for Nd^{3+} in $CaWo_4$".

G.G. Guilbault, ed., Fluorescence: Theory, Instrumentation, and Practice, Marcel Dekker, N.Y. (1967).

G.P. Gurinovich, A.N. Sevchenko and K.N. Solovev, Soviet Phys.-Usp. (English transl.) 6, 67 (1963) "Spectroscopy of the Porphyrins".

G.P. Gurinovich, E.K. Kruglik and A.N. Sevchenko, Soviet Phys. Doklady, 11, 338 (1966) "The Fluorescence Quantum Yield in Solutions of Polyatomic Molecules under Long-Wave Excitation".

L.V. Gurvich and E.A. Shenyavskaya, Opt. Spectry. (USSR) (English transl.) 14, 161 (1962) "The Electronic Spectrum of Scandium Monofluoride".

H.P. Gush, W.F.J. Hare, E.J. Allin and H.L. Welsh, Phys. Rev. 106, 1101 (1957) "Double Transitions in the Infrared Spectrum of Solid Hydrogen".

and

M. Guy, J-Y. Roncin,/N. Damany, Compt. Rend. 263, 546 (1966) "Perturbation de la Raie de Resonance du Zinc et du Cadmium Pièges en Matrices de Gas Rares à Basse Temperature".

H

D. Haarer, D. Schmid and H.C. Wolf, Phys. Stat. Sol. 23, 633 (1967) "Elektronenspin-Resonanz von Triplett-Exzitonen in Anthrazen".

S.G. Hadley, H.E. Rast, Jr., and R.A. Keller, J. Chem. Phys. 39, 705 (1963) "Radiationless Triplet-Singlet Transitions in Naphthalene".

W.B. Hadley, S. Polick, R.G. Kaufman and H.N. Hersh, J. Chem. Phys. 45, 2040 (1966) "Energy Storage and Luminescence in KI: Tl at Low Temperatures".

R.M. Hainer and G.W. King, Nature 166, 1029 (1950) "Effect of Low Temperatures on Infrared Spectra".

H.T. Hall, Nat. Acad. Sci. - Nat. Res. Counc. publ. no 1740, 65 (1967) "High Temperatures, High Pressures, and Periodic Compounds".

L. Hall, A. Armstrong, W. Moomaw and M.A. El-Sayed, J. Chem. Phys. 48, 1395 (1968) "Spin-Lattice Relaxation and the Decay of Pyrazine Phosphorescence at Low Temperatures".

R.T. Hall and G.C. Pimentel, J. Chem. Phys. 38, 1889 (1963) "Isomerization of Nitrous Acid: An Infrared Photochemical Reaction".

H.E. Hallam, Mol. Spectry. 22, 329 (1968) "Recent Advances in the Infrared Spectroscopy of Matrix-Isolated Species".

I. Haller, Ph.D. Thesis, University of California, Berkeley, California (1961) "Matrix Isolation Studies Using Far Ultraviolet Photolysis and the Structure of Some Unstable Molecules".

I. Haller and G.C. Pimentel, J. Am. Chem. Soc. 84, 2855 (1962) Reaction of Oxygen Atoms with Acetylene to Form Ketene".

W. Haller, G. Jura and G.C. Pimentel, J. Chem. Phys. 22, 720 (1954) "Infrared Studies of Solutions Involving Aromatics and Halogens".

A.C.H. Hallett, in Argon, Helium and the Rare Gases, vol. 1, G.A.Cook, ed., Interscience (1961) Chapter 9, "Liquid and Solid-State Properties".

H.F. Hameka and L.J. Oosterhoff, Mol. Phys. 1, 358 (1958) "The Probabilities of Triplet-Singlet Transitions in Aromatic Hydrocarbons and Ketones".

N.B. Hannay, Solid State Chemistry, Prentice-Hall, N.Y. (1967)

D.M. Hanson and G.W. Robinson, J. Chem. Phys. 43, 4174 (1965) "Exciton Structure in Two Triplet States of Crystalline Naphthalene".

I. Harada and T. Shimanouchi, J. Chem. Phys. 46, 2708 (1967) "Far-Infrared Spectra of Crystalline Benzene at 138°K and Intermolecular Forces".

P.B.V. Haranath and V. Sivaramamurty, Indian J. Phys. 35, 599 (1961) "Emission Band Spectrum of SeO_2 Molecule".

W.N. Hardy and J.R. Gaines, Phys. Rev. Letters, 19, 1417 (1967) "Crystal-Field Splitting of Orthohydrogen in Solid Parahydrogen".

W.F.J. Hare, E.J. Allin and H.L. Welsh, Phys. Rev. 99,1887 (1955) "Infrared Absorption of Liquid and Solid Hydrogen with Various Ortho-Para Ratios".

M.D. Harmony, R.J. Myers, L.J. Schoen, D.R. Lide, Jr., and D.E. Mann, J. Chem. Phys. 35, 1129 (1961) "Infrared Spectrum and Structure of the NF_2 Radical".

E.T. Harrigan and N. Hirota, Chem. Phys. Letters 1, 281 (1967) "Direct Observation of Triplet State Energy Transfer from Guest to Host in Mixed Organic Crystals".

E.T. Harrigan and N. Hirota, J. Chem. Phys. 49, 2301 (1968) "Experimental Investigations of Temperature and Host Effects on the Phosphorescent Triplet State in Mixed Organic Crystals".

R.A. Harris, J. Chem. Phys. 39, 978 (1963) "Predissociation".

K.O. Hartman and I.C. Hisatsune, J. Chem. Phys. 44, 1913 (1966) "Infrared Spectrum of Carbon Dioxide Anion Radical".

W.M. Hartmann and R.J. Elliott, Proc. Phys. Soc. 91, 187 (1967) "Theory of One-Phonon Impurity-Induced Infrared Absorption in Rare-Gas Solids".

E.N. Harvey, A History of Luminescence, Am. Phil. Soc., Philadelphia (1957).

K.B. Harvey and H.W. Brown, J. Chim. Phys. 56, 745 (1959) "Etude aux Infrarouges de Certains Solides Condenses a Partir de Decharges en Phase Gazeuse".

K.B. Harvey and J.F. Ogilvie, Can. J. Chem. 40, 85 (1962) "Infrared Absorption of HCHO at Low Temperatures--Evidence for Multiple Trapping Sites in an Argon Matrix".

K.B. Harvey and H.F. Shurvell, Chem. Commun. 1967, 490 (1967) "Evidence for the Rotation of HCl in Solid Nitrogen Matrix".

K.B. Harvey and H.F. Shurvell, Can. J. Chem. 45, 2689 (1967) "Infrared Absorption of HCl and HBr in Solid Nitrogen. Evidence for Rotation in a Nitrogen Matrix".

K.B. Harvey and H.F. Shurvell, J. Mol. Spectry. 25, 120 (1968) "Infrared Absorption of D_2O in Solid Nitrogen".

J.W. Hastie, R. Hauge and J.L. Margrave, J. Phys. Chem. 72, 4492 (1968) "Infrared Vibrational Properties of GeF_2".

G.F. Hatch, M.D. Erlitz and G.C. Nieman, J. Chem. Phys. 49, 3723 (1968) "Environmental Effects on the Phosphorescent Lifetime of Benzene".

W.J. Hauback and D. White, J. Chim. Phys. 60, 97 (1963) "Chromatographic Separation of the Isotopic and Nuclear Spin Species of the Hydrogens at Low Temperatures".

W.J. Haubach, C.M. Knobler, A. Katorski and D. White, J. Phys. Chem. 71, 1398 (1967) "The Low-Temperature Chromatographic Separation of the Isotopic Hydrogens at 27 and 55°K".

F. v. Hauer and J. v. Kowalski, Physik Z. 15, 322 (1914) "Zur Photometrie der Lumineszenzerscheinungen".

A. Haug, Phys. Rev. 147, 612 (1966) "Damping of Molecular Excitons Interacting with Phonons and Impurities in Thin Crystals".

A. Haug, Il Nuovo Cimento 48, 80 (1967) "Green's Function Approach to Electrical Conductivity of an Excess Charge Carrier Interacting with Phonons in Molecular Crystals".

K.W. Hausser, R. Kuhn and E. Kuhn, Z. Physik. Chem. (Leipzig) B29, 417 (1935) "Lichtabsorption und Doppelbindung. VI. Über die Fluoreszenz der Diphenylpolyene".

J. Heber, Z. Angew. Phys. 20, 278 (1966) "Eine Gegengekoppelte Torstufe in der Sampling-Technik fur den Mikro- und Millisek-undenbereich".

H.G. Hecht, J. Chem. Phys. 46, 23 (1967) "Study of the Structure of Vanadium in Soda-Boric Oxide Glasses".

R.C. Heckmann, J. Mol. Spectry. 2, 27 (1958) "Phosphorescence Studies of Some Heterocyclic and Related Organic Compounds".

A.M. Held and J.C. Declus, ACS 24th Northwest Regional Meeting, Salt Lake City (June, 1969) "The Infrared and Far Infrared Spectra of Films of Formaldehyde".

W.R. Heller, Phys. Let. 26A, 54 (1967) "The Cohesion of Ionic Crystals of Alkali Metal and Noble Gas Atoms".

J.R. Henderson, M. Muramoto and J.B. Gruber, J. Chem. Phys. 46, 2515 (1967) "Spectrum of Nd^{3+} in Lanthanide Oxide Crystals".

B.R. Henry and M. Kasha, J. Chem. Phys. 47, 3319 (1967) "Triplet-Triplet Absorption Studies on Aromatic and Heterocyclic Molecules at 77°K".

B.R. Henry and M. Kasha, J. Mol. Spectry. 26, 536 (1968) "Criteria for Maximizing Steady-State Population of the Lowest Excited Triplet State".

B.R. Henry and M. Kasha, Ann. Rev. Phys. Chem. 19, 161 (1968) "Radiationless Molecular Electronic Transitions".

B.R. Henry and W. Siebrand, Chem. Phys. Letters 3, 90 (1969) "Spin-Orbit Coupling in Aromatic Hydrocarbons. The Radiative Triplet Lifetime of Naphthalene".

D.M. Hercules and L.B. Rogers, Spectrochim. Acta 15, 393 (1959) "Absorption and Fluorescence Spectra of Some Mono- and Di-Hydroxy Naphthalenes".

D.M. Hercules and L.B. Rogers, J. Phys. Chem. 64, 397 (1960) "Luminescence Spectra of Naphthols and Naphthalenediols: Low-Temperature Phenomena".

D.M. Hercules, ed., Fluorescence and Phosphorescence Analysis, Interscience Publishers, N.Y. (1966).

W.G. Herkstroeter, A.A. Lamola and G.S. Hammond, J. Am. Chem. Soc. 86, 4537 (1964) "Mechanisms of Photochemical Reactions in Solution. XXVIII. Values of Triplet Excitation Energies of Selected Sensitizers".

J.P. Hernandez and S. Choi, J. Chem. Phys. 50, 1524 (1969) "Optical Absorption by Charge-Transfer Excitons in Linear Molecular Crystals".

K.C. Herr and G.C. Pimentel, Appl. Optics 4, 25 (1965) "A Rapid-Scan Infrared Spectrometer; Flash Photolytic Detection of Chloroformic Acid and of CF_2".

G. Herzberg and D.A. Ramsay, Proc. Roy. Soc. (London) A233, 34 (1955) "The 7500 to 4500 Å Absorption System of the Free HCO Radical".

G. Herzberg and D.N. Travis, Can. J. Phys. 42, 1658 (1964) "The Spectrum and Structure of the Free NCN Radical".

C.M. Herzfeld, Phys. Rev. 107, 1239 (1957) "Theory of the Forbidden Transitions of Nitrogen Atoms Trapped in Solids".

J.E. Hesser, J. Chem. Phys. 48, 2518 (1968) "Absolute Transition Probabilities in Ultraviolet Molecular Spectra".

P. Hestermans and D. White, J. Phys. Chem.65, 362 (1961) "The Vapor Pressure, Heat of Vaporization and Heat Capacity of Methane from the Boiling Point to the Critical Temperature".

R.M. Hexter and D.A. Dows, J. Chem. Phys. 25, 504 (1956) "Low-Frequency Librations and the Vibrational Spectra of Molecular Crystals".

R.M. Hexter, J. Chem. Phys. 25, 1286 (1956) "Relative Magnitude of Crystalline Fields; Crystal Structure of Methyl Iodide".

R.M. Hexter and T.D. Goldfarb, J. Inorg. Nucl. Chem. 4, 171 (1956) "Infra-red Spectra of Quinol Clathrate Compounds".

R.M. Hexter, Spectrochim. Acta 10, 281 (1958) "High-resolution, Temperature-Dependent Spectra of Calcite".

R.M. Hexter, Spectrochim. Acta. 10, 291 (1958) "Infrared Spectroscopic Investigation of Anion Rotational Disorder in Sodium Nitrate".

R.M. Hexter, J. Opt. Soc. Am. 48, 770 (1958) "On the Infrared Absorption Spectra Crystalline Brucite $\{Mg(OH)_2\}$ and Portlandite $\{Ca(OH)_2\}$".

R.M. Hexter, J. Mol. Spectry. 3, 67 (1959) "Low-Frequency Librations and the Vibrational Spectra of Molecular Crystals. Part II."

R.M. Hexter, Am. Rev. Phys. Chem. 10 (1959) "Vibration-Rotation Spectroscopy".

R.M. Hexter, J. Chem. Phys. 33, 1833 (1960) "Intermolecular Coupling of Vibrations in Molecular Crystals: A Vibrational Exciton Approach".

R.M. Hexter, E.J. Chem. Phys. 34, 941 (1961) "Infrared Spectrum of Single Crystals of LiOH, LiOD, and LiOH-LiOD".

R.M. Hexter, J. Chem. Phys. 37, 1347 (1962) "Evaluation of Lattice Sums in the Calculation of Crystal Spectra".

R.M. Hexter, J. Chem. Phys. 36, 2285 (1962) "Vibrational Excitons. II. Degenerate Vibrations".

R.M. Hexter, J. Chem. Phys. 38, 1024 (1963) "Comment on 'Infrared Absorption Spectra of LiOH and LiOD'".

R.M. Hexter, J. Chem. Phys. 39, 1608 (1963) "Erratum and Further Comments: Vibrational Excitons. II. Degenerate Vibrations".

R.M. Hexter, J. Opt. Soc. Am. 53, 703 (1963) "Excitation-Modulation Spectroscopy: A Technique for Obtaining Vibrational Spectra of Excited Electronic States".

R.M. Hexter, J. Chem. Phys. 46, 2300 (1967) "Forbidden Transitions in Molecular Crystals: The Cameron System of Solid α-CO".

D.L. Hildenbrand, J. Chem. Phys. 40, 3438 (1964) "Entropies of Some Gaseous Metal Dihalides".

C.G.A. Hilland and H.A. Klasens, J. Electrochem. Soc. 96, 275 (1949) "Influence of Temperature on the Efficiencies of Zinc Sulfide Phosphors Containing Silver and Cobalt".

I.H. Hillier and S.A. Rice, J. Chem. Phys. 46, 3881 (1967) "Comments on the Influence of Intermediate Excitons and Exchange Forces on the Interaction in Molecular Crystals: The Crystal Structure of Chlorine".

J.W. Hilpern, G. Porter and L.J. Stief, Proc. Roy. Soc. (London) A 277, 437 (1964) "Decay of the Triplet State. I. First-Order Processes in Solution".

F. Hirayama, J. Chem. Phys. 42, 3726 (1965) "Concentration Dependence of Benzene Emission in Frozen Solutions".

N. Hirota and C.A. Hutchison, Jr., J. Chem. Phys. 46, 1561 (1967) "Effect of Deuteration of Durene on the Lifetime of the Phosphorescent Triplet State of Naphthalene in a Durene Host Crystal".

R.M. Hochstrasser, Can. J. Chem. 37, 1367 (1959) "The Luminescence of Complex Molecules in Relation to the Internal Conversion of Excitation Energy. Part II".

R.M. Hochstrasser, Can. J. Chem. 37, 1123 (1959) "Note on the Photooxidation of Tetramethylrubrene".

R.M. Hochstrasser, Spectrochim. Acta 16, 497 (1960) "On the Problem of Radiative Combinations Between Upper Singlet States and the Ground State in Aromatic Molecules".

R.M. Hochstrasser, J. Chem. Phys. 33, 950 (1960) "Electronic Absorption Spectrum of Diphenylene in Substitutional Solid-Solid Solution".

R.M. Hochstrasser, Can. J. Chem. 38, 233 (1960) "The Luminescence of Complex Molecules in Relation to the Internal Conversion of Excitation Energy. Part II. N-Heteroaromatics".

R.M. Hochstrasser, J. Chem. Phys. 33 459 (1960) "Polarization of the First Two Electronic Transitions of Pyrene".

R.M. Hochstrasser, Can. J. Chem. 39, 765 (1961) "The Absorption Spectrum of Diphenylene in the Near-Ultraviolet".

R.M. Hochstrasser, Can. J. Chem. 39, 451 (1961) "The Crystal Spectrum of Perylene".

R.M. Hochstrasser, Can. J. Chem. 39, 459 (1961) "The Effect of Intramolecular Twisting on the Emission Spectra of Hindered Aromatic Molecules. Part I. 1,1'-Binaphthyl".

R.M. Hochstrasser, Can. J. Chem. 39, 1776 (1961) "The Luminescence of Complex Molecules in Relation to the Internal Conversion of Excitation Energy. Part III. The Total Emission Spectra of 1-Naphthoic Acid".

R.M. Hochstrasser, Can. J. Chem. 39, 1853 (1961) "The Polarization of the Fluorescence of 1- and 2-Naphthoic Acid".

R.M. Hochstrasser, J. Chem. Phys. 36, 1808 (1962) "Absorption Spectrum of Phenazine Single Crystals at 77°K and 4.2°K in the Region of the $\eta \rightarrow \pi^*$ Transition".

R.M. Hochstrasser, J. Mol. Spectry. 8, 485 (1962) "The Influence of Temperature on the Emission Spectra of Stilbene Monocrystals and Mixed Crystals with Tetracene",

R.M. Hochstrasser, Rev. Mod. Phys. 34, 531 (1962) "The Luminescence of Organic Molecular Crystals".

R.M. Hochstrasser, J. Chem. Phys. 36 3505 (1962) "Polarization of the Spectra of Crystalline Azobenzene and Mixed Crystals of Azobenzene in Stilbene at 77°K and 4.2°K in the Region of the Lowest $\eta \rightarrow \pi^*$ Transition".

R.M. Hochstrasser, Rad. Res. 20, 107 (1963) "The Problem of Defects in Relation to the Optical Properties of Organic Molecular Crystals".

R.M. Hochstrasser, J. Chem. Phys. 40, 1038 (1964) "Determination of the Efficiency of Triplet Energy Migration in Benzophenone Crystals".

R.M. Hochstrasser, J. Chem. Phys. 41, 1073 (1964) "Experimental Evidence for Localized Excitons in the Spectra of Charge-Transfer Complex Molecular Crystals".

R.M. Hochstrasser, J. Chem. Phys. 40, 2737 (1964) "Photoprocesses Involving Triplet States of Organic Crystals".

R.M. Hochstrasser and S.K. Lower, J. Chem. Phys. 40, 1041 (1964) "Polarized Emission and Triplet-Triplet Absorption Spectra of Aromatic Hydrocarbons in Benzophenone Crystals".

R.M. Hochstrasser, J. Chem. Phys. 40, 2559 (1964) "Spectral Effects of Strong Exciton Coupling in the Lowest Electronic Transition of Perylene".

R.M. Hochstrasser, S.K. Lower and C. Reid, J. Mol. Spectry. 15, 257 (1965) "Absolute Ultraviolet Absorption Intensities of the Anthracene-Trinitrobenzene Crystal".

R.M. Hochstrasser and G.J. Small, Chem. Com. 5, 87 (1965) "Multiplet Structure in the Absorption, Fluorescence, and Phosphorescence of Mixed Molecular Crystals".

R.M. Hochstrasser and G.J. Small, J. Chem. Phys. 45, 2270 (1966) "Electronic Spectra of Phenanthrene in Mixed Crystals".

R.M. Hochstrasser and C. Marzzacco, J. Chem. Phys. 45, 4681 (1966) " Electronic States of 9,10-Diazaphenanthrene".

R.M. Hochstrasser and C. Marzzacco, J.Chem. Phys. 46, 4155 (1966) "Singlet-Triplet Transitions in o-Diazines: Pyridazine".

R.M. Hochstrasser and A.P. Marchetti, Chem. Phys. Letters 1, 597 (1968) "The Polarization of the Allowed Triplet-Triplet Absorption in Anthracene".

C.W.W. Hoffman and J.J. Brown, J. Inorg. Nucl. Chem. 30, 63 (1968) "Compound Formation and Mn^{2+} Activated Luminescence in the Binary Systems R_2O- and RO-Ga_2O_3".

R.E. Hoffman and D.F. Hornig, J. Chem. Phys. 17, 1163 (1949) "The Infra-Red Spectrum of Solid Hydrogen Cyanide".

R.B. Holden, W.J. Taylor and H.L. Johnston, J. Opt. Soc. Am. 40, 757 (1950) "A Variable Thickness Low Temperature Infrared Cell".

W.W. Holloway, Jr., and M. Kestigian, J. Chem. Phys. 45, 639 (1966) "Exchange Effects in the $^3A_2 \rightarrow {}^1E$ Absorption Transition of the Ni^{2+} Ion in Fluoride Compounds".

O.G. Holmes and D.S. McClure, J. Chem. Phys. 26, 1686 (1957) "Optical Spectra of Hydrated Ions of the Transition Metals".

R.R. Holmes, J. Chem. Phys. 46, 3718 (1967) "Molecular Structure of $PClF_4$: Infrared Spectrum, Low-Temperature Raman Spectrum, and Gas-Phase Dipole Moment: Pentacoordinated Molecules. IX".

J.J. Hopfield and R.T. Birge, Phys. Rev. 29, 922 (1927) "CO Cameron Bands"

H.P. Hopkins, Jr.,J.V.V. Kasper and K.S. Pitzer, J. Chem. Phys. 46, 218 (1967) "Restricted Rotation in Solid Deuteromethanes".

H.P. Hopkins, Jr., R.F. Curl, Jr., and K.S. Pitzer, J. Chem. Phys. 48, 2959 (1968) "Infrared Matrix-Isolation Studies of Nuclear-Spin-Species Conversion".

A.R. Horrocks, T. Medinger and F. Wilkinson, Int. Symp. on Luminescence, Munich (1965) (Munich: Verlag Karl Thiemig KG, 1966) P. 16, "Fluorescence Quenching by Compounds Containing Heavy Atoms".

A.R. Horrocks and F. Wilkinson, Proc. Roy. Soc. (London) A 306, 257 (1968) "Triplet State Formation Efficiencies of Aromatic Hydrocarbons in Solution".

H.J. Hrostowski and G.C. Pimentel, J. Am. Chem. Soc. 76, 998 (1954) "The Infrared Spectra of Stable Pentaborane and Deuterated Pentaborane".

C.M. Huggins, G.C. Pimentel and J.N. Shoolery, J. Phys. Chem. 60, 1311 (1956) "Proton Magnetic Resonance Studies of the Hydrogen Bonding of Phenol, Substituted Phenols and Acetic Acid".

C.M. Huggins and G.C. Pimentel, J. Phys. Chem. 60, 1615 (1956) "Systematics of the Infrared Spectral Properties of Hydrogen Bonding Systems: Frequency Shift, Half Width and Intensity".

G.R. Hunt, E.F. McCoy and I.G. Ross, Australian J. Chem. 15, 591 (1962) "Excited States of Aromatic Hydrocarbons: Pathways of Internal Conversion".

T.F. Hunter, R.D. McAlpine and R.M. Hochstrasser, J. Chem. Phys. 50, 1140 (1969) "Triplet-Triplet Energy Transfer in Ordered and Random Media".

N.S. Hush and R.J.M. Hobbs, Prog. in Inorg. Chem. 10, 259 (1968) "Absorption Spectra of Crystals Containing Transition Metal Ions".

C.A. Hutchison, Jr., and B.W. Mangum, J. Chem. Phys. 29, 952 (1958) "Paramagnetic Resonance Absorption in Naphthalene in Its Phosphorescent State".

C.A. Hutchison, Jr., and B.W. Mangum, J. Chem. Phys. 32, 1261 (1960) "Effect of Deuterium Substitution on the Lifetime of the Phosphorescent Triplet State of Naphthalene".

C.A. Hutchison, Jr., and B.W. Mangum, J. Chem. Phys. 34, 908 (1961) "Paramagnetic Resonance Absorption in Naphthalene in Its Phosphorescent State".

D. Ikenberry and T.P. Das, J. Chem. Phys. 45, 1361 (1966) "Chemical-Shift Calculations in Alkali Halides".

A.A. Il'ina and E.V. Shpol'skii, Izvest. Akad. Nauk SSSR, Ser. Fiz. 15, 585 (1951) "Fluorescence and Phosphorescence Spectra of Pyrene-type Carbohydrates in Frozen Solutions".

K. Imakubo, T. Higashimura and T. Sidei, J. Phys. Soc. Japan 22, 339 (1967) "Phosphorescence of Nucleotides and DNA at 77°K".

G.F. Imbusch, W.M. Yen, A.L. Schawlow, D.E. McCumber and M.D. Sturge, Phys. Rev. 133, A1029 (1964) "Temperature Dependence of the Width and Position of the $^2E \rightarrow {}^4A_2$ Fluorescence Lines of Cr^{3+} and V^{2+} in MgO".

G.F. Imbusch, A.L. Schawlow, A.D. May and S. Sugano, Phys. Rev. 140, A830 (1965) "Fluorescence of MgO:Cr^{3+} Ions in Noncubic Sites".

M. Irie, K. Hayashi, S. Okamura and H. Yoshida, J. Chem. Phys. 48, 922 (1968) "Behavior of Trapped Electrons in Irradiated 3-Methylpentane Glass at 77°K".

T.V. Ivanova, P.I. Kudriashov and V.Ya. Sveshnikov, Dokl. Akad. Nauk SSSR 138, 572 (1961) "Lifetime of Ultraviolet Fluorescence of Some Aromatic Compounds".

J

A. Jablonski, Z. Physik 94, 38 (1935) "Uber den Mechanismus der Photolumineszenz von Farbstoffphosphoren".

A. Jablonski, Acta Phys. Polonia 4, 311 (1935) "Weitere Versuche uber die Negative Polarisation der Phosphoreszenz".

A. Jablonski, Acta Phys. Polon. 5, 371 (1936) "Über Einige Optische Eigenschaften der in Festen und Flüssigen Medien Eingebetteten Moleküle".

A. Jablonski, Acta Phys. Polon. 13, 175 (1954) "Quenching of Photoluminescence of Solutions".

M.E. Jacox and D.E. Milligan, Spectrochim. Acta 17, 1196 (1961) "The Infrared Spectra of Thick Films of CO_2 and $CO_2 + H_2O$ at Low Temperatures".

M.E. Jacox and D.E. Milligan, Spectrochim. Acta 19, 1173 (1963) "The Infrared Spectra of Dilute Solid Solutions of Ammonia in Carbon Dioxide".

M.E. Jacox and D.E. Milligan, J. Am. Chem. Soc. 85, 278 (1963) "Infrared Study of the Reactions of CH_2 and NH with C_2H_2 and C_2H_4 in Solid Argon".

M.E. Jacox and D.E. Milligan, J. Chem. Phys. 40, 2457 (1964) "Low-Temperature Infrared Study of Intermediates in the Photolysis of HNCO and DNCO".

M.E. Jacox and D.E. Milligan, Appl. Opt. 3, 873 (1964) "Low-Temperature Infrared Studies of the Chemistry of Free Radicals".

M.E. Jacox, D.E. Milligan, N.G. Moll and W.E. Thompson, J. Chem. Phys. 43, 3734 (1965) "Matrix-Isolation Infrared Spectrum of the Free Radical CCO".

M.E. Jacox and D.E. Milligan, J. Chem. Phys. 43, 866 (1965) "Matrix Isolation Study of the Reaction of Cl Atoms with CO. The Infrared Spectrum of the Free Radical ClCO".

M.E. Jacox and D.E. Milligan, J. Chem. Phys. 47, 1626 (1967) "Matrix-Isolation Study of the Reaction of Carbon Atoms with CHl. The Infrared Spectrum of the Free Radical HCCl".

M.E. Jacox and D.E. Milligan, J. Chem. Phys. 46, 184 (1967) "Production and Reaction of Atomic Fluorine in Solids. Vibrational and Electronic Spectra of the Free Radical HNF".

M.E. Jacox and D.E. Milligan, J. Chem. Phys. 50, 3252 (1969) "Matrix-Isolation Study of the Vacuum-Ultraviolet Photolysis of Methyl Fluoride. The Infrared Spectra of the Free Radicals CF, HCF, and H_2CF".

M.E. Jacox and D.E. Milligan, J. Chem. Phys. (in print) "Matrix-Isolation Study of the Infrared and Ultraviolet Spectra of Several First-Series Transition-Metal Chlorides".

L.R. Jakobsson, Ark. Fysik 34, 19 (1967) "The Infrared Spectrum of the Neutral Sulphur Atom".

T.C. James, W.G. Norris and W. Klemperer, J. Chem. Phys. 32, 728 (1960) "Infrared Spectrum and Dipole Moment Function of Lithium Hydride".

L. Jansen, Phys. Letters 4, 91 (1963) "Absolute Stability of Cubic Crystal Structures of Heavy Rare Gas Atoms I".

L. Jansen, Phys. Rev. 135A, 1292 (1964) "Stability of Crystals of Rare-Gas Atoms and Alkali Halides in Terms of Three-Body Interactions. I. Rare-Gas Crystals".

L. Jansen and E. Lombardi, Chem. Phys. Letters 1, 33 (1967) "Three-Body Exchange Forces in Rare-Gas Crystals".

O. Janssen and K. Funabashi, J. Chem. Phys. 46, 101 (1967) "Luminescence Phenomena in Gamma-Irradiated Pure Alkanes at 77°K".

J.W.C. Johns, Can. J. Phys. 39, 1738 (1961) "The Absorption Spectrum of BO_2".

J.W.C. Johns, S.H. Pirddle and D.A. Ramsay, Disc. Faraday Soc. 35, 90 (1963) "Electronic Absorption Spectra of HCO and DCO Radicals".

N.M. Johnson and F. Daniels, J. Chem. Phys. 34, 1434 (1961) "Luminescence During Annealing and Phase Change in Crystals".

P.D. Johnson, Proc. Natl. Electronics Conf. 11, 152 (1955) "Luminescence and Luminescent Devices".

S.A. Johnson, H.G. Freie, A.L. Schawlow and W.M. Yen, J. Opt. Soc. Am. 57, 734 (1967) "Thermal Shifts in the Energy Levels of $LaF_3:Nd^{3+}$".

P.F. Jones and S. Siegel, J. Chem. Phys. 45, 4757 (1966) "High Pressure Effects on the Triplet-Singlet Transition Probability of Naphthalene".

P.F. Jones and M. Nicol, J. Chem. Phys. 48, 5440 (1968) "Excimer Emission of Naphthalene, Anthracene, and Phenanthrene Crystals Produced by Very High Pressures".

P.F. Jones, J. Chem. Phys. 49, 3730 (1968) "Growth and Decay of Phosphorescence".

P.F. Jones, J. Chem. Phys. 48, 5448 (1968) "Spectral Shifts and Broadening of the Fluorescence of Anthracene and Tetracene in Several Host Crystals at High Pressures".

P.F. Jones and S. Siegel, J. Chem. Phys. 50, (1969) "Temperature Effects on the Phosphorescence of Aromatic Hydrocarbons in Poly(methylmethacrylate)".

T.H. Jones and R. Livingston, Trans. Faraday Soc. 60, 2168 (1964) "Temperature Dependence of the Lifetime of Phosphorescence of Some Polynuclear Hydrocarbons in Viscous Solution".

J. Jortner, L. Meyer, S.A. Rice and E.G. Wilson, Low Temp. Phys. 1, 356 (1965) "Localized Excitations in Condensed Neon, Argon, Krypton, and Xenon".

J. Jortner and R.S. Berry, J. Chem. Phys. 48, 2757 (1968) "Radiationless Transitions and Molecular Quantum Beats".

K.C. Joshi, Z. Phys. Chem. (Frankfurt) 55, 173 (1967) "The γ- and β-Systems of NS".

M.N. Kabler and D.A. Patterson, Phys. Rev. Letters 19, 652 (1967) "Evidence for a Triplet State of the Self-Trapped Exciton in Alkali-Halide Crystals".

A.H. Kalantar, J. Chem. Phys. 48, 4992 (1968) "Consequences of Photoselection on the Intensity and Polarization of Luminescent Molecules".

H.P. Kallmann and G.M. Spruch, eds., Luminescence of Organic and Inorganic Materials, Int. Conf., N.Y. Univ., John Wiley, N.Y. (1962)

Y. Kanda and H. Sponer, J. Chem. Phys. 28, 798 (1958) "Triplet-Singlet Emission Spectra of Solid Toluene at 4°K and 77°K and in EPA Solution at 77°K".

Y. Kanda and R. Shimada, Spectrochim. Acta 15, 211 (1959) "The Triplet-Singlet Emission Spectra of Phenanthrene and Related Compounds in EPA and in Petroleum Ether at 90°K".

Y. Kanda, Y. Gondo and R. Shimada, Spectrochim. Acta 17, 424 (1961) "Absorption Spectrum of Benzene in Carbon Tetrachloride".

Y. Kanda, R. Shimada, K. Hanada and S. Kajigaeshi, Spectrochim. Acta 17, 1268 (1961) "Phosphorescence Spectra of Polycrylic Compounds-I. Fluorene and Dibenzofuran".

Y. Kanda, R. Shimada and Y. Sakai, Spectrochim. Acta 17, 1 (1961) Phosphorescence Spectrum of Biphenyl at 90°K".

Y. Kanda and R. Shimada, Spectrochim. Acta 17, 7 (1961) "The Triplet-Singlet Emission Spectra of Benzene in Carbon Tetrachloride and Dioxane Matrices at 90°".

Y. Kanda, R. Shimada and Y. Takenoshita, Spectrochim. Acta 19, 1249 (1963) "The Phosphorescence Spectrum of Benzoic Acid, Methyl Benzoate and Benzamide at 90°K".

Y. Kanda, H. Kaseda and T. Matumura, Spectrochim. Acta 20, 1387 (1964) "Singlet-Triplet Absorption Spectra of Several Carbonyl Compounds".

A.M. Karo, J. Chem. Phys. 32, 907 (1960) "Electron-Population Analysis and the Dipole Moment of the LiH $^1\Sigma^+$ Excited State".

P.H. Kasai and W. Weltner, Jr., J. Chem. Phys. 43, 2553 (1965) "Ground States and Hyperfine-Structure Separations of ScO, YO, and LaO from ESR Spectra at 4°K".

P.H. Kasai, W. Weltner, Jr., and E.B. Whipple, J. Chem. Phys. 42, 1120 (1965) "Orientation of NO_2 and Other Molecules in Neon Matrices at 4°K".

P.H. Kasai, E.B. Whipple and W. Weltner, Jr., J. Chem. Phys. 44, 2581 (1966) "ESR of $Cu(NO_3)_2$ and CuF_2 Molecules Oriented in Neon and Argon Matrices at 4°K".

L. Kasha and M. Kasha, Molecular Electronic Bibliography, Vol. 1, Molecular Quantum Mechanics and Molecular Electronic Spectroscopy. Early Workers. Publishers Press, Tallahassee, Fla. (1958).

M. Kasha and R.E. Powell, J. Am. Chem. Soc. 69, 2909 (1947) "On the Correlation of the Spectroscopic and Thermal Energy Differences between the Fluorescence and Phosphorescence Levels of Dye Molecules".

M. Kasha, Chem. Rev. 41, 401 (1947) "Phosphorescence and the Role of the Triplet State in the Electronic Excitation of Complex Molecules".

M. Kasha, J. Opt. Soc. A. 38, 1068 (1948) "Fabrication of Boric Acid Glass for Luminescence Studies".

M. Kasha, Science 107, 556 (1948) "On the Properties of Gelatin-Dye Phosphors and the Continuum Theory of Szent-Gyorgyi".

M. Kasha, J. Opt. Soc. Am. 38, 929 (1948) "Transmission Filters for the Ultraviolet".

M. Kasha, R.V. Nauman, J. Chem. Phys. 17, 516 (1949) "The Metastability of the Lowest Excited Singlet Level of Naphthalene".

M. Kasha, Discussions Faraday Soc. 9, 14 (1950) "Characterization of Electronic Transitions in Complex Molecules".

M. Kasha, J. Chem. Phys. 20, 71 (1952) "Collisional Perturbation of Spin-Orbital Coupling and the Mechanism of Fluorescence Quenching. A Visual Demonstration of the Perturbation".

M. Kasha and S.P. McGlynn, Ann. Rev. Phys. Chem. 7, 403 (1956) "Molecular Electronic Spectroscopy".

M. Kasha, Rev. Mod. Phys. 31, 162 (1959) "Relation Between Exciton Bands and Conduction Bands in Molecular Lamellar Systems".

M. Kasha, Rad. Res. 2, 243 (1960) "Paths of Molecular Excitation".

M. Kasha, M. Ashraf El-Bayoumi and W. Rhodes, J. Chim. Phys. 58, 916 (1961) "Excited States of Nitrogen Base-Pairs and Polynucleotides".

M. Kasha, J. Mol. Spectry. 6, iii (1961) "Introductory Remarks of Dr. M. Kasha to the Symposium on Molecular Electronic Spectra".

M. Kasha, Rad. Res. 20, 55 (1963) "Energy Transfer Mechanisms and the Molecular Exciton Model for Molecular Aggregates".

M. Kasha, Rad. Res. 20, 53 (1963) "Introductory Remarks to the Exciton Symposium".

M. Kasha, in Physical Processes in Radiation Biology, Augenstein, Rosenberg and Mason, eds. Academic Press, N.Y. (1964) "Classification of Excitons".

M. Kasha, H.R. Rawls and M. Ashraf El-Bayoumi, Pure & Appl. Chem. 2, 371 (1965) "The Exciton Model in Molecular Spectroscopy".

M. Kasha, Proc. Int. Conf. on Luminescence, 166 (1966) "Theory of Molecular Luminescence".

M. Kasha, in Annual Science Conference Proceedings, Yeshiva Univ., N.Y., A. Gelbart, ed., 2, 1 (1968) "Theory of Molecular Luminescence (Luminescence and Intramolecular Energy Transfer)".

W.E. Kaskan and A.B.F. Duncan, J. Chem. Phys. 16, 223 (1948) "The Fluorescence of Solid Acetone".

A. Katorski and D. White, J. Chim. Phys. 60, 29 (1963) "Theory of Isotope Separation of Homo and Heteronuclear Diatomic Molecules by Adsorption at Low Temperatures".
A. Katorski and D. White, J. Chem. Phys. 40, 3183 (1964) "Theory of Adsorption of the Isotopic Hydrogen Molecules at Low Temperatures".

M.L. Kats, K.E. Gyunsburg and L.I. Golubentseva, Izvest. Akad. Nauk SSSR, Ser. Fiz. 25, 43 (1961) "Exciton Excitation of Luminescence in Activated Alkali-Iodides at Low Temperature".

B. Katz, A. Ron and O. Schnepp, J. Chem. Phys. 47, 5303 (1967) "Far-Infrared Spectrum of HCl Dimers".

B. Katz, A. Ron and O. Schnepp, J. Chem. Phys. 46, 1926 (1967) "Far-Infrared Spectra of HCl and HBr in Solid Solutions".

B. Katz and J. Jortner, Chem. Phys. Letters, 2, 437 (1968) "Observation of Molecular Rydberg States in Rare Gas Solids".

R.G. Kaufman and W.B. Hadley, J. Chem. Phys. 46, 1598 (1967) "Excitation of Luminescence from KI:Tl at 5°K".

H. Kautsky, Nature 19, 1043 (1931) "Die Aufklärung der Photoluminescenztilgung Fluorescierender Systeme Durch Sauerstoff: Die Bildung Aktiver, Diffusionsfähiger Sauerstoffmoleküle Durch Sensibilisierung".

H. Kautsky and A. Hirsch, Deut. Chem. Ges. Berichte 65, 401 (1932) "Phosphorescenz Adsorbierter Fluorescierender Farbstoffe und ihre Beziehung zu Reversiblen und Irreversiblen Struktur-Änderungen der Gele".

H. Kautsky and H. Merkel, Naturwiss. 27, 195 (1939) "Phosphoreszenz, Selbstausloschung und Sensibillisatorwirkung organischer Stoffe".

K. Kawaoka, A.U. Khan and D.R. Kearns, J. Chem. Phys. 46, 1842 (1967) "Role of Singlet Excited States of Molecular Oxygen in the Quenching of Organic Triplet States".

A. Kawski, Bull. Acad. Polon. Sci. 6, 533 (1958) "Effect of Concentration on the Polarization of the Fluorescence of Rigid Solutions".

A.A. Kazzaz and A.B. Zahlan, J. Chem. Phys. 48, 1242 (1968) "Temperature Dependence of Crystalline Tetracene Fluorescence".

T.H. Keil and A. Gold, Phys. Rev. 140, A906 (1965) "Excited States of Solid Ar:H. II. Line Shapes and Interstitial Sites".

T.H. Keil, J. Chem. Phys. 46, 4404 (1967) "Polarizability of an Argon Atom in Solid Argon".

R.A. Keller, Chem. Phys. Letters, 3 , 27 (1969) "Excited Triplet-Singlet Intersystem Crossing".

J.M. Kelliher, Jr., Ph.D. Thesis, University of Connecticut, Storrs, Connecticut (1966) "The Effect of Temperature on Infrared Spectra".

R.E. Kellogg and R.P. Schwenker, J. Chem. Phys. 41, 2860 (1964) "'Temperature Effect' on Triplet State Lifetimes in Solid Solutions".

R.E. Kellogg and N.C. Wyeth, J. Chem. Phys. 45, 3156 (1966) "Evidence of Franck-Condon Factors in Radiationless Transitions".

G.S. Kembrovskii, V.P. Bobrovich and A.N. Sevchenko, Opt. Spectry. (USSR) (English transl.) 24, 213 (1968) "Quasiline Luminescence Spectra of Benzene".

G.I. Kerley, Diss. Abstr. B, 27, 3888 (1967) "Theoretical Study of the Rotation and Vibration of Matrix-Isolated Molecules".

N.R. Kestner, J. Chem. Phys. 45, 208 (1966) "Long-Range Interaction of Helium Atoms. A. Calculations".

N.R. Kestner, J. Chem. Phys. 45, 3121 (1966) "Effect of Intra-Atomic Correlation on Long-Range Intermolecular Forces: An Exactly Soluble Model".

N.R. Kestner and O. Sinanoglu, J. Chem. Phys. 45, 194 (1966) "Intermolecular-Potential-Energy Curves--Theory and Calculations on the Helium-Helium Potential".

N.R. Kestner, J. Chem. Phys. 45, 213 (1966) "Long-Range Interaction of Helium Atoms. B. Study of Approximations".

L.F. Keyser and G.W. Robinson, J. Chem. Phys. 44, 3225 (1966) "Infrared Spectra of HCl and DCl in Solid Rare Gases. I. Monomers".

L.F. Keyser and G.W. Robinson, J. Chem. Phys. 45, 1694 (1966) "Infrared Spectra of HCl and DCl in Solid Rare Gases. II. Polymers".

M.D. Khalupovskii, Opt. Spectry.(USSR) (English transl.) 11, 352 (1961) "On the Phosphorescence of Organic Molecules with Two Metastable Levels".

V.M. Khanna, G. Besenbruch and J.L. Margrave, J. Chem. Phys. 46, 2310 (1967) "Ultraviolet Absorption Spectrum of SiF_2".

O.P. Kharitonova, Opt. Spectry. (USSR) (English transl.) 15, 9 (1963) "Electronic Spectra of 2,6-Dimethylnaphthalene in Solution".

A. Ya. Khesina, Bull. Acad. Sci. USSR. Phys. ser. (English transl.) 24, 629 (1960) "Spectroscopy of Some Pyrene Derivatives in Frozen Solutions".

A. Ya. Khesina, Opt. Spectry (USSR) (English transl.) 10, 319 (1961) "Emission and Absorption Spectra of Frozen Crystalline Solutions of Certain Pyrene Derivatives".

B.A. King, Ph.D. Thesis, University of California, Berkeley, California (1968), and UCRL-18618, "Optical Absorption Spectra of Matrix-Isolated Copper, Silver and Gold".

C.M. King and E.R. Nixon, J. Chem. Phys. 48, 1685 (1968) "Matrix-Isolation Study of the Hydrogen Cyanide Dimer".

S.T. King, J. Chem. Phys. 49, 1321 (1968) "Infrared Study of Matrix-Isolated Chlorinated Tetrahedral Molecules".

M. Kinoshita, T.N. Misra and S.P. McGlynn, J. Chem. Phys. 45, 817 (1966) "Delayed Luminescence of Organic Mixed Crystals. III. Decay Characteristics".

M. Kinoshita and S.P. McGlynn, Molecular Crystals 3, 163 (1967) "Delayed Luminescence of Organic Mixed Crystals".

M. Kinoshita, K. Stolzle and S.P. McGlynn, J. Chem. Phys. 48, 1191 (1968) "Delayed Luminescence of Organic Mixed Crystals. VII. Intermolecular Triplet Decay Processes".

R.D. Kirk, J. Electrochem. Soc. 101, 461 (1954) "Role of Sulfur in the Luminescence and Coloration of Some Alumino-silicates"

(USSR)
G.M. Kisliak, Opt. Spektry./5, 297 (1958) "On the Dependence of the Excited State Duration of Organoluminophors on the Wavelength of the Exciting Light".

G.M. Kisliak, Opt. Spectry. (USSR) (English transl.) 6, 144 (1959) "The Law of Phosphorescence Decay for Trypaflavine in Formic Acid".

G.M. Kisliak, G.M. Lysenko and V.I. Ponochovny, Ukrayin Fiz. Zh. (USSR) 11, 1350 (1966) "Carbazol Phosphorescence".

J.S. Kittelberger and D.F. Hornig, J. Chem. Phys. 46, 3099 (1967) "Vibrational Spectrum of Crystalline HF and DF".

L.A. Kiyanskaya, Bull. Acad. Sci. USSR 29, 1363 (1965) "Concerning the Kinetics of Quenching of the Luminescence of Organic Substances in Solutions".

H.A. Klasens, Phys. and Chem. Solids 9, 185 (1959) "The Temperature Dependence of the Fluorescence of Photoconductors".

M.L. Klein and R.J. Munn, J. Chem. Phys. 47, 1035 (1967) "Interaction Potential of the Inert Gases".

B. Kleman, Can. J. Phys. 41, 2034 (1963) "The Near-Ultraviolet Absorption Spectrum of CS_2".

W. Klemperer and G.C. Pimentel, J. Chem. Phys. 22, 1399 (1954) "Hydrogen Bonding in Sodium Trifluoroacetate-Trifluoroacetic Acid Compounds".

C.C. Klick, J. Phys. Chem. 57, 776 (1953) "Emission and Absorption in Luminescent Centers at Low Temperatures".

C.C. Klick and J.H. Schulman, Sol. St. Phys. 5, 97 (1957) "Luminescence in Solids".

L.A. Klimova and G.N. Nersesova, Opt. Spectry. (USSR) (English transl.) 21, 167 (1966) "Spectroscopy of Aromatic Hydrocarbon Mixtures in Frozen Crystalline Solutions. I. Study of a Binary Mixture of Anthracene and Naphthacene in n-Paraffin Solutions at 77°K".

V.P. Klochkov and S.M. Korotkov, Bull. Acad. Sci. USSR 29, 1359 (1965) "Temperature Dependence of Change of the Equilibrium Separations in Aromatic Compounds".

V.P. Klochkov and T.S. Smirnova, Opt. Spectry (USSR) (English transl.) 22, 464 (1967) "Fine Structure of the Fluorescence Spectrum of Anthracene Vapors".

W. Klöpffer, J. Chem. Phys. 50, 1689 (1969) "Transfer of Electronic Excitation Energy in Solid Solutions of Perylene in N-Isopropylcarbazole".

R.S. Knox, J. Chem. Phys. 9, 238 (1959) "Exciton States in Rare-Gas Crystals".

R.S. Knox, Rad. Res. 20, 77 (1963) "Wannier Excitons in Simple van der Waals Crystals".

R.S. Knox and M.H. Reilly, Phys. Rev. 135A, 166 (1964) "Atomic Multipole Interactions in Rare-Gas Crystals".

T.R. Koehler, Phys. Rev. Letters, 22, 777 (1969) "Theoretical Temperature-Dependent Phonon Spectra of Solid Neon".

H. Kölbel, Naturwissenschaften 41, 550 (1954) "Light-Filter Combination for Observation of Fluorescence in Entire Spectral RAnge".

M.A. Konstantinova-Shlesinger, Lyuminestsentsii Analiz, Izdatelstvo Akademia Nauk SSSR, Moscow and Leningrad (1948).

R. Kopelman and O. Schnepp, J. Chem. Phys. 30, 597 (1959) "Infrared Spectrum of Hexachlorobenzene".

R. Kopelman, J. Chem. Phys. 44, 3547 (1966) "Vibrational Exciton Splitting, Fermi Resonance, and Crystal Structure of Methyl Iodide".

R. Kopelman, J. Chem. Phys. 47, 3227 (1967) "Benzene Vibrational Exciton Spectrum".

R. Kopelman, J. Chem. Phys. 47, 2631 (1967) "Interchange Symmetry. I. Molecules, Crystals, and Excitons".

W. Körber and V. Zanker, Z. Angew. Phys. 17, 398 (1964) "Zuordnung von π-Elektronenabsorptionsbanden mit Hilfe der Methode der Fluoreszenzpolarisation".

V.M. Korsunskii and A.N. Faidysh, Soviet Phys. Doklady (English transl.) 8, 564 (1963) "Triplet-Level Energy Migration in Benzophenone Crystals".

G. Kortüm, Z. Phys. Chem. 40, 431 (1938) "Das Optische Verhalten Gelöster Ionen und Seine Bedeutung für die Struktur Elektrolytischer Lösungen. VII. Fluorescenz-auslöschung und Solvatation".

G. Kortüm and B. Finckh, Z. Phys. Chem. 52, 263 (1942) "Über die Fluorescenz Vielatomiger Moleküle".

I. Kovacs, Rotational Structure in Spectra of Diatomic Molecules, Elsevier, N.Y. (1969).

J. von Kowalski, Physik Z. 12, 956 (1911) "Untersuchungen Über Phosphoreszenz Organischer Verbindungen bei Tiefen Temperaturen".

E.B. Kozyreva and P.V. Meiklar, Opt. Spectry. (USSR) (English transl.) 23, 226 (1967) "Luminescence Spectra of Silver Halides at 4.2°K".

A.A. Krasnovskii, Yu. E. Erokhin and B.A. Gulyaev, Soviet Phys. Doklady (English transl.) 8, 1020 (1964) "Temperature Dependence of Luminescence of Bacterioviridin and State of this Pigment in Photosynthetic Bacteria".

R.J. Kriegler and H.L. Welsh, Can. J. Phys. 46, 1181 (1968) "Induced Infrared Fundamental Band of Hydrogen Dissolved in Solid Argon".

V.G. Krishna and L. Goodman, J. Am. Chem. Soc. 83, 2042 (1961) "Protonation Effects on n → π Transitions in Pyrimidine".

V.G.Krishna and L.Goodman, J. Chem. Phys. 36, 2217 (1962) "Polarization of T → S Emission Spectra of Azines".

N. Kristianpoller and D. Dutton, Appl. Opt. 3, 287 (1964) "Optical Properties of 'Linmogen': A Phosphor for Wavelength Conversion".

V.G. Krongauz, Opt. Spectry. (USSR) (English transl.) 22, 502 (1967) "On the Parallelism Between the Temperature Dependence of the Brightness of X-Ray Luminescence and Optical Flash in Alkali-Halide Phosphors".

W. J. Kroenke and M.E. Kenney, Inorg. Chem. 3, 696 (1964) "The Infrared Spectra of Some Tin and Lead Phthalocyanines".

J.L. Kropp and W.R. Dawson, J. Chem. Phys. 45, 2419 (1966) "Temperature-Dependent Quenching of Fluorescence of Europic-Ion Solutions".

J.L. Kropp and W.R. Dawson, Int. Conf. on Molecular Luminescence, Loyola Univ., Chicago (1968) "Fluorescence and Phosphorescence of Aromatic Hydrocarbons in Poly(Methylmethacrylate) as a Function of Temperature".

I.N. Krupskii and V.G. Manzhely, Phys. Stat. Sol. 24, K53 (1967) "Thermal Conductivity of Solid Argon".

P.I. Kudryashov and B.Ya. Sveshnikov, Opt. Spectry. 8, 344 (1960) "On the Concentration Depolarization of the Phosphorescence of Organoluminophors".

Yu. A. Kulyupin and A.F. Yatsenko, Bull. Acad. Sci. USSR 29, 1417 (1965) "On Mirror Similarity of Luminescence and Absorption Spectra".

S.L. Kupferman and F.M. Pipkin, Phys. Rev. 66, 207 (1968) "Properties of Rubidium Atoms Trapped in a Solid Argon Matrix".

L.A. Kuznetsova and B.Ia. Sveshnikov, Bull. Acad. Sci. USSR, Phys. Ser. 20, 394 (1956) "The Influence of Concentration on the Luminescence of Alcohol Solutions of Acridine Orange at -180°c".

L.A. Kuznetsova and B.Ya. Sveshnikov, Izvest. Akad. Nauk SSSR, Ser. Fiz. 20, 433 (1956) "Influence of Dye Concentration on the Luminescence of Acridine Orange in Alcohol Solution at -183°C".

J. Kwok and G.W. Robinson, J. Chem. Phys. 36, 3137 (1962) "Spectroscopy in Liquid-Rare-Gas Solvents. Infrared Spectra of CH_4 in Argon and of HCl in Xenon".

L

S.J. Ladner and R.S. Becker, J. Chem. Phys. 43, 3344 (1965) "Effect of Environment on the Unimolecular Decay of the Triplet State".

E. Laffitte, Conpt. Rend. 232, 812 (1951) "Luminescence of Coloring Materials in Solid Solution in Plexiglass".

E. Laffitte, Ann. Physique 10, 71 (1955) "Contribution à l'Étude de la Luminescence des Matières Colorantes".

G.T. Lalos, R.J. Corruccini and H.P. Broida, Rev. Sci. Instr. 29, 505 (1958) "Design and Construction of a Blackbody and its Use in the Calibration of a Grating Spectroradiometer".

H. Lami, G. Pfeffer and G. Laustriat, J. Phys. 27, 398 (1966) "Rendements Quantiques de Fluorescence et Durées de Vie Radiative de Quelques Solutés Utilisés dans les Scintillateurs Liquides".

H. Lammermann and J.G. Conway, J. Chem. Phys. 38, 259 (1963) "Absorption Spectrum of Pu^{3+} in Lanthanum Trichloride and Lanthanum Ethylsulfate".

R.J. Landry, J.T. Fournier and C.G. Young, J. Chem. Phys. 46, 1285 (1967) "Electron Spin Resonance and Optical Absorption Studies of Cr^{3+} in a Phosphate Glass".

L. Langouet and A. T'kint de Roodenbeke, J. Phys. 27, 237 (1966) "Saturation de l'Emission des Substances Fluorescentes".

S.R. LaPaglia and B.C. Roquitte, J. Phys. Chem. 66, 1739 (1962) "The Luminescence of Cyclopentane".

J. Lascombe, P. Van Huong and M-L. Josien, Soc. Chim. 5, 76 (1959) "Structure de Vibration-Rotation dans les Spectres de Quelques Molecules Simples en Solution".

G.I. Lashkov and V.L. Ermolaev, Opt. Spectry.(USSR) (English transl.) 22, 462 (1967) "Triplet-Triplet Energy Transfer Along the Chains of Aromatic Polymers. Triplet Excitons in Polymers".

S. Leach, J. Chim. Phys. 55, 714 (1958) "Methode des Radicaux Pieges. Spectres d'Absorption et Photolyse de Quelques Molecules a 20°K".

S. Leach, 6th Int. Symp. Free Radical Stabilization, N.B.S., Washington D.C. (1959) "Effect of Rigid Media on Photochemical Processes in Benzene".

S.Leach, R. Lopez-Delgado and F. Delmas, J. Mol. Spectry. 7, 304 (1961) "On the $^3E_{1u} - {}^1A_{1g}$ Transition of Benzene and the Attribution of Weak Bands Near 2600 Å to the $^1B_{2u} - {}^1A_{1g}$ Transition".

S. Leach and L. Grajcar, 5th Int. Symp. on Free Radicals 36, 24 (1961) Uppsala, "The Photolysis of Toluene, Dibenzyl and Benzyl Chloride in Rigid Media: Studies by Absorption and Luminescence Spectroscopy".

S. Leach and R. Lopez-Delgado, Adv. Mol. Spectry. 419 (1962) "Effets de Milieux Rigides sur les Spectres Electroniques du Benzene".

S. Leach in Luminescence of Organic and Inorganic Materials, Kallman and Spruch, eds. John Wiley, N.Y. (1962) "The Luminescence Spectra of Some Trapped Organic Radicals".

S. Leach and R. Lopez-Delgado, J. Chim. Phys. 723 (1963) "Influence de l'Oxygene et du Tetrachlorure de Carbone sur les Spectres Electroniques du Benzene. I. Effet d'Oxygene".

S. Leach and R. Lopez-Delgado, Compt. Rend. 256, 1299 (1963) "Photoionisation, par Irradiation Ultraviolette en Milieu Rigide a 77°K, de Derives du Benzene Formant des Complexes Moleculaires avec le Tetrachlorure de Carbone. Piegeage d'Anions CCl_4^-".

S. Leach and R. Lopez-Delgado, J. Chim. Phys. 1636 (1964) "Le Premier Etat Triplet du Benzene".

S. Leach, J. Chim. Phys. 1493 (1964) "Structure des Radicaux par Spectroscopie Electronique".

S. Leach, A. Lopez-Campillo, R. Lopez-Delgado and M. Tomas-Magos, Compt. Rend. 263, 1230 (1966) "Spectroscopie Moleculaire--Effets de Gaz Occlus et de l'Histoire Thermique entre le Benzene et le Toluene a 80°K. Etude par Spectroscopie de Fluorescence".

S. Leach, R. Lopez-Delgado and L..Grajcar, J. Chim. Phys. 194, (1966) "Effets de Temperature sur les Spectres Electroniques de Benzene dans le Cyclohexane. Etudes sur le Polymorphisme Cristallin du Cyclohexane par la Methode de la Sonde Electronique".

S. Leach, A. Lopez-Campillo, R. Lopez-Delgado and M.C. Tomas-Magos, Proc. Int. Conf. on Luminescence, 270, (1966) Budapest, "The Luminescence of Benzene in the Pure Crystalline State and in Crystalline Solution as a Function of Concentration and Thermal Treatment".

S. Leach and R. Lopez-Delgado, J. Phys. 28, C3-150 (1967) "Effets de Matrice sur les Spectres Electroniques de Benzene".

S. Leach, I.U.P.A.C. Int. Conf. on Spectroscopy, Bombay (1967) "Electronic Spectra of Organic Molecules and Free Radicals in Solid Matrices".

S. Leach and R. Lopez-Delgado, J. Chim. Phys. 64, 1247 (1967) "Etude, par Spectroscopie de Luminescence, de l'Etat de Dispersion du Benzene dans le Cyclohexane et dans des Hydrocarbures Paraffiniques Lineaires, a 77°K".

S. Leach, J. Phys. 28, C3-134 (1967) "Spectres Electroniques de Molecules et Radicaux Organiques en Solution Solide".

S. Leach, A.Lopez-Campillo, R. Lopez-Delgado and M.C. Tomas-Magos, J. Phys. 28, C3-147 (1967) "Spectres Electroniques, en Matrice Rigide, des Produits Radicalaires de la Photolyse des Dimethylbenzenes".

S. Leach and E. Migirdicyan, Compt. Rend. 264, 156 (1967) "Spectroscopie Moleculaire--Le Spectre d'Emission du Radical Duryle en Phase Solide".

S. Leach and E. Migirdicyan, Chem. Phys. Letters 1, 21 (1967) "On the Electronic Spectra of the Duryl Radical and the Origin of the Green Emission of Durene".

E.L. Lee, J. Phys. Chem. 23, 1823 (1962) "The Absorption Spectrum of Manganese Atoms in Solid Argon at 4°K".

H. Lefebvre-Brion and F. Guerin, J. Chem. Phys. 49, 1446 (1968) "Calculation of the Radiative Lifetime of the $a^4\pi$ State of NO".

K. Lehovec, J. Opt. Soc. Am. 45, 219 (1955) "Decay of Phosphorescence with Activators and Traps Arising from the Same Impurity in Different Valence States".

G.E. Leroi, G.E.Ewing and G.C. Pimentel, J. Chem. Phys. 40, 2298 (1964) "Infrared Spectra of Carbon Monoxide in an Argon Matrix".

A. LeRoy and P. Jouve, Compt. Rend. Ser. A,B 264B, 1656 (1967) "Analyse du Spectre d'Absorption Infrarouge de N_2O Solide à 80°K".

L.L. Levenson, Nuovo Cimento, Suppl. 5, 321 (1967) "Condensation Coefficients of Argon, Krypton and Xenon Measured with a Quartz Crystal Microbalance at 4.2°K".

H.W. Leverenz, Colloid Chem. 7, 125 (1950) "Luminescent Solids (Phosphors)".

M. Levine, J. Jortner and A. Szöke, J. Chem. Phys. 45, 1591 (1966) "Diffusion of Triplet Excitons in Crystalline Anthracene".

G.S. Levison, W.T. Simpson and W. Curtis, J. Am. Chem. Soc. 79, 4314 (1957) "Electronic Spectra of Pyridocyanine Dyes with Assignments of Transitions".

V.L. Levshin, Z. Physik 43, 230 (1927) "Die Auslöschung der Fluoreszenz in Festen und Flüssigen Farbstofflosungen".

V.L. Levshin, Z. Physik 72, 368 (1931) "Das Gesetz der Spiegelkorrespondenz der Absorptions und Fluoreszenzspektren. I.".

V.L. Levshin, Izvest. Akad. Nauk SSSR, Ser. Fiz. 12, 217 (1948) "The Emission Processes of Crystal Phosphors".

V.L. Levshin, Bull. Acad. Sci. USSR, Phys. Ser. 20, 362 (1956) "Effect of Association and Other Physico-Chemical Factors on the Luminescence and Absorption of Complex Molecules in Solutions".

V.L. Levshin and E.G. Baranova, Izvest. Akad. Nauk SSSR, Ser. Fiz. 22, 1038 (1958) "Different Types of Concentration Quenching and Possibility of Separating Them."

V.L. Levshin, Adv. in Phys. Sci. 64, 62 (1958) "The Study of Luminescence Phenomena and Development of their Applications in the Soviet Union".

V.L. Levshin and K.I. Mamedov, Izv. Akad. Nauk SSSR, Ser. Khim. 9, 1571 (1959) "Fluorescence Spectra of Aromatic Hydrocarbons of the Biphenyl Series and their Oxygen and Sulphur containing Analogs.

V.L. Levshin and Kh. I. Mamedov, Izv. Akad. Nauk SSSR, Ser. Fiz. 27, 606 (1963) "Fluorescence and Phosphorescence Spectra of α- and β-Methylnaphthalenes in Normal and Iso-paraffinic Solvents at 77°K".

G.N. Lewis, D. Lipkin and T.T. Magel, J. Am. Chem. Soc. 63, 3005 (1941) "Reversible Photochemical Processes in Rigid Media. A Study of the Phosphorescent State".

G.N. Lewis, T.T. Magel and D. Lipkin, J. Am. Chem. Soc. 64, 1774 (1942) "Isomers of Crystal Violet Ion. Their Absorption and Re-emission of Light".

G.N. Lewis and D. Lipkin, J. Am. Chem. Soc. 64, 2801 (1942) "Reversible Photochemical Processes in Rigid Media: The Dissociation of Organic Molecules into Radicals and Ions".

G.N. Lewis, D. Lipkin and T.T. Magel, J. Am. Chem. Soc. 66, 1579 (1944) "The Light Absorption and Fluorescence of Triarylmethyl Free Radicals".

G.N. Lewis and M. Kasha, J. Am. Chem. Soc. 66, 2100 (1944) "Phosphorescence and the Triplet State".

G.N. Lewis and M. Calvin, J. Am. Chem. Soc. 67, 1232 (1945) "Paramagnetism of the Phosphorescent State".

G.N. Lewis and M. Kasha, J. Am. Chem. Soc. 67, 994 (1945) "Phosphorescence in Fluid Media and the Reverse Process of Singlet-Triplet Absorption".

G.N. Lewis, M. Calvin and M. Kasha, J. Chem. Phys. 17, 804 (1949) "Photomagnetism. Determination of the Paramagnetic Susceptibility of a Dye in its Phosphorescent State".

K.F. Lider and B.V. Novikov, Opt. Spectry. (USSR) (English transl.) 22, 328 (1967) "Effect of Ionic Bombardment on the Low-Temperature Luminescence Spectrum of CdS Crystals".

L.N. Liebermann, Phys. Rev. 60, 496 (1941) "A Rotational Analysis of Some CS_2 Bands in the Near Ultraviolet System".

S.H. Liebson, Nucleonics 10, 41 (1952) "Temperature Effects in Organic Fluors".

E.C. Lim and S.K. Chakrabarti, Mol. Phys. 13, 293 (1967) "Excimer Phosphorescence of Halogenated Benzenes in Organic Glasses".

S.H. Lin and R. Bersohn, J. Chem. Phys. 48, 2732 (1968) "Effect of Partial Deuteration and Temperature on Triplet-State Lifetimes".

M.J. Linevsky, J. Chem. Phys. 34, 587 (1961) "Infrared Spectrum of Lithium Fluoride Monomer by Matrix Isolation".

M.J. Linevsky, J. Chem. Phys. 38, 658 (1963) "Infrared Absorption Spectra of LiF and Li_2F_2 in Solid Argon, Krypton, and Xenon Matrices".

H. Linschitz, M.G. Berry and D. Schweitzer, J. Am. Chem. Soc. 76, 5833 (1954) "The Identification of Solvated Electrons and Radicals in Rigid Solutions of Photoöxidized Organic Molecules; Recombination Luminescence in Organic Phosphors".

E. Lippert, Z. Elektrochem. 61, 962 (1957) "Spektroskopische Bestimmung des Dipolmomentes Aromatischer Verbindungen im Ersten Angeregten Singulettzustand".

E. Lippert, W. Luder, F. Moll, W. Nagele, H. Boos, H. Prigge and I Seibold, Z. Angew. Chem. 73, 695 (1961) "Umwanalung von Elektronenanregungsenergie".

E. Lippert and W. Voss, Z. Physik. Chem. (Frankfurt) 31, 321 (1962) "Die Elektronen-Spektren des 3,4-Benzcinnolins. Beobachtung einer $\pi^* \rightarrow$ n-Fluoreszenz."

I.A. Lisovskaya, M.D. Zakharova and I.G. Kaplan, Opt. Spectry. 22, 348 (1967) "On Triplet-Triplet Energy Transfer from Benzene and Toluene to Diacetyl in the Liquid Phase".

F.F. Litvin and R.I. Personov, Soviet Phys. Doklady (English transl.) 6, 134 (1961) "Fine Structure of the Absorption and Fluorescence Spectra of Some Pigments at 77°K".

A. Loewenschuss, A. Ron and O. Schnepp, J. Chem. Phys. 49, 272 (1968) "The Vibrational Spectra and Thermodynamics of the Zinc Halides".

L.L. Lohr, Jr., J. Chem. Phys. 45, 3611 (1966) "Optical Spectra of Divalent Manganese Salts. I. Energy Levels for Cubic and Lower-Symmetry Complexes".

L.L. Lohr, Jr. And D.S. McClure, J. Chem. Phys. 49, 3516 (1968) "Optical Spectra of Divalent Manganese Salts. II. The Effect of Interionic Coupling on Absorption Strength".

J.R. Lombardi and G.A. Daffron, J. Chem. Phys. 44, 3882 (1966) "Anisotropic Rotational Relaxation in Rigid Media by Polarized Photoselection".

B.A. Lombos, P. Sauvageau and C. Sandorfy, Chem.Phys. Letters 1, 382 (1967) "Far Ultraviolet Spectra of Solid Films of Methane, Ethane and Propane".

P. Longin, Compt. Rend. 248 , 1971 (1959) "Contribution à l'Etude de la Fluorescence des Acides Aminés en Solutions Aqueuses".

P. Longin, Compt. Rend. 251, 2499 (1960) "Luminescence en Phase Vapeur en Solution Étendue. Cristallisée a 77°K de Quelques Aldehydes et Cétones Aliphatiques".

H.C. Longuet-Higgins and J.A. Pople, J. Chem. Phys. 27, 192 (1957) "Electronic Spectral Shifts of Nonpolar Molecules in Nonpolar Solvents".

J.W. Longworth, R.O. Rahn and R.G. Shulman, J. Chem. Phys. 45, 2930 (1966) "Luminescence of Pyrimidines, Purines, Nucleosides, and Nucleotides at 77°K. The Effect of Ionization and Tautomerization".

R.C. Lord, R.S. McDonald and F.A. Miller, J. Opt. Soc. Am. 42, 149 (1952) "Notes on the Practice of Infrared Spectroscopy".

W. Low, in Quantum Electronics, a symposium, C.H. Towns, ed., Columbia Univ. Press, N.Y. (1960) p. 40, "Optical Properties of Paramagnetic Solids".

S.K. Lower, R.M. Hochstrasser and C. Reid, Mol. Phys. 4, 161 (1961) "The Polarized Charge-Transfer Spectrum of Crystalline Anthracene-TNB Complex".

S.K. Lower and M.A. El-Sayed, Chem. Rev. 66, 199 (1966) "The Triplet State and Molecular Electronic Processes in Organic Molecules".

Ch.B. Lushchik, Bull. Acad. Sci. USSR 29, 11 (1965) "Physical Processes in Luminescent Ionic Crystals".

G.N. Lyalin and G.I. Kobyshev, Opt. Spectry. (USSR) (English transl.) 15, 135 (1963) "Luminescence and Intracomplex Energy Transfer of Uranyl Phthalocyanine".

M

M. McCarty, Jr. and G.W. Robinson, Mol. Phys. 2, 415 (1959) "Environmental Perturbations on Foreign Atoms and Molecules in Solid Argon, Krypton and Xenon".

M. McCarty, Jr. and G.W. Robinson, J. Am. Chem. Soc. 81, 4472 (1959) "Imine and Imine-d Radicals Trapped in Argon, Krypton and Xenon Matrices at 4.2°K".

M. McCarty, Jr. and G.W. Robinson, J. Chim. Phys. 56, 723 (1959) "Les Spectres d'Absorption Électroniques des Radicaux Libres de Petite Dimension dans les Milieux Rigides Constitues par des Gaz Rares".

M.E. McCarville and S.P. McGlynn, "Delayed Luminescence of Organic Mixed Crystals. IX. Amino Acids and Proteins" (1969) (in press).

A.L. McClellan and G.C. Pimentel, J. Chem. Phys. 23, 245 (1955) "Vibrational Assignment and Thermodynamic Properties of Naphthalene".

D.S. McClure, J. Chem. Phys. 17, 905 (1949) "Triplet-Singlet Transitions in Organic Molecules. Lifetime Measurements of the Triplet State".

D.S. McClure, J. Chem. Phys. 19, 670 (1951) "Excited Triplet States of Some Polyatomic Molecules. I.".

D.S. McClure, N.W. Blake and P.L. Hanst, J. Chem. Phys. 22, 255 (1954) "Singlet-Triplet Absorption Bands in Some Halogen Substituted Aromatic Compounds".

D.S. McClure, J. Chem. Phys. 23, 1575 (1955) "Electronic States of the Naphthalene Crystal".

D.S. McClure and P.L. Hanst, J. Chem. Phys. 23, 1772 (1955) "Excited Triplet States of Polyatomic Molecules. II. Flash-Lamp Studies on Aromatic Ketones".

D.S. McClure, J. Chem. Phys. 24, 1 (1956) "Excited States of the Naphthalene Molecule. II. Further Studies on the First Singlet-Triplet Transition".

D.S. McClure, J. Chem. Phys. 25, 481 (1956) "First Singlet-Singlet Electronic Transition in the Phenanthrene Molecule and the Band Structure of the Phenanthrene Crystal".

D.S. McClure, Phys. and Chem. Solids 3, 311 (1957) "The Distribution of Transition Metal Cations in Spinels".

D.S. McClure, Can. J. Chem. 36, 59 (1958) "Energy Transfer in Molecular Crystals and in Double Molecules".

D.S. McClure, Solid State Phys. 8, 1 (1959) "Electronic Spectra of Molecules and Ions in Crystals. I. Molecular Crystals".

D.S. McClure, Rad. Res.,Supl. 2, 218 (1960) "Electronic Structure of Transition-Metal Complex Ions".

D.S. McClure, Proc. Conf. on Electrical Conductivity in Organic Solids, H. Kallmann, ed., Interscience, N.Y. (1961) p. 219, "Dispersion Forces in Molecular Crystals".

D.S. McClure, Proc. 6th Int. Conf. on Coordination Chemistry, McMillan, N.Y. (1961) p. 498, "Energy Level Splittings in Non-Cubic Ions and the Two-Dimensional Spectrochemical Series".

D.S. McClure, J. Chem. Phys. 25, 481 (1956) "First Singlet-Singlet Electronic Transition in the Phenanthrene Molecule and the Band Structure of the Phenanthrene Crystal".

D.S. McClure, Can. J. Chem. 36, 59 (1958) "Energy Transfer in Molecular Crystals and in Double Molecules".

D.S. McClure, Rad. Res. Supl. 2, 218 (1960) "Electronic Structure of Transition-Metal Complex Ions".

D.S. McClure, J. Chem. Phys. 36, 2757 (1962) "Optical Spectra of Transition-Metal Ions in Corundum".

D.S. McClure, Rad. Res. 20, 83 (1963) "Energy Exchange Processes".

D.S. McClure, J. Chem. Phys. 39, 2850 (1963) "Optical Spectra of Exchange Coupled Mn^{++} Ion Pairs in ZnS:MnS".

D.S. McClure, J. Chem. Phys. 39, 3251 (1963) "Survey of the Spectra of the Divalent Rare-Earth Ions in Cubic Crystals".

D.S. McClure, in Phonons in Perfect Lattices and in Lattices with Perfect Imperfections, R. Stevenson, ed., Oliver & Boyd, London, 1966, "The Electronic States and Spectra of Ions and Imperfections in Solids".

H. McConnell and D.S. McClure, J. Chem. Phys. 21, 1296 (1953) "Even-Odd Character of the 2900-3200 Å Absorption Transition in Naphthalene".

R.M. Macfarlane, Phys. Rev. 158, 252 (1967) "Stress-Induced Trigonal Crystal-Field Parameters in Some Oxide Lattices".

R.M. Macfarlane and J.Y. Wong, Phys. Rev. 166, 250 (1968) "Dynamic Jahn-Teller Effect in Octahedrally Coordinated d^1 Impurity Systems".

S.P. McGlynn, Rad. Res., Supl. 2, 300 (1960) "Donor-Acceptor Interaction".

S.P. McGlynn, J.D. Boggus and E. Elder, J. Chem. Phys. 32, 357 (1960) "Energy Transfer in Molecular Complexes. II. The Anthracene-sym-Trinitrobenzene Complex".

S.P. McGlynn, R. Sunseri and N. Christodouleas, J. Chem. Phys. 37, 1818 (1962) "External Heavy-Atom Spin-Orbital Coupling Effect. I. The Nature of the Interaction".

S.P. McGlynn, M.J. Reynolds, G.W. Daigre and N.D. Christodouleas, J. Phys. Chem. 66, 2499 (1962) "The External Heavy-Atom Spin-Orbital Coupling Effect. III. Phosphorescence Spectra and Lifetimes of Externally Perturned Naphthalenes".

S.P. McGlynn, J. Daigre and N. Christodouleas, Org. Cryst. Symp., Proc. Nat. Res. Council of Canada, Ottawa, 33 (1962) "Intersystem Crossing and Donor-Acceptor Interaction".

S.P. McGlynn and T. Azumi, J. Chem. Phys. 37, 2413 (1962) "The Polarization of the Luminescence of Phenanthrene".

S.P. McGlynn, J. Daigre and F.J. Smith, J. Chem. Phys. 39, 675 (1963) "External Heavy-Atom Spin-Orbital Coupling Effect. IV. Intersystem Crossing".

S.P. McGlynn and N. Christodouleas, J. Chem. Phys. 40, 166 (1964) "Energy Transfer in Charge Transfer Complexes. III. Intersystem Crossing".

S.P. McGlynn and T. Azumi, J. Chem. Phys. 40, 507 (1964) "External Heavy-Atom Spin-Orbital Coupling Effect. V. Absorption Studies of Triplet States".

S.P. McGlynn and F.J. Smith, J. Chem. Phys. 42, 4308 (1965) "Delayed Excimer Fluorescence of Pyrene".

S.P. McGlynn, A.T. Armstrong and T. Azumi, in Modern Quantum Chemistry, part 3, Academic Press, N.Y. (1965) Ch. 6, "Interaction of Molecular Exciton, Charge Resonance States and Excimer Luminescence".

S.P. McGlynn, L. Azarraga and F. Watson, in Modern Quantum Chemistry, part 3, Academic Press, N.Y. (1965), Ch. 9, "Temperature Dependence of Photoconductivity in Organic Molecular Crystals".

S.P. McGlynn, T.N. Misra and E.F. McCoy, Proceedings of the Munich Luminescence Symposium, ed. H. Kallman and N. Riehl, Springer Verlag, Berlin (1966) "A Mechanistic Model of the Origin of Delayed Fluorescence of Organic Mixed Crystals".

S.P. McGlynn, M. Kinoshita, M. McCarville, B.N. Srinivasan and J.W. Rabalais, Photochem. & Photobio. 8, 349 (1968) "Delayed Luminescence of Organic Mixed Crystals. VIII. The Luminescence of Impure Crystals".

S.P. McGlynn, T. Azumi and M. Kinoshita, Molecular Spectroscopy of the Triplet State, Prentice-Hall, New Jersey (1969).

D.C. McKean, Spectrochim. Acta 23A, 2403 (1967) "Infra-red Spectra of Crystals--IV. Matrix Shifts and the Contribution from Classical Electrostatic Forces".

R. McLaughlin, R. White, N. Edelstein and J.G. Conway, J. Chem. Phys. 48, 967 (1968) "Optical Spectra of Pu in CaF_2".

J.C. McLennan and G.M. Shrum, Proc. Roy. Soc. (London) A106, 138 (1924) "On the Luminescence of Nitrogen, Argon, and other Condensed Gases at Very Low Temperatures".

J.C. McLennan, H.J.C. Ireton and E.W. Samson, Proc. Roy. Soc. (London) A120, 303 (1928) "On the Luminescence of Solid Nitrogen under Cathode Ray Bombardment".

J.C. McLennan and J.H. McLeod, Nature 123, 160 (1929) "The Raman Effect with Liquid Oxygen, Nitrogen and Hydrogen".

D. McLeod, Jr., and W. Weltner, Jr., J. Phys. Chem. 70, 3293 (1966) "Spectroscopy and Franck-Condon Factors of Scandium Fluoride in Neon Matrices at 4°K".

D.H. McMahon and M. Kestigian, J. Chem. Phys. 46, 137 (1967) "Triplet-Triplet Annihilation in Anthracene at Low-Excitation Intensities: Wavelength and Temperature Dependence".

H.L. McMurry, J. Chem. Phys. 9, 241 (1941) "The Long Wave-Length Spectra of Aldehydes and Ketones. Part II. Conjugated Aldehydes and Ketones".

R.W. McNamee, Jr.,Ph.D. Thesis, University of California, Berkeley, California (1962) and U.S. At. Energy Comm., UCLRL 10451 (1962) "Matrix Isolation Studies of High-Temperature Species. Group II Chlorides".

E.G. McRae and M. Kasha, J. Chem. Phys. 28, 721 (1958) "Enhancement of Phosphorescence Ability upon Aggregation of Dye Molecules".

I.L. Mador and R.S. Quinn, J. Chem. Phys. 20, 1837 (1952) "The Influence of Temperature and State on Infrared Absorption Spectra: Methyl Iodide".

I.L. Mador and M.C. Williams, J. Chem. Phys. 22, 1627 (1954) "Stabilization of Free Radicals from the Decomposition of Hydrazoic Acid".

J.L. Magee, Rad. Res. 20, 71 (1963) "Energy Transfer Phenomena and Dissociation Processes in Electronically Excited Molecules".

A.S.M. Mahbub'ul Alam and B. Di Bartolo, J. Chem. 47, 3790 (1967) "Thermal Dependence of Fluorescence and Lifetimes of Sm^{2+} in Several Host Lattices".

G. Maier, U. Haeberlen and H.C. Wolf, Phys. Letters 25A, 323 (1967) "Kernspin-Relaxation Durch Triplett-Excitonen in Anthracen".

G. Maier, U. Haeberlen, H.C. Wolf and K.H. Hausser, Phys. Lett. 25A, 384 (1967) "Optische Kernspin-Polarisation in Anthracen-Kristallen".

G. Maier and H.C. Wolf, Z. Naturforsch.23a, 1068 (1968) "Relaxation und Optische Kernspinpolarisation der Protonen in Optisch Angeregten Anthracen-Kristallen".

L. Majernikova, Czech. J. Phys. 17, 717 (1967) "A Contribution to the Theory of the Faraday Effect of Excitons in Rare-Gas Crystals".

L.A. Makarevich, E.S. Sokolova and G.A. Sorina, Russ. J. Phys. Chem. 42, (1968) "Critical Parameters of Sulphur Hexafluoride".

A. Maki and J.C. Decius, J. Chem. Phys. 28, 1003 (1958) "Infrared Spectrum of Cyanate Ion as a Solid Solution in a Potassium Iodide Lattice".

J. Makovsky, J. Chem. Phys. 46, 390 (1967) "Optical Spectra of Gd^{3+} in SrF_2 and BaF_2".

L.Ya. Malkes, L.L. Nagornaya and A.I. Timchenko, Opt. Spectry. (USSR) (English transl.) 10, 291 (1961) "The Luminescence Spectra and Scintillation Properties of Para-Monohalogen Substituted Trans-Stilbene".

Kh. I. Mamedov, Bull. Acad. Sci, USSR, Phys. Ser. 29, 1413 (1965) "Absorption, Fluorescence and Phosphorescence Spectra of Acenaphthene in Alkane Solvents at 77°K".

Kh. I. Mamedov and R.Z. Laipanov, Opt. Spectry. 20, 280 (1966) "On the Manifestation of Lines and Background in the Quasi-Line Phosphorescence Spectrum of Quinoline in Paraffins at 77°K".

D.E. Mann, N. Acquista and D. White, J. Chem. Phys. 44, 3453 (1966) "Infrared Spectra of HCl, DCl, HBr, and DBr in Solid Rare-Gas Matrices".

D.E. Mann, G.V. Calder, K.S. Seshadri, D. White and M.J. Linevsky, J. Chem. Phys. 46, 1138 (1967) "Geometry and Vibrational Spectra of the Alkaline-Earth Dihalides. I. MgF_2".

N.H. March and J.C. Stoddart, Rep. Prog. Phys. 31, 534 (1968) "Localization of Electrons in Condensed Matter".

A.P. Marchetti and D.R. Kearns, J. Am. Chem. Soc. 89, 768 (1967) "Investigation of Singlet-Triplet Transitions by the Phosphorescence Excitation Method. IV. The Singlet-Triplet Absorption Spectra of Aromatic Hydrocarbons".

R.A. Marcus, Chem. Phys. 43, 1261 (1965) "On the Theory of Shifts and Broadening of Electronic Spectra of Polar Solutes in Polar Media".

J.S. Margolis and D. Bass, J. Chem. Phys. 45, 3162 (1966) "Spectrum of I_2 Trapped in Benzene Matrix".

H. Maria and A. Zahlan, J. Chem. Phys. 38, 941 (1963) "Exciton-Phonon Interaction in Crystalline Benzene".

H.J. Maria and A.B. Zahlan, J. Chem. Phys. 46, 4329 (1967) "Phonon Effects in the uv Spectrum of Crystalline Hexamethylbenzene".

H.J. Maria, A.T. Armstrong and S.P. McGlynn, J. Chem. Phys. 4694 (1968) "Luminescence of Inorganic Nitrite Salts".

H.J. Maria, A.T. Armstrong and S.P. McGlynn, J. Chem. Phys. 50, 2777 (1969) "Spin Polarization in the Triplet State of Silver Nitrate".

S.V. Marisova, Opt. Spectry. (USSR) (English transl.) 22, 310 (1967) "Reflection Spectra of the Anthracene Crystal and the Structure of Exciton Zones".

F.D. Marsh and M.E. Harvey, J. Am. Chem. Soc. 86, 4506 (1964) "Cyanogen Azide".

T.E. Martin and A.H. Kalantar, J. Chem. Phys. 49, 235 (1968) "CH and CD Stretching Anharmonicities and Radiationless Decay of Triplet Benzene".

T.E. Martin and A.H. Kalantar, J. Chem. Phys. 49, 244 (1968) "Nonexponential Phosphorescence Decay of Benzene".

T.E. Martin and A.H. Kalantar, J. Phys. Chem. 72, 2265 (1968) "Observed Phosphorescence Lifetimes and Glass Relaxation at 77°K".

and

T.E. Martin/ A.H. Kalantar, J. Chem. Phys. 50, 1485 (1969) "Relative Phosphorescence Radiative Rate Constants: Benzene in Two Cyclohexane Sites at 77°K".

A. Martinez, Compt. Rend. 255, 491 (1962) "Mésure de la Durée de Vie dans l'État Triplet".

A. Martinez, J. Phys. Suppl. 24, 117 A (1963) "Apparatus for Studying Decrease in T→S Luminescence".

R. Marx, S. Leach and M. Horani, J. Chim. Phys. 726 (1963) "Excitation Electronique d'un Jet de Molecules d'Eau et de ses Isotopes Deuteres: Etude par Resonance Paramagnetique Electronique des Produits Condenses a 77°K".

M.P. Marzocchi, V. Schettino and S. Califano, J. Chem. Phys. 45, 1400 (1966) "Infrared Spectrum of Crystalline CH_2I_2 Crystal Structure and Phase Transition".

S.F. Mason, J. Chem. Soc. 1958, 976 (1958) "The Infrared Spectra of N-Heteroaromatic Systems. Part I. The Porphins".

S. Masunaga, I. Morita and M. Ishiguro, J. Phys. Soc. Japan 21, 638 (1966) "Optical Properties of CsI: Tl and CsBr: Tl".

N. Mataga and S. Tsuno, Bull. Chem. Soc. Japan 30, 368 (1957) "Hydrogen Bonding Effect on the Fluorescence of Some Nitrogen Heterocycles. I.".

N. Mataga, Bull. Chem. Soc. Japan 31, 459 (1958) "Electronic Spectra of Quinoline and Isoquinoline and the Mechanism of Fluorescence Quenching in These Molecules".

N. Mataga, Y. Torihashi and Y. Ota, Chem. Phys. Letters 1, 385 (1967) "Studies on the Fluorescence Decay Times of Anthracene and Perylene Excimers in Rigid Matrices at Low Temperatures in Relation to the Structures of Excimers".

M.S. Matheson and B. Smaller, J. Chem. Phys. 23, 521 (1955) "Paramagnetic Species in Gamma-Irradiated Ice".

F.A. Mauer, in The Formation and Trapping of Free Radicals, A.M. Bass and H.P. Broida, eds., Academic Press, N.Y. (1960) Ch. 5, "Low Temperature Equipment and Techniques".

Yu. T. Mazurenko, Opt. Spectry. (USSR) (English transl.) 13, 486 (1962) "Separation of Active and Non-Active Absorption in the Long-Wavelength Region of Excitation of Luminescence".

C.A. Mead, Rad. Res. 20, 101 (1963) "Absorption of Light by a Rigid Crystal".

H. Meinert, Z. Chem. 6, 71 (1966) "Über die Bildung von Xenondichlorid".

W.H. Melhuish, J. Opt. Soc. Am. 54, 183 (1964) "Measurement of Quantum Efficiencies of Fluorescence and Phosphorescence and Some Suggested Luminescence Standards".

A.J. Merer and D.N. Travis, Can. J. Phys. 44, 525 (1966) "Absorption Spectra of HCCl and DCCl".

R.E. Merrifield, Rad. Res. 20, 154 (1963) "Vibronic States of Dimers".

R.B. Merrithew, G.V. Marusak and C.E. Blount, J. Mol. Spectry. 25, 269 (1968) "Temperature Dependence of the Matrix Isolation Spectrum of Benzene".

R.B. Merrithew, G.V. Marusak and C.E. Blount, J. Mol. Spectry. 29, 54 (1969) "Absorption Spectra of Metal Atoms in Solid Xenon".

M. Metlay, J. Chem. Phys. 39, 491 (1963) "Fluorescence Lifetime of the Europium Dibenzoylmethides".

J.L. Metzger, B. Smith and B. Meyer, Spectrochim. Acta (August 15, 1969) "Phosphorescence of Matrix Isolated Naphthalene and Phenanthrene".

B. Meyer, Ph.D. thesis, Zurich (1960) "Zur Allotropie des Schwefels".

B. Meyer and E. Schumacher, Helv. Chim. Acta 43, 1333 (1960) "isolation and Identification of S_2".

B. Meyer, J. Chem. Phys. 37, 1577 (1962) "Vibration Spectrum of Trapped S_2".

B. Meyer, J. Chem. Phys. 43, 2986 (1965) "Absorption Spectrum of Na and K in Rare-Gas Matrices".

B. Meyer, L.F. Phillips and J.J. Smith, Proc. NAS 67, 7 (1968) "Temperature Dependence of Intersystem Crossing: Lifetime and Intensity of SO_2 Phosphorescence in Low-Temperature Solids".

P. Michel, in Colloquium on Diffusion of Solids, Saclay (July, 1958), M. Chandron, ed., North-Holland Publisher, Amsterdam (1959), p. 41, "Surface Diffusion in Vapor Deposited Films".

E. Miethke and V. Zanker, Z. Physik. Chem. (Frankfurt) 18, 375 (1958) "Die Reaktion des Chlordioxyds mit Nitrosylchlorid in der Gasphase".

E. Migirdicyan and S. Leach, Bull. Soc. Chim. Belg. 71, 845 (1962) "La Photolyse de Quelques Composes Cycliques en Milieu Rigide".

E. Migirdicyan, J. Chim. Phys. 4, 520 (1966) "Photolyse et Radiolyse du Benzene en Milieu Rigide. I. Detection des Produits de Photodecomposition Primaire et Secondaire".

E. Migirdicyan, J. Chim. Phys. 4, 535 (1966) "Photolyse et Radiolyse du Benzene en Milieu Rigide. II. Mecanisme de al Photodecomposition".

E. Migirdicyan, J. Chim. Phys. 4, 543, (1966) "Photolyse et Radiolyse du Benzene en Milieu Rigide. III. Detection par R.P.E.".

E. Migirdicyan, Compt. Rend. 266, 756 (1968) "Photochimie--Photolyse en Milieu Rigide des Derives Methyles du Benzene: Detection d'Especes Piegees Nouvelles".

E. Migirdicyan, Ber. Buns. Ges. Phys. Chem. 72, 344 (1968) "Solid State Photolysis of the Tetramethylbenzenes".

V.I. Mikhailenko, P.A. Teplyakov, V.V. Trusov and V.M. Martynchenko, Opt. Spectry. (USSR) (English transl.) 20, 29 (1966) "Vibrational Structure of the Luminescence Spectra of Frozen Solutions of Naphthalene and Tolan".

B. Mile, Angew. Chem. 80, 519 (1968) "Die Untersuchung Freier Radikale bei Tiefer Temperatur".

D.E. Milligan, H.W. Brown and G.C. Pimentel, J. Chem. Phys. 25, 1080 (1956) "Infrared Absorption by the N_3 Radical".

D.E. Milligan and R.M. Hexter, Technical Report to the Air Force Office of Scientific Research (ARDC), Contract No. Af 49(638)542; AFOSR TN-59-1327 (December 18, 1959) "Infrared Spectroscopic Evidence for the Rotation of Ammonia Molecule in Solid Argon and Nitrogen".

D.E. Milligan and G.C. Pimentel, J. Chem. Phys. 29, 1405 (1958) "Matrix Isolation Studies: Possible Infrared Spectra of Isomeric Forms of Diazomethane and of Methylene, CH_2".

D.E. Milligan, R.M. Hexter and K. Dressler, J. Chem. Phys. 34, 1009 (1961) "Infrared Spectroscopic Evidence for the Rotation of the Ammonia Molecule in Solid Argon and Nitrogen".

D.E. Milligan, J. Chem. Phys. 35, 372 (1961) "Infrared Spectroscopic Study of the Photolysis of Chlorine Azide in Solid Argon at 4.2 K".

D.E. Milligan, J. Chem. Phys. 35, 1491 (1961) "Infrared Spectroscopic Study of the Photolysis of Methyl Azide and Methyl-d_3 Azide in Solid Argon and Carbon Dioxide".

D.E. Milligan, M.E. Jacox, S.W. Charles and G.C. Pimentel, J. Chem. Phys. 37, 2302 (1967) "Infrared Spectroscopic Study of the Photolysis of HN_2 in Solid CO_2".

D.E. Milligan and M.E. Jacox, J. Chem. Phys. 36, 2911 (1962) "Infrared Study of the Reaction of CH_2 with CO_2 in the Solid State".

D.E. Milligan and M.E. Jacox, J. Mol. Spectry. 8, 126 (1962) "Solid-State Vibrational Spectra of Methyl and Methyl-d_2 Cyanide".

D.E. Milligan and M.E. Jacox, J. Chem. Phys. 39, 712 (1963) "Infrared Spectroscopic Evidence for the Species HNC".

D.E. Milligan and M.E. Jacox, J. Chem. Phys. 38, 2627 (1963) "Infrared Spectroscopic Evidence for the Species HO_2".

D.E. Milligan, J. Am. Chem. Soc. 85, 823 (1963) "A Synthesis of Xenon Difluoride not Involving use of Elemental Fluorine".

D.E. Milligan, D.E. Mann, M.E. Jacox and R.A. Mitsch, J. Chem. Phys. 41, 1199 (1964) "Infrared Spectrum of CF_2".

D.E. Milligan and M.E. Jacox, J. Chem. Phys. 41, 3032 (1964) "Infrared Spectrum of HCO".

D.E. Milligan and M.E. Jacox, J. Chem. Phys. 40, 2461 (1964) "Infrared Spectra of NF, NCl, and NBr".

D.E. Milligan and M.E. Jacox, J. Chem. Phys. 40, 605 (1964) "Infrared Spectroscopic Evidence for the Species HO_2".

D.E. Milligan and M.E. Jacox, J. Chem. Phys 41, 2838 (1964) "Infrared Studies of the Photolysis of HN_3 in Inert and Reactive Matrices. The Infrared Spectrum of NH".

D.E. Milligan, M.E. Jacox, J.J. Comeford and D.E. Mann, J. Chem. Phys. 43, 756 (1965) "Infrared Spectrum of the Free Radican NCN".

D.E. Milligan and M.E. Jacox, J. Chem. Phys. 43, 4487 (1965) "Matrix-Isolation Infrared Spectrum of the Free Radical NH_2".

D.E. Milligan, M.E. Jacox and A.M. Bass, J. Chem. Phys. 43, 3149 (1965) "Matrix Isolation Study of the Photolysis of Cyanogen Azide. The Infrared and Ultraviolet Spectra of the Free Radical NCN".

D.E. Milligan, M.E. Jacox, A.M. Bass, J.J. Comeford and D.E. Mann, J. Chem. Phys. 42, 3187 (1965) "Matrix-Isolation Study of the Reaction of F Atoms with CO. Infrared and Ultraviolet Spectra of the Free Radical FCO".

D.E. Milligan, M.E. Jacox and J.D. McKinley, J. Chem. Phys. 42, 902 (1965) "Spectra of Matrix-Isolated NiF_2 and $NiCl_2$".

D.E. Milligan, M.E. Jacox and J.J. Comeford, J.Chem. Phys. 44, 4058 (1966) "Infrared Spectrum of the Free Radical CF_3 Isolated in Inert Matrices".

D.E. Milligan and M.E. Jacox, J. Chem. Phys. 44, 2850 (1966) "Matrix-Isolation Study of the Infrared and Ultraviolet Spectra of the Free Radical CNN".

D.E. Milligan and M.E. Jacox, J. Chem. Phys. 45, 1387 (1966) "Matrix-Isolation Study of the Photolysis of Cyanogen Azide. II. The Symmetric Stretching Fundamental of the Free Radical NCN".

D.E. Milligan and M.E. Jacox, J. Chem. Phys. 47, 5146 (1967) "Infrared and Ultraviolet Spectroscopic Study of the Products of the Vacuum-Ultraviolet Photolysis of Methane in Ar and N_2 Matrices. The Infrared Spectrum of the Free Radical CH_3".

D.E. Milligan and M.E. Jacox, J. Chem. Phys. 47, 5157 (1967) "Matrix-Isolation Study of the Infrared and Ultraviolet Spectra of the Isocyanate Free Radical".

D.E. Milligan and M.E. Jacox, J. Chem. Phys. 47, 703 (1967) "Matrix-Isolation Study of the Reaction of Carbon Atoms with Chlorine".

D.E. Milligan and M.E. Jacox, J. Chem. Phys. 47, 278 (1967) "Spectroscopic Study of the Vacuum-Ultraviolet Photolysis of Matrix-Isolated HCN and Halogen Cyanides. Infrared Spectra of the Species CN and XNC".

D.E. Milligan, M.E. Jacox and L. Abouaf-Marguin, J. Chem. Phys. 46, 4562 (1967) "Vacuum-Ultraviolet Photolysis of Acetylene in Inert Matrices. Spectroscopic Study of the Species C_2".

D.E. Milligan and M.E. Jacox, J. Chem. Phys. 48, 2265 (1968) "Matrix-Isolation Study of the Reaction of Atomic and Molecular Fluorine with Carbon Atoms. The Infrared Spectra of Normal and ^{13}C-Substituted CF_2 and CF_3".

D.E. Milligan and M.E. Jacox, J. Chem. Phys. 48, 4811 (1968) "Matrix-Isolation Study of the Reaction of F_2 and of F Atoms with NCN. The Infrared Spectra of the Species NF_2CN and FNCN".

D.E. Milligan and M.E. Jacox, J. Chem. Phys. 49, 1938 (1968) "Matrix-Isolation Study of the Vacuum-Ultraviolet Photolysis of Dichlorosilane. The Infrared Spectrum of the Free Radical $SiCl_2$".

D.E. Milligan and M.E. Jacox, J. Chem. Phys. 49, 4269 (1968) "Matrix-Isolation Study of the Vacuum-Ultraviolet Photolysis of Difluorosilane. The Infrared and Ultraviolet Spectra of the Free Radical SiF_2".

D.E. Milligan and M.E. Jacox, J. Chem. Phys. 50, July (1969) "Matrix-Isolation Study of the Infrared and Ultraviolet Spectra of the Free Radical HCO. The Hydrocarbon Flame Bands".

D.E. Milligan and M.E. Jacox, J. Chem. Phys. (in press) "Studies of the Photoproduction of Electrons in Inert Solid Matrices. The Electronic Spectrum of the Species C_2^-".

D.E. Milligan and M.E. Jacox, in Physical Chemistry: An Advanced Treatise, vol. 4, Molecular Properties, H. Eyring, Ed., Academic Press, N.Y., 1969, Ch. 4, "Spectra of Radicals".

G. Minkoff and F.I. Scherber, J. Chem. Phys. 28, 992 (1958) "Energy Release from Discharged Monatomic Gases Trapped at 4°K".

T.N. Misra and S.P. McGlynn, J. Chem. Phys. 44, 3816 (1966) "Delayed Luminescence of Organic Mixed Crystals".

T.N. Misra, A.R. Lacey and L.E. Lyons, Australian J. Chem. 19, 415 (1966) "Fluorescence Spectrum of Phenanthrene Single Crystal at 4°K".

H. Mitsuhashi, Appl. Phys. Letters, 10, 339 (1967) "Luminescence from Plastically Bent Crystals of Cadmium Sulfide".

B.S. Mohanty, K.N. Upadhya, Ran. B. Singh and N.L. Singh, J. Mol. Spectry. 24, 19 (1967) "On the β-Band System of the PO Molecule".

B.S. Mohanty and K.N. Upadhya, Current Sci. 36, 478 (1967) "Rotational Analysis of Some Visible BAnds of BiF Molecule".

E.G. Moisya, Opt. Spectry. (USSR) (English transl.) 23, 119 (1967) "The Effect of Phase Transitions of the Solvent on the Electronic Spectra of Dissolved Molecules".

E.G. Moisya, Opt. Spectry. (USSR) (English transl.) 24, 385 (1968) "Absorption Spectra of Anthracene in Solution at 77°K".

G.A. Mokeeva and B.Ya. Sveshnikov, Opt. Spectry. (USSR)(English transl.) 9, 317 (1960) "The Concentration Quenching of Luminescence in Organoluminors".

G.A. Mokeeva and B.Ya. Sveshnikov, Opt. Spectry. (USSR)(English transl.) 10, 41 (1961) "On the Mechanism of the Transition of Excited Organic Molecules into the Metastable State".

H.G. Moll and W.E. Thompson, J. Chem. Phys. 44, 2684 (1966) "Reactions of Carbon Atoms with N_2, H_2 and D_2 at 4.2°K".

M.M. Moodie and C. Reid, J. Chem. Phys. 22, 252 and 1126 (1954) "Inter-and Intramolecular Energy Transfer Processes. 3. Phosphorescence Bands of Some Carcinogenic Aromatic Hydrocarbons".

W.R. Moomaw and M.A. El-Sayed, J. Chem. Phys. 45, 3890 (1966) "Phosphorescence of Crystalline Pyrazine".

W.R. Moomaw and M.A. El-Sayed, J. Chem. Phys. 47, 2193 (1967) "Phonon-Induced Phosphorescence in Pyrazine Molecular Crystal".

W.R. Moomaw and M.A. El-Sayed, J. Chem. Phys. 48, 2502 (1968) "Phosphorescence of Crystalline Pyrazine at 4.2°K".

A. Mooradian and H.Y. Fan, Phys. Rev. 148, 873 (1966) "Recombination Emission in InSb".

C.B. Moore and G.C. Pimentel, J. Chem. Phys. 38, 2816 (1963) "Infrared Spectrum and Vibrational Potential Function of Ketene and the Deuterated Ketenes".

C.B. Moore and G.C. Pimentel, J. Chem. Phys. 41, 3504 (1964) "Matrix Reaction of Methylene with Nitrogen to Form Diazomethane".

C.B. Moore and G.C. Pimentel, J. Chem. Phys. 40, 342 (1964) "Solid Infrared Spectra, Assignment and Vibrational Potential Function of Diazomethane".

C.B. Moore and G.C. Pimentel, J. Chem. Phys. 43, 63 (1965) "Matrix Photolysis Products of Diazomethane: Methyleneimine and Hydrogen Cyanide".

D.J. Morantz, B.G. White and A.J.C. Wright, J. Chem. Phys. 37, 2041 (1962) "Phosphorescence and Stimulated Emission in Organic MOlecules".

R.L. Morehouse, J.J. Christiansen and W. Gordy, J. Chem. Phys. 45, 1751 (1966) "ESR of Free Radicals Trapped in Inert Matrices at Low Temperature: CH_3, SiH_3, GeH_3 and SnH_3".

R.L. Morehouse, J.J. Christiansen and W. Gordy, J. Chem. Phys. 45, 1747 (1966) "ESR of Free Radicals Trapped in Inert Matrices at Low Temperature: P, PH_2, and As".

W.A. Morgan, E. Silberman and H.W. Morgan, Spectrochim. Acta Part A, 23, 2855 (1967) "Infrared Spectra of the Nitrite Ion in Solid Solutions".

A. Morikawa and R.J. Cvetanovic, J. Chem. Phys. 49, 1214 (1968) "Quenching of the Excited Singlet State of Benzene ($^1B_{2u}$) by Mono-olefins and Diolefins".

G.G. Moross and H.S. Story, J. Chem. Phys. 45, 3370 (1966) "Temperature Dependence of the Nuclear Quadrupole Resonance Frequencies in Para-Dichlorobenzene".

S.I. Morrow, ACS 24th Northwest Regional Meeting, Salt Lake City, (June, 1969) "Problems in the Synthesis of Inorganic Mixed Crystals".

J.R. Morton, J. Chem. Phys. 43, 3418 (1965) "Electron Resonance Spectrum of S_2^- in Sulfur-Doped Potassium Bromide".

J.R. Morton, J. Chem. Phys. 45, 1800 (1966) "Electron Spin Resonance Spectrum of ClO_4 Trapped in Irradiated KClO".

J.R. Morton, J. Phys. Chem. 71, 89 (1967) "Identification of Some Sulfur-Containing Radicals Trapped in Single Crystals".

F. Moser, R.K. Ahrenkiel and S.L. Lyu, Phys. Rev. 161, 897 (1967) "Optical Absorption and Luminescent Emission of the I^- Center in AgCl".

B. Moszynska and A. Tramer, J. Chem. Phys. 46, 820 (1967) "'Electron Vibration' in Crystalline Charge-Transfer Complexes".

S. Mrozowski and C. Santaram, J. Opt. Soc. Am. 57, 522 (1967) "Electronic Spectra of P_2, As_2, and Sb_2 Molecules".

K. Mukherjee, Phys. Letters, 25A, 439 (1967) "Vacancies in Solid Argon".

R. Müller and F. Dörr, Z. Elektrochem. 63, 1150 (1959) "Absorptions- und Phosphoreszenzspektren der Mono- und Diazanaphthaline (π-π Phosphoreszenz nach n-π Absorption bei den Diazanaphthalinen)".

R.S. Mulliken, Phys. Rev. 36, 699 (1930)

R.S. Mulliken and W.B. Person, Ann. Rev. Phys. Chem. 13, 107 (1962) "Donor-Acceptor Complexes".

R.J. Munn, J. Chem. Phys. 40, 1439 (1964) "Interaction Potential of the Inert Gases. I.".

J.N. Murrell, Mol. Phys. 3, 319 (1960).

I.K. Musatov, Izvest. Vysshikh Ucheb. Zavedenii, Fiz. 4, 46 (1960) "Low-Temperature Luminescence and After-Glow of Silica Gel".

N

J. Nag-Chaudhuri, L. Stoessell and S. P. McGlynn, J. Chem. Phys. 38, 2027 (1963) "External Heavy-Atom Spin-Orbital Coupling Effect. II. Comments on the Effect of Ferric Acetylacetonate on the Spectra of Polyacenes".

L. L. Nagornaya, A. P. Kilimov, L. Ya. Malkes, L. V. Shubina and A. I, Timchenko, Instr. Exp. Tech. (USSR)(English Transl.) 4, 37 (1960) "Plastic Scintillators With Admixtures of 1,2-Diaryl-Ethylenes".

L. L. Nagornaya, R. N. Nurmukhametov, L. Ya. Malkes and L. V. Shubina, Bull. Acad. Sci. USSR 27, 747 (1963) "Luminescence of Naphthylic and Anthrylic Derivatives of Ethylene".

L. L. Nagornaya, T. R. Mnatsakanova, A. P. Grekov and O. P. Shvaika, Opt. Spectry. (USSR)(English Transl.) 18, 228 (1965) "Photoluminescent and Scintillation Properties of Some 1, 3, 4-Oxadiazole".

L. A. Nakhimovskaya, Opt. Spectry. (USSR)(English Transl.) 24, 105 (1968) "On the Conditions for Realization of the Shpolskii Effect".

K. R. Naqvi, Chem. Phys. Letters 1, 497 (1967) "P-Type Delayed Fluorescence from Rigid Solutions".

A. Nath and S. Khorana, J. Chem. Phys. 46, 2858 (1967) "Photoexcited Isotopic Exchange in the Solid State--$^{57}Co^{++}$-Doped Cobalt Chelates".

A. W. Naumann and G. J. Safford, J. Chem. Phys. 47 (2), 867 (1967) "Low-Frequency Motions in Solid SO_2 Hydrate".

K. Neelakantam, S. Narayanan and M. Sitaraman, Proc. Indian Acad. Sci. 25A, 159 (1947) "Luminescence in the Solid State: Boric Acid Glasses. III. Azo Dyes from o-Hydroxy Carbonyl Compounds With Activators".

E. F. Neilson and D. White, Amer. J. Chem. Soc. 79, (1957) "The Heat Capacity, Heat of Fusion, Heat of Transition and Heat of Vaporization of Chlorodifluoromethane Between 16°K and the Boiling Point".

E. D. Nelson, J. Y. Wong and A. L. Schawlow, Phys. Rev. 156, 298 (1967) "Far Infrared Spectra of $Al_2O_3:Cr^{3+}$ and $Al_2O_3:Ti^{3+}$".

L. Y. Nelson and G. C. Pimentel, J. Chem. Phys. 47, 3671 (1967) "Infrared Detection of the Trichloride Radical, Cl_3".

L. Y. Nelson and G. C. Pimentel, Inorg. Chem. 6, 1758 (1967) "Infrared Detection of Xenon Dichloride".

L. Y. Nelson and G. C. Pimentel, Inorg. Chem., in press "Infrared Spectra of Chlorine-Bromine Polyhalogens by Matrix Isolation".

P. F. Nepochatykh, Bull. Acad. Sci. USSR, Phys. Ser. English Transl. 22, 1407 (1958) "Characteristics of the Luminescence of Difurylpolenes".

A. N. Nesmeyanov, Vapour Pressure of the Elements, Academic Press, N. Y. (1963).

E. Newman, A. M. Smith and F. E. Steigert, Phys. Rev. 122, 1520 (1961) "Fluorescent Response of Scintillation Crystals to Heavy Ions".

J. W. Nibler and G. C. Pimentel, Spectrochim. Acta 21, 877 (1965) "Infrared Spectrum and Vibrational Potential Function of Amide Ion".

J. W. Nibler and G. C. Pimentel, J. Chem.Phys. 47, 710 (1967) "Infrared Spectra of Cesium Bihalide Salts".

E. L. Nichols and E. Merritt, Phys. Rev. 18, 355 (1904) "Studies in Luminescence. I. The Phosphorescence and Fluorescence of Organic Substances at Low Temperatures".

M. F. Nicol, J. Chem. Phys. 45, 4753 (1966) "Fluorescence and Phosphorescence at High Pressure: Naphthalene Dissolved in Polymethlmethacrylate".

M. Nicol and J. Somekh, J. Opt. Soc. Am. 58, 233 (1968) "Triplet-Triplet Absorption Spectrum (4500-3800 Å) of Perdeuteronaphthalene in Polymethylmethacrylate under Very High Pressures".

G. C. Nieman and G. W. Robinson, J. Chem. Phys. 37, 2150 (1962) "Rapid Triplet Excitation Migration in Organic Crystals".

G. C. Nieman and G. W. Robinson, J. Chem. Phys. 39, 1298 (1963) "Direct Determination of Exciton Interactions for Triplet States of Organic Crystals".

G. C. Nieman and D. S. Tinti, J. Chem. Phys. 46, 1432 (1967) "Geometry of the Lowest Triplet State of Benzene".

A. N. Nikitin, M. D. Galanin, G. S. Ter-Sarkisian and B. M. Mikhailov, Opt. Spectry. (USSR)(English Transl.) 6, 226 (1959) "The Absorption and Luminescence Spectra of Solutions of Some Substituted Polyenes".

S. Nikitine and G. Perny, J. Phys.Rad. 17, 1017 (1956) "Emission and Absorption Spectra of Lead Iodide at Low Temperatures".

S. Nikitine and R. Reiss, J. Phys. Rad. 17, 1017 (1956) "Luminescence of Copper Iodide Thin Films at Low Temperatures".

S. Nikitine, J. Burckel, J. Biellmann and R. Reiss, Compt. Rend. 251, 935 (1960) "The Absorption, Reflection and Photoluminescence Spectra of Single Crystals of PbI, at 4°K".

P. N. Noble and G. C. Pimentel, J. Chem. Phys. 44, 3641 (1966) "Confirmation of the Identification of Dioxygen Monofluoride".

P. N. Noble and G. C. Pimentel, J. Chem. Phys. in press "Hydrogen Dichloride Radical: Infrared Detection Through the Matrix Isolation Technique".

S. Noda, K. Fueki and Z. Kuri, J. Chem. Phys. 49, 3287 (1963) "ESR and Optical Studies of Acyl Radicals Produced from Acyl Chlorides by Dissociative Electron Attachment in γ-Irradiated Organic Glasses at 77°K".

I. Norman and G. Porter, Nature 174, 508 (1954) "Trapped Atoms and Radicals in a Glass 'Cage' ".

I. Norman and G. Porter, Proc. Roy. Soc. (London) 230A, 399 (1955) "Trapped Atoms and Radicals in Rigid Solvents".

J. R. Novak and M. W. Windsor, Proc. Roy. Soc. (London) in press
"Laser Photolysis and Spectroscopy: A New Technique For The Study Of Rapid Reactions In The Nanosecond Time Range".

R. Nudelmann, Optical Properties of Solids, Plenum Press, NY (1969) (Proceedings Nato Conference, 1966)

R. N. Nurmukhametov. E. G. Popova and N. S. Dokimikhin, Opt. Spectry. (USSR)(English Transl.) 9, 313 (1960) "The Luminescence of Chrysene Solutions and Powder at 77°K".

R. N. Nurmukhametov and G. V. Gobov, Opt. Spectry. (USSR) (English Transl.) 13, 384 (1962) "The Luminescence Spectra of Fluorine".

R. N. Nurmukhametov, D. N. Shigorin and Yu. I. Kozlov, Bull. Acad. Sci. USSR 27, 685 (1963) "Luminescence Spectra of Solutions of Indigo and Its Derivatives at 77°K".

R. N. Nurmukhametov and G. V. Gobov, Opt. Spectry. (USSR) (English Transl.) 18, 126 (1965) "The Effect of the Hetero-atom on the Luminescence of Compounds Containing a Biphenyl Nucleus".

R. N. Nurmukhametov, L. A. Mileshina, L. Ya. Malkes and L. V. Shubina, Opt. Spectry. (USSR)(English Transl.) 20, 17 (1966) "Electronic Spectra of 1,4-Divinylbenzene Diaryl Derivatives".

R. N. Nurmukhametov, Opt. Spectry. 22, 209 (1967) "Electronic Spectra and the Process of Singlet-Triplet Conversion in Aromatic Aldehydes".

I. W. Obreimov, de Haas, Proc. Roy. Soc. Amsterdam 31, 353 (1928) "Change of Color of Crystals at Low Temperatures".

I. W. Obreimov, A. F. Prikhot'ko, Physik. Z. Sowjetunion 1, 203 (1932) "The Absorption Spectra of Some Crystalline Organic Compounds at Low Temperature".

I. W. Obreimov, A. F. Prikhot'ko, Physik. Z. Sowjetunion 9, 34 (1936) "Absorption Spectra of Crystals at Low Temperature II. Spectrum of Phenanthrene at 20°K".

I. W. Obreimov, A. F. Prikhot'ko, Physik. Z. Sowjetunion 9, 48 (1936) "Absorption Spectra of Crystals at Low Temperature III. Spectrum of Anthracene at 20°K".

I. W. Obreimov and K. Shabaldas, J. Phys. USSR 7, 167 (1943) "Fluorescence of Naphthalene Crystals".

K. Ochial, Chem. Soc. Japan 5, 203 (1930) "Studies on the Phosphorescence of Gelatine and Fluorescein at Low Temperatures".

M.F. O'Dwyer, M. A. El-Bayoumi and S.J. Strickler, J. Chem. Phys. 36, 1395 (1962)

H. W. Offen and B. A. Baldwin, J. Chem. Phys. 44 3642 (1966) "Effects of High Pressures on the Phosphorescence of Naphthalene and Quinoline".

H. W. Offen and A. H. Kadhim, J. Chem. Phys. 45, 269 (1966) "Spectroscopy of EDA Complexes at High Pressures. II. Absorption of Several TCNE Complexes in Polymer Matrices".

H. W. Offen, J. Applied Phys. 38, 5245 (1967) "High-Pressure Apparatus for Optical Studies at 77°K".

H. W. Offen and D. T. Phillips, J. Chem. Phys. 49, 3995 (1968) "Fluorescence Lifetimes of Aromatic Hydrocarbons Under Pressure".

J. F. Ogilvie, Nature 204, 572 (1964) "Infrared Absorption of the Hydroxyl Radical".

D. W. Olds, J. Chem. Phys. 35, 2248 (1961) "Polarized Phosphorescence in Crystalline Hexachlorobenzene at 77°K".

D. Olness and H. Sponer, J. Chem. Phys. 38, 1779 (1963) "Phosphorescence Lifetime Studies in Some Organic Crystals at Low Temperatures".

G. Oster and A. H. Adelman, J. Am. Chem. Soc. 78, 913 (1956) "Long-Lived States in Photochemical Reactions. I. Photoeduction of Eosin".

G. Oster, J. Joussot-Dubien and B. Broyde, J. Am. Chem. Soc. 81, 1869 (1959) "Photoeduction of Dyes in Rigid Media. I. Triphenylmethane Dyes".

G. K. Oster and H. Kallmann, Int. Symp. on Luminescence (Munich, 1965) Verlag Karl Thiemig KG, Munich (1966) p. 31 "Energy Transfer From Higher Excited States of Solvents".

R. Ostertag and H. C. Wolf, Phys. Stat. Sol. 31, 139 (1969) "Phonoenstruktur im Emissionsspektrum dotierter Naphthalin-kristalie".

L. N. Ovander, Opt. Spectry. (USSR)(English Transl.) 11, 129 (1961) "Temperature Dependence of Infrared Absorption Lines. I".

L. N. Ovander, Opt. Spectry. (USSR)(English Transl.) 12, 711 (1962) "Temperature Dependence of Infrared Absorption Lines. II".

P

M.R. Padhye, S.P. McGlynn and M. Kasha, J. Chem. Phys. 24, 588 (1956) "Lowest Triplet State of Anthracene".

G.K. Pandey and S. Chandra, J. Chem. Phys. 45, 4369 (1966) "On the Matrix Spectra of the HF Molecule".

G.K. Pandey, J. Chem. Phys. 49, 1555 (1968) "Effect of Localized Lattice Vibration on the Matrix Spectra of Diatomic Molecules".

A.E. Pankeeva, Bull. Acad. Sci. USSR, Phys. Ser. (English transl.) 23, 108 (1959) "Quenching of the Phosphorescence of Organic Dyes by Electric Ions".

G. Pannetier, P. Deschamps and J. Guillaume, Compt. Rend. 265, 710 (1967) "Observation d'un Nouveau Systeme de Bandes et Attribution a AsF".

I.N. Panov, N.A. Adrova and M.M. Koton, Opt. Spectry. (USSR) (English transl.) 7, 16 (1959) "Optical Characteristics of Compounds of the Oxazole, Oxadiazole and Furan Series".

D.D. Pant and D.P. Khandelwal, Proc. Indian Acad. Sci. 51A, 60 (1960) "Fluorescence Spectra of Solutions of Uranyl Nitrate at Liquid-Air Temperature".

H.A. Papazian, J. Chem. Phys. 27, 813 (1957) "Technique to Produce Free Radicals in the Solid State".

H.A. Papazian, J. Chem. Phys. 29, 448 (1958) "Free Radical Formation in Solids by Ion Bombardment".

R. Pappalardo, J. Chem. Phys. 49, 1545 (1968) "Absorption Spectra of ERbium Tricyclopentadienide at Liquid-Helium Temperature".

J.P. Paris, R.C. Hirt and R.G. Schmitt, J. Chem. Phys. 34, 1851 (1961) "Observed Phosphorescence and Singlet-Triplet Absorption in s-Triazine and Trimethyl-s-Triazine".

C.A. Parker and C.G. Hatchard, Trans. Faraday Soc. 51, 1894 (1961) "Triplet-Singlet Emission in Fluid Solutions: Phosphorescence of Eosin".

C.A. Parker and C.G. Hatchard, Proc. Roy. Soc. (London) 269, 574 (1962) "Delayed Fluorescence from Solutions of Anthracene and Phenanthrene".

C.A. Parker and C.G. Hatchard, Analyst 87, 664 (1962) "The Possibilities of Phosphorescence Measurement in Chemical Analysis: Tests with a New Instrument".

C.A. Parker, in Adv. in Photochem., W. Noyes, Jr., ed., 2, 305 (1964) "Phosphorescence and Delayed Fluorescence from Solutions".

M.A. Parker and D.F. Eggers, Jr., J. Chem. Phys. 45, 4354 (1966) "Infrared Spectra of Carbon Dioxide Films at Nonnormal Incidence".

R.H. Partridge, J. Chem. Phys. 49, 365 (1968) "Exciton Interpretation of the Vacuum-Ultraviolet Absorption Spectra of Saturated Organic Polymers".

T. Pavlopoulos and M.A. El-Sayed, J. Chem. Phys. 41, 1082 (1964) "Spectroscopic Investigation of the Mechanism of the Intramolecular Heavy Atom Effect on the Phosphorescence Process. I. Naphthalene Emission".

C. Pecile and B. Lunelli, J. Chem. Phys. 46, 2109 (1967) "Polarized Infrared Spectra of Single Crystals of 9,10-Anthraquinone and 9,10-Anthraquinone-d_8".

S.S. Penner, Nat. Acad. Sci. - Nat. Res. Counc. Publ. no. 1470, 28 (1967) "Selected Problem Areas in High-Temperature Chemistry".

W.B. Person and G.C. Pimentel, J. Chem. Phys. 20, 1913 (1952) "Infrared Studies of Mixed Crystals: Naphthalene-d_8 in Napthalene".

W.B. Person, G.C Pimentel and S. Pitzer, J. Am. Chem. Soc. 74, 3437 (1952) "The Structure of Cyclooctatetraene".

W.B. Person, G.C. Pimentel and O. Schnepp, J. Chem. Phys. 23, 230 (1955) "Infrared Studies of Naphthalene and Naphthalene-d_8".

W.B. Person, C.F. Cook and H.B. Friedrich, J. Chem. Phys. 46, 2521 (1967) "Infrared Spectra of Charge-Transfer Complexes. VII. The Solid Benzene-Bromine Complex".

R.I. Personov, Opt. Spectry. (USSR) (English transl.) 15, 30 (1963) "Emission and Absorption Line Spectra of Phthalocyanine in Frozen Crystalline Solutions".

R.I. Personov and V.V. Solodunov, Opt. Spectry.(USSR) (English transl) 22, 317 (1967) "Temperature Dependence of the Line-Width in the Quasiline Fluorescence Spectrum of 1,12-Benzoperylene".

R.I. Personov,and V.V. Solodunov, Opt. Spectry. (USSR) (English transl.) 24, 70 (1968) "Interference Measurements of Line-Widths in the Quasiline Fluorescence Spectrum of 1,12-Benzoperylene at 4°K".

L. Pesteil, J. Chim. Phys. 58, 204 (1961) "Spectres Electroniques de l'Acénaphtène et du Deutéroacénaphtène à Basse Température".

L. Pesteil and M. Rabaud, J. Chim. Phys. 59, 167 (1962) "Spectres Électroniques des Phénanthrènes $C_{14}H_{10}$ et $C_{14}D_{10}$ a Basse Température".

P. Pesteil and M. Barbaron, J. Phys. Radium 15, 92 (1954) "Fluorescence Spectra of Aromatic Crystals at Low Temperature".

P. Pesteil and L. Pesteil, Compt. Rend. 238, 226 (1954) "Fluorescence de Quelques Cristaux Aromatiques. Discussion des Résultats".

P. Pesteil, A. Zmerli and M. Barbaron, Compt. Rend. 239, 255 (1954) "Photoluminescence de Cristaux aux Bases Temperatures. V. Quelques Molecules Carboxylees".

P. Pesteil, Ann. Phys. 10, 128 (1955) "The Absorption and Flurescence of Several Organic Molecules in the Crystalline State".

P. Pesteil, Ann. Phys. 10, 8 (1955) "Etude de l'Absorption et de la Fluorescence de Quelques Molecules Organiques en Milieu Cristallin".

P. Pesteil and A. Zmerli, Ann. Phys. 10, 1079 (1955) "Structure Vibrationnelle des Spectres de Phosphorescence de Cristaux Aromatiques aux Tres Basses Temperatures".

P. Pesteil and A. Zmerli, Compt. Rend. 242, 1876 (1956) "Luminescence of Crystals at Low Temperatures. Naphthalene at 20°K".

P. Pesteil and A. Ciais, Compt. Rend. 250, 494 (1960) "Spectre de Fluorescence du Naphthalene en Solution dans e'Octodeuterononaphthalene a 20°K.

N.L. Peterson, Solid State Phys. 22, 409 (1968)

B. Petropoulos and L. Herman, Compt. Rend. 264B, 1196 (1967) "Effect of Rare-Gas Matrixes on the Spectrum of the S_2 Molecule".

M. Peyron and H.P. Broida, J. Chem. Phys. 30, 139 (1959) "Spectra Emitted from Solid Nitrogen Condensed at Very Low Temperatures from a Gas Discharge".

M. Peyron, E.M. Hörl, H.W. Brown and H.P. Broida, J. Chem. Phys. 30, 1304 (1959) "Spectroscopic Evidence for Triatomic Nitrogen in Solids at Very Low Temperature".

M. Peyron and Lam Thanh My, J. Chim. Phys. 64, 129 (1967) "Chimiluminescence du Radical NS".

D.M.P. Phillips, Nature 161, 53 (1948) "Use of Ultra-Violet Fluorescence in Paper Chromatography".

L.F. Phillips, J.J. Smith, and B. Meyer, J. Mol. Spectry. 29, 230 (1969) "The Ultraviolet Spectra of Matrix Isolated Disulfur Monoxide and Sulfur Dioxide".

M.R. Philpott, J. Chem. Phys. 49, 3736 (1968) "Radiation Damping of Frenkel Excitons in Molecular Crystals".

L.G. Pikulik and M.A. Solomakho, Inzhener. Fiz. Shur., Akad. Nauk Belorus. SSR 3, 53 (1960) "Effect of Temperature on Luminescence and Absorption Spectra of Complex Molecules in Solutions".

L.G. Pikulik and L.F. Gladchenko, Bull. Acad. Sci. USSR 27, 756 (1963) "Influence of Temperature on the Luminescence of Complex Molecules in Different Media".

A.M. Pilon, Compt. Rend. 249, 1492 (1959) "The Phosphorescence of Solid Nitrogen".

G.C. Pimentel and K.S. Pitzer, J. Chem. Phys. 17, 882 (1949) "The Ultraviolet Absorption and Luminescence of Decaborane".

G.C. Pimentel, G. Jura and L. Grotz, J. Chem. Phys. 19, 513 (1951) "The Infrared Spectra of Mesitylene Complexes".

G.C. Pimentel, J. Chem. Phys. 19, 1536 (1951) "Infrared Studies of Mixed Crystals: Naphthalene in Anthracene".

G.C. Pimentel, C.W. Garland and G. Jura, J. Am. Chem. Soc. 75, 803 (1952) "Infrared Spectra of Heavy Water Adsorbed on Silica Gel".

G.C. Pimentel and A.L. McClellan, J. Chem. Phys. 20, 270 (1952) "The Infrared Spectra of Naphthalene Crystals, Vapor, and Solutions".

G.C. Pimentel and W.A. Klemperer, J. Chem. Phys. 23, 376 (1955) "Infrared Spectrum of Solid η-Octane-1,1,1,8,8,8-d_6".

G.C. Pimentel, A.L. McClellan, W.B. Person and O. Schnepp, J. Chem. Phys. 23, 234 (1955) "Interpretation of the Infrared Spectrum of a Molecular Crystal: Naphthalene".

G.C. Pimentel and C.H. Sederholm, J. Chem. Phys. 24, 639 (1956) "Correlation of Infrared Stretching Frequencies and Hydrogen Bond Distances in Crystals".

G.C. Pimentel, J. Am. Chem. Soc. 79 3323 (1957) "Hydrogen Bonding and Electronic Transitions: The Role of the Franck-Condon Principle".

G.C. Pimentel, IUPAC Conf. on Hydrogen Bonding, Ljubljana, 1957; Pergamon Press, N.Y. 1957 "Low Temperature Spectral Behaviour of Hydrogen Bonded Species".

G.C. Pimentel, Spectrochim. Acta 12, 94 (1958) "The Promise and Problems of the Matrix Isolation Method for Spectroscopic Studies".

G.C. Pimentel, J. Am. Chem. Soc. 80, 62 (1958) "Reaction Kinetics by the Matrix Isolation Method: Diffusion in Argon; cis-trans Isomerization of Nitrous Acid".

G.C. Pimentel, in Formation and Trapping of Free Radicals, Bass and Broida, eds., Academic Press, 1960, "Radical Formation and Trapping in the Solid Phase".

G.C. Pimentel, paper presented at American Petroleum Institute's Division of Refining Meeting, Houston, Texas, (1961) "Investigation of Highly Reactive Species by the Matrix Isolation Technique."

G.C. Pimentel, J. Am. Chem. Soc. 83, 2217 (1961) "Photo-Chemistry in the Liquid and Solid States".

G.C. Pimentel, M.O. Bulanin and M. Van Thiel, J. Chem. Phys. 36, 500 (1962) "Infrared Spectra of Ammonia Suspended in Solid Nitrogen".

G.C. Pimentel, Pure & Appl. Chem. 4, 61 (1962) "Matrix Technique and its Application in the Field of Chemical Physics".

G. Pimentel and R. Spratley, J. Am. Chem. Soc. 85, 826 (1963) "The Bonding in the Inert Gas-Halogen Compounds--the Likely Existence of Helium Difluoride".

G. Pimentel, Science 143, 674 (1963) "Helium Difluoride: Possible Preparative Techniques Based on Nuclear Transmutations".

G.C. Pimentel and S.W. Charles, Pure & Appl. Chem. 7, 111 (1963) "Infrared Spectral Perturbations in Matrix Experiments".

G. Pimentel, Science 140, 974 (1963) "Krypton Fluoride: Preparation by the Matrix Isolation Technique".

G.C. Pimentel and K.C. Herr, J. Chim. Phys. 1964, 1509 (1964) "The Infrared Detection of Free Radicals using Flash Photolysis Methods".

G.C. Pimentel, Pure & Appl. Chem. 11, 563 (1965) "Infrared Detection of Reactive Species Produced Through Flash Photolysis".

G.C. Pimentel, S.W. Charles and K. Rosengren, J. Chem. Phys. 44, 3029 (1966) "Hydrogen Bonding of Hydrazoic Acid in Solid Nitrogen".

E.H. Pinnington, J. Opt. Soc. Am. 57, 1252 (1967) "Zeeman-Effect Analysis of the Spectrum of Neutral Gadolinium (Gd I)".

V.F. Pissarenko and S.V. Voropaeva, Phys. Stat. Sol. 15, K95 (1966) "The Luminescence of Dy^{3+} in NaCl and KCl".

K.S. Pitzer, Adv. Chem. Phys. 2, 59 (1959) "Inter- and Intramolecular Forces and Molecular Polarizability".

G.L. Pollack and H.P. Broida, J. Chem. Phys. 38, 2012 (1963) "Spectroscopic Absorption of NO in Crystalline and Liquid Krypton".

G.L. Pollack, Rev. Mod. Phys. 36, 748 (1964) "The Solid State of Rare Gases".

J.A. Pople, Mol. Phys. 3, 16 (1960) "The Renner Effect and Spin-Orbit Coupling".

H. Port and H.C. Wolf, in The Triplet State, A.B. Zahlan, ed., Cambridge University Press (1967) "Optical Investigations of the Triplet State of Naphthalene in Different Crystalline Environments".

H. Port and H.C. Wolf, Z. Naturforschung 23a, 315 (1968) "Phosphoreszenz und Verzögerte Fluoreszenz von Naphthalin in Verschiedenen Mischkristallen".

G. Porter and F. J. Wright, Discussions Faraday Soc. 14, 23 (1953) "Studies of Free Radical Reactivity by the Methods of Flash Photolysis. The Photochemical Reaction Between Chlorine and Oxygen".

G. Porter and M.W. Windsor, J. Chem. Phys. 21, 2088 (1954) "Triplet States in Solution".

G. Porter and M.W. Windsor, Discussions Faraday Soc. 17, 178 (1954) "Studies of the Triplet State in Fluid Solvents".

G. Porter and M.R. Wright, J. Chim. Phys. 55, 705 (1958) "Energy Transfer from the Triplet State in Solution".

G. Porter and E. Strachan, Trans. Faraday Soc. 54, 1595 (1958) "Primary Photochemical Processes in Aromatic Molecules. Part 4--Side-Chain Photolysis in Rigid Media".

J. Powling and H. Bernstein, J. Am. Chem. Soc. 73, 1815 (1951) "Internal Rotation. VI. A Dilute Solution Method for the Spectroscopic Determination of the Energy Difference Between Rotational Isomers".

H.J. Prask and H. Boutin, J. Chem. Phys. 45, 3284 (1966) "Low-Frequency Motions of H_2O Molecules in Crystals. III."

W.C. Price, W.F. Sherman and G.R. Wilkinson, Spectrochim. Acta 16, 663 (1960) "Infra-red Studies on Polyatomic Ions Isolated in Alkali-Halide Lattices".

E.B. Priestley and A. Haug, J. Chem. Phys. 49, 622 (1968) "Phosphorescence Spectrum of Pure Crystalline Naphthalene".

A. Prikhotko, Acta Physicochem. 16, 125 (1942) "The Absorption Spectra of Halogen Solutions at Low Temperatures".

A.F. Prikhotko, Izvest. Akad. Nauk SSSR, Ser. Fiz. 15, 608 (1951) "Luminescence and Absorption of Light in Crystalline Organic Compounds".

A.F. Prikhotko and I. Ya. Fugol, Opt. Spectry. (USSR) (English transl.) 7, 19 (1959) "Luminescence of Stilbene Crystals at 20°K".

A.F. Prikhotko and A.F. Skorobogatko, Opt. Spectry. (USSR) (English transl.) 20/1, 33 (1966) "Spectral Study of Naphthacene Single Crystals".

P. Pringsheim and A. Kronenberger, Z. Phys. 40, 75 (1926)

P. Pringsheim and S.J. Vavilov, Z. Physik 37, 705 (1926) "Polarisierte und Unpolarisierte Phosphoreszenz Fester Farbstofflösungen".

P. Pringsheim, Acta Phys. Polon. 6, 158 (1936) "Bemerkung Über die 'Spiegelsymmetrie' der Fluoreszenz- und Absorptionsbanden in Lösungen".

P. Pringsheim, Acta Phys. Polon. 5, 361 (1936) "Fluoreszenz und Phosphoreszenz Adsorbierter Farbstoffe".

A. Pröpstl and H.C. Wolf, Z. Naturforsch. 18a, 822 (1963) "Die Temperaturabhängigkeit der Sensibilisierten Fluoreszenz in Naphthalin-Kristallen Zwischen 2 und 100°K".

A.D.E. Pullin, Proc. Roy. Soc. (London) 255A, 39 (1960) "A Theory of Solvent Effects in Infra-Red Spectra".

B.A. Pyatnitskii, Doklady Akad. Nauk SSSR 71, 457 (1950) "Phosphorescence of Benzene Hydrocarbons at the Temperature of Liquid Oxygen".

B.A. Pyatnitskii, Izvest. Akad. Nauk SSSR, Ser. Fiz. 15, 597 (1951) "Decay of Phosphorescence and Duration of the Metastable State of Organic Molecules at Low Temperature".

B.A. Pyatnitskii, Doklady Akad. Nauk SSSR 109, 503 (1956) "Phosphorescence Spectra of Some Aromatic Acids at Liquid Air Temperature".

B.A. Pyatnitskii, Izvest. Akad. Nauk SSSR, Ser. Fiz. 22, 1304 (1958) "Phosphorescence Spectra of Some Aromatic Acids at Liquid-Air Temperature".

B.A. Pyatnitskii and A.I. Vlasenko, Bull. Acad. Sci. USSR, 27, 648 (1963) "Phosphorescence of Carbazole and Phenanthrene at Liquid Oxygen Temperature".

Q

F.S. Quiring, J. Chem. Phys, 49, 2448 (1968) "Nonradiative Transfer of Excitation Energy Between Rare-Earth Ions in Aqueous Solution".

J. W. Rabalais, H. J. Maria and S. P. McGlynn, Chem. Phys. Lett. 3, 59 (1969) "Comments on Phosphorescence Decay Times of Benzene and Methyl-Benzene Derivatives".

J. W. Rabalais, H. J. Maria and S. P. McGlynn, in press

"The Phosphorescence Decay of Benzene and Methylbenzene Derivatives".

R. O. Rahn, T. Yamane, J. Eisinger, J. W. Longworth and R. G. Shulman, J. Chem. Phys. 45, 2947 (1966) "Luminescence and Electron Spin Resonance Studies of Adenine in Various Polynucleotides".

R. O. Rahn, R. G. Shulman and J. W. Longworth, J. Chem. Phys. 45, 2955 (1966) "Phosphorescence and Electron Spin Resonance Studies of the uv-Excited Triplet State of DNA".

K. Rajnak and W. F. Krupke, J. Chem. Phys. 46, 3532 (1967) "Energy Levels of Ho^{3+} in $LaCl_3$".

H. Rammensee and V. Zanker, Z. Angew. Phys. 12, 237 (1960) "Beitrag zum Zusammenhang zwischen Lichtabsorption, Ablingzeit und absoluter Fluoreszenzquantenausbeute bei organischen Farbstoffmolekulen".

B. Ramsey, M. A. El-Bayoumi and M. Kasha, J. Chem. Phys. 35, 1502 (1961) "Intramolecular Charge-Transfer Bands Observed in the Spectra of Some Aryl Boron Compounds".

D. A. Ramsay, J. Chem. Phys. 21, 960 (1953) "Absorption Spectrum of Free HCO Radicals".

D. A. Ramsay, Advances in Spectroscopy 1, 1 (1959) "The Spectra of Polyatomic Free Radicals".

D. A. Ramsay, Electronic Spectra of Polyatomic Molecules and the Configurations of Molecules in Excited Electronic States, In the Determination of Organic Structures by Physical Methods, F. C. Nachod and W. D. Phillips ectoris, Vol. Academic Press, N.Y. (1961).

D. J. Randazzo, J. Chem. Phys. 49, 1808 (1968) "Zeeman Studies on Er^{3+} in $GdCl_3$".

E. Rapoport, J. Chem. Phys. 45, 2721 (1966) "Phase Diagrams of Sodium Nitrite and Potassium Nitrite to 40 kbar".

H. E. Rast, J. L. Fry and H. H. Caspers, J. Chem. Phys. 46, 1460 (1967) "Energy Levels of Sm^{3+} in LaF_3".

H. E. Rast, H. H. Caspers and S. A. Miller, J. Chem. Phys. 47, 3874 (1967) "Fluorescence and Energy Transfer Between Nd^{3+} and Yb^{3+} in LaF_3".

G. B. Rathmann, Nat. Acad. Sci.- Nat. Res. Counc., Publ. No. 1740, 76 (1967) "Problems in High-Temperature Chemistry".

S. G. Rautian and I. I. Sobel'man, Opt. Spectry. (USSR) (English Transl.) 10, (1965) "Remarks On Negative Absorption".

I. R. Rawlings, Brit. J. Appl. Phys., ser. 2, 1, 733 (1968) "Optical Absorption in Silicon Monoxide".

B. Raz and J. Jortner, J. Chem. Phys. 49, 3318 (1968) "Trapped Exciton States in Liquid Argon".

K. K. Reband and O. I. Sild, Opt. Spectry. (USSR)(English Transl.) 22, 222 (1967) "The Theory of Isotopic Composition Effect in the Spectra of Impurity Crystals".

R. E. Rebbert and P. Ausloos, J. Chem. Phys. 46, 4333 (1967) "Vacuum-Ultraviolet Photolysis of Solid Propane at 20° and 77°K".

R. E. Rebbert and P. Ausloos, J. Chem. Phys. 48, 306 (1968) "Photolysis of Methyl Iodide in Matrices of Organic Compounds at 20° and 77°K. Reactions of Hot Methyl Radicals".

R. L. Redington and D. E. Milligan, J. Echm. Phys. 37, 2162 (1962) "Infrared Spectroscopic Evidence for the Rotation of the Water Molecule in Solid Argon".

R. L. Redington and D. E. Milligan, J. Chem. Phys. 39, 1276 (1963) "Molecular Rotation and Ortho-Para Nuclear Spin Conversion of Water Suspended in Solid Ar, Kr, and Xe".

C. Reid, J. Chem. Phys. 21, 1906 (1953) " n - π Emission Spectra".

C. Reid, J. Am. Chem. Soc. 76, 3264 (1954) "The Aromatic Carbonium Ions".

M. H. Reilly, Phys. and Chem. Solids 28, 2067 (1967) "Band Structure, Deformation Potentials, and Exciton States in Solid Xenon".

P. Rentzepis, D. White and P. N. Walsh, J. Phys. Chem. 64, 784 (1960) "The Reaction Between B_2O_3(l) and C(s): Heat of Formation of B_2O_2(g)".

P. M. Rentzepis, Chem. Phys. Lett. 2, 117 (1968) "Direct Measurements of Radiationless Transitions in Liquids".

W. Rhodes, B. R. Henry and M. Kasha, Proc. Nat. Acad. Sci. ___, (1969) "A Stationary State Approach to Radiationless Transitions. Radiation Bandwidth Effect on Excitation Processes in Polyatomic Molecules".

O. K. Rice, J. Chem. Phys. 5, 492 (1937) "On Transitions in Condensed Systems".

N. Riehl, H. Kallmann and H. Vogel, International Symposium on Luminescence. The Physics and Chemistry of Scintillators, Verlag K. Thiemig KG, Munich (September 1965).

V. B. Rinck, Z. Naturforsch. 3a, 406 (1948) "Ubergangswahrscheinlichkeiten fur strahlende und strahlungslose Prozesse".

J. Ripoche, Bull. Soc. Sci. Bretagne Sci. Mat. Phys. Nat. (France) 40, 129 (1965) "Contribution to the Techniques of Formation, and to the Spectroscopic Study of Free Radicals Trapped in Crystal Lattices at Low Temperature".

J. Ripoche, Comp. Rend. 263, 912 (1966) "Spectre de fluorescence du radical benzyle piege a la temperature de l'helium liquide dans le cyclopentane et le methyl-cyclopentane".

W. W. Robertson and R. E. Reynolds, J. Chem. Phys. 29, 138 (1958) "Effects of Hydrostatic Pressure on the Intensity of the Singlet-Triplet Transition of α-Chloronaphthalene in Ethyl Iodide".

C. C. Robinson, J. Opt. Soc. Am. 57, 4 (1967) "Excited-State Absorption in Fluorescent Uranium, Erbium, and Copper-Tin Glasses".

G.W. Robinson and C.D. Cornwell, J. Chem. Phys. 21, 1436 (1953) "The Interaction with Molecular Rotation of the Nuclear Electric Quadrupole Moments of Two Nuclei Having Spins 3/2".

G.W. Robinson, J. Chem. Phys. 22, 1384 (1954) "Techniques in the Study of Emission Spectra of Polyatomic Molecules--the Spectra of Benzaldehyde and Acetophenone".

G.W. Robinson and M. McCarty, Jr., J. Chem. Phys. 28, 350 (1957) "Electronic Spectra of Free Radicals at 4°K--HNO, NH, and OH".

G.W. Robinson, M. McCarty, Jr., and M.C. Keelty, J. Chem. Phys. 27, 972 (1957) "Electronic Spectrum of Monomeric Nitrogen Dioxide at Liquid Helium Temperature".

G.W. Robinson, J. Chem. Phys. 27, 1227 (1957) "On Asymmetric Rotors".

G.W. Robinson and M. McCarty, Jr., J. Chem. Phys. 28, 349 (1958) "Electronic Spectra of Free Radicals at 4°K--NH_2".

G.W. Robinson and M. McCarty, Jr., Can. J. Phys. 36, 1590 (1958) "Radical Spectra at Liquid Helium Temperatures".

G.W. Robinson and M. McCarty, Jr., Informal Discussions Faraday Soc, unpublished preprints, Sheffield (September, 1958) "Some Diatomic and Triatomic Free Radicals Trapped at 4.2°K".

G.W. Robinson and M. McCarty, Jr., J. Chem. Phys. 30, (1959) "Trapped HN_2 Radicals at 4.2°K".

G.W. Robinson, Mol. Phys. 3, 301 (1960) "Discrete Sites in Liquids".

G.W. Robinson and L. Keyser, J. Am. Chem. Soc. 82, 5245 (1960) "Frozen NH and NH_2 Radicals from the Photodecomposition of Hydrazoic Acid".

G.W. Robinson and M. McCarty, Jr., J. Am. Chem. Soc. 82, 1859 (1960) "The Production and Subsequent Photolysis of Transient Products from the Photodecomposition of Diazomethane at 4.2°K".

G.W. Robinson, in Light and Life, W.D. McElroy and B. Glass, eds., The Johns Hopkins Press (1961) "Electronic Excited States of Simple Molecules".

G.W. Robinson, J. Mol. Spectry. 6, 58 (1961) "Spectra and Energy Transfer Phenomena in Crystalline Rare Gas Solvents".

G.W. Robinson, in Methods of Experimental Physics, v.3, p.155, D. Williams, ed., Academic Press, N.Y. (1962) "Electronic Spectra".

G.W. Robinson and R.P. Frosch, J. Chem. Phys. 37, 1962 (1962) "Theory of Electronic Energy Relaxation in the Solid Phase".

G.W. Robinson, Proc. NAS, 49, 521 (1963) "Dynamic Role of Triplet States in Photosynthesis".

G.W. Robinson and R.P. Frosch, J. Chem. Phys. 38, 1187 (1963) "Electronic Excitation Transfer and Relaxation".

G.W. Robinson, An. Rev. Phys. Chem. 15, 311 (1964) "Quantum Processes in Photosynthesis".

G.W. Robinson, Brookhaven Symp. in Biol. 19, 16 (1966) "Excitation Transfer and Trapping in Photosynthesis".

G.W. Robinson, J. Chem. Phys. 46, 572 (1967) "Intensity Enhancement of Forbidden Electronic Transitions by Weak Intermolecular Interactions".

G.W. Robinson, J. Chem. Phys. 47 1967 (1967) "Intersystem Crossing in Gaseous Molecules".

G.W. Robinson, in The Triplet State, Proc. Int. Symp. Beirut, E.B. Zahlan, ed., Cambridge University Press, p.213 (1967) "Radiationless Transition in Gaseous Benzene".

M. M. Rochkind and G. C. Pimentel, J. Chem. Phys. 42, 1361 (1965) "Infrared Spectrum and Vibrational Assignment for Chlorine Monoxide, Cl_2O".

M. M. Rochkind, Environ. Sci. Technol. 1, 434 (1967) "Infrared Analysis of Gases: A New Method".

M. M. Rochkind and G. C. Pimentel, J. Chem. Phys. 46, 4481 (1967) "Photolysis of Matrix-Isolated Dichlorine Monoxide: Infrared Spectra of ClClO and $(ClO)_2$".

M. M. Rochkind, Appl. Spectry. 22, 313 (1968) "Cryogenic System for Optical Spectroscopy".

M. M. Rochkind, Science 160, 196 (1968) "Infrared Pseudo Matrix Isolation Spectroscopy: Analysis of Gas Mixtures".

J. L. Roebber, G. K. Rollefson and G. C. Pimentel, J. Am. Chem. Soc. 80, 255 (1958) "High Intensity Photolysis of Acetone".

J. L. Roebber, J. Chem. Phys. 37 (9), 1974 (1962) "Photolysis of the Phenoxy Radical in a Nitrogen Matrix".

J. Rolfe, F. R. Lipsett and W. J. King, Phys. Rev. 123, 447 (1961) "Optical Absorption and Fluorescence of Oxygen in Alkali Halide Crystals".

J. Rolfe, J. Chem. Phys. 49, 4193 (1968) "Emission Spectra of S_2^-, Se_2^-, and SeS^- Ions in KI Crystals".

A. Ron and O. Schnepp, J. Chem. Phys. 46, 3991 (1967) "Lattice Vibrations of the Solids N_2, CO_2, and CO".

J-Y. Roncin and N. Damany-Astoin, C.R. Acad. Sci. 253, 835 (1961) "Spectre d'Absorption entre 1650 et 2600 Å, du Mercure Piege dans des Matrices d'Isopentane et d'Argon a 20°K".

J-Y. Roncin, S.Y. Ch'en, J. Granier et N. Damany-Astoin, Spectrochim. Acta 18, 835 (1961) "Spectres d'Absorption de quelques Corps Organiques Purs ou en Matrices, dans l'Ultra-violet Lointain".

J-Y. Roncin, V. Chandrasekharan, N. Damany, B. Vodar, J. Chim. Phys. 60, 1212 (1963) "Spectre d'Absorption entre 1150 et 1550 Å du Xenon Piege dans des Matrices d'Argon et de Krypton a Basse Temperature".

J-Y. Roncin, V. Chandrasekharan, N. Damany, C.R. Acad. Sci. 258, 2513 (1964) "Spectres d'Absorption entre 1070 et 1400 Å du Xenon et du Krypton Solides, Purs ou en Matrices a Basse Temperature".

J-Y. Roncin, N. Damany, B. Vodar, C.R. Acad. Sci. 260, 96 (1965) "Perturbation de la Raie d'Absorption Lyman α de l'Hydrogene Atomique Piege dans une Matrice Solids".

J-Y. Roncin, N. Damany, C.R. Acad. Sci. 261, 4697 (1965) "Spectre d'Absorption, dans l'Ultraviolet Lointain, de l'Oxyde Azotique en Matrice, a Basse Temperature".

J-Y. Roncin, N. Damany, C.R. Acad. Sci. 260, 6069 (1965) "Spectres d'Absorption dans l'Ultraviolet Lointain, de l'Oxyde de Carbone et de l'Azote Solides a Basse Temperature".

J-Y. Roncin, N. Damany, C.R. Acad. Sci. 262, 1436 (1966) "Spectre d'Absorption dans l'Ultraviolet Lointain de l'Oxyde de Carbone et de l'Oxyde Azotique en Matrice de Neon a 1,5°K".

J-Y. Roncin, J. Phys. 28, C3-159 (1967) "Etats Electroniques Excites de NO piege en Matrice a Basse Temperature".

J-Y. Roncin, N. Damany, and J. Romand, J. Mol. Spectry. 22, 154 (1957) "Far Ultraviolet Absorption Spectra of Atoms and Molecules Trapped in Rare Gas Matrices at Low Temperature".

J-Y. Roncin and K. Moorjani, Phys. Stat. Sol. 23, K1 (1967) "On the Absorption Spectrum of Gaseus and Solid Xenon".

J-Y. Roncin, J. Mol. Spectry. 26, 105 (1968) "Electronic Transitions of CO, N_2 and NO Molecules Trapped in Solid Rare Gas Matrices: Qualitative Discussion".

J-Y. Roncin, N. Damany, B. Vodar, Chem. Phys. Let. (March, 1969) "Electronic Transitions of CS_2 and OCS Trapped in Solid Matrices and Rydberg States in Dense Media".

D. Rosahl, Ann. Physik. 12, 35 (1953) "Fluorescence Spectra and Quantum Yields of Some Organic Materials Excited with Ultraviolet Light".

E. I. Roshchupkin and Yu. A. Vladimirov, J. Appl. Spect. 3 (3), 184 (1965) "A Study of the Primary Photochemical Processes Occurring in Proteins. III. The Luminescence and Kinetics Involved in the Formation of the Photoproducts of Aromatic Amino Acids at Low Temperatures".

B. Rosen, Nature 157, 692 (1946) "Electronic Spectra of Some Bent Triatomic Molecules".

R. L. Rosenbaum, Rev. Sci. Instr. 39, 890 (1968) "Some Properties of Gold-Iron Thermocouple Wire".

K. J. Rosengren, Acta Chem. Scand. 16, 1418 (1962) "The Photolysis of Alkanethiols in a Rigid Glass at 77°K with the Possible Formation of Thiyl Radicals".

K. J. Rosengren, Acta Chem. Scand. 16, 1421 (1962) " A Study on Contraction, Relative Viscosity and Melting Curves of Some Glass-forming Hydrocarbon Mixtures".

K. J. Rosengren, Acta Chem. Scand. 16, 1401 (1962) "A Systematic Study of the Photolysis of Some Dialkyl Disulfides in a Rigid Glass at 77°K".

K. Rosengren and G. C. Pimentel, J. Chem. Phys. 43, 507 (1965) "Infrared Detection of Diimide, N_2H_2, and Imidogen, NH, by the Matrix Isolation Method".

W. Rothman, A. Case and D. R. Kearns, J. Chem. Phys. 43, 1067 (1965) "Determination of Singlet→Triplet Absorption Spectra from Phosphorescence Excitation Spectra: α-Bromonaphthalene".

A. Rousset, R. Lochet and J. Darrine, Compt. Rend. 237, 37 (1953) "Phosphorescence de la Cellulose".

J. K. Roy, Indian J. Phys. 36, 507 (1962) "Luminescence Spectra of 2,4-Dechloro- and 3,4-Dichlorotoluene in the Solid State at -180°C".

J.K. Roy and M.A. El-Sayed, J. Chem. Phys. 40, 3442 (1964) "Donor-Acceptor Relative Orientation for Maximum Triplet-Triplet Energy Transfer".

N.K. Roy, Indian J. Phys. 28, 365 (1954) "On the Raman Spectra of Styrene and Polystyrene at -180°C".

I.M. Rozman and S.F. Kilin, Soviet Phys. Uspekhi (English Transl.) 2,856 (1959)"Luminescence of Plastic Scintillators".

W. A. Runciman, Rept. Progr. in Phys. 21, 30 (1958) "Absorption and Fluorescence Spectra of Ions in Crystals".

J. J. Rush, J. Chem. Phys. 45, 1312 (1966) "Motions of Water Molecules in Potassium Ferrocyanide Trihydrate, Water, and Ice: A Neutron Scattering Study".

J. J. Rush, J. Chem. Phys. 46, 2285 (1967) "Cold-Neutron Study of Hindered Rotations in Solid and Liquid Methylchloroform, Neopentane, and Ethane".

Z. S. Ruzevich, Opt. Spectry. (USSR) (English Transl.) 15, 191 (1963) "Fluorescence and Absorption Spectra of Azulene in Frozen Crystalline Solutions".

V. V. Rylkov, V. E. Kholmogorov and A. N. Terenin, Opt. Spectry. (USSR)(English Transl.) 22, 129 (1967) "Triplet-Triplet Energy Transfer in Two-Photon Processes of Molecular Breakdown".

S

E. Sackmann, J. Am. Chem. Soc. 90, 3569 (1968) "On the Polarization of Optical Transitions of Dye Molecules Oriented in an Ordered Glass Matrix".

H. Samelson and A. Lempicki, J. Chem. Phys. 39, 110 (1963) "Fluorescence and Lifetimes of Eu Chelates".

K.M. Sancier, W.H. Fredericks, H. Wise and W.J. Silva, U.S. Dept. Com. , Office Tech. Serv., PB Repts. 143, 35 (1959) "Luminescence of Solids Produced by Surface Recombination of Atoms".

G. Santiago and M. Kasha, J. Am. Chem. Soc. 91, 757 (1969) "Intraconfigurational Spin-Forbidden Transitions in Cr (III), Mn (II), and Ni (II) Complexes in Aqueous Glass Solutions at 77°k".

M. Sato, T. Azumi and H. Azumi, Bull. Chem. Soc. Japan 40, 1031 (1967) "Delayed Thermal Excimer Fluorescence of Acriflavine in a Stretched PVA Sheet".

E.V. Sayre, D.G. Miller and S. Freed, J. Chem. Phys. 26, 109 (1957) "Symmetries of Electric Fields About Ions in Solutions. Absorption and Fluorescence Spectra of Europic Chloride in Water, Methanol, and Ethanol".

S.A. Sazonova and B.S. Skorobogatov, Opt. Spectry. (USSR) (English transl.) 22, 87 (1967) "Sensitized Luminescence of Rare Earth Ions in NaCl:TR^{3+}-Se^{2-} Crystals".

A.L. Schawlow, D.L. Wood and A.M. Clogston, Phys. Rev. Letters 3, 271 (1959) "Electronic Spectra of Exchange-Coupled Ion Pairs in Crystals".

A.L. Schawlow, Adv. Quantum Electr. , 50 (1961) "Fine Structure and Properties of Chromium Fluorescence in Aluminum and Magnesium Oxide".

A.L. Schawlow, A.H. Piksis and S. Sugano, Phys. Rev. 122, 1469 (1961) "Strain-Induced Effects on the Degenerate Spectral Line of Chromium in MgO Crystals".

A.L. Schawlow, Paris Conf. (1963) "Widths and Positions of Sharp Optical Lines in Solids".

A.L. Schawlow, ARPA Order #206-64, Tech. Summary Report #14, M.L. Report #1065 (December, 1967) "Research in Laser Physics".

G.O. Schenck and E. Koch, Z. Electrochem. 64, 170 (1960) "Zwischenreaktionen bei Photosensibilisierten Prozessen in Lösungen".

D. Schmid and V. Zimmermann, Phys. Letters 27A, 459 (1968) "The Influence of Light on the ESR of F Centers".

J. Schmidt, I.A.M. Hesselmann, M.S. De Groot and J.H. Van der Waals, Chem. Phys. Letters 1 434 (1967) "Optical Detection of Electron Resonance Transitions in Phosphorescent Quinoxaline".

A. Schmillen, Z. Physik 150, 123 (1958) "Zur Frage der Energieübertragung in Festen Polyacenlösungen".

A. Schmillen, Z. Naturforsch. 16a, 5 (1961) "Fluorescence of Pyrene in Solid Hydrocarbons".

A. Schmillen and R. Legler, Z. Naturforsch. 18a, 1 (1963) "Über die Fluoreszenz von Binären Systemen Kristalliner Aromatischer Kohlenwasserstoffe".

T. Schneider and H. Labhart, Helv. Phys. Acta 38, 606 (1965) "Transfer and Conversion of Optical Excitation in Molecular Crystals".

O. Schnepp and D.S. McClure, J. Chem. Phys. 20, 1375 (1952) "A Vibrational Analysis of the Fluorescence of Naphthalene Vapor".

O. Schnepp and D.S. McClure, J. Chem. Phys. 26, 83 (1957) "Near Ultraviolet Spectrum of Crystalline Hexamethyl Benzene and the Structure of the Hexamethyl Benzene Molecule".

O. Schnepp and D.S. McClure, J. Chem. Phys. 30, 874 (1959) "Near Ultraviolet Spectrum of Crystalline Durene".

O. Schnepp, J. Chem. Phys. 30, 48 (1959) "Low-Temperature Phase Transition of Crystalline Hexamethylbenzene. II.".

O. Schnepp, J. Chem. Phys. 30, 863 (1959) "Near Ultraviolet Absorption Spectrum of Crystalline 1,3,5-Trichlorobenzene".

O. Schnepp, J. Chem. Phys. 30, 874 (1959) "Near Ultraviolet Spectrum of Crystalline Durene".

O. Schnepp, J. Chem. Phys. 30, 868 (1959) "Near Ultraviolet Spectrum of Crystalline Hexachlorobenzene".

O. Schnepp and K. Dressler, J. Chem. Phys. 33, 49 (1960) "Absorption Spectra of Solid Xenon, Krypton, and Argon in the Vacuum Ultraviolet".

O. Schnepp and K. Dressler, J. Chem. Phys. 32, 1682 (1960) "Photolysis of Ammonia in a Solid Matrix at Low Temperature".

O. Schnepp, J. Phys. Chem. Solids 17, 188 (1961) "The Absorption Spectra of Magnesium and Manganese Atoms in Solid Rare Gas Matrices".

O. Schnepp and M. Levy, J. Am. Chem. Soc. 84, 172 (1962) "Intramolecular Energy Transfer in a Naphthalene-Anthracene System".

O. Schnepp, Ann. Rev. Phys. Chem. 14, 35 (1963) "Electronic Spectra of Molecular Crystals".

O. Schnepp and K. Dressler, J. Chem. Phys. 42, 2482 (1965) "Schumann-Runge Bands of O_2 in Solid Phases: Spectroscopic Measurement of Intermolecular Potentials".

O. Schnepp, J. Chem. Phys. 46, 3983 (1967) "Theory for the Infrared Absorption Intensities of the Lattice Vibrations of Molecular Solids".

L.J. Schoen, L.E. Kuentzel and H.P. Broida, Rev. Sci. Instr. 29, 633 (1958) "Glass Dewars for Optical Studies at Low Temperatures".

L.J. Schoen and H.P. Broida, J. Mol. Spectry. 5, 416 (1960) "Effect of Structure on the Spectra Emitted by Solid Nitrogen during Electron Bombardment".

L.J. Schoen and H.P. Broida, J. Chem. Phys. 32, 1184 (1960) "Spectra Emitted from Rare Gas-Oxygen Solids during Electron Bombardment"

L.J. Schoen and H.P. Broida, Rev. Sci. Instr. 33, 470 (1962) "Glass Dewars for Optical and Other Studies at Low Temperatures".

L.J. Schoen, D.E. Man, C. Knobler and D. White, J. Chem. Phys. 37, 1146 (1962) "Rotation-Vibration Spectrum of Matrix-Isolated Hydrogen Chloride".

L.J. Schoen, Rev. Sci. Instr. 38 1531 (1967) "Sapphire Window Mountings for Low Temperature Spectroscopy".

E. Schumacher and B. Meyer, Nature 186, 801 (1960) "Colored Sulfur Allotropes".

E. Schumacher, Chimia 15, 471 (1961) "Untersuchungen an Eingefrorenen, Reaktionsfähigen Substanzen".

I. Schwager and A. Arkell, J. Am. Chem. Soc. 89, 6006 (1967) "Matrix Infrared Spectra of HOBr and HOCl".

A. Schweig, Mol. Phys. 15, 1 (1968) "Solvent Effects on the Electronic Spectra of Polar Conjugated Systems. 4-Dimethylamino-prop-2-en-1-al, A Simple Merocyanine".

M. Schwoerer and H.C. Wolf, Int. Conf. on Magnetic Resonance and Relaxation, Lubljanja (1966)
"Excitation Exchange and Optical Spin Polarization in the Triplet State of Naphthalene as Studied by ESR".

M. Schwoerer and H.C. Wolf, in The Triplet State, A.B. Zahlan, edl, Cambridge University Press (1967) "ESR Investigations of Naphthalene-d_8: Naphthalene-h_8 Mixed Crystals".

M. Schwoerer and H.C. Wolf, in Molecular Crystals, vol. 3, 177 Gordon and Breach , (1967) "ESR-Untersuchungen an Naphthalin-d_8: Naphthalin-h_8-Mischkristallen in deren Triplett-Zustand".

M. Schwoerer, Ph.D. Thesis, Stuttgart (1968) "ESR-Untersuchungen an Naphthalin-d_8: Naphthalin-h_8-Mischkristallen in deren Triplett-Zustand".

M. Schwoerer and H. Sixl, Chem. Phys. Letters 2, 14 (1968) "Optical Spin Polarisation in the Triplet State of Naphthalene".

D.R. Sears and H.P. Klug, J. Chem. Phys. 37, 3002 (1962) "Density and Expansivity of Solid Xenon".

D.D. Sell, R.L. Greene, W.M. Yen, A.L. Schawlow and R.M. White, J. Appl. Phys. 37, 1229 (1966) "Magnetic Effects in the Optical Spectrum of MnF_2".

D.D. Sell, R.L. Greene and R.M. White, Phys. Rev. 158, 489 (1967) "Optical Exciton-Magnon Absorption in MnF_2".

T.T. Serafini and J.L. Keenig, Cryogenic Properties of Polymers, M. Dekker (1968).

R.A. Serway and S.A. Marshall, J. Chem. Phys. 45, 4098 (1966) "ESR Absorption Spectra of Two Phosphorous Defect Centers in Irradiated Single-Crystal Calcite".

K.S. Seshadri, D. White and D.E. Mann, J. Chem. Phys. 45, 4697 (1966) "Low-Frequency Region of the Infrared Spectrum of Matrix Isolated Vapors from Li_2O (s)".

P. Seybold and M. Gouterman, Chem. Rev. 65, 199 (1965) "Radiationless Transitions in Gases and Liquids".

A.V. Shablya and A.N. Terenin, Opt. Spectry. (USSR) (English transl.) 10, 324 (1961) "The Phototransfer of a Proton in Acridine Derivatives at Low Temperatures as Observed in the Luminescence Spectrum".

K.V. Shalimova, V.N. Khirin and O.I. Korolev, Opt. Spectry. (USSR) (English transl.) 20, 587 (1966) "Spectral Distribution of the Relative Quantum Yield of Photoluminescence of Polycrystalline Cadmium Sulfide Films at 77°K".

K.V. Shalimova, V.N. Khirin and O.I. Korolev, Opt. Spectry. (USSR) English transl.) 21, 256 (1966) "Temperature Dependence of the Absorption, Reflection, Emission, and Excitation Spectra and of the Luminescence Quantum Yield of Polycrystalline Sulfide Films".

L.M. Shamovskii and M.G. Larionov, Opt. Spectry. (USSR) (English transl.) 22, 319 (1967) "Study of the Recombination Luminescence Mechanism in Alkali-Halide Phosphors Activated by Thallium and Indium".

R.D. Sharma, Phys. Rev. Letters 18, 1139 (1967) "Autoionization in Anthracene Crystal".

C.F. Sharn, J. Chem. Phys. 34, 240 (1961) "High-Energy Radiation Damage to Fluorescent Organic Solids".

N. Sheppard and G.B.B.M. Sutherland, Nature 159 739 (1947) "Infrared Spectrum of C_nD_{2n+2} and the 'Long Chain Frequency' in Paraffins".

W.F. Sherman, J. Sci. Instr. 43, 462 (1966) "A High-Pressure Absorption Cell for Obtaining Well-Resolved Infra-red Spectra of Samples under 50 kb Pressures at 90°K".

D.N. Shigorin, N.A. Shcheglova, R.N. Nurmukhametov and N.S. Dokunikhin, Soviet Phys. Doklady (English transl.) 3, 628 (1958) "Influence of the Position and Nature of the Substituent on the Fluorescence Spectra of Anthraquinone Derivatives in Frozen Solutions".

D.N. Shigorin, N.A. Shcheglova and R.N. Nurmukhametov, Bull. Acad. Sci. USSR Phys. Ser. (English transl.) 23, 39 (1959) "Effect of the Position and Nature of the Substituent on the Fluorescence Spectra of Anthraquinone Derivatives in Frozen Solutions".

D.N. Shigorin, N.A. Shcheglova and N.S. Dokunikhin, Bull. Acad. Sci. USSR Phys. Ser. (English transl.) 24, 781 (1960) "Luminescence Spectra of Halogen Derivatives of Anthraquinone in Frozen Solutions".

R. Shimada, Spectrochim. Acta 17, 30 (1961) "The Lowest Multiplicity-Forbidden Transitions in Diazines--II. The Phosphorescence Spectrum of Pyrimidine at 90°K".

J.S. Shirk and A.M. Bass, J. Chem. Phys. 49, 5156 (1968) "Matrix Isolation Spectra of Dishcarge 'Sputtered' Metals".

D.A. Shockey and G.W. Groves, J. Am. Ceram. Soc. 51, 299 (1968) "Effect of Water on Toughness of MgO Crystals".

M.T. Shpak and E.F. Sheka, Opt. Spectry. (USSR) (English transl.) 9, 29 (1960) "The Influence of Impurities on the Luminescence of Crystalline Naphthalene".

M.T. Shpak and E.F. Sheka, Opt. Spectry (USSR) (English transl.) 8, 32 (1960) "On the Intrinsic Luminescence of Crystalline Naphthalene".

M.T. Shpak, Bull. Acad. Sci. USSR. Phys. Ser. 25, 13 (1961) "Role of Impurities in the Luminescence of Molecular Crystals at Low Temperatures".

E.V. Sphol'skii and A.A. Il'ina, Zhur. Eksptl. Teoret. Fiz. 21, 142 (1951) "Fluorescence of 3,4-Benzopyrene in Frozen Solutions".

E.V. Shpol'skii, A.A. Il'ina and L.A. Klimova, Doklady Akad. Nauk SSSR 87, 935 (1952) "Fluorescence Spectrum of Coronene in Frozen Solutions".

E.V. Shpol'skii and L.A. Klimova, Soviet Phys. Doklady 1, 732 (1956) "Emission Spectrum of Coronene in Solutions at Low Temperatures".

E.V. Shpol'skii and L.A. Klimova, Soviet Phys. Doklady (English transl.) 1, 782 (1956) "Emission Spectrum of Coronene in Solutions at Low Temperatures".

E.V. Shpol'skii and L.A. Klimova, Bull. Acad. Sci USSR 20, 428 (1956) "Influence of the Solvent on the Luminescence Spectrum of Aromatic Hydrocarbons at Low Temperatures".

E.V. Shpol'skii, E.A. Girdzhiyauskaite and L.A. Klimova, Fiz. Sbornik 1, 24 (1957) "Emission Spectra of Aromatic Hydrocarbons at Low Temperatures".

E.V. Shpol'skii and E.A. Girdzhiyauskaite, Opt. 620 (1958) "Luminescence and absorption of Pyrene and 3,4-Benzopyrene in Frozen Solutions of Normal Paraffins".

E.V. Shpol'skii, Sov. Phys. Usp. 2, 378 (1959) "Emission Spectroscopic Analysis of Organic Compounds".

E.V. Shpol'skii and L.A. Klimova, Bull. Acad. Sci. USSR Phys. Ser. (English transl.) 23, 22 (1959) "Vibrational Analysis of the Phosphorescence of Coronene".

E.V. Shpol'skii, Sov. Phys. Usp. 2, 958 (1960) "A Century of Spectrum Analysis".

E.V. Shpol'skii and R.I. Personov. Opt. Spectry. (USSR) (English transl.) 8, 172 (1960) "Emission and Absorption Spectra of Perylene in Solid Solutions at 77°K".

E.V. Shpol'skii, Sov. Phys. Usp. 3, 372 (1960) "Line Fluorescence Spectra of Organic Compounds and their Applications".

E.V. Shpol'skii and L.A. Klimova, Opt. Spectry (USSR) (English transl.) 13, 97 (1962) "Line Spectra of Aromatic Hydrocarbons in Frozen Crystalline Solutions".

E.V. Shpol'skii, Sov. Phys. Usp. 5, 522 (1962) "Problems of the Origin and Structure of the Quasilinear Spectra of Organic Compounds at Low Temperatures".

E.V. Shpol'skii and R.I. Personov, Ind. Lab. 28, 451 (1962) "The Spectral Analysis of Organic Compounds by Emission Using the Low Temperature Line Spectrum".

E.V. Shpol'skii, Sov. Phys. Usp. 6, 411 (1963) "New Data on the Nature of the Quasilinear Spectra of Organic Compounds".

E.V. Shpol'skii, Sov. Phys. Usp. 5, 612 (1963) "New Results on the Radiation Properties of Optical Masers (Lasers)".

E.V. Shpol'skii, Opt. Spectry. (USSR) (English transl.) 23, 357 (1967) "The Development of Soviet Optics and Spectroscopy During the Past Fifty Years".

M. Sibleyras, J-Y. Roncin, N. Damany, Compt. Rend. 266B, 175 (1968) "Spectre Electronique du Protoxyde d'Azote Solide, Pur et en Matrice, a Basse Temperature".

J.W. Sidman and D.S. McClure, J. Am. Chem. Soc. 77, 6461 (1955) "Electronic and Vibrational States of Biacetyl and Biacetyl-d_6. I. Electronic States".

J.W. Sidman, J. Chem. Phys. 25, 115 (1956) "Electronic and Vibrational States of Anthracene".

J.W. Sidman and D.S. McClure, J. Chem. Phys. 24, 757 (1956) "Electronic and Vibrational States of Azutene".

J.W. Sidman, J. Am. Chem. Soc. 78, 4217 (1956) "Electronic and Vibrational States of the Pleiadienes".

J.W. Sidman, J. Chem. Phys. 25, 122 (1956) "Electronic and Vibrational States of Tetracene (Naphthacene)".

J.W. Sidman, J. Chem. Phys. 25, 229 (1956) "Phosphorescence Spectra of the β-Halonaphthalenes".

J.W. Sidman, Phys. Rev. 102, 96 (1956) "Polarized Absorption and Fluorescence Spectra of Crystalline Anthracene at 4°K: Spectral Evidence for Trapped Excitons".

J.W. Sidman, J. Am. Chem. Soc. 79, 305 (1957) "Concentration Dependence of the Absorption and Fluorescence Spectra of Mixed Crystals of Anthracene with Phenanthrene at 77°K".

J.W. Sidman, Chem. Rev. 58, 689 (1958) "Electronic Transitions due to Nonbonding Electrons in Carbonyl, Aza-Aromatic, and other Compounds".

W. Siebrand and D.F. Williams, J. Chem. Phys. 46, 405 (1967) "Isotope Rule for Radiationless Transitions with an Application to Triplet Decay in Aromatic Hydrocarbons".

W. Siebrand, J. Chem. Phys. 46, 440 (1967) "Radiationless Transitions in Polyatomic Molecules. I. Calculation of Franck-Condon Factors".

W. Siebrand, Proc. Int. Symp. on Triplet States, Beirut (1967)

"Triplet Decay and Intersystem Crossing in Aromatic Hydrocarbons".

W. Siebrand, J. Chem. Phys. 44, 4055 (1966) "Mechanism of Radiationless Triplet Decay in Aromatic Hydrocarbons and the Magnitude of the Franck-Condon Factors".

S. Siegel and L. Golstein, J. Chem. Phys. 45, 1860 (1966) "Erratum: Study of Triplet-Triplet Transfer by the Method of Magnetophotoselection. II. Concentration Depolarization".

Y.T. Sihvonen, J. Appl. Phys. 38, 4431 (1967) "Photoluminescence, Photocurrent, and Phase-Transition Correlations in $SrTiO_2$".

R. Silbey, J. Chem. Phys. 46, 4029 (1967) "Radiation Damping of Exciton States in Molecular Crystals".

W.T. Simpson, Rad. Res. 20, 87 (1963) "Theory of the Interaction of Localized Electronic Excitations".

N.L. Singh and D.C. Jain, Proc. Phys. Soc. 79, 753 (1962) "The True Potential Energy Curves of the Excited States of LiH and RbH Molecules".

G.B. Singh and P. Venkateswarlu, J. Chem. Phys. 46, 4765 (1967) "Paramagnetic Resonance of Gd^{3+}-Doped $La(NO_3)_3 \cdot 6H_2O$ and $Nd(NO_3)_3 \cdot 6H_2O$ Single Crystals".

S.C. Sirkar and D.C. Biswas, Indian J. Phys. 28, 423 (1954) "The Fluorescence of p-Chlorotoluene in the Solid State at Low Temperatures".

T. Skettrup and L.R. Lidholt, Sol. St. Comm. 6, 589 (1968) "Decay Times of the Ultraviolet and Green Emission Lines in ZnO".

B.L. Smith and C.J. Pings, J. Chem. Phys. 38, 825 (1963) "Optical Determination of the Compressibility of Solid Argon".

B.L. Smith and C.J. Pings, J. Chem. Phys. 48, 2387 (1968) "Polarizability of an Argon Atom in Solid Argon".

D.Y. Smith, Phys. Rev. 133, A1087 (1964) "Calculation of the g Factor of Hydrogen and the Alkali Atoms Trapped in Rare-Gas Solids".

D.Y. Smith, Phys. Rev. 166, (February, 1968) "Possibility of Rare-Gas Color Centers in Ionic Crystals".

F.J. Smith, J.K. Smith and S.P. McGlynn, Rev. Sci. Instr. 33, 1367 (1962) "Low Temperature Double Path Absorption Cell".

F.J. Smith and S.P. McGlynn, J. Chem. Phys. 4308 (1964) "Delayed Excimer Fluorescence of Pyrene".

G.C. Smith and R.C. Hughes, Phys. Rev. Letters 20, 1358 (1968) "Magnetic Field Effects on Triplet-Exciton Interaction in Anthracene".

J.J. Smith and B. Meyer, J. Mol.Spectry. 27, 304 (1968) "The Absorption and Fluorescence Spectrum of SnS and SnO: Matrix-Induced Intersystem Crossing".

J.J. Smith and B. Meyer, J. Chem. Phys. 48, 5436 (1968) "Absorption and Phosphorescence Spectrum of Matrix-Isolated Ferrocene".

J.J. Smith and B. Meyer, J. Chem. Phys. 50, 456 (1969) "Fluorescence and Induced Phosphorescence of Formaldehyde in Solid-Low-Temperature Solutions".

M.S. Smith, Jr., and P.A.P. de Maine, J. Miss. Acad. Sci. 12, 109 (1966) "Infrared Studies of Complex Formation in Inert Solvents. II. Hydrogen Bonds in Nitro Compound-Alcohol-Carbon Tetrachloride Systems".

W.H. Smith and G.E. Leroi, J. Chem. Phys. 45, 1767 (1966) "Infrared and Raman Spectra of Carbon Suboxide in Condensed Phases".

A. Snelson and K.S. Pitzer, J. Phys. Chem. 67, 882 (1963) "Infrared Spectra by Matrix Isolation of Lithium Fluoride, Lithium Chloride, and Sodium Fluoride".

A. Snelson, J. Phys. Chem. 70, 3208 (1966) "Infrared Spectra of Some Alkaline Earth Halides by the Matrix Isolation Technique".

A. Snelson, J. Phys. Chem. 71, 3202 (1967) "Infrared Spectrum of AlF_3, Al_2F_6, and AlF by Matrix Isolation".

A. Snelson, J. Chem. Phys. 46, 3652 (1967) "Infrared Spectrum of LiF, Li_2F_2, and Li_3F_3 by Matrix Isolation".

V.V. Sobolev, Opt. Spectry. (USSR) (English transl.) 22, 504 (1967) "Photoluminescence of Mixed CdSe-CdS Crystals at T = 4.2°K".

A.V. Solov'ev, Ukr. Fiz. Zh. 6, 56 (1961) "Absorption and Luminescence of Impurities in Crystals of Organic Compounds at 20°K. IV. Spectra of Anthracene in Crystals of Certain Polyphenyls".

A. Sommer, P.N. Walsh, D. White, J. Chem. Phys. 33, 296 (1960) "Mass Spectrometric and Infrared Emission Investigation of the Vapor Species in the B-S System at Elevated Temperatures".

A. Sommer, D. White, M.J. Linevsky and D.E. Mann, J. Chem. Phys. 38, 87 (1963) "Infrared Absorption Spectra of B_2O_3, B_2O_2, and BO_2 in Solid Argon Matrices".

B. Sommer and J. Jortner, J. Chem. Phys. 50, 822 (1969) "Electronic States of Mixed Molecular Crystals: Singlet Excited States of Isotopic Impurities in Crystalline Benzene and Naphthalene".

B. Sommer and J. Jortner, J. Chem. Phys. 50, 839 (1969) "Triplet States in Mixed Molecular Crystals".

Z.G. Soos, J. Chem. Phys. 46, 4284 (1967) "Frenkel and Wannier Spin-Excitons in Organic Free-Radical Crystals".

O.I. Sopp and J. Moum, Nature 210, 724 (1966) "Size Analysis in the Sub-sieve Range by Electronic Counter".

J.D. Spangler and N.G. Kilmer, J. Chem. Phys. 48, 698 (1968) "Electronic Spectra of Benzene in Cyclohexane at 77°K".

H. Sponer, Y. Kanda and L.A. Blackwell, J. Chem. Phys. 29, 721 (1958) "Delayed Fluorescence in Naphthalene Crystals at 4°K".

H. Sponer, Y. Kanda and L.A. Blackwell, Spectrochim. Acta, 16, 1135 (1960) "Triplet-Singlet Emission Spectra of Benzene in a Crystalline Matrix of Cyclohexane at 4.2°K and 77°K".

H. Sponer, Int. Conf., New York (1962) p. 143 "Luminescence of Organic and Inorganic Materials".

H. Sponer and Y. Kanda, J. Chem. Phys. 40, 778 (1964) "Triplet-Singlet Luminescence from Methylated Benzenes in the Crystalline State and in Rigid Glass Solutions".

R.D. Spratley, J.J. Turner and G.C. Pimentel, J. Chem. Phys. 44, 2063 (1966) "Dioxygen Monofluoride: Infrared Spectrum, Vibrational Potential Function, and Bonding".

Z. Spurny and J. Novotny, J. Phys. Chem. Sol. 26, 1107 (1965) "Effect of Ionizing Radiation on Glasses: The Relation Between Optical Absorption and Thermoluminescence of Borate Glasses".

B.N. Srinivasan, M. Kinoshita and S.P. McGlynn, J. Chem. Phys. 47, 5090 (1967) "Delayed Luminescence of Organic Mixed Crystals. VI. Delayed Excimer Fluorescence of Pyrene in Biphenyl".

B.N. Srinivasan, M. Kinoshita, J.W. Rabalais and S.P. McGlynn, J. Chem. Phys. 48, 1924 (1968) "Growth and Decay of Delayed Luminescence".

R.H. Steele and A. Szent-Gyorgyi, Proc. Nat. Acad. Sci. US 43, 477 (1957) "On Excitation of Biological Substances".

R.H. Steele and A. Szent-Gyorgyi, Proc. Nat. Acad. Sci. US 44, 540 (1958)

H.B. Steen, Photochem. & Photobiol. 8, 47 (1968) "Luminescence of L-Tryptophan in the Dry State and in Aqueous Solution Induced by X-Rays and UV Light at 77°K".

I.Z. Steinberg, J. Chem. Phys. 48, 2411 (1968) "Nonradiative Energy Transfer in Systems in which Rotatory Brownian Motion is Frozen".

I.Z. Steinberg and E. Katchalski, J. Chem. Phys. 48, 2404 (1968) "Theoretical Analysis of the Role of Diffusion in Chemical Reactions, Fluorescence Quenching, and Nonradiative Energy Transfer".

I.T. Steinberger and O. Schnepp, Solid State Comm. 5, 417 (1967) "Wannier Excitons in Solid Xenon".

A. Stern and M. Dezelic, Z. Physik. Chem. (Leipzig) A 180, 131 (1937) "Uber die Lichtabsorption der Porphyrine. XII. (Metallkomplexe)."

H. Sternlicht and H.M. McConnell, J. Chem. Phys. 35, 1793 (1961) "Paramagnetic Excitons in MOlecular Crystals".

H. Sternlicht, G.C. Nieman and G.W. Robinson, J. Chem. Phys. 39, 1610 (1963) "Errata: Triplet-Triplet Annihilation and Delayed Fluorescence in Molecular Aggregates; and Comments Concerning Ruby-Laser-Induced Fluorescence in Anthracene Crystals".

B. Stevens and B.E. Algar, Chem. Phys. Letters 1, 219 (1967) "Intersystem Crossing Yields in Anthanthrene and Perylene from Photosensitised Peroxidation".

R. Stevenson, J. Chem. Phys. 27, 673 (1957) "Compressions and Solid Phases of CO_2, CS_2, COS, O_2, and CO".

J.W. Stewart, J. Phys. Chem. Solids 29, 641 (1968) "The Compression of Solid Neon, Argon, and Krypton to 20 Kbar".

S.E. Stokowski and A.L. Schawlow, Phys. Rev. Letters 21, 965 (1968), "Dielectric-Related Optical Line Shifts in $SrTiO_3:Cr^{3+}$".

J.A. Stone, Can. J. Chem. 46, 1267 (1968) "Radiolysis of Cyclohexane in a Xenon Matrix at 77°K".

L.V. Streng and A.G. Streng, Inorg. Chem. 5, 328 (1966) "Photochemical Formation of Krypton Difluoride from Krypton and Fluorine or Oxygen Difluoride".

S.J. Strickler and M. Kasha, J. Chem. Phys. 34, 1077 (1961) "Solvent Effects on the Spectra of Halide Ions".

S.J. Strickler and R.A. Berg, J. Chem. Phys. 814 (1962) "Relationship between Absorption Intensity and Fluorescence Lifetime of Molecules".

S.J. Strickler and M. Kasha, J. Am. Chem. Soc. 85, 2899 (1963) "Solvent Effects on the Electronic Absorption Spectrum of Nitrite Ion".

L. Stryer, J. Mol. Biol. 13, 482 (1965) "The Interaction of a Naphthalene Dye with Apomyoglobin and Apohemoglobin. A Fluorescent Probe of Non-polar Binding Sites".

L. Stryer, J. Am. Chem. Soc. 88, 5708 (1966) "Excited-State Proton-Transfer Reactions. A Deuterium Isotope Effect on Fluorescence".

M.D. Sturge and M.H. Crozier, J. Chem. Phys. 46, 4551 (1967) "Is there a Dynamic Jahn-Teller Effect in the ^{2}D-E State of Ce^{3+} in CaF_2?".

S. Sugano, A.L. Schawlow and F. Varsanyi, Phys. Rev. 120, 2045 (1960) "Zeeman Effect of the Purely Cubic Field Fluorescence Line of MgO:Cr^{3+} Crystals".

B.Ya. Sveshnikov and V.I. Shirokov, Opt. Spectry. (USSR) (English transl.) 12, 320 (1962) "Variation of the Mean Lifetime and Yield of Luminescence in the Process of Quenching as a Function of the Law of Molecular Interaction".

G.M. Svishchev, Akad. Nauk SSSR, Phys. Ser. 27, 695 (1963) "Concerning the Nature of the Fine Structure of the Quasiline Spectra of Aromatic Hydrocarbons in Frozen Paraffin Solutions".

C.E. Swenberg and W.T. Stacy, Chem. Phys. Letters, 2, 327 (1968) "Bimolecular Radiationless Transitions in Crystalline Tetracene".

C.A. Swenson, W.B. Person, D.A. Dows and R.M. Hexter, J. Chem. Phys. 31, 1324 (1959) "Infrared Studies of Crystal Benzene. I. The Resolution and Assignment of ν_{20}, and the Relative Magnitudes of Crystal Fields in Benzene".

R.W.G. Syme, W.J. Haas, F.H. Spedding and R.H. Good, Jr., J. Chem. Phys. 48, 2772 (1968) "Theory of Zeeman Effect for Rare-Earth Ions in Crystal Field with C_{3h} Symmetry. III.".

M.C.R. Symons and M. Townsend, J. Chem. Phys. 25, 1299 (1956) "Electronic Spectrum of Trapped Ethanol Radicals".

T

S. Takeno, J. Chem. Phys. 46, 2481 (1967) "Vibrational Properties of Excitons in Molecular Crystals".

S. Takezawa, F. R. Innes and Y. Tanaka, J. Chem. Phys. 46, 45555 (1967) "Selective Enhancement in Hydrogenlike Molecules with the Rare Gases. II. HD and D_2 with Ar and Kr".

L. Y. Tan and G. C. Pimentel, J. Chem. Phys. 48, 5202 (1968) "Methyl Alkali Halides: A New Molecular Type; Infrared Spectra by the Matrix Isolation Technique".

M. Tanaka and J. Tanaka, Mol. Phys. 16, 1 (1969) "Theory of Exciton States of Molecular Crystals".

V. Tarina, J. Chem. Phys. 46, 3273 (1967) "On the Low-Frequency Motions in Solid Benzene by Inelastic Scattering of Cold Neutrons".

C. A. Taylor, M. A. El-Bayoumi and M. Kasha, Proc. Nat. Acad. Sci. ___, (1969) "Excited-State Two-Proton Tautomerism in Hydrogen-Bonded N-Heterocyclic Base Pairs".

C. A. Ten Seldam and S. R. De Groot, Physica 18, 891 (1952) "On the Ground State of a Model for Compressed Helium".

P. A. Teplyakov, Opt. Spektry. (USSR) 1, 896 (1956) "Effect of Solvents on the Phosphorescence of Aromatic Compounds at Low Temperature".

P. A. Teplyakov and B. A. Piatnitski, Bull. Acad. Sci. USSR, Phys. Ser. 20, 476 (1956) "Influence of Concentration and the Solvent on the Phosphorescence of Aromatic Compounds at Low Temperatures".

P. A. Teplyakov, Opt. Spektry. (USSR) 2, 269 (1957) "Influence of Concentration on Phosphorescence of Solutions of Aromatic Compounds at Low Temperature".

P. A. Teplyakov, Opt. Spectry. (USSR)(English Transl.) 15, 350 (1963) "Quasi-Linear Phosphorescence Spectra of Phenanthrene Solutions".

P. A. Teplyakov, V. V. Trusov, V. I. Mikhailenko and V. M. Martynchenko, Bull. Acad. Sci. USSR 29, 1430 (1965) "Influence of the Solvent on the Luminescence Spectra of Diphenylene Oxide and Diphenylacetylene".

A. Terenin, Acta Physicochim. U.R.S.S. 14, 566 (1941) " A Correction to the Paper: Spectral Investigation of Chemical Processes in Organic Compounds at Low Temperatures. II".

A. Terenin, Acta Physicochim. U.R.S.S. 18, 210 (1943) "Photochemical Processes in Aromatic Compounds".

A. Terenin and V. Ermolaev, Trans. Far. Soc. 52, 1042 (1956) "Sensitized Phosphorescence in Organic Solutions at Low Temperature. Energy Transfer Between Triplet States".

A. Terenin, E. Putzeiko and I. Akimov, Disc. Far. Soc. 27 83 (1959) "Energy Transfer in Systems of Connected Organic Molecules".

A. Terenin, Recent Progress in Photobiology, E. J. Bowen, ed. Academic Press Inc., N. Y. (1964) p. 3

C. Terry, Rev. Sci. Instr. 39, 925 (1968) "Self-Supporting Carbon Resistance Thermometers for Use at Low Temperatures".

"Transfer of Electronic Excitation Energy in Rigid Solutions of Organic Luminors".

A. Thomas, in Oxydation and Combustion Reviews, Vol. 2, M. Tippe editor, Elsevier Publishers, N.Y. (1968) "Trapped Radicals and Combustion".

C. E. Thompson, J. Opt. Soc. Am. 55, 1184 (1965) "Phosphorescence Lifetimes of Benzene and Naphthalene in Rare-Gas Matrices".

W. E. Thompson and G. C. Pimentel, Z. Elektrochem. 64 (5), 748 (1960) "The First Overtone of the Hydrogen Bending Mode of Chloroform: Enhancement by Hydrogen Bonding".

C. Thomson, Quart. Revs. (London) 22, 45 (1968) "Electron Spin Resonance Studies of the Triplet State".

E. Tiede, Ber. Deut. Chem. Ger. 53, 2214 (1920) "Phosphorescenz der Borsaure. III. Mitteilung zur Kenntnis anorganischer Luminescenz-Erscheinungen".

E. Tiede, Physik. Zeit. 23, 563 (1921) "Borsaurehydrate als Grundlage hochphosphoreszenzfahiger Systeme".

E. Tiede and P. Wulff, Ber. Deut. Chem. Ger. 55, 588 (1922) "Bortrioxyd-Hydrate als Bestandteil hochphosphorescenz-fabiger, organische Verbindungen enthaltender Systeme".

E. Tiede and A. Ragob, Ber. Deut. Chem. Ger. 56, 655 (1923) "Die Borsaure-Phosphore".

D. S. Tinti, J. Chem. Phys. 48, 1459 (1968) "Absorption and Emission Spectra of OH and OD in Solid Ne. Evidence for Rotation".

D. S. Tinti and G. W. Robinson, J. Chem. Phys. 49, 3229 (1968) "Spectroscopic Evidence for Slow Vibrational and Electronic Relaxation in Solids. The Vegard-Kaplan and Second Positive Systems of N_2 in Solid Rare Gases".

D. S. Tinti, W. R. Moomaw and M. A. El-Sayed, J. Chem. Phys. 50, 1035 (1969) "Fine Structure of the Pyrazine Crystal Phosphorescence at 4.2°K".

N. A. Tolstoi and A. P. Abramov, Opt. Spectry. (USSR) (English Transl.) 20, 187 (1966) "Nonlinear Quenching of the Luminescence of Ruby Under Intense Excitation".

R. Tomaschek, Ann. Physik. 67, 612 (1922) "Zur Kenntnis der Borsaurephosphore".

B.L. Tomlinson, Ph.D. Thesis, University of California, Berkeley (1968), UCRL-18444, "Optical Properties of Nucleic Acids".

M. Tomura, T. Kitada and S. Honda, J. Phys. Soc. Japan 23, 1179 (1967) "Luminescences of F_A Centers in KCl:Na".

J. K. Torres and C. P. Holder, Rev. Soc. Quim. Mex. 11(3), 73 (1967) (Span.) "Theory and Properties of Solid Argon".

M. Travnicek, Ann. Physik 5, 17 (1933) "Uber neue Phosphore aus Sulfathydraten des Aluminiums und anderer Metalle mit organischen Leuchtstoffen".

H. P. Trommsdorff, Chem. Phys. Lett. 1, 214 (1967) "Zeeman Effect and Singlet-Triplet Absorption Spectrum of p-Benzoquinone Single Crystals".

V. V. Trusov and P. A. Teplyakov, Opt. Spectry. (USSR)(English Transl.) 16, 27 (1964) "Phosphorescence Spectra of Dephenyl Fluorene, Acenaphthene, and Carbazole".

A. Tschampa, Z. Naturforsch. A22, 112 (1967) "Lumineszenzuntersuchunger am kristallinen Phenanthren".

H. Tsubomura and R. S. Mulliken, J. Am. Chem. Soc. 82, 5966 (1960)

J. J. Turner and G. C. Pimentel, Science 140, 974 (1963) "Krypton Fluoride: Preparation by the Matrix Isolation Technique".

J. J. Turner and G. C. Pimentel, in Noble-Gas Compounds, Hyman ed., University of Chicago Press, Chicago (1963) p. 101 "Preparation of Inert-Gas Compounds by Matrix Isolation: Krypton Difluoride".

U

A. R. Ubbelohde, J. Phys. Chem. Sol. 18, 90 (1961) "Some Concluding Remarks on Systematic Studies of Barriers to Rotation in Crystals".

Y. Udagawa, T. Azumi, M. Ito and S. Nagakura, J. Chem. Phys. 49, 3764 (1968) "Phosphorescnece and Triplet ← Singlet Absorption Spectra of Benzophenone Crystal at 4.2°K".

S. Udenfriend, Fluorescence Assay in Biology and Medicine, Academic Press, N. Y (1962).

Y. Uehara, J. Chem. Phys. 50, 961 (1969) "Electronic Structure of Luminescence Centers of ZnS Phosphors Activated with Impurity Ions of s^2 Configuration (I) Zns:Bi Phosphors".

A. O. Urvas, D. L. Losee and R. O Simmons, Phys. Chem. Sol. 28, 2269 (1967) "The Compressibility of Krypton, Argon and Other Noble Gas Solids".

L. F. Utkina, Bull. Acad. Sci. USSR 29, 1420 (1965) "Effect of Conjugation of the C=C Bonds in Some Complex Derivatives of Anthracene on the Character of the Quasiline Fluorescence and Absorption Spectra".

M. Vacher and Y. Lortie, J. Chim. Phys. 56, 732 (1959) "Spectres D'Absorption Ultraviolette et de Fluorescence des Radicaux Produits par la Decharge Haute Frequence Dans des Vapeurs de Toluene et de Toluene Octa-Deutere et Pieges A Basse Temperature".

W. M. Vaidya, Proc. Roy. Soc. (London) A 279, 572 (1964) "Isotope Effect in Hydrocarbon Flame Bands".

M. M. Val'dman and G. D. Sheremet'ev, Izv. Akad. Nauk SSSR, Ser. Fiz. 27, 693 (1963) English Transl. in : Bull. Acad. Sci. USSR, Phys. Sec. 27, 692 (1963) "Luminescence Spectra of Perylene and DIIsobutyl Ester of 3,9-Perylenedicarboxyl Acid at 20.4°K".

J. H. v.d. Waals, S. M. D. Berghuis and M.S. de Groot, Mol. Phys. 13, 301 (1967) "Vibronic Interaction in the Lower Electronic States of Benzene I. Review of the Static Problem and Solutions of the Pseudo-Cylindrical Vibronic Equations".

J.H. Van der Waals and M.S. De Groot in The Triplet State, A.B. Zahlan, ed., Cambridge Univ. Press (1967) p. 101, "Magnetic Interactions Related to Phosphorescence".

A. Van Heuvelen, J. Chem. Phys. 46, 4903 (1967) "Relativistic Crystal-Field Splitting of Mn^{2+}".

J. Van Kranendonk, Physica 25, 1080 (1959) "Rotational and Vibrational Energy Bands in Solid Hydrogen".

J. Van Kranendonk and G. Karl, Rev. Mod. Phys. 40, 531 (1968) "Theory of the Rotational and Vibrational Excitations in Solid Parahydrogen and Frequency Analysis of the Infrared and Raman Spectra".

J. W. Van Loben Sels and J. T. Dubois, J. Chem. Phys. 45, 1522 (1966) "Triplet States of Liquid Benzene and Toluene".

R. Vanselov and A. B. E. Duncan, J. Am. Chem. Soc. 75, 829 (1953)"The Ultraviolet Absorption and Fluorescence Spectra of Acetophenone".

M. Van Thiel, E. D. Becker and G. C. Pimentel, J. Chem. Phys. 27, (1957) "Infrared Studies of Hydrogen Bonding of Methanol by the Matrix Isolation Technique".

M. Van Thiel, E. D. Becker and G. C. Pimentel, J. Chem. Phys. 27, 486 (1957) "Infrared Studies of Hydrogen Bonding of Water by the Matrix Isolation Technique".

M. Van Thiel and G. C. Pimentel, J. Chem. Phys. 32, 133 (1960) "Matrix Isolation Studies: Infrared Spectra of Intermediate Species in the Photolysis of Hydrazoic Acid. II".

L. G. Van Uitert, E. F. Dearborn and J. J. Rubin, J. Chem. Phys. 45, 1578 (1966) "Mechanisms of Energy Transfer Involving Trivalent Tb and Sm".

V. N. Vatul'ev, Ukr. Fiz. Zh. 5, 40 (1960) "Absorption and Luminescence of Anthracene Impurities in 9, 10-Dihydroanthracene Crystals at 20°K".

V. N. Vatulev, N. I. Sheremet and M. T. Shpak, Opt. Spectry. (USSR)(English Transl.) 16, 315 (1964) "Luminescence of Benzene at Low Temperatures".

S. I. Vavilov and W. L. Lewschin, Z. Physik. 16, 135 (1923) "Beitrage zur Frage uber polarisiertes Fluoreszenzlicht von Farbstofflosungen. II".

S. I. Vavilov, Z. Physik. 22, 266 (1924) "Die Fluoreszenz-ausbeute von Farbstofflosunger".

S. I. Vavilov and W. L. Lewschin, Z. Physizk. 35, 920 (1926) "Die Beziehunger zwischen Fluoreszenz und Phosphoreszenz in festen und flussigen Medien".

S. I. Vavilov and W. L. Lewschin, Z. Physik. 44, 539 (1927) "Berichtigung zu unserer Arbeit ('erratum', ed.): Die Beziehungen zwischen Fluoreszenz und Phosphoreszenz in festen und flussigen Medien".

L. Vegard, Nature 113, 716 (1924) "The Auroral Spectrum and the Upper Atmosph ere"

L. Vegard, Nature 114, 357 (1924) "The Light emitted from Solidified Gases and its Relation to Cosmic Phenomena".

L. Vegard, H. R. Onnes and W. H. Reesom, Compt. Rend. 180, 1084 (1925) "Emission de lumiere par des gaz solidifies a la temperature de l'helium liquide et origine du spectre auroral".

L. Vegard, H.Kamerlingh Onnes and W.H. Keesom, Compt. Rend. 180, 1084 (1925) "Emission of Light by Solidified Gases at the Temperature of Liquid Helium and the Origin of the Auroral Spectrum".

L. Vegard, Leiden Comm. No. 175 (1925) "The Luminescence from Solidified Gases down to the Temperature of liquid Hydrogen and its Application to Cosmic Phenomena".

L. Vegard, Compt. Rend. 182, 211 (1926) "Sur l'interpretation des spectres emis par de l'azote solide et des melanges solidifies d'azote et de gaz inertes".

L. Vegard and W.H. Keesom, Verslag Akad. Wetenschappen, (Amsterdam) 36, 364 (1927) " On the Luminescence Produced by Bombarding Solidified Gases with Electric Rays at the Temperature of Liquid Helium".

L. Vegard ,Ann. Physik. 6, 487 (1930) "Die Spektren verfestigter Gase und ihre atomtheoretische Deutung".

L. Vegard and W. H. Keesom, Comm. Phys. Lab. Univ. Leiden 205b, 1949 (1930) "Luminescence from Solidified Gases at the Temperature of Liquid Helium".

L. Vegard, Comm. Phys. Lab. Univ. Leiden 205a 3 (1930) "Continued Investigations on the Luminescence from Solidified Gases at the Temperature of Liquid Hydrogen. II. Luminescence Produced by Canal Rays".

L. Vegard, Nature 162, 967 (1948) "The Green Auroral Line as an Initiator of Phosphorescence in Condensed Systems".

R. Velasco, Can. J. Phys. 35, 1204 (1957) "Ultraviolet Spectra of LiH and LiD".

J. M. P. J. Verstegen, H. Goldring, S. Kimel and B. Katz, J. Chem. Phys. 44 (9), 3216 (1966) "Infrared Spectra of HCl in Pure and Impure Noble-Gas Matrices, Absolute Intensities".

E. N. Viktorova, I. A. Zhmyreva, V. P. Kolobkov and A. A. Sagamenko, Opt. Spektry. 9, 349 (1960) "Duration of Phosphorescence of Solutions of Organic Compounds at -196°".

E. N. Viktorova, I. A. Zhmyreva, V. P. Kolobkov and A. A. Saganenko, Opt. Spectry. (USSR)(English Transl.) 9, 181 (1960) "Study of the Phosphorescence Lifetimes of Solutions of Organic Compounds at -196°".

E. N. Victorova, Opt. Spectry. (USSR)(English Transl.) 10, 141 (1961) "Certain Regularities in the Nature of Yield versus Fluorescence Band Position Functions for a Number of Organic Compounds".

E. N. Viktorova, Opt. Spectry. (USSR)(English Transl.) 22, 206 (1967) "Spectral Dependences of the Absolute Fluorescence Quantum Yields of Organic Compounds in Mixed Solvents".

G. Viswanath and M. Kasha, J. Chem. Phys. 24, 574 (1956) "Confirmation of the Anomalous Fluorescence of Azulene".

C. R. Viswanathan, K. Radisavljevis and E. Y. Wong, J. Chem. Phys. 46, 4231 (1967) "Absorption Spectra of Pr^{3+} and Nd^{3+} Doped in Lanthanum Sulfate".

Yu.A. Vladimirov and F.F. Litvin, Biophys. 5, 151 (1960) "Long-Lived Phosphorescence of Aromatic Amino-Acids and Proteins at Low Temperatures".

Yu.A. Vladimirov and F.F. Litvin, Biofiz. 5, 127 (1960) "Low-Temperature Afterglow of Aromatic Amino Acids and Proteins".

Iu.A. Vladimirov and E.A. Burshtein, Biophys. 5, 445 (1960) "Luminescence Spectra of Aromatic Amino Acids and Proteins".

Yu. A. Vladimirov and D.I. Roshchupkin, Biophys. 9, 305 (1964) "Study of Primary Photochemical Processes in Proteins. I. Two Photochemical Reactions in Aromatic Amino Acids".

Yu. A. Vladimirov and O.F. L'vova, Biophys. 9, 548 (1964) "Superweak Luminescence and Oxidative Phosphorylation in Mitochondria".

Yu. A. Vladimirov and G.M. Zimina, Biochem. 30, 951 (1965) "Luminescence of Certain Proteins and Tryptophan During Monochromatic Excitation in Solutions with Various pH".

Yu. A. Vladimirov, Photochem. and Photobiol. 4, 369 (1965) "Primary Steps of Photochemical Reactions in Proteins and Aromatic Amino-Acids: A Review".

E. M. Voigt and B. Meyer, J. Chem. Phys. 49, 852 (1968) "Charge-Transfer Spectra of Iodine with Hydrogen Sulfide and Benzene in Low-Temperature Matrices".

M. V. Vol'kenshtein, Issledovaniya Eksptl. Teoret. Fiz., Akad. Nauk S.S.S.R., Fiz. Inst. im. P.N. Lebedeva 1959, 80 (1959) "Optical Properties of Substances in a Glassy State".

L. V. Volodko, A. N. Sevchenko and D. S. Umreiko, Opt. Spectry. (USSR)(English Transl.) 22, 46 (1967) "Manifestation of Intramolecular Vibrations in Luminescence Spectra of Uranyl Compounds".

R. Voltz, J. L. Da Silva, G. Laustriat and A. Coche, J. Chem. Phys. 45, 3306 (1966) "Influence of the Nature of Ionizing Particles on the Specific Luminescence of Organic Scintillators".

V. P. Vorob'ev, A. V. Solov'ev and M. T. Shpak, Bull Acad. Sci. USSR 29, 1312 (1965) "Luminescence of the Products of Photolysis of Crystalline Triphenylmethane at 20°K".

H. Vu, M. R. Atwood and E. Staude, Compt. Rend. 257, 1771 (1963) "Bande Fondamentale Induite de la Molecules H_2 en Solution dans L'Argon Gazeuz, Liquide et Solide".

W

W.C. Waggener, A.J. Weinberger and R.W. Stoughton, J. Phys. Chem. 71, 4320 (1967) "Effects of Temperature on the Near-Infrared Absorption Spectra of Molecules in the Condensed States. I. Carbon Dioxide".

E.L. Wagner and D.F. Hornig, J. Chem. Phys. 18, 296 (1950) "The Vibrational Spectra of Molecules and Complex Ions in Crystals. III. Ammonium Chloride and Deutero-Ammonium Chloride".

T.E.H. Walker and W.G. Richards, Proc. Phys. Soc. 92, 285 (1967) "The Nature of the First Excited Electronic State in BeF".

A.D. Walsh, J. Chem. Soc. 1953 ,2266 (1953) "The Electronic Orbitals, Shapes, and Spectra of Polyatomic Molecules. Part II. Non-hydride AB_2 and BAC Molecules".

A.D. Walsh, J. Chem. Soc. 1953, 2288 (1953) "The Electronic Orbitals, Shapes, and Spectra of Polyatomic Molecules. Part III. HAB and HAAH Molecules".

W.R. Ware, J. Am. Chem. Soc. 83, 4374 (1961) "An Experimental Study of Energy Transfer between Unlike Molecules in Solution".

W.R. Ware and B.A. Baldwin, J. Chem. Phys. 43, 1194 (1965) "Effect of Temperature on Fluorescence Quantum Yields in Solution".

E.Wasserman, L. Barash and W.G. Yager, J. Am. Chem. Soc. 87, 2075 (1965) "The Electron Paramagnetic Resonance of Triplet CNN, NCN, and NCCCN".

K. Watanabe and A.S. Jursa, J. Chem. Phys. 41, 1650 (1964) "Absorption and Photoionization Cross Sections of H_2O and H_2S".

R.J. Watts and S.J. Strickler, J. Chem. Phys. 49, 3867 (1968) "Deuterium Isotope Effects on the Lifetime of the Phosphorescent Triplet State of Naphthalene".

G. Weber and F.W.J. Teale, Trans. Faraday Soc. 53, 646 (1957) "Determination of the Absolute Quantum Yield of Fluorescent Solutions".

G. Weber, Biochem. J. 75, 335 (1960)"Fluorescence-Polarization Spectrum and Electronic-Energy Transfer in Tyrosine, Tryptophan, and Related Compounds".

E.M. Wehrli and E. Miescher, Helv. Physica Acta 7, 298 and 467 (1964)

J.W. Weigl, J. Mol. Spectry. 1, 133 (1957) "The Polarization of the Fluorescence of Tetraphenylporphine".

A.Weller, Naturwiss. 42, 175 (1955) "Fluorescence of Salicylic Acid and Related Compounds".

S.I. Weissman and D. Lipkin,
J. Am. Chem. Soc. 64, 916 (1942) "The Electromagnetic Mechanism of the Beta Phosphorescence of Fluorescein in Acid Solution.

S.I. Weissman, J. Chem. Phys. 37, 1886 (1962) "Relation Between Absorption and Fluorescence Spectra of Triphenylmethyl".

W. Weltner, Jr., J. Chem. Phys. 31, 264 (1959) "Polytypism and the Origin of the Potential Barrier Hindering Internal Rotation in Molecules".

W. Weltner, Jr. and J.R. W. Warn, J. Chem. Phys. 37, 292 (1962) "Matrix Isolation of High-Temperature Vapors: Boric Oxide".

W. Weltner, Jr., J. Chem. Phys. 37, 1153 (1962) "Spectroscopy of Carbon Vapor Condensed in Inert Matrices at 4° and 20°K".

W. Weltner, Proc. Meeting Interagency Chem. Rocket Propulsion Group Thermochem, 1st New York (1963) p. 27 "Thermodynamic Properties of Vaporizing Molecules".

W. Weltner, Jr., P.N. Walsh, and C.L. Angell, J. Chem. Phys. 40, 1299, (1964) "Spectroscopy of Carbon Vapor Condensed in Rare-Gas Matrices at 4°K and 20°K. I.".

W. Weltner, Jr. and D. McLeon, Jr., J. Chem. Phys. 40, 1305, (1964) "Spectroscopy of Carbon Vapor Condensed in Rare-Gas Matrices at 4°K and 20°K. II."

W. Weltner, Jr. and D. McLeod, Jr., J. Chem. Phys. 41, 235 (1964) "Spectroscopy of Silicon Carbide and Silicon Vapors Trapped in Neon and Argon Matrices at 4° and 20°K".

W. Weltner, Jr., Nature 206, 87 (1965) "Ground State of Zirconium Monoxide from Neon Matrix Investigations at 4°K"

W. Weltner, Jr., NASA Accession No. N65-31322, Rept. no. AD 467028 (1965), p. 115 "On C3 and Transition-Metal Oxide Molecules".

W. Weltner, Jr., and D. McLeod, Jr., J. Chem. Phys. 42, 882 (1965) "Spectroscopy of TaO and TaO_2 in Neon and Argon Matrices at 4° and 20°K".

W. Weltner, Jr., and D. McLeod, Jr., J. Phys. Chem. 69, 3488 (1965) "Spectroscopy of Titanium, Zirconium, and Hafnium Oxides in Neon and Argon Matrices at 4 and 20°K".

W. Weltner, Jr.. and D. McLeod, Jr., J. Mol. Spectry. 17, 276 (1965) "Spectroscopy of Tungsten Oxide Molecules in Neon and Argon Matrices at 4° and 20°K".

W. Weltner, Jr. and D. McLeod, Jr., J. Chem. Phys. 45, 3096 (1966) "Spectroscopy of Carbon Vapor Condensed in Rare-Gas Matrices at 4°K. III.".

W. Weltner, Jr., D. McLeod, Jr., and P.H. Kasai, J. Chem. Phys. 46, 3172 (1967) "ESR and Optical Spectroscopy of ScO, YO, and LaO in Neon and Argon Matrices; Establishment of Their Ground Electronic States".

W. Weltner, Jr., Science 155, 3759 (1967) "Stellar and Other High-Temperature Molecules".

R.D. Werder, R.A. Frey and Hs.H. Gunthard, J. Chem. Phys. 47, 4159 (1967) "Far-Infrared Matrix and Solution Spectra and Solid-State Vibrational Spectra of Niobiumpentachloride".

R.D. Wesley and C.W. De Kock, ACS 24th Northwest Regional Meeting, Salt Lake City (June, 1969) "The Infrared Spectrum of $PrCl_3(g)$ Isolated in an Argon Matrix".

W.West , in Chemical Applications of Spectroscopy, W. West, ed., Interscience, N.Y. (1956) p. 707, "Fluorescence and Phosphorescence".

W.West, in Technique of Organic Chemistry, vol.9, W. West, ed., Interscience, N.Y. (1956) Chapter 1, "Introductory Survey of Molecular Spectra".

W. West, in Technique of Organic Chemistry, vol. 9, W. West, ed., Interscience, N.Y. (1956) Chapter 6, "Fluorescence and Phosphorescence".

W. Weyhmann and F.M. Pipkin, Phys. Rev. 137, A490 (1965) "Optical Absorption Spectra of Alkali Atoms in Rare-Gas Matrices".

R.E. Whan and G.A. Crosby, U.S. At. Energy Comm. SCTM 234-60 (51), 1 (1960) "Intersystem Crossing from Higher Excited States in Complex Molecules".

R.E. Whan and G.A. Crosby, J. Mol. Spectry. 8, 315 (1962) "Luminescence Studies of Rare Earth Complexes: Benzoylacetonate and Dibenzoyl Methide Chelates".

D.J. Whelan, Chem. Rev. 69, 179 (1969)

D. White, P.N. Walsh, D.E. Mann, J. Chem. Phys. 28, 508 (1958) "Infrared Emission Spectra of B_2O_3 (g) and B_2O_2 (g)"

D. White, J-H. Hu and H.L. Johnston, J. Phys. Chem. 63, 1181 (1959) "The Heats of Vaporization of Para-Hydrogen and Ortho-Deuterium from their Boiling Points to their Critical Temperatures".

D. White and W.J. Haubach, J. Chem. Phys. 30, 1368 (1959) "Separation of the Hydrogen Isotopes by Preferential Adsorption at 20.4°K".

D. White, D.E. Mann, P.N. Walsh and A. Sommer, J. Chem. Phys. 32, 488 (1960) "Infrared Emission Spectrum of Gaseou HBO_2".

D. White, W.J. Haubach and E.N. Lassettre, Pure & Appl. Chem. 2, 323 (1961) "Ortho-Para and Isotope Separations by Preferential Adsorption at Low Temperatures".

D. White, P.N. Walsh, H.W. Goldstein and D.F. Dever, J. Phys. Chem. 65, 1404 (1961) "Rare Earths. II. A Mass Spectrometric Determination of the Heats of Sublimation (or Vaporization) of Neodymium, Praseodymium, Gadolinium, Terbium, Dysprosium, Holmium, Erbium and Lutetium".

D. White and D.E. Mann, Rev. Sci. Instr. 34, 1370 (1963) "Miniature Cryostats: Design and Application to Matrix-Isolation Studies".

D. White, K.S. Seshadri, D.F. Dever, D.E. Mann and M.J. Linevsky, J. Chem. Phys. 39, 2463 (1963) "Infrared Spectra and the Structures and Thermodynamics of Gaseous LiO, Li_2O, and Li_2O_2".

D. White and C.M. Knobler, Ann. Rev. Phys. Chem. 14, 251 (1963) "Thermodynamics of Solutions at Low Temperatures".

D. White, T. Rubin, P. Camky and H.L. Johnston, J. Phys. Chem. 64, 1607 (1964) "The Virial Coefficients of Helium from 20 to 300°K".

D. White and J.R. Gaines, J. Chem. Phys. 42, 4152 (1965) "Liquid-Solid Phase Equilibria in the Hydrogen-Deuterium System".

G.K. White and S.B. Woods, Nature 177, 851 (1956) "Thermal Conductivity of Solid Argon at Low Temperatures".

G.K. White, Cryogenics 4, 2 (1964) "Thermal Expansion of Silica at Low Temperatures".

E. Whittle, D.A. Dows and G.C. Pimentel, J. Chem. Phys. 22, 1943 (1954) "Matrix Isolation Method for the Experimental Study of Unstable Species".

T.E. Whyte, Jr., Dissertation Abstr. 26, 5071 (1966) "Infrared Spectra of Matrix-Isolated Hydrogen Chloride in Sulfur Hexafluoride and Hydrogen Iodide".

E. Wiedemann, Ann. Physik 34, 446 (1888) "II. Ueber Fluorescenz und Phosphorescenz. I. Abhandlung".

E. Wiedemann and G.C. Schmidt, Ann.Physik 232, 18 (1895) "2. Ueber Lichtemission Osganischer Substanzen im Gasförmigen, Flüssigen und Festen Zustand".

E. Wiedemann and G.C. Schmidt, Ann. Physik 232, 255 (1895) "3. Ueber Luminescenz von Festen Körpern und Festen Lösungen".

W.L. Wiese, Methods of Exp. Phys. 7a, 117 (1968) "Transition Probabilities for Allowed and Forbidden Lines"

F. Wilkinson, Adv. in Photochem. 3, 241 (1964) "Electronic Energy Transfer between Organic Molecules in Solution".

D.F. Williams, J. Adolph and W.G. Schneider, J. Chem. Phys. 45, 575 (1966) "Diffusion of Triplet Excitons in Anthracene Crystals".

D.F. Williams and W.G. Schneider, J. Chem. Phys. 45, 4756 (1966) "Phosphorescence Emission from Anthracene Single Crystals".

D.F. Williams and J. Adolph, J. Chem. Phys. 46, 4252 (1967) "Diffusion Length of Triplet Excitons in Anthracene Crystals".

F.E. Williams, J. Opt. Soc. Am. 39, 648 (1949) "Review of the Interpretations of Luminescence Phenomena".

M.W. Williams and E.T. Arakawa, J. Appl. Phys. 38, 5272 (1967) "Optical Properties of Single-Crystal Magnesium Oxide".

R. Williams and J. Dresner, J. Chem. Phys. 46, 2133 (1967) "Photoemission of Holes from Metals into Anthracene".

L.J. Williamson and B. Meyer, "The Spectrum of Matrix Isolated Thiazole".

S.J. Wilt and M.A. El-Sayed, J. Am. Chem. Soc. 88, 2911 (1966) "The Vibrational Spectra and Structure of 1,4,7-Cyclononatriene and Related Derivatives".

M.W. Windsor, in Physics and Chemistry of the Solid State, vol II, D. Fox, et. al., eds. 343 (1965) "Luminescence and Energy Transfer".

M.W. Windsor and W.R. Dawson, Molecular Crystals 4, 253 (1967) and in Organic Scintillators, D.L. Horrocks, ed., Gordon and Breach, N.Y. (1968) "Quantum Efficiencies of Triplet Formation in Aromatic Molecules".

G. Winnewisser, M. Winnewisser and W. Gordy, J. Chem. Phys. 49, 346 (1968) "Millimeter-Wave Rotational Spectrum of HSSH and DSSD. I. Q Branches".

H. Winston, O.J. Marsh, C.K. Suzuki and C.L. Telk, J. Chem. Phys. 39, 267 (1963) "Fluorescence of Europium Thenoyltrifluoroacetonate. I. Evaluation of Laser Threshold Parameters".

B. Wiseall and J.E. Willard, J. Chem. Phys. 46, 4387 (1967) "Electrical Conductivity of γ-Irradiated 3-MP Glass and of Photoionized 3-MP-TMPD during Warming from 4°K and 77°K".

H. Witzmann, H. Anderson and G. Grieser, Z. Phys. Chem. 226, 333 (1964) "Beitrag zur Phosphoreszenz Sauerstoffdominierender Luminophore. (2. Mitteilung)."

H.C. Wolf, Z. Naturforsch. 10a, 270 (1955) "Zum Spektroskopischen Verhalten der Methyl-derivate des Naphthalins und zur Frage der Spektroskopischen Analysierbarkeit Stellungsisomerer Derivate Aromatischer Kohlenwasserstoffe".

H.C. Wolf, Z. Naturforsch. 13a, 420 (1958) "Der Erste Elektronische Anregungszustand des Phenanthren-Kristalls".

H.C. Wolf, Sol. State Phys. 9, 1 (1959) "The Electronic Spectra of Aromatic Molecular Crystals".

H.C. Wolf, Naturwissen. 48,43 (1961) "Die Eigenfluoreszenz des Naphthalinkristalls bei 4.2°K".

H.C. Wolf, in Adv. in Atomic and Molecular Physics, vol. 2, Academic Press, N.Y. (1967) p. 119, "Energy Transfer in Organic Molecular Crystals: A Survey of Experiments".

D.L. Wood and J.P. Remeika, J. Chem. Phys. 46, 3595 (1967) "Optical Absorption of Tetrahedral Co^{3+} and Co^{2+} in Garnets".

M.R. Wright, R.P. Frosch, and G.W. Robinson, J. Chem. Phys. 33, 934 (1960) "Phosphorescence Lifetime of Benzene. An Intermolecular Heavy-Atom Effect, a Deuterium Effect, and a Temperature Effect".

A. Wrzesinska, Acta Phys. Polon. 4, 475 (1935) "Absorption und Lumineszenz Spektren Organischer Farbstoffe".

Y

M. Yamamoto, T. Kikuchi, C. Obayashi and T. Nakano, J. Phys. Soc. Japan 21, 2417 (1966) "Anomalus Behavior of Fluorescence Lifetime for Europium Chelate".

M. Yamamoto, J. Phys. Soc. Japan 21, 2415 (1966) "Mechanical Luminescence in Europium Chelate".

N. C. Yang, S. L. Murov and Tsu-Chia Shieh, Chem. Phys. Lett. 3, 6 (1969) "Radiationless Decay Processes in 2-Naphthaldehyde".

V. A. Yastrebov, Trudy Fiz. Inst.,Akad. Nauk S.S.S.R., Fiz Inst. im. P.N. Lebedeva 3, 121 (English summary 190) (1946) "Temperature Stability of Luminescence Bands".

V. A. Yastrebov, Zhur. Eksptl. Teoret. Fiz. 21, 164 (1951) "Nonexponential Decay of the Luminescence of Solid Aromatic Hydrocarbons".

V. A. Yastrebov, Diklady Akad. Nauk. S.S.S.R. 90, 1015 (1953) "On the Law of Damping of the Luminescence of Solid Organic Substances".

W. M. Yen, W. C. Scott and A. L. Schawlow, Phys. Rev. 136, A271 (1964) "Phonon-Induced Relaxation in Excited Optical States of Trivalent Praseodymium in LaF_3"

W. M. Yen, R. L. Greene and W. C. Scott and D. L. Huber, Phys. Rev. 140, A1188 (1965) "Optical Linewidth and Line-shape Studies of Energy Transfer Mechanisms between Rare-Earth Impurity Ions".

P. Yuster and S. I. Weissman, J. Chem. Phys. 17, 1182 (1949) "Effects of Perturbations on Phosphorescence: Luminescence of Metal Organic Complexes".

Z

A. B. Zahlan, ed., The Triplet State: Proc. Int. Symp.; American University Beirut, Cambridge University Press (1967).

V. Zanker and E. Miethke, Z. Naturforsch. 12a, 385 (1957) "Die Spektroskopisch Nachweisbarem Elektronen zustande der stabilen und Metastabilen Molekelform einiger Acridinfarbstoffe und des Fluoresceinkations".

V. Zanker and H. Rammensee, Z. Physik. Chem. (Frankfurt) 26, 168 (1960) "Absolute Fluoreszenz-und Phosphoreszenzquantenausbeuten bei verschiedenen Acridin-und Fluoreszeinfarbstoffen".

V. Zanker and W. Korber, Z. Angew. Phys. 14, 43 (1962) "Fluoreszenz-und Phosphoreszenz ausbente-sowie Lebensdauermessungen au dihalogenierten Acridinen und Fluoreszeinen".

V. V. Zelinskii and V. P. Kolobkov, Doklady Akad. Nauk S.S.S.R. 101, 241 (1955) "Ratio of Quantum Yields of Phosphorescence and Fluorescence of Substituted Phthalimides".

V. V. Zelinskii, M. P. Emets, V. P. Kolobkov and L. G. Pikulik, Bull. Acad. Sci. USSR, Phys. Ser. (English Transl.) 20, 465 (1956) "Investigation of the Ability of Complex Organic Molecules to Fluoresce and Phosphoresce".

V. V. Zelinskii, V. P. Kolobkov and L. G. Pikulik, Opt. Spektry. 1, 161 (1956) "The Spectral Relation for Luminescence Yields".

V. V. Zelinskii, V. P. Kolobkov and I. I. Reznikova, Dokl. Akad. Nauk S.S.S.R. 121, 315 (1958) "Effect of the Structure of Organic Molecules on the Probability of a Transition into the Metastable State".

V. V. Zelinskii, V. P. Kolobkov and N. D. Krasnitskaya, Opt. Spectry. (USSR) (English Transl.) 6, 261 (1959) "On the Question of the Thermal Quenching of Fluorescence".

V. V. Zelinskii and I. I. Reznikova, Bull. Acad. Sci. USSR Phys. Ser. (English Transl.) 24, 612 (1960) "Influence of Stucture on the Luminescence Characteristics of Complex Organic Molecules".

I. A. Zhmyreva and I. I. Reznikova, Opt. Spectry. (USSR) (English Transl.) 10, 142 (1961) "The Influence of the Molecular Volume of a Solute on the Susceptibility of its Electronic Spectra to Solvent Effects".

I. A. Zhmyreva, I. V. Kovaleva, V. P. Kolobkov, P. I. Kudryashov, G. A. Mokeeva, G. T. Petrovskii and G. A. Tsurikova, Opt. Spectry. (USSR)(English Transl.) 22, 278 (1967) "The Absorption and Luminescence of Trivalent Rare-Earth Ions in Beryllium Fluoride Glass".

R. A. Zhitnikov and N. I. Melnikov, Opt. Spectry. (USSR) (English Transl.) 24, 53 (1965) "The Absorption Spectra of Silver Atoms Trapped in Frozen Solutions of its Salts".

H. Zimmermann and N. Joop, Z. Elektrochem. 65, 61 (1961) "Polarisation der Elektronin banden von Aromaten 3. Mittelung: Chinolin, Isochinolin, Indol".

H. Zimmermann and N. Joop, Z. Electrochem.65, 66 (1961) "Polarisation der Elektronen banden von Aromaten 4. Mittelung: Phenanthren, Chrysen, Tetraphen".

H. Zimmermann and N. Joop, Z. Elektrochem. 65, 138 (1961) "Polarisation der Elektronenbanden von Aromaten 5. Mittelung: Benzol, Coronen, Triphenylen, Pyren, Perylen".

R. Zimmermann and G. C. Pimentel, Adv. Mol. Spectry. 2, 726 (1962); A. Mangini, ed. MacMillan Co. N.Y. "The Infrared Spectrum of Ice Temperature Dependence of the Hydrogen Bond Potential Function".

W. B. Zimmerman, Ph.D. Thesis, Michigan State University (1960) "Infrared Absorption Spectra of Isotopically-Enriched Lithium Hydride".

O. G. Zinov'eva, Doklady Akad. Nauk S.S.S.R. 68, 265 (1949) Effect of the Solvent on the Phosphorescence of Benzene and of Some Aromatic Acids at the Temperature of Liquid Oxygen".

O. G. Zinov'eva, Zhur. Eksptl. Teoret. Fiz. 20, 132 (1950) "Decay of the Phosphorescence of Alcoholic Solutions of Some simple Aromatic Compounds at the Temperature of Liquid Oxygen".

A. Zmerli, J. Chim. Phys. 56, 405 (1959) "Spectres de Luminescence T-S des Cristaux Aromatiques A 20°K: Benzene, Hexadeuterobenzene, Naphtalene, Octodeuteronaphthalene".

A. Zmerli, Colloq. Intern. Centre Natl. Recherche Sci. (Paris) 77, 345 (1959) "Absorption and Luminescence of C_6H_6 and C_6D_6 at 20°K".

A. Zmerli, J. Chem. Phys. 34, 2130 (1961) "Phosphorescence spectra of Acenaphthene at Low Temperatures".

G. M. Zverev. G. Ya. Kolodnyi and A. I. Smirnov, Opt. Spectry. (USSR)(English Transl.) 22, 325 (1967) "Optical Spectra of Nd^{3+} in Single Crystals of Scandium and Yttrium Oxides".

UNAUTHORED REPORTS

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