



ARQUIVO CENTRAL DO SISTEMA DE ARQUIVOS

Catálogo Sérgio Porto

UNIVERSIDADE ESTADUAL DE CAMPINAS
ARQUIVO CENTRAL DO SISTEMA DE ARQUIVOS
Fev./2003

**UNIVERSIDADE ESTADUAL DE CAMPINAS
ARQUIVO CENTRAL DO SISTEMA DE ARQUIVOS**

Reitor

Prof. Dr. Carlos Henrique de Brito Cruz

Coordenador Geral da Universidade

Prof. Dr. José Tadeu Jorge

Pró-Reitor de Desenvolvimento Universitário

Prof. Dr. Paulo Eduardo Moreira Rodrigues da Silva

Pró-Reitor de Pesquisa

Prof. Dr. Fernando Ferreira Costa

Pró-Reitor de Graduação

Prof. Dr. José Luis Boldrini

Pró-Reitor de Pós-Graduação

Prof. Dr. Daniel Hogan

Pró-Reitor de Extensão e Assuntos Comunitários

Prof. Dr. Rubens Maciel Filho

Chefe de Gabinete

Prof. Dr. Renato Atílio Jorge

Chefe de Gabinete Adjunto

Profa. Dra. Marilda Solon Teixeira Bottesi

Coordenadora do Sistema de Arquivos

Neire do Rossio Martins

PRODUÇÃO INTELECTUAL

ARTIGOS EM SEPARATAS

- 01 - PORTO, Sérgio Pereira da Silva. **The infrared spectrUm of the Diethyl - Benzenes.** Rio de Janeiro.. 1958. Sep. ANAIS ACADEMIA BRASILEIRA DE CIÊNCIAS, v. 29, n. 3, p. 345 - 351, set.1957. 2 ex. SP Pi 01 - P. 1
- 02 - PORTO, Sérgio Pereira da Silva. **The comet tail band system of CO.** Rio de Janeiro. Academia Brasileira de Ciências. 1958. Sep. ANAIS, v. 30, n. 2, 133 - 135, 1957. 2 ex. SP Pi 02 - P. 1
- 03 - PORTO, Sérgio Pereira da Silva. **Fine Structure of some infrared bands of CH₂F₂ and CH₂ CLF.** Sep. JOURNAL OF MOLECULAR SPECTROSCOPY, v. 3, n. 3, p. 248 - 258, jun. 1959. 2 ex. SP Pi 03 - P. 1
- 04 - PORTO, Sérgio Pereira da Silva. **The ruby optical maser as a Raman source.** Sep. SPECTROSCOPY. s.n.t., p. 417 - 420. 2 ex. SP Pi 04P. 1
- 05 - PORTO, Sérgio Pereira da Silva. **Angular dependence and depolarization ratio of the Raman effect.** Sep. JOURNAL OF THE OPTICAL SOCIETY OF AMERICA, v. 56, n.11, p.1585 - 1589, nov. 1966. 2 ex. SP Pi 05 - P. 1
- 06 - PORTO, Sérgio Pereira da Silva. **Light scattering with laser sources, part 2.** Sep. THE SPEX S. PEAKER, v. 14, n.2, p.1 - 8, jun. 1969. SP Pi 06 - P. 1
- 07 - "Metting Notice" – Programa de palestra a ser realizada por Sérgio Pereira da Silva Porto, organizada pela Optical Society of Sourthern California, sobre as aplicações do raio laser, no dia 6 de maio de1970. 01 p. impr. SP Pi 07 - P. 1
- 08 - PORTO, Sérgio Pereira da Silva. **A quantitative and Easily operated x - rays detector.** s. l. d., 1 maio 1961. 3p. Proposta. SP Pi 08 - P. 1
- 09 - PORTO, Sérgio Pereira da Silva. **Recent Experiments in Raman spectroscopy of solids.** Abstracts for an invited paper for the Cleveland meeting of the American Physical Society. 29 mar. - 1 abr. 1971. (Laser spectroscopy I. J. D. Swalen, presd.). s.l.d. SP Pi 09 - P. 1
- 10 - PORTO, Sérgio Pereira da Silva. **New developements and possible application of tunable lasers: pat. 1 - Spin flip Raman lasers. part 2 - Semiconductor tunable laser.** s. n. t. 9p. cop. mimeo. SP Pi 10 - P. 1
- 11 - PORTO, Sérgio Pereira da Silva. **Lazer excited Raman spectroscopy.** s. l. d. , cóp. mimeo. 04p.

SP Pi 11 - P. 1

- 12 - PORTO, Sérgio Pereira da Silva. **The use of lasers in Raman spectroscopy** – resumo de comunicação a ser apresentada no International Electron Devices Meeting - 1965. s. l. d. Cóp. datil. Anexo: correspondência em papel timbrado do “The Institute of Electrical and Electronics Engineers”, de Ricahrd C. Miller.

SP Pi 12 - P. 1

ARTIGOS EM SEPARATAS COM COLABORADORES

- 13 - ANDRADE, P. da R.; KATIYAR, R. S.; PORTO, Sérgio Pereira da Silva. **Effect of internal brownian particles on phase transition of ordes - discoder crystals.** Sep. FERROELETRICS. v. 8, p. 637 - 647, 1974. 2 ex.
SP Pi 13 - P. 2
- 14- ANDRADE, P. da R.; PORTO, Sérgio Pereira da Silva. **Dielectric properties of crystals of order - discorder type.** Sep. ANNUAL REVIEW OF MATERIALS SCIENCE, v. 4, p. 287 - 209, 1974. 2 ex.
SP Pi 14 - P. 2
- 15 - ANDRADE, P. da R.; PORTO, Sérgio Pereira da Silva. **Hard core phonon frequency at transition temperature.** Sep. SOLID STATE COMMUNICATIONS. v. 14, p. 547 - 550, 1974. 2 ex.
SP Pi 15 - P. 2
- 16 - ANDRADE P. da R.; PORTO, Sérgio Pereira da Silva. **Hard core phonon frequency at transition temperature.** s. n. t. 11 p.
SP Pi 16 - P. 2
- 17 - ANDRADE, P. da R., PORTO, Sérgio Pereira da Silva. **Lydanne - Sachs - Teller relation and dielectric constant in crystals.** Sep. REVISTA BRASILEIRA DE FISICA, v. 3, n. 2, 1973. 2 ex.
SP Pi 17 - P. 2
- 18 - ANDRADE, P. da R., PORTO, Sérgio Pereira da Silva. **On linewidth of phonons associated to a discorder mechanism.** Sep. SOLID STATE COMMUNICATIONS. v. 13, p. 1249 - 1954, 1973. 2 ex.
SP Pi 18 - P. 2
- 19 - ANDRADE, P. da R. Analysis of the relationship between temperature dependence of the libration mode and dielectric relaxation in NaPO₂. Sep. SOLID COMMUNICATIONS. v. 12, p. 847, 1973 p. 2.
SP Pi 19 - P. 2
- 20 - ANDRADE, P. da R.; PRASADRAO, S. D.; KATIYAR, R; PORTO, Sérgio Pereira da Silva. **Break - down of the soft mode rule at the transition temperature for B₁ Phonon in NaNO₂.** s.l.d., texto datil. c. correções ms., 05 p.
SP Pi 20 - P. 2
- 21 - ARCHER, R. J.; LEITE, R. C. C.; YARIV, A., et alii. **Electron - hole and electron - impurity band tunneling in GaAs luminescent junctions.** Sep. PHYSICAL REVIEW LETTERS, v. 10, n.1, p. 483 - 485, jun. 1963.
SP Pi 21 - P. 2
- 22 - ARGUELLO, C. A.; ROUSSEAU, D. L.; LUZZI, R., et alii. **Light scattering research at the University of Southern California.** Sep. MATERIALS RESEARCH BULLETIN. v. 4, p. 463 - 476, 1969. 2 ex.
SP Pi 22 - P. 2

- 23 - ARGUELLO, C. A.; ROUSSEAU, D. L.; PORTO, Sérgio Pereira da Silva. **A double beam raman spectrometer.** s. l. d., texto datil., 2p. fotocópia.
SP Pi 23 - P. 2
- 24 - ARGUELLO, C. A.; ROUSSEAU, D. L.; PORTO, Sérgio Pereira da Silva. **First - Order Raman Effect in Wurtzite - Type Crystals.** Sep. PHYSICAL REVIEW. v. 181, n.3, p. 1351 - 1363, maio 1969.
SP Pi 24 - P. 2
- 25 - ARGUELLO, C. A.; ROSSEAU, D. L., PORTO, Sérgio Pereira da Silva, et alii. **Rauleigh scattering of linearly polarized light from optically active quartz.** Sep. APPLIED OPTICS. v. 7, n.10, p. 1913 - 1915, out. 1968. fotocópia.
SP Pi 25 - P. 2
- 26 - BALLMAN, A. A.; PORTO, Sérgio Pereira da Silva; YARIV, A. **Calcium Niobate Ca(NbO₃)₂: a new laser host crystal.** Sep. JOURNAL OF APPLIED PHYSICS. American Institute of Physics, v. 34, n.11, P.3155 - 3136, nov. 1963. 2 ex.
SP Pi 26 - P. 3
- 27 - BARBOSA, G. A.; CAHVES, A.; PORTO, Sérgio Pereira da Silva. **Temperature dependence of the Raman cross sections in BaTiO₃ and SrTiO₃.** Sep. SOLID STATE COMMUNICATIONS. v. 11, p. 1053 - 1055, 1972. 2 ex.
SP Pi 27 - P. 3
- 28 - BARBOSA, G. A.; KATIYAR, R. S.; PORTO, Sérgio Pereira da Silva. **Optical properties of SrTiO₃ at high temperatures.** Sep. JOURNAL OPTICAL SOCIETY AMERICAN. v. 68, n.5, p. 611 - 614.
SP Pi 28 - P. 3
- 29 - BAUMAN. R. P.; PORTO, Sérgio Pereira da Silva. **Lattice vibrations and structure of rare earth fluorides.** Sep. PHYSICAL REVIEW. v. 161, n.3, p. 842 - 847, set. 1967.
SP Pi 29 - P. 3
- 30 - BOYD, G. D.; COLLINS, R. J.; PORTO, Sérgio Pereira da Silva. **Excitation, relaxation, and continuous maser action in the 2. 613 - micron transition of CaF₂: U³⁺.** Sep. PHYSICAL REVIEW LETTERS. v. 8, n.7, p. 269 - 272, abr. 1962.
SP Pi 30 - P. 3
- 31 - BOZINIS, D. G.; PENNA, A. F.; PORTO; Sérgio Pereira da Silva. **The need for an alternative to the simple soft mode theory in solids.** s. n. t., p. 569 - 570. fotocópia.
SP Pi 31 - P. 3
- 32 - CASTELLUCCI, E.; FIRSTEIN, L. A.; PORTO, Sérgio Pereira da Silva. **Low frequency Raman spectra in the ferroelectric antiferroelectric and paraelectric phases of NaNo₂.** s. n. t. p. 872 - 876. fotocópia.
SP Pi 32 - P. 3
- 33 - BOZINIS, D. G.; PENNA, A. F.; PORTO, Sérgio Pereira da Silva. **The need for an alternative to the simple soft mode theor in solids.** s. l. d., 29p., IF/Unicamp. fotocópia de texto datil.
SP Pi 33 - P. 3
- 34 - CHERLOW, J. M.; HYATT, H. A.; PORTO, Sérgio Pereira da Silva. **Raman scattering in hydrogen halide gases.** Sep. CHEMICAL PHYSICS. v. 63, n.9, p. 3996 - 4000, nov. 1975.

SP Pi 34 - P. 3

- 35 - CEVENKA, P. O.; PRASAD RAO, A. D.; PORTO, Sérgio Pereira da Silva. **The ferroelectric phase transition in tri - glycine sulfate.** s. n. t., p. 953 - 958.

SP Pi 35 - P. 3

- 36 - CHAVES, A.; ANDRADE, P. da R.; KATIYAR, R. S. **Coupled polaritons of A1 symmetry in BaTiO₃.** Sep. TAORMINA RESEARCH CONFERENCE ON THE STRUCTURE OF MATTER, 1. Laormina, Italy, 1972. Proceedings. . . 1974, by Elias Burstein and Francisco de Martini, ed.

SP Pi 36 - P. 3

- 37 - CHAVES, A.; KATIYAR, R. S., PORTO, Sérgio Pereira da Silva. **Coupled modes with A1, symmetry in tetragonal BaTiO₃.** Sep. PHYSICAL REVIEW B. v. 10, n.8, P.3522 - 3532, out. 1974. fotocópia.

SP Pi 37 - P. 3

- 38 - CHAVES, A. S.; PORTO, Sérgio Pereira da Silva. **Generalized Lyddane - Sachs - Teller relation.** Sep. SOLID STATE COMMUNICATIONS. v. 13, p. 865 - 868, 1973. 2 ex.

SP Pi 38 - P. 3

- 39 - CHAVES, A. S.; PORTO, Sérgio Pereira da Silva. **Observation of coherent tuneable phonon interface in solids.** s. n. t., 14p. 2 ex. P. 3

SP Pi 39 - P. 3

- 40 - CHAVES, A.; PORTO, Sérgio Pereirada Silva. **Raman Scattering of YVO.** Sep. SOLID STATE COMMUNICATIONS. v. 10, p. 1075 - 1077, 1972.

SP Pi 40 - P. 3

- 41 - CHERLOW, J. M.; PORTO, Sérgio Pereira da Silva. **Laser Raman spectroscopy of gases.** Reimpresso. TOPICS IN APPLIED PHYSICS. Berlin, Heidelberg, 1976. (Laser Spectroscopy of atoms and molecules. Ed. H. Walther). 2 ex.

SP Pi 41 - P. 3

- 42 - CLAUS, R.; BORSTEL, G. **Polariton dispersion in triclinic crystals.** Sep. PHYSICA STATUS SOLID (b). v. 88, p. k 123 - 125, 1978

SP Pi 42 - P. 3

- 43 - CROSS, H. G., MASLEY, A. J., MOE, G., et alii. Development of remote sensing techniques for the determinations of layer thickness of petroleum and other oils spilled on water. s. n. t., 21 fev. 1973. Anexes: Proposati develop water pollution sensor for use in local area surveillance. MDC. C. 4358P., 72w - 11q, p. 1 - 19 to 1 - 27, fev. 1973.

SP Pi 43 - P. 4

- 44 - DAMEN, T. C.; KIEL, A. PORTO, Sérgio Pereira da Silva. et alii. The Raman effects of CeCl₃ ande PrCl₃. Sep. SOLID STATE COMMUNICATIONS. v. 6, p. 671 - 673, 1968.

SP Pi 44 - P. 4

- 45 - DAMEN, T. C.; LEITE, R. C. C., PORTO, Sérgio Pereira da Silva. **Angular dependence of the Raman scattering from benzene excited by the He - Ne CW laser.** Sep. PHYSICAL REVIEW LETTERS. v. 14, n.1, p. 9 - 11, jan. 1965. 2 ex.

SP Pi 45 - P. 4

- 46 - DAMEN, T. C.; PORTO, Sérgio Pereira da Silva; TELL, B. **Raman effect in zinc oxide.** Sep. PHYSICAL REVIEW. American Institute of Physics. v. 142, n.2, p. 570 - 574, fev. 1966. 2 ex.
SP Pi 46 - P. 4
- 47 - DIDOMENICO Jr., M.; PORTO, Sérgio Pereira da Silva; WEMPLE, H. S. **Evidence from Raman scattering for a overdamped soft optic mode in BaTiO₃.** Sep. PHYSICAL REVIEW LETTERS. v. 19, n.15, p. 855 - 857, out. 1967.
SP Pi 47 - P. 4
- 48 - DIDOMENICO Jr., M.; PORTO, Sérgio Pereira da Silva; WEMPLE, H. S., et alii. **Raman spectrum of single - domain BaTiO₃.** Sep. PHYSICAL REVIEW. v. 174, n.2, p. 552 - 530, out. 1968. Inclui dupl. e referência.
SP Pi 48 - P. 4
- 49 - FENNER, Wayne R., HYATT, Howard A.; KELLAM, John M., et alii. **Raman cross section of some simple gases.** Sep. JOURNAL OF THE AMERICA. v. 63, n.1, p. 73 - 76, jan. 1973. fotocópia.
SP Pi 49 - P. 4
- 50 - FIRSTEIN, L. A.; BARBOSA, G. A., PORTO, Sérgio Pereira da Silva. **Combined Raman - brillouin scattering in SrTiO₃ near 110°K phase transition.** s. n. t. 6p.
SP Pi 50 - P. 4
- 51 - FIRSTEIN, L. A.; BARBOSA, G. A., PORTO, Sérgio Pereira da Silva. **Combined Raman - brillouin scattering in SrTiO₃ near 110°K phase transition.** s. n. t., 2p. fotocópia.
SP Pi 51 - P. 4
- 52 - FLEURY, P. A.; PORTO, Sérgio Pereira da Silva. **Light scattering by spin waves.** Sep. JOURNAL OF APPLIED PHYSICS. v. 39, n.2, p. 1035 - 1041, fev. 1968. fotocópia.
SP Pi 52 - P. 4
- 53 - FLEURY, P. A.; PORTO, Sérgio Pereira da Silva, CHEESMAN, L. E., et alii. **Light scattering by spin waves in FeF₂.** Sep. PHYSICAL REVIEW LETTERS. v. 17, n.2, p. 84 - 86, jul. 1966.
SP Pi 53 - P. 4
- 54 - FLEURY, P. A.; PORTO, Sérgio Pereira da Silva; LOUDON, R. **Two - magnon light scattering in antiferromagnetic MnF₂.** Sep. PHYSICAL REVIEW LETTERS. v. 18, n. 6, p. 658 - 662, abr. 1967.
SP Pi 54 - P. 4
- 55 - FRAAS, Lewis M., PORTO, Sérgio Pereira da Silva; LOH, Eugene. **Symmetry in Raman scattering from the optical phonon in single crystal beryllium.** Sep. SOLID STATE COMMUNICATIONS. v. 8, p. 803 - 805, 1970.
SP Pi 55 - P. 4
- 56 - FRAAS, L. M.; WILLIAMS, P. F.; PORTO, Sérgio Pereira da Silva. **Photoluminescence studies of superconducting Nb₃Sn.** Sep. SOLID STATE COMMUNICATIONS. v. 8, p. 2113 - 2115, 1970.
SP Pi 56 - P. 4
- 57 - GALZERANI, José Claudio, SRIVASFAVA, R.; KATIYAR, R. S., et alii. **Temperature dependent Raman study of H - bonds and possible phase - transition in LiH-**

- COO. H₂O.** Sep. JOURNAL OF RAMAN SPECTROSCOPY. v. 6, n.4, p. 174 - 182, 1977. fotocópia. SP Pi 57 - P. 4
- 58 - GORDON, J. P.; LEITE, R. C. C.; MOOR, R. S., et alii. **Long - transient effects in lasers with insert liquid samples.** Sep. JOURNAL OF APPLIED PHYSICS. v. 36, n.1, p. 3 - 8, jan. 1965. 2 ex. SP Pi 58 - P. 4
- 59 - HARTER, W. G., PORTO, Sérgio Pereira da Silva. **Raman spectra of solids involved in order disorder phase transitions.** Sep. FUNDAMENTALK AND APPLIED LASER. Esfaham Symmicem, 29 ago./5 set. 1971. Proceeding. . ., edited by M. S. Feld, A. Javan, N. Kurnit, 1973. p. 629 - 633. Sep., orig. datil. SP Pi 59 - P. 4
- 60 - HARTER, W. G.; PRASAD RAD, A. D.; GRENINGER, R. S., et alii. **Raman spetra of libration in calcite and NaNo₃.** Texto datil. s. l. d., 18p. com anexos. SP Pi 60 - P. 5
- 61 - HARTWIG, C. M.; ROUSSEAU, D. L.; PORTO, Sérgio Pereira da Silva. **Optical phonons in sodium chlorate.** Sep. THE PHYSICAL REVIEW. v. 188, n.3, p. 1328 - 1335, dez. 1969. Com orig. datil. SP Pi 61 - P. 5
- 62 - HARTWIG, C. M., WIENER - AVNEAR, E.; PORTO, Sérgio Pereira da Silva. **Analysis of the temperature - dependent phonon structure in sodium nitrite by Raman spectroscopy.** Sep. PHYSICAL REVIEW B. v. 5, n.1, p. 79 - 91, jan. 1972. SP Pi 62 - P. 5
- 63 - HARTWIG, C. M.; WIENER - AVNEAR, E.; SMIT, J., et alii. **Phonon coupling and angular dispersion in biaxial NaNO₂.** Sep. PHYSICAL REVIEW B., v. 3, n.6, p. 2078 - 2080, 15 mar. 1971. SP Pi 63 - P. 5
- 64 - HURRELL, J. P.; PORTO, Sérgio Pereira da Silva; CHANG, I. F., et alii. **Optical phonon of yttrium aluminum garnet.** Sep. PHYSICAL REVIEW, v. 173, n.3, p. 851 - 856, set. 1968. SP Pi 64 - P. 5
- 65 - HURRELL, J. P., PORTO, Sérgio Pereira da Silva, DAMEN, T. C., et alii. **Raman scattering from mixed KBr, KCl crystals.** Sep. PHYSICS LETTERS. v. 26A, n.5, P. 194 - 196, jan. 1968. SP Pi 65 - P. 5
- 66 - HYATT, H. A., CHERLOW, J. M., FENNER, W. R., et alii. **Cross section for the Raman effect in molecular nitrogen gas.** Sep. JOURNAL OF THE OPTICAL SOCIETY OF AMERICA. v. 63, n.12, p. 1604 - 1606. 2 ex. SP Pi 66 - P. 5
- 67 - JANNUZI, N.; PORTO, Sérgio Pereira da Silva. **Table of energy levels of a slightly asymmetrical top rotor.** Sep. JOURNAL OF MOLECULAR SPECTROSCOPY. v. 4, n.6, p. 459 - 467, 1960. SP Pi 67 - P. 5

68 - KAMINOW, I. P., LEITE, R. C. C., PORTO, Sérgio Pereira da Silva. **Laser - excited Raman spectra of deuterated KH₂PO₄**. Sep. JOURNAL OF PHYSICS AND CHEMISTRY OF SOLIDS. v. 26, p. 2085 - 2087, [1965].

SP PI 68 - P. 5

69 - KATIYAR, R. S.; SCARPARO, M. A. F, RAMAKANT SRIVASTAVA, et alii. Sep. FERROELETRICS. v. 16, p. 213 - 218, 1977. 2 ex.

SP Pi 69 - P. 5

- 70 - KIEL, A.; DAMEN, T.; PORTO, Sérgio Pereira da Silva, et alii. **Electronic Raman effect in paramagnetic crystals: CeCl₃**. Sep. PHYSICAL REVIEW. v. 178, n. 3, p. 1518 - 1524, fev. 1969. 2 ex.

SP Pi 70 - P. 5

- 71 - KIEL, A.; PORTO, Sérgio Pereira da Silva. **Selection rules for electronic Raman effect**. Sep. JOURNAL OF MOLECULAR SPECTROSCOPY. v. 32, n.3, p. 458 - 468, dec. 1969.

SP Pi 71 - P. 5

- 72 - KLEIN, Miles V.; PORTO, Sérgio Pereira da Silva. **Multiple phonon resonance Raman effect in CdS**. Sep. PHYSICAL REVIEW LETTERS. v. 22, n.15, p. 782 - 784, abr. 1969. 2 ex. e cópia datil.

SP Pi 72 - P. 5

- 73 - KOGELNIK, H.; PORTO, Sérgio Pereira da Silva. **Continuous helium - neon red laser as a Raman souce**. Sep. OPTICAL SOCIETY OF AMERICA. v. 53, n.12, p. 1446 - 1447, dez. 1963. Com trab. manuscrito.

SP Pi 73 - P. 6

- 74 - LANDON, D.; PORTO, Sérgio Pereira da Silva. **A tandem spectrometer to detect laser - exited Raman radiation**. Sep. APPLIED OPTICS. v. 4, p. 762, jun. 1962. 2 ex.

SP Pi 74 - P. 6

- 75 - LEITE, Rogério C. C.; MOORE, Robert S., PORTO, Sérgio Pereira da Silva. **Use of a gas laser in studies of the depolarization of the rayleigh scattering from simple liquids**. Sep. JOURNAL OF CHEMICAL PHYSICS. v. 40, n.12, p. 3741 - 3742, jun. 1964.

SP Pi 75 - P. 6

- 76 - LEITE, R. C. C.; PORTO, Sérgio Pereira Porto. **A simple method for calibration of ruby laser output**. Sep. PROCEEDING OF THE IEEE. v. 51, n.4, ip. abr. 1963.

SP Pi 76 - P. 6

- 77 - LIMA, C. A. S.; SCALABRIN, A., MIRANDA; L. C. M., et alii. **Temperature behaviour of the dielectric constant of tetragonal BaTiO₃**. Sep. PHYSICS STATE SOLID (B). v. 86, p. 373 - 378, 1978.

SP Pi 77 - P. 6

- 78 - LIN, C. T.; ATVARS, T. D. Z.; PESSINE, F. B. T., et alii. **Laser isotropic enrichment of boron using catalysis**. IF e IQ da Unicamp, s.d. 7p.

SP Pi 78 - P. 6

- 79 - LIN, C. T.; ATVARS, T. D. Z.; PORTO, Sérgio Pereira da Silva; et alii. **A low cost and high efficiency helium recycling system for CO₂ laser**. IF e IQ da Unicamp, s. d., 11p. fotocópia.

SP Pi 79 - P. 6

- 80 - OCTAGURO, W.; ARGUELLO, C. A.; PORTO, Sérgio Pereira da Silva. **Mixing of internal modes of different molecular symmetry in LiIO₃**. Sep. THE PHYSICAL REVIEW B, v. 1, n.6, P.2818 - 2820, mar. 1970.

SP Pi 80 - P. 6

- 81 - OCTAGURO, W.; WIENER - AVNER, E.; PORTO, Sérgio Pereira da Silva. Determination of the second - harmonic - generation coefficient and the linear electro - optic coefficient in Li_2O_3 through oblique Raman phonon measurements. Sep. APPLIED PHYSICS LETTERS, v. 18, n.11, p. 499 - 501, jun. 1971. 2 ex. SP Pi 81 - P. 6
- 82 - OCTAGURO, W.; WIENER - AVNER, E.; PORTO, Sérgio Pereira da Silva, et alii. **Oblique polaritons in uniaxial crystals: applications to Li_2O_3 .** Sep. PHYSICAL REVIEW B, v. 6, n.8, p.3100 - 3104, out. 1972. 2 ex. SP Pi 82 - P. 6
- 83 - OCTAGURO, W.; WIENER - AVNER, E.; ARGUELLO, C. A., et alii. **Phonons, polaritons, and oblique phonons in Li_2O_3 by Raman scattering and infrared reflection.** Sep. PHYSICAL REVIEW B., v. 4, n.12., p. 4542 - 4551, dez. 1971. 2 ex. SP Pi 83 - P. 6
- 84 - PEARSON, A. David; PORTO, Sérgio Pereira da Silva; NORTHOVER, W. R. **Laser oscillations at 0, 918, 1. 057, and 1. 401 microns in Nd³⁺ - doped borate glasses.** Sep. JOURNAL OF APPLIED PHYSICS, v. 35, n.6, p. 1704 - 1706, jun., 1964. SP Pi 84 - P. 7
- 85 - PEARSON, A. David; PORTO, Sérgio Pereira da Silva. **Nonradiative energy exchange and laser oscillation in Yb - , Nd - doped borad glass .** Sep. APPLIED PHYSICS LETTERS, v. 4, n.12, p. 202 - 204, jun. 1964. 2 ex. SP Pi 85 - P. 7
- 86 - PENNA, A. F., CHAVES, A., ANDRADE, P. da R., et alii. **Light scattering by lithium tantalate at room temperature.** Sep. PHYSICAL REVIEW B., v. 13, n.11, p. 4907 - 4917, jun. 1976. SP Pi 86 - P. 7
- 87 - PENNA, A. F.; CHAVES, A.; PORTO, Sérgio Pereira da Silva. **Debye - like diffusive central mode near the phase transition in ferroelectric lithium tantalate.** Sep. SOLID STATE COMMUNICATIONS, v. 19, p. 491 - 494, 1976. Com cópia. SP Pi 87 - P. 7
- 88 - PENNA, A. F.; CHAVES, A. S.; PORTO, Sérgio Pereira da Silva. **High temperature light scattering in lithium tantalate.** s. n. t. . s. d. p. 891 - 894. SP Pi 88 - P. 7
- 89 - PORTO, Sérgio Pereira da Silva. **The laser as a Raman source a survey.** Sep. ANNALS OF THE NEW YORK ACADEMY OF SCIENCES, v. 122, n.2, p. 613 - 649, 28 maio 1965. SP Pi 89 - P. 7
- 90 - PORTO, Sérgio Pereira da Silva; CHEESMAN, L. E. **Photoelectric recording of laser excited Raman spectra of gases.** Resumo submetido para encontro científico da American Physical Society [1965]. 2p. Anexo: correspondência do autor a K. K. Darrow encaminhando o documento. Columbia University, New York, N. Y., 9 nov. 1965. SP Pi 90 - P. 7
- 91 - PORTO, Sérgio Pereira da Silva; DIEKE, G. H. **Infrared spectrum of hydrogen and deuterium between one two microns.** Sep. JOURNAL OF THE OPTICAL SOCIETY OF AMERICA, v. 45, n.6, p. 447 - 450, jun., 1955. 2 ex. SP Pi 91 - P. 7

- 92 - PORTO, Sérgio Pereira da Silva; FLEURY, P. A.; DAMEN, T. C. **Raman spectra of TiO₂, MgF₂, ZnF₂, and MnF₂**. Sep. PHYSICAL REVIEW, v. 154, n.2, p. 522 - 526, fev. 1967.
SP Pi 92 - P. 7
- 93 - PORTO, Sérgio Pereira da Silva. GIORDMAINE, J. A.; DAMEN, T. C. **Depolarization of Raman scattering in calcite**. New York: Bell Telephone System, Thechnical Publications, 1966. (Monograph, 5. 221). Sep. PHYSICAL REVIEW, American Physucal Society, v. 147, p. 608 - 611, jul. 1966. 2 ex.
SP Pi 93 - P. 7
- 94 - PORTO, Sérgio Pereira da Silva; GROSS, H. G.; HOGAN, M. W., et alii. **Proposal for tunable laser environment and resorces absorption fluorescence experiment for AAFe**. California: MacDinnel Douglas Astronautics, maio 1973. 25p.
SP Pi 94 - P. 7
- 95 - PORTO, Sérgio Pereira da Silva; LAMBERT, C. A. **Molecular constants of the ground state of H₂ derived from theoretical calculations**. Sep. JOURNAL OF CHEMICAL PHYSICS, v. 36, n.9, p. 2520 - 2521, maio 1962. 2 ex.
SP Pi 95 - P. 7
- 96 - PORTO, Sérgio Pereira da Silva; JANUZZI, Nicolao. **Determination of the asymmetry constant of slightly asymmetrical top molecules**. Rio de Janeiro; Academia Brasileira de Ciências, 1959. Sep. ANAIS. . ., v. 31, n.1, P.31 - 36, mar. 1959.
SP Pi 96 - P. 7
- 97 - PORTO, Sérgio Pereira da Silva; JANUZZI, N. **New singlet transitions in the near infrared spectrum of molecular hydrogen**. Sep. JOURNAL OF MOLECULAR SPECTROSCOPY, v. 11, n.15, p. 378 - 384, nov. 1963. 2 ex.
SP Pi 97 - P. 7
- 98 - PORTO, Sérgio Pereira da Silva; SCOTT, J. F. **Raman spectra of CaWO₄, SrWO₄, CaMoO₄, and SrMoO₄**. Sep. PHYSICAL REVIEW, v. 157, n.3, p. 716, maio 1967.
SP Pi 98 - P. 7
- 99 - PORTO, Sérgio Pereira da Silva; SMIT, J. Solid state phase transition using Raman scattering and infrared reflectivity techniques. s. n. t., p. 66 - 68.
SP Pi 99 - P. 7
- 100 - PORTO, Sérgio Pereira da Silva; SZULE, A.; PEREIRA NETO, J. Rezende, et alii. **Contruction and perfomance of a high resolution grating spectrometer**. Rio de Janeiro: Academia Brasileira de Ciências, 1960. Sep. ANAIS. . ., v. 32, n.1, 25 - 30, mar. 1960. 2 ex.
SP Pi 100 - P. 7
- 101 - PORTO, Sérgio Pereira da Silva; SZULE, A.; GUIMARÃES, W. O. N., et alii. **High - resolution grating spectrometer**. Sep. JOURNAL OF THE OPTICAL SOCIETY OF AMERICA, v. 50, n.9, p. 921 - 922, set. 1960. 2 ex.
SP Pi 101 - P. 8
- 102 - PORTO, Sérgio Pereira da Silva; TELL, B.; DAMENM T. C. **Near - foward Raman scattering in zinc oxide**. Sep. PHYSICAL REVIEW LETTERS, v. 16, n.11, p. 450 - 452, mar. 1966. 2 ex.

SP Pi 102 - P. 8

- 103 - PORTO, Sérgio Pereira da Silva; YARIV, A. **Excitation, relaxation and optical maser action at 2. 407 microns in SrF₂:U³⁺.** Sep. PROCEEDING OF THE IRE, v. 50, n.6, jun. 1963. 2 ex.

SP Pi 103 - P. 8

- 104 - PORTO, Sérgio Pereira da Silva; YARIV, Amnon. **Optical maser characteristics BaF₂:U³⁺.** s. n. t., [abr. 1962], p. 1542 - 1543. 2 ex. APENSO: **Exilation, relaxation and optical maser action at 2. 407 microns in SrF₂:U³⁺.** s. n. t., p. 1543 - 1544.

SP Pi 104 - P. 8

- 105 - PORTO, Sérgio Pereira da Silva; YARIV, Amnon. **Trigonal sites and 2. 24 - micron coherent emission of U³⁺ in CaF₂.** Sep. JOURNAL OF APPLIED PHYSICS, v. 33, n.4, p. 1620 - 1621, abr. 1962. 2 ex.

SP Pi 105 - P. 8

- 106 - PORTO, Sérgio Pereira da Silva; WOOD, D. L. **Ruby optical maser as a Raman source.** OPTICAL SOCIETY OF AMERICA, v. 52, n.3, p. 251 - 152, mar. 1962.

SP Pi 106 - P. 8

- 107 - PRASAD RAO, A. D.; ANDRADE, P. da R.; PORTO, Sérgio Pereira da Silva. **Phonon behavior and disorder mechanism in NaClO₃.** Sep. PHYSICAL REVIEW B., v. 9, n.3, p. 1077 - 1084. 2 ex.

SP Pi 107 - P. 8

- 108 - PRASAD RAO, A. D.; ANDRADE, P da R.; PORTO Sérgio Pereira da Silva. **Temperature dependence of the libration mode and dielectric relaxation of NaNO₃.** Sep. PHYSICA STATUS SOLID (B), v. 61, p. k75, 1974.

SP Pi 108 - P. 8

- 109 - PRASAD RAO, A. D, KATIYAR, R. S.; PORTO, Sérgio Pereira da Silva. **Relation between phonon structure and phase transition in NaClO₃.** Sep. PHYSICAL REVIEW LETTERS, v. 28, n.11, p. 665 - 668, mar. 1972. 2 ex.

SP Pi 109 - P. 8

- 110 - PRASAD RAO, A. D, KATIYAR, R. S.; PORTO, Sérgio Pereira da Silva. **Temperature dependend Raman scattering in sodium nitrate.** Sep. ADVANCES IN RAMAN SPEC

TROSCOPY, v. 1, p. 174 - 180. (Proceding of third International Conference on Raman Spectroscopy, Reims, France, sept. 1972). Com cópia.

SP Pi 110 - P. 9

- 111 - PRASAD RAO, A. D.; PORTO, Sérgio Pereira da Silva. **Disorder induced Raman scattering in NaNO₂.** s. n. t., p. 877 - 882.

SP Pi 111 - P. 9

- 112 - PROFFITT, W.; FRAAS, L. M.; CERVENKA, P., et alii. **An interferometric rejection filter for Raman spectroscopy.** Sep. APPLIED OPTICS, v. 10, n.3, p. 531 - 534, mar. 1971.

SP Pi 112 - P. 9

- 113 - PROFFITT, W.; OTAGURO, W. S.; PORTO, Sérgio Pereira da Silva. **Generalized polaritm phase matching in enhanced Raman scattering.** s. n. t., 3p. fotocópia.

SP Pi 113 - P. 9

- 114 - PROFFITT, W.; PORTO, Sérgio Pereira da Silva. **Depolarization ratio in Raman spectroscopy as a function of frequency.** Sep. JOURNAL OF THE OPTICAL SOCIETY OF AMERICA, v. 63, n.1, p. 77 - 80. jan. 1973. 2 ex.
SP Pi 114 - P. 9
- 115 - ROUSSEAU, D. L.; PORTO, Sérgio Pereira da Silva. **Polywater: polymer or artifact?** Sep. SCIENCE, American Associaton for the Advancement of Science, v. 167, p. 1715 - 1719, mar. 1970. 2 ex.
SP Pi 115 - P. 9
- 116 - QUITTEL, Anne - Marie; LAMBERT, Marianne; FONTANA, M. M. Mario, et alii, présentée par André Guinier. Sep. C. R. ACAD. SC. PARIS, v. 277, Série B, p. 523 - 526, 5 nov. 1973.
SP Pi 116 - P. 9
- 117 - ROUSSEAU, D. L.; PORTO, Sérgio Pereira da Silva. **Auger - like resonant interference in Raman scattering from one and two phonon states of BaTiO₃.** Sep. PHYSICAL REVIEW LETTERS, v. 20, n.24, 10 jun. 1968.
SP Pi 117 - P. 9
- 118 - ROUSSEAU, D. L.; STORKS, K. H.; MALM, D. L.; et alii. **On the existence of polywater.** s. n. t., 18p.
SP Pi 118 - P. 9
- 119 - SANJURJO, J. A.; PORTO, Sérgio Pereira da Silva; SILBERMAN, E. **Measurement of the A1 - modes reflecvtiy of BaTiO₃.** s. n. t., 9p. Com anexos: fotos. Inclui Separata UNICAMP do mesmo.
SP Pi 119 - P. 9
- 120 - SCALABRIN, A.; CHAVES, A. S.; SHIM, D. S.; et alii. **Temperature dependence of the A1, and E optical phonons in BaTiO₃.** Sep. PHYSICA STATUS SOLIDI (b), v. 79, p. 731 - 742, 1977.
SP Pi 120 - P. 9
- 121 - SCALABRIN, A.; PORTO, Sérgio Pereira da Silva; CHAVES, A. S. **Temperature dependence of the A1 optical phonons in BaTiO₃.** s. n. t., 5p.
SP Pi 121 - P. 9
- 122 - SCALABRIN, A.; PORTO, Sérgio Pereira da Silva; CHAVES, A. S. **Temperature dependence of the optical phonons in BaTiO₃.** s. n. t., 2p.
SP Pi 122 - P. 9
- 123 - SCALABRIN, A.; PORTO, Sérgio Pereira da Silva; VARGAS, H., et alii. **Temperature dependence of the broad A1 (TO) phonon Raman linewidth in Ba-TiO₃.** Sep. SOLID STATE COMMUNICATIONS, v. 24, P.291 - 194, 1977.
SP Pi 123 - P. 9
- 124 - SCOTT, J. F.; CHEESMAN. L. E.; PORTO, Sérgio Pereira da Silva. **Polariton spectrum of alfa - quartz.** Sep. PHYSICAL REVIEW, v. 162, n.3, p. 834 - 840, out. 1967. 2 ex.
SP Pi 124 - P. 9
- 125 - SCOTT, J. F.; PORTO, Sérgio Pereira da Silva. **Longitudinal and transverse optical lattice vibration in quartz.** Sep. PHYSICAL REVIEW, v. 161, n.3, set. 1967.
SP Pi 125 - P.10

- 126 - TELL, B.; DAMEN, T. C.; PORTO, Sérgio Pereira da Silva. **Raman effect in cadmium sulfide.** Sep. PHYSICAL REVIEW, v. 144, n.2, abr. 1966. SP Pi 126 - P.10
- 127 - VERBLE, J. L.; GALLEGOS - LLUESMA, E.; PORTO, Sérgio Pereira da Silva. **First - order A1(TO) phonons as evidence of disorder in BaTiO₃.** Sep. JOURNAL OF RAMAN SPECTROSCOPY, v. 7, n.1, p. 7 - 9, 1978. SP Pi 127 - P.10
- 128 - WEBER, Alfons; PORTO, Sérgio Pereira da Silva. **He - Ne laser as a light source for high - resolution Raman spectroscopy.** Sep. JOURNAL OF THE OPTICAL SOCIETY OF AMERICA, v. 55, n.8, p. 1033 - 1034, ago. 1965. 2 ex. SP Pi 128 - P.10
- 129 - WEBER, Alfons; PORTO, Sérgio Pereira da Silva; CHEESMAN, Leonard E., et alii. **High - resolution Raman spectroscopy of gases with cw - laser excitation.** Sep. JOURNAL OF THE OPTICAL OF AMERICA, v. 57, n.1, p. 19 - 28, jan. 1967. SP Pi 129 - P.10
- 130 - WILLIAMS, P.F.; PORTO, Sérgio Pereira da Silva. **Role of bound excitons in near resonant Raman scattering from CdS.** Reimpresso: BALKANSKI, M, ed. Proceedings of the Second International Conference on Light Scattering in Solids, Paris, jul. 19 - 23, 1971. SP Pi 130 - P.10
- 131 - WILLIAMS, P.F.; PORTO, Sérgio Pereira da Silva. **Symmetry - forbidden resonant Raman scattering in Cu₂O.** Sep. PHYSICAL REVIEW B, v. 8, n.4, p. 1782 - 1783, ago. 1973. 2 ex. SP Pi 131 - P.10
- 132 - WORLOCK, J. M.; PORTO, Sérgio Pereira da Silva. **Raman scattering by F centers.** Sep. PHYSICAL REVIEW LETTERS, v. 15, n.17, p. 697 - 699, out. 1965. 2 ex. SP Pi 132 - P.10
- 133 - YARIV, A.; PORTO, Sérgio Pereira da Silva; NASSAU, K. **Optical maser emission from trivalent praseodymium in calcium tungstate.** New York: Bell Telephone System, Technical Publications, 1962. (Monograph 4312). Sep. JOURNAL OF APPLIED PHYSICS, v. 33, p. 2519 - 2521, ago. 1962. Com cópia. SP Pi 133 - P.10
- 134 - BOYD, Gary D., PORTO, Sérgio P. S. **Phase - Matched Raman Radiation Amplifier and Oscillator.** U.S. Patent Office nº 3,300,653. Série nº 457, 090. 11 claims CI307 - 88. 3. jan. 24, 1967. Filed maio 19, 1965. United States Patent Office. Acompanha correspondência de W. L. Wisner, do Bell Telephone Laboratories, parabenizando os pesquisadores. SP Pi 134 - P.10
- 135 - NASSAU, Nassau; PORTO, Sérgio P.S.; YARIV, A. **Optical maser comprising the active medium CaWO₄:Pr.** U. S. Patent Office nº 3,258,716, 258, 716. Sér. nº153, 604. 4 claims - CI 331 - 94. 5. jun. 28, 1966. Filed nov. 20, 1961. United States Patent Office. SP Pi 135 - P.10

PRODUÇÃO DIVERSA

136 - PORTO, Sérgio Pereira da Silva. "A observação e identificação parcial do espectro molecular do hidrogênio no infravermelho próximo". Tese para concurso de Livre Docência para a Cadeira de Física Geral e Experimental da Faculdade Nacional de Filosofia da Universidade de Brasília. Rio de Janeiro, 1955. Com anexos datil.

SP Pi 136 - P.11

137 - Pasta com material de estudo contendo fotos, slides, negativos, transparências e papéis com gráficos, esquemas e textos científicos diversos sobre Raman. Os trabalhos tem a colaboração de Roberto C. Cerqueira Leite, AWeber, R.P.Bauman, L.E.Ceesman, J.J.Barret e J.F.Scott.

SP Pi 137 - P.12

138 - Pasta identificada como "Raman - He - Ne Laser" contendo:

- estudo manuscrito "The simplet spetrum", out. 1960, 34 p.
- Relatórios de estudos realizados entre 1964 a 1967 sobre o efeito Raman do KDP – Caso 39093. 18p.datil.
- Projeto de estudo intitulado "Solid State Phase Transitions Using Raman Scattering and Infrared Reflectivity Techniques", de Sérgio Porto e J.Smit. Electronic Sciences Laboratory, University of Southern California, set. 1963, 8 p.datil.
- Texto intitulado "The Continuouns Helium Neon Red Laser as a Raman Source", de Sérgio Porto e H.Kogelnik, s.d., 9 p.datil. Anexo: correspondência.
- Texto intitulado "Long - Transient Effects in Lasers with Inserted Liquid Samples – Case 39093", de Sérgio Porto, J.P.Gordon, R.C.C. Leite, R.S.Moore, J.R.Whinnery, fev. 1964, 16 p.datil.
- Relatório intitulado "The continuouns helium neon red laser as a Raman source – Case 39093" de jul. 1963, 08 p.datil.

SP Pi 138 - P.13

139 - Pasta identificada como "Raman of F Centers" contendo um texto incompleto em inglês datilografado e medições gráficas. 23 ago. 1965, 13p.

SP Pi 139 - P.13

140 - Transparências manuscritas. 07 p.

SP Pi 140 - P.13

141 - Fragmentos diversificados: manuscrito, graficos, medições, etc. 9p.

SP Pi 141 - P.13

CORRESPONDÊNCIA

- 142 - CARTA, em inglês, de John Strong, Johns Hopkins University, a Sérgio Pereira da Silva Porto, Bell Telephone Laboratories, agradecendo o comparecimento a um seminário de grupo de leitura. Baltimore, Maryland, 6 dez. 1962. 1p. datil.

SP CP 01 - P.14

- 143 - CARTA, em inglês, de Kenneth Fox, University of Tennessee, a Sérgio Pereira da Silva Porto, Bell Telephone Laboratories, agradecendo e elogiando o seminário "Atomic and Molecular Processes". University of Tennessee, Department of Physics and Astronomy, 8 nov. 1965. 1p. datil.

SP CP 02 - P.14

- 144 - CARTA, em inglês, de R. T Frost, da General Electric Company, Missile and Space Division, a Sérgio Pereira da Silva Porto, University of Southern California - Department of Physics, enviando o texto denominado "Cross Section Measurements". s.l., 23 maio 1968. Anexo: o referido texto e breve currículo de Sérgio Porto. 2p. datil. + anexo.

SP CP 03 - P.14

- 145 - CARTA, em inglês, de M. Balkanski, em papel timbrado da International Conference on Light Scattering in Solids, a Sérgio Pereira da Silva Porto, University of Southern California, Departments of Physics, convidando - o para participar da evento supra referido, Paris, 23 jun. 1971. 1p. datil.

SP CP 04 - P.14

- 146 - CARTA, em inglês, de G. L. Weissler, secretário da Sigma XI, a Raymond J. Seeger, diretor do Committee on National Lectureships, com referência a participação de Sérgio Porto no evento "Regional Lectures for Sigma Xi - RESA". The Society of the Sigma Xi and The Scientific Research of America. New Haven, Connecticut, 19 mar. 1971. fotocópia. 2p. datil.

SP CP 05 - P.14

- 147 - CARTA de A. Javan, professor de Física do Massachusetts Institute of Technology, a Sérgio Porto, University of Southern California, com notícias sobre o Symposium on Fundamental and Applied Laser Physics. Cambridge, Massachusetts, 13 maio 1971. 1p. datil. e anexo.

SP CP 06 - P.14

- 148 - CARTA de V. L. Strizhevsky e V. V. Obukhovsky, de Kiev, Ukraine, URSS, Department of Radiophysics, University Vladimir Skaya st., para Sérgio Pereira da Silva Porto, B. Tell e T. C. Damen sobre o artigo intitulado "Raman scattering in ZnO for near-forward directions", de autoria dos três pesquisadores, publicado na PHYSICS REVIEW LETTERS. 30 nov. 1968. 4p. datil.

SP CP 07 - P.14

OBRAS DE TERCEIROS

ARTIGOS CIENTÍFICOS

- 149 - ABRAGAM, Anatole e COWBRISSON, Jean. **Relaxation paramagnétique spin - spin dans un semi - conducteur.** Sep. Academie des Sceinces, t. 243, p. 650 - 652, 13 out. 1956. 2 ex. SP OT 01 - P.15
- 150 - ABRAGAM, Anatole e PROCTOR WARREN. **Identité de la temperature de spin it de la temperature thermodynamique.** Sep. Académie des Sciences, t. 245, p. 1048 - 1050, 23 set. 1957. SP OT 02 - P.15
- 151 - ABRAGAM, Anatole; COWBRISSON, Jean e Salomon Ionel. **Polarisation nucléaire par effet overhauser daus les solutions d'ions paramagnétiques.** Sep. Académie des Sciences, t. 245, p. 157 - 160, 8 jul. 1957. SP OT 03 - P.15
- 152 - ACKERHALT, J. R e GALBRAITH, H. W. **Collisionless multiple photon excitation of SF₆.** Sep. J. Chem. Phys., v. 69, n.3, p. 1200 - 1206, 1 ago. 1978. SP OT 04 - P.15
- 153 - AILAWADI, Narinder K. **Critical scattering in A₃B compounds at structural transitions.** Sep. ANNALS OF PHYSICS, v. 86, n.1, p. 121 - 137, jul. 1974. 2 ex. SP OT 05 - P.15
- 154 - ALDER, B. J. e outros. **Instability modes prior to meeting.** Sep. PHYSIC REVIEW LETTERS, v. 21, n.11, p. 732 - 734, 9 set. 1968. SP OT 06 - P.15
- 155 - ALLAN, Nelo D. **The problem of the maximality of arithmetic groups.** Sep. SYMPOSIA IN PURE MATHEMATICS PROCEEDINGS... Algebraic Groups and Discontinuous Subgroups, v. 9. SP OT 07 - P.15
- 156 - ALMEIDA, A. M. Ozorio. **Light scattering from BaTiO₃.** Campinas, UNICAMP/Instituto de Física, s. d., 21p. SP OT 08 - P. 15
- 157 - ALSOP, L. E. e outros. **Measurement of Noise in a maser amplifier.** Sep. THE PHYSICAL REVIEW, v. 107, n.5, p. 1450 - 1451, 1 set. 1957. SP OT 09 - P.15
- 158 - ALSOP, L. E. e outros. **Observation of discrete sources at 3 - cm wavelength using a maser.** Sep. SYMPOSIUM ON RADIO ASTRONOMY. Stanford: RN. Bracerwell, 1959, p. 69 - 74. SP OT 10 - P.15

- 159 - ALSOP, L. E; GIORDMAINE, J. A. e MAYER, C. H. **Observations using a maser radiometer at 3 - cm wave length.** Sep. THE ASTRONOMICAL JOURNAL, v. 63, n.8, s/p. set. 1958. SP OT 11 - P.15
- 160 - AMBARTZUMIAN, R. V.; MAKAROV G. N.; PURETZKY, A. A. **Investigation of multiple photon excitation of O₃O₄ by dissociation yield saturation.** Sep. OPTICS COMMUNICATIONS, v. 27, n.1, p. 79 - 84, out. 1978. SP OT 12 - P.15
- 161 - AMMONS, J. W. **A general purpose pulsed ruby maser.** Sep. BELL TELEPHONE LABORATORIES, 14 ago. 1961. SP OT 13 - P.15
- 162 - ANDERMAN, G. **Sample preparation for Raman analysis.** s. n. t. 5p. SP OT 14 - P. 15
- 163 - ANDRADE, P de R. Texto datilografado, sem título, sobre a estrutura do phonon e propriedades do NaNO₂. SP OT 15 - P.15
- 164 - ANDRESS, Philip M. **The wheatstone bridge.** RUBICON NOTES. Philadelphia: Electrical Instrument Nakers, v. 2, p. 1 - 4, s. d. SP OT 16 - P.15
- 165 - APPLIED RESEARCH LABORATORIES. **Suggested method for the spectro chemical analysis of lubricating oils the rotating electrode technique using the production control quantometer.** 14 jul., 1953. 4p. SP OT 17 - P.15
- 166 - ARAKAWA, Hidetoshi. **O efeito acústico da rosa de metal no cravo.** Apresentado no Congresso Brasileiro de Acústica, 1. Curitiba, 20 fev. 1979. 10p. SP OT 18 - P.15
- 167 - ASCARELLI, G. e BARONE, A. **Modulation of the Optical Absorption of F Centers in KCl.** IL NUOVO CIMENTO. v. 37, n. 3, jun. 1965. SP OT 19 - P.15
- 168 - ASHKIN, A.; BOYD, G. D.; DZIEDZIC, J. M. **Observation of continuous optical harmonic generation with gas masers.** Sep. BELL TELEPHONE LABORATORIES, 3 jun. 1963. 7p. SP OT 20 - P.15
- 169 - ASHIKIN, A. e GERSHENZON, M. **Reflection and guiding of light at p - n junctions.** Sep. BELL TELEPHONE LABORATORIES, 1 abr. 1963. 7p. SP OT 21 - P.15
- 170 - BALI, L. M. e DUTT, J. **Harmonics in the scattering of light by bound electrons.** Sep. NUOVO CIMENTO, v. 35, n.3, p. 805 - 810, fev. 1965. SP OT 22 - P.16

- 171 - BAIRD, W. S. e outros. **An automatic recording infra - red spectrophotometer.** Sep. JOURNAL OF THE OPTICAL SOCIETY OF AMERICA, v. 37, n.10, p. 754 - 761, out. 1947.
SP OT 23 - P.16
- 172 - BALLMAN, Albert A. **The growth and properties of piezoelectric bismuth germanium oxide Bi₁₂GeO₂₀.** Sep. JOURNAL OF CRYSTAL GROWTH, v. 1, p. 37 - 40, 1967.
SP OT 24 - P.16
- 173 - BARBER, H. Philip. **Coherence length extension of He - Ne lasers.** Sep. APPLIED OPTICS, v. 7, n.3, p. 559 - 561, mar. 1968.
SP OT 25 - P.16
- 174 - BARKER Jr., A. S. **Infrared lattice vibrations in calcium tungstate and calcium molybdate.** Sep. THE PHYSICAL REVIEW, v. 135, n.3A, 742 - 747, ago. 1964.
SP OT 26 - P.16
- 175 - BARKER Jr., A. S. **Response functions in the theory of raman scattering by vibrational and polariton modes in dielectric crystals.** Sep. REVIEW OF MODERN PHYSICS, v. 44, n.1, jan. 1972.
SP OT 27 - P.16
- 176 - BARNES, Frank S. **Review of lasers and some applications.** Sep. NATIONAL BUREAU OF STANDARDS, 8 a 12 abr. 1963. 86p.
SP OT 28 - P.16
- 177 - BARNS, R. L. **Imperfections in ruby for maser applications.** Sep. BELL TELEPHONE LABORATORIES, 10 set. 1962. 13p.
SP OT 29 - P.16
- 178 - BARRET, J. J. e ADAMS N. I. III. **Laser excited rotation vibration raman scattering in ultra small gas samples.** Sep. JOURNAL OF THE OPTICAL SOCIETY OF AMERICA, v. 58, n.3, P.311 - 319, mar. 1968.
SP OT 30 - P.16
- 179 - BARRET, J. J. e WEBER, Alfons. **Pure - rotational raman scattering in a CO₂ electric discharge.** Sep. JOURNAL OF THE OPTICAL SOCIETY OF AMERICA. v. 60, n.1, p. 70 - 77, jan. 1970.
SP OT 31 - P.16
- 180 - BEAVER, Edward A. e MCILWAIN, Carl E. **A digital multichannel photometer.** Sep. THE REVIEW OF SCIENTIFIC INSTRUMENTS, v. 42, n.9, p. 1321 - 1324, set. 1971.
SP OT 32 - P.17
- 181 - BEAVER, Edward A. e MCILWAIN, Carl E. **Couting image tube photoelectrons with semiconductor diodes.** Sep. SYMPOSIUM ON PHOTOELECTRON IMAGE DEVICES. London, set. 1971. 9p.
SP OT 33 - P.17
- 182 - BECKEL, Charles L; NAKHLEH, Jamil e CHOWDARY, Yalamanchili R. **On the use of the WBK method for obtaining energy eingenvales.** Sep. JOURNAL OF CHEMICAL PHYSICS, v. 40, n.1, p. 139 - 145, jan. 1964.

SP OT 34 - P.17

- 183 - BECKEL, Charles L. **Power series expansions of vibrational potentials. I the Heitler - London potential for H₂.** Sep. JOURNAL OF CHEMICAL PHYSICS, v. 33, n.6, p. 1885 - 1886, dez., 1960.

SP OT 35 - P.17

- 184 - BECKEL, Charles L. **Vibrational analysis of the Heitler London potential of H₂.** Sep. JOURNAL OF CHEMICAL PHYSICS, v. 39, n.1, p. 90 - 93, jul. 1963.
SP OT 36 - P.17
- 185 - BEGLEY, R. F.; HARVEY, A. B.; BYER, R. L. **Coherent anti - stokes raman spectroscopy.** Stanford: Stanford University, Microwave Laboratory, 1974. 17 p.
SP OT 37 - P.17
- 186 - BEGLEY, R. F. e outros. **A new spectroscopic tool.** Stanford: Stanford University, Microwave Laboratory, 1974. 12p.
SP OT 38 - P.17
- 187 - BEGLEY, R. F. e outros. **Raman spectroscopy with intense, coherent, anti - stokes beams.** Stanford: Stanford University, Microwave Laboratory, 1974. 4p.
SP OT 39 - P.17
- 188 - BEHR, Leo e WILLIAMS Jr., A. J. **The campbell - shackleton shielded ratio box.** Sep. INSTITUTE OF RADIO ENGINEERS, v. 20, n.6, p. 969 - 988, jun. 1932.
SP OT 40 - P.17
- 189 - BENEDEK, G. e GREYTAK, T. **Brillouin scattering in liquids.** Sep. PROCEEDINGS OF THE IEEE, v. 53, p. 1623 - 1629, out. 1965.
SP OT 41 - P.17
- 190 - BENNETT, W. R.; REGIORD W. W. e KOGELNEK H. W. **Operating characteristics of the Helium neon gas maser.** s. n. t.
SP OT 42 - P.17
- 191 - BERGER, S. B., RUBINSTEIN, C. B. **Noninteraction of magnetooptical effects in Ce III and Nd III phosphate glasses.** Sep. BELL TELEPHONE LABORATORIES, mar. 1963.
SP OT 43 - P.17
- 192 - BERNARD, Maurice e DURAFOURG, Georges. **Possibilités de lasers à semiconducteurs.** Sep. L'ECHO DES RECHERCHES, p. 24 - 27.
SP OT 44 - P.17
- 193 - BHAUMIK, M. L. e outros. **Laser emission from a europium benzoylacetone alcohol solution.** Sep. JOURNAL OF PHYSICAL CHEMISTRY, v. 68, n.6, p. 1490 - 1493, jun. 1964.
SP OT 45 - P.17
- 194 - BJORKHOLM, J. E. e SIEGMAN, A. E. **Accurate CW measurements of optical second - harmonic generation in ADP and calcite.** Sep. BELL TELEPHONE LABORATORIES, ago. 1966. 39p.
SP OT 46 - P.18
- 195 - BLAINE, Raymond L.; VALIS, Harold J. **Surface available to nitrogen in hydrated portland cements.** Sep. JOURNAL OF RESEARCH OF THE NATIONAL OF STANDARDS, v. 42, p. 257 - 267, mar. 1949.
SP OT 47 - P.18
- 196 - BOND, W. L. **Absorption losses in multilayer dielectric mirrors.** s. n. t. 13p.
SP OT 48 - P.18

- 197 - BOND, W. L. **Absorption losses in multilayer reflectors.** Sep. BELL TELEPHONE LABORATORIES, out. 1962. 12p.
SP OT 49 - P.18
- 198 - BOND, W. L. **Antireflectiting double layers for optical masers - case 38139 - 9.** Sep. BELL TELEPHONE LABORATORIES, abr. 1961. 6p.
SP OT 50 - P.18
- 199 - BOND, W. L. **"Bent axis" focusing mirrors.** Sep. BELL TELEPHONE LABORATORIES, dez. 1962. 4p.
SP OT 51 - P.18
- 200 - BONNER, W. A. **The growth of semiconducting potassium tantalate single crystals.** Sep. BELL TELEPHONE LABORATORIES, abr. 1965. 8p.
SP OT 52 - P.18
- 201 - BOYD, G. D. e PATEL C. K. N. **Enchancement of optical second harmonic generation (SHG) by reflection phase matching.** Sep. BELL TELEPHONE LABORATORIES, mar. 1966. 5p.
SP OT 53 - P.18
- 202 - BOYD, G. D. e ASHKIN, A. **Theory of parametric oscillator threshold with single mode optical masers and observation of amplification in LiNbO₃.** Sep. BELL TELEPHONE LABORATORIES. 37p.
SP OT 54 - P.18
- 203 - BOULE, W. S.; NELSON, D. F. **Continuously pumped solid state optical.** Sep. BELL TELEPHONE LABORATORIES, jun. 1962.
SP OT 55 - P.19
- 204 - BOZINIS, D. G. e HUNELL J. P. **Optical modes and dielectric properties of ferroelectric orthorhombic KNbO₃.** Sep. PHYSICAL REVIEW B, v. 13, n.7, p. 3109 - 3120, abr. 1976.
SP OT 56 - P.19
- 205 - BLOOM, Arnold L. **Observation of new visible gas laser transitions by removal of dominance.** Sep. APPLIED PHYSICS LETTERS, v. 2, n.5, p. 101 - 102, mar. 1963.
SP OT 57 - P.19
- 206 - BONNER, W. A. **Growth of potassium tantalate single crystals.** Sep. BELL TELEPHONE LABORATORIES, nov., 1962. 4p.
SP OT 58 - P.19
- 207 - BORTAS, S. **A relatively simple and inexpensive fixture for outside diameter grinding and slicing used in conjuction with an ordinary surface grinder - case 38788 - 1.** Sep. BELL TELEPHONE LABORATORIES, out. 1962, 4p.
SP OT 59 - P.19
- 208 - BORTFELD, D. P.; GELLER, M. e ECKHARDT, Gisela. **Combination lines in the stimulated raman spectrum of styrene.** Sep. THE JOURNAL OF CHEMICALS PHYSICS, v. 40, n.6, p. 1770 - 1771, mar. 1964.
SP OT 60 - P.19

- 209 - BOYD, G. D.; ASHKIN, A. **Theory of parametric oscillation - tor threshold with single mode optical masers and observation of amplification in LiNbO₃.** Sep. BELL TELEPHONE LABORATORIES, jan. 1966. 47p.
SP OT 61 - P.19
- 210 - BOYLE, W. S. **Introduction to optical masers.** s. n. t.
SP OT 62 - P.19
- 211 - BRADLEY, D. J. **Dye lasers and spectroscopy.** Belfast: The Queen's University of Belfast, s. d. 4p.
SP OT 63 - P.19
- 212 - BRANDMÜLLER, J. e outros. **Improvement of resolution by a photoelectric raman spectrometer with He - Ne laser excitation.** Munique: Universidade de Munique, 1966. 11p.
SP OT 64 - P.19
- 213 - BRANDMÜLLER, J.; KIEFER, W. **Physicists view fifty years of raman spectroscopy.** Sep. THE SPEX SPEAKER, v. 23, dez. 1978. 10p.
SP OT 65 - P.19
- 214 - BRAY, R. G. e outros. **Measurement of highly forbidden optical transitions by intracavity CW dye laser spectroscopy.** Sep. CHEMICAL PHYSICS LETTERS, v. 47, n.2, p. 213 - 218, abr. 1977.
SP OT 66 - P.19
- 215 - BRAY, Robert G. **Notes on intracavity photoacoustic spectroscopy of acetylene.** Morristown: Allied Chemical Corporation, s. d. 5p.
SP OT 67 - P.19
- 216 - BRIDGES, T. J.; PATEL, C. K. N. **High Power Brewster windows laser.** Sep. BELL TELEPHONE LABORATORIES, set. 1965. 4p.
SP OT 68 - P.19
- 217 - BRINKMAN, R. T. **Rotational raman scattering in planetary atmospheres.** Pasadena: Tust of Techonology - Jet Propulsion Laboratory, s. d. 16 p.
SP OT 69 - P.19
- 218 - BRINKMAN, R. T. **Rotational raman scattering in planetary atmospheres.** Sep. THE ASTROPHYSICAL JOURNAL, v. 154, p. 1087 - 1093, dez. 1968.
SP OT 70 - P.20
- 219 - BRIT, M.; RON, A.; SCHNEPP, O. The raman spectrum of alfa - N₂. Los Angeles: University of Southern California, s. d. 13p.
SP OT 71 - P. 20
- 220 - BROCKWAY, L. O. **Electron diffraction by gas molecules.** Fragmento.
SP OT 72 - P.20
- 221 - BRODY, Edward M. e CUMMINS, Herman Z. **Brillouin scattering study of the ferroelectric transition in KDP.** Baltimore: The Johns Hopkins University, s. d. 10p.
SP OT 73 - P.20

- 222 - BROWNE, P.F. **Coupling between Sm ions and colour centres in the CaF₂: Sm laser system.** s. n. t. P. 1085 - 1087. SP OT 74 - P.20
- 223 - BRUNTON, J. H. e COURTNEY - PRATT, J. S. **The polarization of the light output from a Ruby optical maser.** Sep. BELL TELEPHONE LABORATORIES, jul. 1964. SP OT 75 - P.20
- 224 - BRYANT, James I. e BROOKS III, Robert I. **Raman spectrum of potassium azide single crystals.** Sep. THE JOURNAL OF CHEMICAL PHYSICS, v. 43, p. 880 - 882, ago. 1965. SP OT 76 - P.20
- 225 - BUCHHEIM, W. **Influence of intramolecular forces on the raman effect of liquids.** Sep. BELL TELEPHONE LABORATORIES, TR 6583, jun. 1965. (Translation Phys Z, v. 36, p. 694 - 711, 1935). SP OT 77 - P.20
- 226 - BUNGE, Annik Vivier e BUNGE Carlos F. **Electron affinity of helium (1s2s)3 S.** s. n. t. SP OT 78 - P.20
- 227 - BURDETT, J. K. e outros. **Tunable laser infrared photochemistry at cryogenic temperatures.** s. n. t. SP OT 79 - P.20
- 228 - AMBARTZUMIAN, R. V. e outros. **Dissociation of matrix - isolated molecules by infrared laser radiation.** s. ref. SP OT 80 - P.20
- 229 - BURSTEIN, E. e outros. **Exciton - Enhanced Raman scattering by optical phonons.** s. ref. SP OT 81 - P.20
- 230 - BUTCHER, P.N.; LONDON R. e MCLEAN T. P. **Parametric amplification near resonance in non - linear dispersive media.** Sep. PROC. PHYS. SOC., v. 85, p. 565 - 581, mar. 1965. SP OT 82 - P.20
- 231 - CAHILL, J. E. e LEROI G. E. **Raman studies of molecular motion in condensed oxygen.** Submetido por publicação no JOURNAL OF CHEMICAL PHYSICS, dez. 1968. 29p. SP OT 83 - P. 20
- 232 - CALLOMON, J. H. **An emission spectrum of the diacetylene ion a study of schüller's "T" spectrum under high resolution.** Sep. CANADIAN JOURNAL OF PHYSICS, v. 34, p. 1046 - 1073, 1956. SP OT 84 - P.21
- 233 - CALLOMON, J. H.; DUNN, T. M. e MILLS I. M. **Rotational analysis of the 2600 Å absorption system of benzene.** S. ref. SP OT 85 - P.21

- 234 - CAMPBELL, J. D. e outros. **Optical time of flight spectroscopy.** Los Angeles: University of Southern California, s. d. 18p.
SP OT 86 - P.21
- 235 - CAMUÑAS, A. **Aplicacion de un sistema de difragmas graduados al spectrografo de litrox de optica de vidrio.** Sep. ANNALES DE REAL SOCIEDAD ESPANOLA DE FISICA Y QUIMICA, Serie A, t. 48, n.1 - 2, p. 45 - 46, jan. - fev. 1952.
SP OT 87 - P.21
- 236 - CAMUÑAS, A. e LAGO, CARMEM. **Contribución al estudio del estado metálico de la aleación ligera RR - 59 por medios espectrales.** Sep. CONGRESSO INTERNACIONAL DE QUIMICA INDUSTRIAL, 28. Madrid, out. 1955.
SP OT 88 - P. 21
- 237 - CAMUÑAS, A. e DOMÍNGUEZ CALLE, Maria. **Espectroanálisis de vidrios ópticos.** Sep. CONGRESO INTERNACIONAL DE QUIMICA INDUSTRIAL, 28. Madrid, out. 1955.
SP OT 89 - P.21
- 238 - CANTRELL, C. D e outros. **Spontaneous laser action in laser isotope separation.** Submetido ao APPLIED OPTICS, New York.
SP OT 90 - P.21
- 239 - CANTRELL, C. D. e GALBRAETH, H. W. **Statiscal weights for octahedral spherical top molecules.** Sep. JOURNAL OF MOLECULAR SPECTROSCOPY, v. 58, p. 158 - 164, 1975.
SP OT 91 - P.21
- 240 - CANTRELL, C. D. e GALBRAETH, H. W. Towards. **An explanation of collisionless multiplique - photon laser dissociation of SF₆.** Submetido ao OPTICS COMMUNICATIONS. (original + fotocópia).
SP OT 92 - P.22
- 241 - CARLSTEN, J. L.; SZOKE A. e RAYMER M. G. **Collisional redistribution and saturation of near - resonance scattered light.** Boulder: University of Colorado an National Bureau of Standards, s. d. 57p.
SP OT 93 - P.22
- 242 - CARLSON, E. H.; DIEKE, G. H. **The state of the Nd³⁺ Ion as derived from the absorption and fluorescence spectra of Nd Cl₃ and their zeeman effects*.** JOURNAL OF CHEMICAL PHYSICS, . v34, n.5, p. 1602 - 1609, maio 1961. (Nd). 93 - CARRA, S. e KONOWALOW D. D. **An improved intermolecu - lar potencial function.** Sep. NUOVO CIMENTO, v. 34, n.1, p. 205 - 214, out. 1964.
SP OT 94 - P.22
- 243 - CARRARO, F. L. **Algumas aplicações de raios - x na indústria cerâmica.** Sep. REV. CERÂMICA, n. 8 - 9, dez. 1956 e mar. 1957.
SP OT 95 - P.22
- 244 - CARRIER, L. W. e NUGENT, L. J. **Comparison of some recent experimental results of coherent and incoherent light scattering with theory.** Sep. APPLIED OPTICS, v. 4, n.11, p. 1457 - 1462, nov. 1965.
SP OT 96 - P.22

- 245 - CAVANANGH, C. J. e SMITH, R. G. **Optimum focusing conditions for optical second harmonic generation in LiNbO₃.** Sep. BELL TELEPHONE LABORATORIES, jan. 1967. 14p.
SP OT 97 - P.22
- 246 - CHANUSSET, G. e FRIDKIN, V. M. **The dynamic light scattering in the region of the ferroelectric phase transition in BaTiO₃.** Sep. APPLIED PHYSICS LETTERS, v. 32, n.11, p. 695 - 696, jun. 1978.
SP OT 98 - P.22
- 247 - CHENG, H. **Interaction of light with light in a plasma.** Sep. PHYSICAL REVIEW LETTERS, v. 14, n.12, p. 426 - 428, mar. 1965.
SP OT 99 - P.22
- 248 - CHANG, R. K.; LACINA, Brad e PERSHAN, P.S. **Raman scattering from mixed crystals (Ca(x)Sr(1 - x)F₂) and (Sr(x)Ba(1 - x)F₂).** Cambridge: Harvard University, s. d. 7p.
SP OT 100 - P.22
- 249 - CHEO, P.K. e COOPER H. G. **Ultraviolet ion laser transitions between 2300 and 4000 Å.** Sep. JOURNAL OF APPLIED PHYSICS, v. 36, n.6, p. 1862 - 1865, jun. 1965.
SP OT 101 - P.22
- 250 - CHEO, P.K. e COOPER H. G. Sep. BELL TELEPHONE LABORATORIES, jul., 1965. 4p.
SP OT 102 - P.23
- 251 - CHEO, P.K. e COOPER H. G. **UV and visible laser oscillations in fluorine, phosphorus, and chlorine.** Sep. APPLIED PHYSICS LETTERS, v. 7, n.7, p. 202 - 204, out. 1965.
SP OT 103 - P.23
- 252 - CHERKIN, Arthur. **"Anomalous" water: a silica dispersion?** Sep. NATURE, v. 224, n.5226, p. 1293, dez. 1969.
SP OT 104 - P.23
- 253 - CHIANG, T. C. e outros. **Mult - magnon luminescence sidebands in antiferromagnets.** Submetido ao PHYSICAL REVIEW LETTERS em dez. 1977.
SP OT 105 - P.23
- 254 - CHOISSEUR, John P. e WYSOCZANSKI. **A mult - channel image tube for photoelectron counting.** S. ref.
SP OT 106 - P.23
- 255 - CHU, Ben. **Laser scattering.** Sep. AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCES, v. 163, p. 967 - 968, fev. 1969.
SP OT 107 - P.23
- 256 - CHRISTOFFERSEN, Ralph E.; HAGSTROM, STANLAY e PROSSER, Franklin. **THE JOURNAL OF CHEMICAL PHYSICS**, v. 40, n.1, p. 236 - 237, jan. 1964.
SP OT 108 - P.23
- 257 - CHARK, Edward A.; e WEBER, Alfons. **Normal - coordinate treatment and computation of coriolis and methylsilane.** Sep. THE JOURNAL OF CHEMICAL

- PHYSICS, v. 45, n.5, p. 1759 - 1766, set. 1966.
SP OT 109 - P.23
- 258 - CLINTON, WILLIAN L. **New potencial energy function - I Empirical.** s. ref.
SP OT 110 - P.23
- 259 - CLINTON, WILLIAN L. **New potencial energy function - II Theoritical.** s. ref.
SP OT 111 - P.23
- 260 - CYVIN, S. J.; RAUCH, J. E.; DECIUS, J. C. **Theory of hyper - Raman effects (Nonlinear inelastic light scattering): selection rules and depolarization ratios for the second - order polarizability.** Sep. THE JOURNAL OF CHEMICAL PHYSICS, v. 43, n.11, p. 4083 - 4085, 01 dez. 1965.
SP OT 112 - P.23
- 261 - COHEN, M. G. e GORDON E. I. **Acoustic beam probing using optical techniques.** Sep. THE BELL SYSTEM TECHNICAL JOURNAL, p. 693 - 721, abr. 1965.
SP OT 113 - P.23
- 262 - COLLINS, R. J. e outros. **Coherence, narrowing, . . . case 38788 - 1.** Sep. BELL TELEPHONE LABORATORIES, out. 1960. 9p.
SP OT 114 - P. 23
- 263 - COLLINS, R. J. e GIORDMAINE J. A. **Maser oscillations in the bouncing - ball modess of large resonators.** Sep. BULLETIN OF THE AMERICAN PHYSICAL SOCIETY, v. 7, p. 446, 1962.
SP OT 115 - P. 23
- 264 - COLLINS, L. J. e SMITH, J. **Mirror mounts for experimental optical masers.** sep. J. SCIENCE INSTRUM., v. 19, p. 499 - 500.
SP OT 116 - P. 23
- 265 - COLLINSON, J. A. **A stable single - frequency, rf - excited gas laser at 6328A.** Sep. BELL TELEPHONE LABORATORIES, nov. 1964. 16p.
SP OT 117 - P. 23
- 266 - COLWELL, Priscila J. e KLEIN, Miles V. **Wave vector dependence and numerical value of the scattering efficiency for the resonant raman effect in CdS.** Urbana: University of Illinois, s. d. 13p.
SP OT 118 - P. 23
- 267 - CONWAY, John G.; GRUBER, John B., et alii. **Absorption and self - luminescence spectra of Cf³⁺ (5f9).** Sep. THE JOURNAL OF CHEMICAL PHYSICS, v. 36, n.1, p. 189 - 190, jan. 1, 1962. Com apêndices.
- APENSO:
- EVANS, Marjorie W. **Detonation sensitivity and failure diameter in homogeneous condensed materials.** Sep. THE JOURNAL OF CHEMICAL, v. 36, n.1, p. 103, 01 jan. 1962.
- FISCHER - HJALMARS, Inga **Note on some possible metastable states of H2.** S. n. t., p. 461 - 462. [14 set. 1961].

- GRUBER, John B.; CONWAY, John G. **Absorption spectrum and zeeman effect of Am³⁺ in LaCl₃.** Sep. THE JOURNAL OF CHEMICAL PHYSICS, p. 191 - 193, 01 jan. 1963.
- KAHLE, H. G.; KALBFLEISCH, H. **Spektrum, zeeman - effekt and electronenterme des dreiwertigen terbiums in kristallinen Salzen.** ZEITSCHFT FÜR PHYSIK, v. 166, p. 184 - 191, 1962.
- SP OT 119 - P.23
- 268 - COUDON, E. V. **Intensity - dependent absorption of light.** Sep. PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES, v. 52, n.3, p. 635 - 637, set. 1964.
SP OT 120 - P. 23
- 269 - COOKE, Charlie H.; MCKENNA, James; SKINNER, John G. **Pumping energy considerations in a ruby rod.** S. I. : BELL TELEPHONE LABORATORIES, 31 out. 1963. 22p.
SP OT 121 - P. 23
- 270 - COOPER, A. S. **An evolution of the quality of mirrors for optical masers.** Sep. BELL TELEPHONE LABORATORIES, jan. 1963. 5p.
SP OT 122 - P. 23
- 271 - COOPER, H. G. **Ion laser oscillations in sulfur.** Sep. BELL TELEPHONE LABORATORIES, jun. 1965. 8p.
SP OT 123 - P.24
- 272 - COUMOU, D. J.; MACKOR, E. L. e HIJMANS J. **Isotropic light - scattering in pure liquids.** Sep. TRANS FARADAY SOC., v. 60, p. 1539 - 1547, set. 1964.
SP OT 124 - P.24
- 273 - COURTENS, E. e SZOKE, A. **Time and spectral resolution in resonance scattering and resonance fluorescence.** Boulder: University of Colorado and National Bureau of Standards, s. d. 50p.
SP OT 125 - P.24
- 274 - COURTNEY - PRATT, J. S. **Some uses of optical masers in photography.** s. ref.
SP OT 126 - P.24
- 275 - COWAN, R. D. e DIEKE, G. H. **Self - absorption of spectrum lines.** Sep. REVIEWS OF MODERN PHYSICS, v. 20, n.2, p. 418 - 455, abr. 1948.
SP OT 127 - P.24
- 276 - COWLEY, R. A. **On the dielectric properties of an anharmonic crystal.** Sep. JOURNAL OF THE PHYSICAL SOCIETY OF JAPAN, v. 28, p. 239 - 241, 1970. (supl.).
SP OT 128 - P.24
- 277 - CROWELL, M. H. **Characteristics of mode - coupled lasers.** Sep. BELL TELEPHONE LABORATORIES, jan. 1965. 38p.
SP OT 129 - P.24
- 278 - CROSS, Paul C.; HAMER, R. M.; KING, Gilbert W. **The asymmetric rotor II. Calculation of dipole intensities and line classification.** Sep. THE JOURNAL OF CHEMICAL PHYSICS, v. 12, n.6, p. 210 - 243, jun. 1944.

- SP OT 130 - P.24
- 279 - COX, D. M. **Pulsed optoacoustic detection of multiple photon excitation in molecules.** Sep. OPTICS COMMUNICATIONS, v. 24, n.3, p. 336 - 340, mar. 1978.
- SP OT 131 - P.24
- 280 - CROCE, P. **Light scattering investigation in the nature of polished glass surfaces.** S. ref.
- SP OT 132 - P.24
- 281 - CROSKY, G. A. e WHAN, R. E. **Selective excitation of trivalent thulium ira intramolecular energy transfer.** Sep. THE JOURNAL OF CHEMICAL PHYSICS, v. 36, n.4, p. 863 - 865, fev. 1962.
- SP OT 133 - P.24
- 282 - CROSSWHITE, H. M. e FASTIE, W. G. **New spectrometer slit mechanism.** Sep. JOURNAL OF THE OPTICAL SOCIETY OF AMERICA, v. 46, n.2, p. 110 - 115, fev. 1956.
- SP OT 134 - P.24
- 283 - CROSSWHITE, H. M. **Photoelectric intensity measure - ments in the iron are.** Sep. SPECTROCHIMICA ACTA, v. 4, p. 122 - 151, 1950.
- SP OT 135 - P.24
- 284 - CSANAK, Gy e MCKOY, V. **A time dependent first - older Bethe - Goldstone theory.** Sep. J. PHYS. B: ATOM. MOLEC. PHYS., v. 11, n.2, p. 209 - 215, 1978.
- SP OT 136 - P.24
- 285 - DATA SHEET. Lithium gallium oxide single crystals - Liga O2. New Jersey: ISOMET, 15 mar. 1969.
- SP OT 137 - P.24
- 286 - DATA SHEET. Lithium fluoride vacuum ultraviolet grade. New Jersey: ISOMET, jul. 1969.
- SP OT 138 - P.24
- 287 - DATA SHEET. Acousto - optic Q - Switch model 451. New Jersey: ISOMET, 01 set. 1970.
- SP OT 139 - P.24
- 288 - DATA SHEET. Leat molybdate PbMoO4. New Jersey: ISOMET, 01 set. 1970.
- SP OT 140 - P.24
- 289 - DATA SHEET. Lithium niobate LiNbO3. New Jersey: ISOMET, 01 set. 1970.
- SP OT 141 - P.24
- 290 - DATA SHEET. Lithium iodate second harmonic generator. New Jersey: ISOMET, 01 set. 1970.
- SP OT 142 - P.24
- 291 - DATA SHEET. Sub - nanosecond Q - Switchy. Models 447 - 448.
- SP OT 143 - P.24
- 292 - DATA SHEET. Lithium niobateQ - Switches. Models 435 - 437. New Jersey: ISOMET, jan. 1971.

- SP OT 144 - P.24
293 - DATA SHEET. Co₂ Laser attenuator L - 50 series. New Jersey: ISOMET, mar. 1971.
SP OT 145 - P.24
294 - DATA SHEET. Single crystal specimens. New Jersey: ISOMET, jun. 1971.
SP OT 146 - P.24
295 - DATA SHEET. Co₂ Laser polarizers L - 40 series. New Jersey: ISOMET, out. 1971.
SP OT 147 - P.24
296 - DATA SHEET. Bismuth germanium oxide (Bi₁₂GeO₂₀). New Jersey: ISOMET, s. d.
SP OT 148 - P.24
297 - DAVIS, E. T.; ALDEU, W. B. e WYETH, F. H. **Precise heat for growing silicon crystals.** Reimpresso Electronic, fev. 1957.
SP OT 149 - P.25
298 - DAVIS, H. L. e BEAM, J. E. **Perturbation formulas for the energy levels of the slightly asymmetric top.** Sep. JOURNAL OF MOLECULAR SPECTROSCOPY, V. 6, P.312 - 318, 1961.
SP OT 150 - P.25
299 - **Design of short pulse flashe lamp systems for dye lasers and flash photolysis.** Sunnyvale: ILC, s. d. (Technical Bulletin n.5).
SP OT 151 - P.25
300 - DEVLIN, G. E e outros. **Composite rod optical masers - cases 38139 - 9 and 20878 - 4.** Sep. BELL TELEPHONE LABORATORIES, set. 1961.
SP OT 152 - P.25
301 - DEVOE, Ralph G. e BREWER, Richard G. **Optical cohe - rent transients by laser frequency switching.** San Jose: IBM Research Laboratory, s. d. 8p.
SP OT 153 - P.25
302 - DIDOMENICO Jr., M. **Mode control and mode selection in lasers.** Murray Hill: BELL TELEPHONE LABORATORIES, s. d. 47p.
SP OT 154 - P.25
303 - DIEKE, G. H. **Bands from doubly excited levels of the hydrogen molecule.** Sep. PHYSICAL REVIEW, v. 76, n.1, p 50 - 57, jul. 1949.
SP OT 155 - P.26
304 - DIEKE, G. H e SAMP, R. **Fluorescence and spectrum and the energy levels of the Sm²⁺ Ion.** Sep. THE JOURNAL OF CHEMICAL PHYSICS, v. 36, n.2, p. 371 - 177, jan. 1962.
SP OT 156 - P.26
305 - DIEKE, G. H. **The 2s1 - 2p1 bands of the hydrogen molecule.** Sep. PHYSICAL REVIEW, v. 50, p. 797 - 805, nov., 1936.
SP OT 157 - P.26
306 - DIEKE, G. H. **The molecular spectra of tritium and related spectra III.** Annual report. Johns Hopkins University. Report no NYO 693, 1951.

- SP OT 158 - P.26
- 307 - DIEKE, G. H. **The molecular spectrum of higrogen and its isotopes.** Sep. JOURNAL OF MOLECULAR SPECTROSCOPY, v. 2, p. 494 - 517, 1958. (Inclui fotocópia parcial do Trabalho).
- SP OT 159 - P.26
- 308 - DIEKE, G. H. **The use of iron lines as intensity standards.** Sep. JOURNAL OF THE OPTICAL SOCIETY OF AMERICA, v. 33, n.8, p. 425 - 434, ago. 1943.
- SP OT 160 - P.26
- 309 - DIEK G. H. **Quaterly Report, april/june, 1951.** Baltimore: The Johns Hopkins University, 1951.
- SP OT 161 - P.26
- 310 - DIEKE, G. H. e SARUP, R. **Fluorescence Spectrum of PrCl_3 and the Level of the Pr^{+++} Ion.** Sep. de THE JOURNAL OF CHEMICAL PHYSICS, v. 29, n.4, p.741 - 745, out. 1958.
- SP OT 162 - P.26
- 311 - DIEKE, G. H.; CROSSWHITE, H. M. **Absorption spectrum and magnetic properties of ytterbium chloride.** Reimpresso: THE JOURNAL OF THE OPTICAL SOCIETY OF AMERICA, v. 46, n.10, p. 885 - 889, out. 1956. (Yb).
- SP OT 163 - P.26
- 312 - DIEKE, G. H.; LEOPOLD, L. **Absorption, fluorescente, and magnetic properties of gadolinium chloride ($\text{GdCl}_3 \cdot 6\text{H}_2\text{O}$).** Reimpresso: JOURNAL OF THE OPTICAL SOCIETY OF AMERICA, v. 47, n.10, p. 944 - 954, out. 1957. (Gd).
- SP OT 164 - P.26
- 313 - DIEKE, G. H.; SINGH, Shobha. **Absorption, fluorescence, and energy levels of the dysprosium ion.** Reimpresso: JOURNAL OF THE OPTICAL SOCIETY OF AMERICA, v. 46, n.7, p. 495 - 499, jul. 1956. (Dy).
- SP OT 165 - P.26
- 314 - DIEKE, G. H.; SINGH, Shobha. **Absorption and fluorescence spectra with magnetic properties of ErCl_3 .** Reimpresso: JOURNAL OF CHEMICAL PHYSICS, v. 35, n.2, p. 555 - 563, ago. 1961. (Er).
- SP OT 166 - P.26
- 315 - DIGIOVANI, A. E. **Equipment and cooling techniques used in the continuous operation of solid state optical masers.** Sep. BELL TELEPHONE LABORATORIES, jun. 1962.
- SP OT 167 - P.26
- 316 - DIXON, R. W. **Acoustic diffraction of light in anisotropic media.** Murray Hill: BELL TELEPHONE LABORATORIES, s. d. 21p.
- SP OT 168 - P.26
- 317 - DOOD, D. M. **The optical properties of ruby ($\text{Al}_2\text{O}_3:\text{Cr}^{3+}$).** Sep. BELL TELEPHONE LABORATORIES, dez. 1960.
- SP OT 169 - P.26
- 318 - DREYFUS, Bernard; VERDONE - THUILLIER, Janine; VEYSSIE - COUNILLON,

- Madeleine, transmise par Louis Néel. **Spectrographie cristalline: spectre d'absorption du ferrite d'erbicim à struture grenat dans le proche infrarouge.** Sep. ACADEMIE DES SCIENCES, p. 646 - 648, 14 jan. 1963.
- SP OT 170 - P.27
- 319 - DUARDO, J. A. e JOHNSON, F. M. **Evidence for quenching of stimulated raman scattering of 5289 Å laser radiation by mixed two - photon absorption.** s.ref.
- SP OT 171 - P.27
- 320 - DUARDO, J. A.; JOHNSON, F. M. e EL - SAYED, M. A. **A new method for observing the inverse raman (absorption) spectra.** Sep. PHYSICS LETTERS, v. 21, n.2, p. 168 - 169, maio 1966.
- SP OT 172 - P.27
- 321 - DUCULOT, Camille, transmise par Jean Cabannes. **Physique moleculaire - Determination de la structure de l'acétilmé - thylcarbinol par spectrographie infrarouge.** Extraído de : Comples rendus des séances de L'Academie des Sciences, v. 241, p. 1738 - 1740, 14 dez. 1955.
- SP OT 173 - P.27
- 322 - DUGUAY, M. A.; SHAPIRO, S. L. e RENTZEPIS, P.M. **Spontaneous appearance of picosecond pulses in ruby and Nd: glass lasers.** Murray Hull: BELL TELEPHONE LABORATORIES, s. d. 5p.
- SP OT 174 - P.27
- 323 - DUPREE, R. e FORD, C. J. **Magnetic susceptibility of the noble metals around their melting points.** Sep. PHYSICAL REVIEW B, v. 8, n.4, p. 1780 - 1782, ago. 1973. 2 ex.
- SP OT 175 - P.27
- 324 - DUVAL, Clément e LECOMTE, Jean. **Interprétation des spectres d'absorption infrarouges de phosphites et d'hypophosphites métalliques.** Sep. MIKROCHIMICA ACTA, V. 1 - 6, 1956.
- SP OT 176 - P.27
- 325 - DUVAL, Clément e LECOMTE, Jean. **Spectres d'absorption infrarouges de phosphites et d'hipophosphites métalliques, leur interprétation.** Extraído de Académie des Sciences, t. 240, p. 66 - 68, janvier, 1955.
- SP OT 177 - P.27
- 326 - EERKENS, J. W. **Spectral considerations in the laser isotope separation of uranium hexafluoride.** Sep. APPL. PHYS., v. 9, maio 1976.
- SP OT 178 - P.27
- 327 - EICK, R. H. **Brewster's angle gas maser to study infrared radiaton from 1to 9 microns.** Sep. BELL TELEPHONE LABORATORIES, jun. 1965. 7p.
- SP OT 179 - P.27
- 328 - EICK, R. H. **Adjustable mirror mount.** Sep. BELL TELEPHONE LABORATORIES, abr. 1963. 2p.
- SP OT 180 - P.27
- 329 - EISENBERG, D. e outros. **Acoustic anomalies in John - Teller coupled systems.** S.

- ref.
- SP OT 181 - P.27
- 330 - ELLIOTT, J. C. **Fenther studies of the structure of dental. . . spectroscopy.** Sep. DENTAL RESEARCH, v. 41, p. 1251, 1962.
- SP OT 182 - P.27
- 331 - ERLANDER, S. R. **The structure of water.** Sep. SCIENCE JOURNAL, p. 60 - 65.
- SP OT 183 - P.27
- 332 - EVALUATION and improvement of x - ray emission analysisof raw - mix elements. NEWS LETTER, v. 13, nº3, jul. - ago. - set. 1960. (Spectrographer's).
- SP OT 184 - P.27
- 333 - FARADAY, Bruce J. **Colors Centers Produced in KCl and KBr by Prolonged X Irradiations at Low Temperatures.** PHYSICAL REVIEW, v.138, n.3^A, maio 1965.
- SP OT 185 - P.27
- 334 - FAGEN, Willin F. e SHOVAR, Mark. **The subcritical reator at the University of Flórida.** Engineering Progress at the University Flórida, v. 11, n.9, 32p. set. 1957. (Bulletin Series, 92).
- SP OT 186 - P.27
- 335 - FAUST, W. L. e MCFARLANE, R. A. **Line strengths for noble. . . wavelengths.** Sep. BELL TELEPHONE LABORATORIES, fev. 1963. 12p.
- SP OT 187 - P.27
- 336 - FELD, Michael. **Problem sets for physical science today.** Del Mar: Massachusetts Institute of Techonology, 1973.
- SP OT 188 - P.27
- 337 - FELUMB, René. Dixanthogénés III. **Contribution à la configuration moléculaire par l' emploi de spectres infrarouges.** Extraído Bulletin de la Société Chemique de France, p. 890 - 894, 1957.
- SP OT 189 - P.27
- 338 - FEOFILOV, P.P.; KAPLYANSK II. **Spectra of divalent rare earth ions in crystals of alkaline earth fluorides. I. Samarium.** s. n. t., [1961]. P.272 - 277.
- SP OT 190 - P.27
- 339 - FIELD, R. L. **Operating parameters of DC - Excited He - Ne gas lasers.** Sep. BELL TELEPHONE LABORATORIES, set. 1966. 8p.
- SP OT 191 - P.28
- 340 - FITZGERALD, Warren E.; JANZ, George J. **Vibrational Spectra and molecular structure.** v. 1, p. 49 - 60, 1957.
- SP OT 192 - P.28
- 341 - FLEURY, P.A. e WORLOCK, J. M. **Electric - field - induced raman scattering in SrTiO₃ and KtaO₃.** Sep. THE PHYSICAL REVIEW, v. 174, n.2, p. 613 - 623, out. 1968.
- SP OT 193 - P.28
- 342 - FONTAINE, D.; KRAUZMAN, M e PICK, R. M. **Plastic phases of NaCn and KCn: a**

- light scattering study.** S. Ref. SP OT 194 - P.28
- 343 - FORK, R. L. e PATEL, C. K. N. **Broadband magnetic field tuning of optical masers.** Sep. BELL TELEPHONE LABORATORIES, mar. 1963. 6p. SP OT 195 - P.28
- 344 - FORK, Richard L. e PATEL, C. K. N. **Broadband magnetic field tuning of optical masers.** Sep. APPLIED PHYSICS LETTERS, v. 2, n.9, p. 180 - 181, maio 1963. SP OT 196 - P.28
- 345 - FORK, R. L. e LEVINE, M. W. **Finesse and transmission enhancement in active interferometers.** Sep. BELL TELEPHONE LABORATORIES, nov. 1963. 4p. SP OT 197 - P.28
- 346 - FORK, R. L; HARGROVE, L. E. e POLLACK, M. A. Sep. BELL TELEPHONE LABORATORIES, maio 1964. 6p. SP OT 198 - P.28
- 347 - FORK, R. L. e PATEL C. K. N. **Magnetic field tuning of gaseous laser oscillators.** Sep. BELL TELEPHONE LABORATORIES, dez. 1963. 4p. SP OT 199 - P.28
- 348 - FORK, R. L; HERRIOT, D. R. e KOGELNIK, H. **A scanning spheri - cal mirror interferometer for spectral analysis of laser radiation.** Sep. BELL TELEPHONE LABORATORIES, nov. 1963, 38p. SP OT 200 - P.28
- 349 - FOX, A. G. e LI, Tingye. **Effects of tilted mirrors in a maser interferometer - case 20564 - 26.** Sep. BELL TELEPHONE LABORATORIES, mar. 1962. 13p. SP OT 201 - P.29
- 350 - FRENCH, M. J. e LOUG, D. A. **A versatile computer - controlled spectrometer for hyper rayleigh and hyper raman spectroscopy.** Sep. JOURNAL OF RAMAN SPECTROSCOPY, v. 3, p. 391 - 406, 1975. SP OT 202 - P.29
- 351 - FOX, A. G. e LI, Tingye. **Modes in a maser interferometer with curved mirrors.** Sep. BELL TELEPHONE LABORATORIES, set. 1962. 15p. SP OT 203 - P.29
- 352 - FREIRE, Gabriel F. **Active waves in solid - state plasmas.** Sep. INST. J. ELECTRONICS, v. 28, n.1, p. 1 - 18, 1970. SP OT 204 - P.29
- 353 - FREUND, I e RENTZEPES, P.M. **Second Harmonic genera - tion in liquid crystals.** Sep. BELL TELEPHONE LABORATORIES, fev. 1967. 4p. SP OT 205 - P.29
- 354 - FREED, C. **Sealed - off operation of stable co lasers.** Submetido ao JOURNAL OF APPLIED PHYSICS, mar. 1971. 5p. SP OT 206 - P.29

- 355 - FRISCH, H. L. e MCKENNA, J. **The double scattering of electromagnetic radiation.** Sep. BELL TELEPHONE LABORATORIES, dez. 1964. 31p.
SP OT 207 - P.29
- 356 - GAINON, Denis J. A.; JAFFE, Hans e SLIKER, T. R. **Optical observation of elastic resonances in NH₄H₂PO₄.** Sep. JOURNAL OF APPLIED PHYSICS, v. 35, n.4, p. 1166 - 1168, abr. 1964.
SP OT 208 - P.29
- 357 - GALBRAITH, H. W. e ACKERHALT, J. R. **Calculation of the temperature dependence of the multiphoton absorption spectrum of SF₆.** Sep. OPTICS LETTERS, v. 3, n.3, p. 109 - 111, set. 1978.
SP OT 209 - P.29
- 358 - GALBRAITH, Harold W. **Single - photon transition moments in excited states of spherical - top molecules.** Sep. OPTICS LETTERS, v. 3, n.4, p. 154 - 155, out. 1978.
SP OT 210 - P.29
- 359 - GALEMBECK, Fernando e BERNARDES, Newton. **A novl effect of coupled fluxes.** S. ref. 10p.
SP OT 211 - P.30
- 360 - GALKIN, L. N. e TEOFILOV, P.P. **Luminescence spectra of trivalent uranium ions.** S. ref.
SP OT 212 - P.30
- 361 - GARMIRE, E. **The angular distribution of stimulated raman emission in liquids.** Sep. PHYSICS LETTERS, v. 17, n. 3, p. 251 - 252, jul. 1965.
SP OT 213 - P.30
- 362 - GARRET, C. G. B. e DUGUAY, M. A. **Theory of the optical frequency translator.** Sep. APPLIED PHYSICS LETTERS, v. 9, n.10, p. 374 - 377, nov. 1966.
SP OT 214 - P.30
- 363 - GEBHARDT, W. e KUNHEIT H. **Temperature of F - centre absorption and emission.** Sep. PHYSICS LETTERS, v. 11, n.1, p.15 - 16, jul. 1964.
SP OT 215 - P.30
- 364 - GEE, A. Roger e O'SHEA, Donald C. **A dewar for use in crystal raman spectroscopy.** S. ref.
SP OT 216 - P.30
- 365 - GEE, A. Roger e O'SHEA, Donald C e CUMMINS, Herman Z. **Raman scattering and fluorescence in calcium fluoride.** Sep. SOLID STATE COMMUNICATIONS, v. 4, n.1, p. 43 - 46, 1965.
SP OT 217 - P.30
- 366 - GELLER, S. e WOOD, E. A. **Crystallographic studies of perovskite - like compounds I rare earth orthoferrites and YFeO₃, YCrO₃ e YAIO₃.** Sep. ACTA CRYST., v. 9, p. 563 - 568, 1956.
SP OT 218 - P.30

- 367 - GEORGE, T. V.; SLAMA, L. e YOKOYAMA, M. **Intensity distribution of ruby laser beams.** Sep. APPLIED OPTICS, v. 2, n.11, p. 1198 - 1201, nov. 1963.
SP OT 219 - P.30
- 368 - GERGE, T. V. e outros. **Molecular scattering of ruby laser light.** Sep. PHYSICAL REVIEW, v. 137, n.2A, p. 369 - 380, jan. 1965.
SP OT 220 - P.30
- 369 - GERMAN, K. R. e KIEL, A. **Radiative and non - radiative transitions in LaCl₃, Pr and PrCl₃.** Sep. BELL TELEPHONE LABORATORIES, maio 1973. 23p.
SP OT 221 - P.30
- 370 - GERTHSEN, P. e outros. **The small polaron problem and optical effects in barium titanate.** Sep. SOLID STATE COMMUNICATIONS, v. 3, n.8, p. 165 - 168, 1965.
SP OT 222 - P.30
- 371 - GESCHWIND, S. e outros. **Sharp line fluorescence, EPR and thermoluminescence of Mn⁴⁺ in alfa - Al₂O₃.** Sep. LOW SYMPOSIUM PARAMAGNETIC RESONANCE, v. 1, p. 113 - 124, 1963.
SP OT 223 - P.30
- 372 - GEUSIC, J. E. e SCOVIL, H. E. D. **A unidirectional traveling wave optical maser.** Sep. THE BELL SYSTEM TECHNICAL JOURNAL, v. 41, n.4, p. 1371 - 1397, jul. 1962.
SP OT 224 - P.30
- 373 - GIORDMAINE, J. A. e RENTZEPES, P.M. **Coherent sum frequency generation in optically active liquids.** Sep. IEEE JOURNAL OF QUANTUM ELECTRONICS, v. QE 2, n.32, abr. 1966.
SP OT 225 - P.30
- 374 - GIORDMAINE, J. A. **The interaction of light with light.** Sep. SCIENTIFIC AMERICAN, v. 210, n.4, p. 38 - 49, abr. 1964. original e fotocópia.
SP OT 226 - P.31
- 375 - GIORDMAINE, J. A. e HOWE, John A. **Intensity - induced optical absorption cross section in CS₂.** Sep. PHYSICAL REVIEW LETTERS, v. 11, n.5, p. 207 - 209, set. 1963.
SP OT 227 - P.31
- 376 - GIORDMAINE, J. A. e KAISER, W. **Light scattering by cohe - rently driven lattice vibrations.** Sep. BELL TELEPHONE SYSTEM. Monografia 5183, 13p.
SP OT 228 - P.31
- 377 - GIORDMAINE, J. A. **New method for paramagnetic relaxation time measurements.** Sep. BULLETIN OF THE AMERICAM PHYSICAL SOCIETY, v. 5, p. 418, 1960.
SP OT 229 - P.31
- 378 - GIORDMAINE, J. A. e outros. **A maser amplifier for radio astronomy AT X - Band.** Sep. PROCEEDINGS OF THE IRE, v. 47, n.6, p. 1062 - 1069, jun. 1959.
SP OT 230 - P.31
- 379 - GIORDMAINE, J. A. **Mixing of light beams in crystals.** Sep. PHYSICAL REVIEW

- LETTERS, v. 8, n.1, p. 19 - 20, jan. 1962.
- SP OT 231 - P.31
- 380 - GIORDMAINE, J. A. e KAISER, W. **Mode selecting prism reflectors for optical masers.** Sep. JOURNAL OF APPLIED PHYSICS, v. 35, n.12, p. 3446 - 3451, dez. 1964.
- SP OT 232 - P.31
- 381 - GIORDMAINE, J. A. e WAUG, T. C. **Molecular beam formation by long parallel tubes.** Sep. JOURNAL OF APPLIED PHYSICS, v. 31, n.3, p. 463 - 471, mar. 1960.
- SP OT 233 - P.31
- 382 - GIORDMAINE, J. A. e WAUG, T. C. **Molecular beam formation by long parallel tubes.** Sep. QUANTUM ELECTRONICS A SYMPOSIUM, 1960.
- SP OT 234 - P.31
- 383 - GIORDMAINE, J. A. **Nonlinear optical properties of liquids.** Sep. THE PHYSICAL REVIEW, v. 138, n.6A, p. 1599 - 1606, jun. 1965.
- SP OT 235 - P.31
- 384 - GIORDMAINE, J. A. e outros. **Observations of Jupiter and mars at 3 - cm wave length.** Sep. ASTRONOMICAL JOURNAL, v. 64, p. 332, 1959.
- SP OT 236 - P.31
- 385 - GIORDMAINE, J. A. e MILLER, Roberto C. **Optical parametric oscillation in LiNbO₃.** Sep. PHYSICS OF QUANTUM ELECTRONICS, P.31 - 42, 1965.
- SP OT 237 - P.31
- 386 - GIORDMAINE, J. A. e outros. **Paramagnetic relaxation at very low temperatures.** Sep. THE PHYSICAL REVIEW, v. 109, n.2, P.302 - 311, jan. 1958.
- SP OT 238 - P.31
- 387 - GIORDMAINE, J. A. **Recent experiments in non - linear optics.** Sep. QUANTUM ELECTRONICS. Proceedings of the Third International Congress, p. 1549, 1964.
- SP OT 239 - P.31
- 388 - GIORDMAINE, J. A. **A ruby maser radiometer, and the measurement of centimeter wave radiaton from Venus, masrs and Jupiter.** Sep. DISSERTATION ABSTRACTS, v. 21, P.2760, 1961.
- SP OT 240 - P.31
- 389 - GIORDMAINE, J. A. e MILLER, Roberto C. **Tunable coherent parametric oscillation in LiNbO₃ at optical frequencies.** Sep. PHYSICAL REVIEW LETTERS, v. 14, n.24, p. 973 - 976, jun. 1965.
- SP OT 241 - P.32
- 390 - GIRARD, Maurice e LECONTE, Jean. **Contribution par spectrographie infrarouge, . . et bismuthotartriques.** Sep. JOURNAL DE PHYSIQUE ET LE RADIUM, t. 17, p. 9 - 15, jan. 1956.
- SP OT 242 - P.32
- 391 - GLASS, A. M. e outros. **Anomalous dielectric behavior and reversible pyroelectricity in roller quenched LiNbO₃ and LiTaO₃ glass.** Sep. APPLIED PHYSICS LETTERS, v. 31, n.4, p. 249 - 251, ago. 1977.

- SP OT 243 - P.32
- 392 - GLASS, A. M.; NASSU, K. e SHIENER, J. W. **Evolution of ferroelectricity in ultrafine - grained Pb₅Ge₃O₁₁ crystallized from the glass.** Sep. JOURNAL APPLIED PHYSICS, v. 48, n.12, p. 5213 - 5216, dez. 1977.
- SP OT 244 - P.32
- 393 - GLASS, A. M. e LINES, M. E. **Low temperature behavior of spontaneous polarization in LiNbO₃ and LiTaO₃.** Sep. PHYSICAL REVIEW B, v. 13, n.1, p. 180 - 191, jan. 1976.
- SP OT 245 - P.32
- 394 - GO, S.; BILZ, H e CARDON, M. **Bond polarizabilities and energy bands of covalent semiconductors.** S. ref.
- SP OT 246 - P.32
- 395 - GOLDEN, S. **An asymptotic expression for the energy levels of the rigid asymmetric rotor.** Sep. THE JOURNAL OF CHEMICAL PHYSICS, v. 16, n.1, p. 78 - 86, jan. 1948.
- SP OT 247 - P.32
- 396 - GOLDEN, S. **An asymptotic expression for the energy levels of the rigid asymmetric Rotor II. Centrifugal distortion correction.** Sep. THE JOURNAL OF CHEMICAL PHYSICS, v. 16, n.3, p. 250 - 253, mar. 1948.
- SP OT 248 - P.32
- 397 - GOLDMAN, M. e SHEN, L. **Spin - Spin relaxation in LaF₃.** Sep. PHYSICAL REVIEW, v. 144, n.1, p. 321 - 331, abr. 1966.
- SP OT 249 - P.32
- 398 - GORBAN, I. S.; TIMOFEEV. V. B. e TROLOVA, E. F. **Spectroscopic observation of excitation scattering in a crystal.** Sep. SOVIET PHYSICS - SOLID STATE, v. 5, n.4, p. 711 - 714, out. 1963.
- SP OT 250 - P.32
- 399 - GORDON, E. I. e COHEN, M. G. **High - resolution brillouin scattering.** Sep. PHYSICAL REVIEW, v. 153, n.1, p. 201 - 207, jan. 1967.
- SP OT 251 - P.32
- 400 - GÖILECH, P.; KARRAS, H. e KÖTITZ, G. **On the excitation of the spontaneous fluorescence of synthetic CaF₂/V³⁺ crystals.** Sep. PHYSICAL STAT. SOL., v. 3, p. 1935 - 1940, 1963.
- SP OT 252 - P.32
- 401 - GOSSO, J. P. e MOCH, P. **Raman scattering by magnetic... antiferromagnets.** S. ref.
- SP OT 253 - P.32
- 402 - GRANT, W. B. e outros. **Investigation of K=O phonons in Bi, Cd, Mg, and Zn by raman scattering.** Sep. PHYS. STAT. SOL., v. 60, p. 331 - 340, 1973. 2 ex.
- SP OT 254 - P.32
- 403 - GRANT W. B. e RADHAKRISHNA, S. **Raman scattering from CrO₄²⁻ ions at low temperatures.** sep. SOLID STATE COMMUNICATIONS, v. 13, n.1, p. 109 - 111,

1973.

SP OT 255 - P.32

- 404 - GREGG, David e THOMAS, Scott J. **Momentum transfer produced by focused laser giant pulses.** Sep. JOURNAL OF APPLIED PHYSICS, v. 37, n.7, p.2787 - 2789, jun. 1966.

SP OT 256 - P.32

- 405 - GREYTAK, T. J. e BENEDEK, G. B. **The spectrum of light scattered from thermal fluctuations in gases.** S. ref. 13p.

SP OT 257 - P.33

- 406 - GROB, K. **Theory of stimulated raman emission.** Submetido ao Zeitschrift für Physik. 44p.

SP OT 258 - P.33

- 407 - GROSSMAN, Jack J. e MURAMOTO, M. **A tunable laser line filter polychromator for gas temperature measurements using laser raman scattering.** Sep. NASA LEWIS RESEARCH CENTER, CR - 134, 771, 28p.

SP OT 259 - P.33

- 408 - GRONE, R. E.; WU, F. U. e EZEKIEL, S. **Measurement of the spectrum of resonance fluorescence from a two - level atom in an intense monochromatic field.** Sep. PHYSICAL REVIEW A, v. 15, n.1, p. 227 - 233, jan. 1977.

SP OT 260 - P.33

- 409 - GRUBER, John B. **An analisys of the infrared absorption spectrum of Am(5f6) in LaCl₃.** Sep. JOURNAL OF CHEMICAL PHYSICS, v. 35, n.3, p. 2186 - 2192, dez. 1961.

SP OT 261 - P.33

- 410 - GUDMUNDSEN, R. A.; MARSH, O. J. e MATOVICH, E. **Fluorescence of Europium thenoyl trifluoroacetone. Determination of absolute quantum efficiency.** Sep. THE JOURNAL OF CHEMICAL PHYSICS, v. 39, n.2, p.272 - 274, jul. 1963.

SP OT 262 - P.33

- 411 - GUNDERSEN, Martin. **Proposal for research and development of an infrared detector and image converter.** S. ref.

SP OT 263 - P.33

- 412 - GÜRS, von K. **Bestimmung der lebensdauer von anregungszus tänden durch zeitmessung ans optischen masern.** Sep. Z. NATURFORSCHG, v. 17, p. 883 - 885, 1962.

SP OT 264 - P.33

- 413 - HADNI, Armand. **Petit spectromètre a réseau pour l'infrarouge lointan.** Sep. JOURNAL DE PHYSIQUE ET LE RADIUM, v. 17, p. 77, jan. 1956.

SP OT 265 - P.34

- 414 - HADNI, Armand, présentée par Jean Cabennes. **Spectroscopie Moléculaire; élimination de la vapeur d'eau à l'intérieur d'un spectrographe pour l'infrarouge lointain et spectre de l'alcool méthylique.** Sep. COMPTES RENDUS DES SCEANCES DE L'ACADEMIE DES SCIENCES, v. 238, p. 573 - 575, 1 fev., 1954.

- SP OT 266 - P.34
- 415 - HADNI, Armand, présentée par Louis Hackspill. **Determination et interprétation des basses fréquences d'absorption infrarouge de l'éther diméthylique; application au calcul des fonctions thermodynamiques.** Extraído: COMPTES RENDUS DES SCIENCES DE L'ACADEMIE DES SCIENCES, v. 239, p. 349 - 351, 21 jul. 1954. Notas.
- SP OT 267 - P.34
- 416 - HADNI, Armand; MICHEL, René - Lucien, transmise par Gustave Ribaud. **Spectroscopie Moléculaire: modifications dans les spectres d'absorption infrarouge de titanate de baryum.** Extraído: COMPTES RENDUS DES SÉANCES DE L'ACADEMIE DES SCIENCES, v. 244, p. 2602 - 2603, 20 maio 1957. Notas.
- SP OT 268 - P.34
- 417 - HADNI, Armand, transmise par Jean Cabannes. **Spectroscopie moléculaire: Structure fine des raies de rotation de l'ammoniac de $J''=14$ à $J''=18$.** Extraído: COMPTES RENDUS DES SCIENCES, v. 237, P.317 - 319, 27 jul. 1953. Notas.
- SP OT 269 - P.34
- 418 - HALL, L. A.; DIEKE, G. H. **Fluorescent lifetimes of uranyl salts at different temperatures.** Reimpresso de JOURNAL OF THE OPTICAL SOCIETY OF AMERICA, v. 47, n.12, p. 1092 - 1096, dez. 1957.
- SP OT 270 - P.34
- 419 - HAMILTON, David C.; MCWHORTER, A. L. **Raman scattering from spin - density fluctuations in GaAs.** S. n. t., 25 set. 1968. 13p.
- SP OT 271 - P.34
- 420 - HAMILTON, David C. **Resonant Raman scattering from 10 phonons in polar semiconductors.** S. n. t., jul. 1969. 17p.
- SP OT 272 - P.34
- 421 - HARDY, Walter N.; SILVERA, Isaac F.; KLUMP, K. N., et alii. **Optical phonons in solid hydrogen and deuterium in the ordered state.** Sep. PHYSICAL REVIEW LETTERS, v. 21, n.5, P.291 - 294, 29 jul. 1968.
- SP OT 273 - P.34
- 422 - HARRIS Jr., F. S.; SHERMAN, G. C.; MORSE, F. C. **Experimental comparison of scattering of coherent and incoherent light.** Reimpresso de IEEE TRANSACTIONS ON ANTENNAS AND PROPAGATION, v. AP - 15, n.1, p. 141 - 147, jan. 1967.
- SP OT 274 - P.34
- 423 - HARTTWIG, Chuck. **The magniton or the polariton effect in magnetic crystals.** S. n. t. s. d. 15p.
- SP OT 275 - P.34
- 424 - HARWOOD, Julius J.; SILVERMAN, Shileigh. **Establishment of a faculty of applied science and technology at the Hebrew University.** S. n. t. [1968]. 28p. Relatório de visita a vários institutos israelenses no período de 22 de out. a 7 de nov. 1968.
- SP OT 276 - P.34
- 425 - HAUS, H. A.; KELLEY, P.L.; ZEIGER, H. J. **Generation of stokes and anti - stokes**

- radiation in raman media.** Sep. PHYSICAL REVIEW, v. 138, n.4A, p. A960 - 971, 17 maio 1965.
SP OT 277 - P.34
- 426 - HAY, P. Jeffrey; WADT, Willard R.; DUNNING Jr.; Thomas H. **Theoretical studies of molecular electronic transition lasers.** [Los Alamos; New Mexico: Univesity Alamos Scientific Laboratory. s. d. Ca 60p. Submetido a: Annual Review of Physical Chemistry.
SP OT 278 - P.34
- 427 - HAYASHI, Shinji; KANAMORI, Hitoshi. **Group theoretical selection rules for two - phonon processes in rocksalt type crystals under electrostatic fields.** Reimpresso de: JOURNAL OF THE PHYSICAL SOCIETY OF JAPAN, v. 37, n.5, p. 1399 - 1405, nov. 1974.
SP OT 279 - P.35
- 428 - HENDEE, C. F.; FINE, S.; BROWN, W. B. **Gaz - flow proportional couter for soft x - ray detection.** Sep. THE REVIEW SCIENTIFIC INSTRUMENTS, v. 27, n.7, p. 531, jul. 1956.
SP OT 280 - P.35
- 429 - HENDRA, P.J.; STRATTON, P.M. **Laser - Raman spectroscopy.** S. n. t. s. d. 31 p.
SP OT 281 - P.35
- 430 - HELLER, Wilfried. **Range of practical validity of the Debye and the Rayleigh equations for determining molecular weights from light scattering and methods allowing a limited extension of this range.** Sep. JOURNAL OF POLYMER SCIENCE: PART A, v. 3, p. 3313 - 3329, 1965.
SP OT 282 - P.35
- 431 - HELLWARTH, Robert; CHERLOW, Joel; TIENTSAI YANG. **Frequency dependence of the nonlinear optical susceptibility of five glasses.** S. n. t., s. d. 8p; . **Origin and frequency dependence of the nonlinear.** S. n. t., s. d. 11p.
SP OT 283 - P.35
- 432 - HERZBERG, G.; HOWE, L. L. **The lyman bands of molecular hydrogen.** Sep. CANADIAN JOURNAL OF PHYSICS, v. 37, p. 636 - 659, 1959.
SP OT 284 - P.35
- 433 - HIDALGO, Antonio. **Spectres d'absorption infrarouge du thiophéne et de dérivés mono et disubstitués: attribution des modes de vibration aux bandes enregistrées.** Sep. LE JOURNAL DE PHYSIQUE ET LE RADIUM, v. 16, p. 366 - 370, maio 1955. Partie d'une thèse de doctorat, Madrid 1953.
SP OT 285 - P.35
- 434 - HIRLIMANN, C.; RESERMAN, R.; BALKANSKI, M. **Raman study of one and two phonons coupling in mixed Ga(x)In(1 - x)P.** S. n. t., s. d. 2p.
SP OT 286 - P.35
- 435 - HIRSCHFELD, Tomas. **Correction of Raman cross section from laboratory to remote spectrometer geometries.** S. n. t., s. d. Informação de propriedade de Block Engineering.
SP OT 287 - P.35

- 436 - HIRSCHFELD, Tomas; KLAINER, Stanley. **Air pollution detection by remote Raman spectroscopy.** S. n. t. 15p.
SP OT 290 - P.35
- 437 - HIRSHFELD, M.; DIEKE, G. H. **Spectroscopic study of reactions in a hydrogen discharge.** Maryland: The Johns Hopkins University, 1950. (Bumblebee Report, 129).
SP OT 289 - P.35
- 438 - "HOLOGRAMS". Information and instructions, Barrington, New Jersey: Edmund Scientific, s.d.4p
SP OT 290 - P. 35
- 439 - HON, David T. **Camped and unclamped electrooptic effects and second harmonic generation in CD*A.** S. n. t. 11p. Pre print.
SP OT 291 - P.36
- 440 - HOWE, John A.; GIORDMAINE, J. A. **High flux optical absorption in organic liquids.** Extraído de BULLETIN OF THE AMERICAN PHYSICAL SOCIETY, v. 8, n.531, 1963. 1p.
SP OT 292 - P.36
- 441 - HOWLAND, Bradford. **Use of crossed cylinder lens in photographic lens evaluation.** Reimpresso de APPLIED OPTICS, v. 7, n.8, p. 1587 - 1599, ago. 1968.
SP OT 293 - P.36
- 442 - HUDSON, R. L.; HERING, K. W. **An automatic multi component infrared analyzer.** Norwalk, Connecticut: The Perkin - Elmer, s. d. 8p.
SP OT 294 - P.36
- 443 - HÜFNER, S. **Elektronenterme des dreiwertigen promethiums.** Sep. Z. PHYSIK, Bd., v. 165, p. 397 - 401, [1961].
APENSO: SAITO, Fujio. **Transient phenomena in ruby maser.** Sep. J. PHYS. SOC. JAPAN, v. 16, p. 2592 - 2593, 1962.
SP OT 295 - P.36
- 444 - HULBURT, Hugh M. HIRSCHFELDER, Joseph O. **Potential energy functions for diatomic molecules.** Sep. JOURNAL OF CHEMICAL PHYSICS, v. 9, p. 61 - 69, jan. 1941.
SP OT 296 - P.36
- 445 - HUMPHREYS, C. J.; PAUL Jr, E. **The first spectrum of xenon on the 4 - micron region and its interpretation.** NAVWEPS Report 8150. Quaterly Report. Foundational Research Projects, p. 33 - 39, jan. - mar. 1963. (Infrared Atomic Spectra).
SP OT 297 - P.36
- 446 - HUMPHREYS, C. J.; PAUL Jr, E. **Infrared atomic spectra: determination of 5g levels of the first spectra of chlorine and bromine.** Reimpresso de NAVWEPS Reports 8213. Quaterly Report. Foundational Research Projects, p. 13 - 20, jan. - mar. 1965. (Infrared Atomic Spectra).
SP OT 298 - P.36
- 447 - HUMPHREYS, Curtis J.; KOSTKOWSKI, Henry J. **Infrared spectra of noble gases. (12000 to 19000Å).** Sep. JOURNAL NATIONAL BUREAU OF STANDARDS, v. 49,

- n.2, p. 73 - 84, ago. 1952. (Research Paper 2345). SP OT 299 - P.36
- 448 - HWANG, D. M. **Polar isotope modes in crystals: application to Rb₂SiO₃**. Sep. PHYSICAL REVIEW B, v. 9, n.6, p.2717 - 2722, 15 mar. 1974. SP OT 300 - P.36
- 449 - IBUKI, S. **Strong blue emission in ZnSiTm**. Sep. APPLIED PHYSICS LETTERS, v. 2, n.5, p. 95 - 97, 1 mar. 1963. SP OT 301 - P.36
- 450 - **Infrared Absorption Spectroscopy**. New York: Electrical testing Laboratories, s. d. 4p. SP OT 302 - P.36
- 451 - INOUE, M. **Dielectric dispersion formula for ferroelectrics**. Sep. PHYSICS LETTERS, v. 47A, n.4, p.311 - 312, 8 abr. 1974. SP OT 303 - P.36
- 452 - ITO, M. **Raman spectrum and molecular motions of hydrogen bromide crystal**. Sep. CHEMICAL PHYSICS LETTERS, v. 7, n.4, p. 439 - 441, 15 nov. 1970. SP OT 304 - P.36
- 453 - ITO, Mitsuo; SUZUKI, Masako; YOKOYAMA, Toru. **Laser excited Raman spectra of some organic crystals of the space group C5** . Reimpresso BULLETIN OF THE CHEMICAL SOCIETY OF JAPAN, v. 40, n.10, p. 2461, 1967. SP OT 305 - P.36
- 454 - ITO, Mitsuo; SUZUKI, Masako; YOKOYAMA, Toru. **Raman active lattice vibrations of organic crystals**. Reimpresso: EXCITONS, MAGNONS AND PHONONS IN MOLECULAR CRYSTALS, Cambridge University, 1968. (1 Phonons: Spectra and Density of States). SP OT 306 - P.36
- 455 - JESSUP, Ralph S. **Heat of combustion of isoprene**. Sep. JOURNAL OF RESEARCH OF THE NATIONAL BUREAU OF STANDARDS, v. 20, p. 589 - 597, maio 1938. SP OT 307 - P.36
- 456 - JOHNSON, L. F. **Characteristics of the CaWO₄: Nd³⁺**. S. I. :BELL TELEPHONE LABORATORIES, 01 mar. 1963. 9p. SP OT 308 - P.37
- 457 - JOHNSON, L. F. **Optical maser characteristics of rare earth ions in crystals**. Sep. JOURNAL OF APPLIED PHYSICS, v. 34, n.4 - part 1, p. 897 - 909, abr. 1963. SP OT 309 - P.37
- 458 - JOHNSON, L. F.; BOYD, G. D.; NASSAU, K, et alii. **Continuous operation of a solid state optical maser**. S. I. : BELL TELEPHONE LABORATORIES, 18 dez., 1961. SP OT 310 - P.37
- 459 - JOHNSON, L. F.; GEUSIC, J. E.; VAN UITERT, L. G. **Efficient, high power coherent emission from Ho³⁺ ions in yttrium aluminum garnet, assisted by energy transfer**. S. I. :BELL TELEPHONE LABORATORIES, 2 mar. 1966. 10p. SP OT 311 - P.37

- 460 - JOHNSON, L. F.; NASSAU, K. **Infrared fluorescence an stimulated emission of Nd³⁺ in CaWO₄.** S. I. : BELL TELEPHONE LABORATORIES, set. 17 1961. 8p.
SP OT 312 - P.37
- 461 - JOHNSON, L. F.; NASSAU, K. **Optical maser action of neodymium in calcium tungstate.** S. n. t., s. d. 13p.
SP OT 313 - P.37
- 462 - JOHNSON, L. F.; DIETZ, R. E.; GUGGENHEIM, H. J. **Optical maser oscillation from Ni²⁺ in MgF₂ involving simultaneous emission of phonons.** S. I. : BELL TELEPHONE LABORATORIES, 30 set. 1963. 6p.
SP OT 314 - P.37
- 463 - JOHNSON, L. F.; SODEN, R. R. **Optical maser characteristics of Nd³⁺ in SrMoO₄.** S. I. : BELL TELEPHONE LABORATORIES, nov. 10 1961. 5p.
SP OT 315 - P.37
- 464 - JONES, Chas. F. **Science and the human condition.** THE HUMBLE WAY, v. 9, n.4, p. 23 - 27, 1970.
SP OT 316 - P.37
- 465 - JOUANNE, M.; BERSEMAN, R.; BALKANSKI, M., et alii. **Electron - phonon interaction in heavily doped silicon.** S. n. t., s. d. 2p.
SP OT 317 - P.37
- 466 - KAGEL, R. O. **Evaluation of the instrumental correction parameter p - absolute raman intensities and depolarization ratios of the deuterated methanes.** S. n. t., s. d. (Com correspondência do autor, enviando tese parcial a Sérgio P.S. Porto, UNICAMP, em 6 set. 1974).
SP OT 318 - P.38
- 467 - KAISER, W. **Two quantum processes.** [Murray Hill, New Jersey]: BELL TELPHONE LABORATORIES, s. d. 4p.
SP OT 319 - P.38
- 468 - KAISER, W.; MAIER, M.; GIORDMAINE, J. A. **Vibration interaction in mixed liquids during stimulated Raman action.** Reimpresso de: APPLIED PHYSIC LETTERS, v. 6, n.2, p. 25 - 26, 15 jan. 1965.
SP OT 320 - P.38
- 469 - KAISER, W.; ZUREK, R. **Brillouin and critical light scattering in SrTiO₃ - crystals.** Sep. PHYSICAL LETTERS, v. 23, n.11, p. 668 - 670, 12 dez. 1966.
SP OT 321 - P.38
- 470 - KAMINOW, I. P. **Microwave light modulation.** S. n. t., s. d. 5p.
SP OT 322 - P.38
- 471 - KAMINOW, I. P.; TURNER, E. H. **Temperature dependence of Raman scattering and the electro - optic properties of CuCl.** Sep. PHYSICAL REVIEW B, v. 5, n.4, p. 1564 - 1578, fev. 1972.
SP OT 323 - P.38
- 472 - KANAMORI, Hitoshi; HAYASHI, Shinji; IKEDA, Yasukazu. **Dispersion relations and elastic - wave velocities of external lattice vibration modes propagating along C -**

- Axes. in Scheelites.** Reimpresso de JOURNAL OF THE PHYSICAL SOCIETY OF JAPAN, v. 37, n.5, p. 1375 - 1378, nov. 1974.
SP OT 324 - P.38
- 473 - KANAMORI, Hitoshi; HAYASHI, Shinji; IKEDA, Yasukazu. **External lattice vibration modes in BaWO₄, NH₄ReO₄, Nd₄ReO₄.** Sep. J. PHYS. SOC. JAPAN, v. 36, p. 916, 1974.
SP OT 325 - P.38
- 474 - KANAMORI, Hitoshi; HAYASHI, Shinji; IKEDA, Yasukazu. **External lattice vibration modes in scheelites.** Reimpresso de: JOURNAL OF THE PHYSICAL SOCIETY OF JAPAN, v. 36, n.2, p. 511 - 516, fev. 1974.
SP OT 326 - P.38
- 475 - KAPLYANSKII, A. A.; FECFILOV, P.P. **The spectra of divalent rare earth ions in crystals of alkaline earth fluorides II. Europium and Ytterbium.** Trad. de OPTIKA I SPEKTROSKOPIYA, v. 13, n.2, p. 129 - 132, ago. 1962.
SP OT 327 - P.38
- 476 - KASHA, Michael. **Quantum chemistry in molecular biology.** Reimpresso de: HORIZONS IN BIOCHEMISTRY, P.583 - 599, 1962.
SP OT 328 - P.38
- 477 - KASKAN, W. E.; DUNCAN, A. B. F. **Mean lifetime of the fluorescence of acetone and biacetyl vapors.** Reimpresso: THE JOURNAL OF CHEMICAL PHYSICS, v. 18, n.4, p. 427 - 431, abr. 1950.
SP OT 329 - P.38
- 478 - KATTI, M. R.; BATRA, D. P. **On the potential energy function of diatomic molecules.** Sep. ACTA PHYS. ACAD. SCI. HUNG., v. 16, n.1, p. 13 - 14, 1963.
SP OT 330 - P.38
- 479 - KLENMAN, D. A. **The maser rate equations and spiking.** S. I. : BELL TELEPHONE LABORATORIES, 13 fev. 1964. 54p.
SP OT 331 - P.39
- 480 - KEMP, J. W. **Raman and infrared spectroscopy - part 1: molecular structure.** S. n. t. 24p. 2 ex.
SP OT 332 - P.39
- 481 - KEMP, J. W.; ANDERMANN, George. **The application of Raman spectroscopy to hydrocarbon analysis.** [California, Glendale: APPLIED RESEARCH LABORATORIES, 16 jun. 1953]. 13p.
SP OT 333 - P.39
- 482 - KEMP, J. W.; JONES, J. L.; DURKEE, R. W. **A source unit for Raman spectroscopy.** OPTICAL SOCIETY OF AMERICA, v. 42, n.11, p. 811 - 814, nov. 1962.
SP OT 334 - P.39
- 483 - KIELICH, S. **Non - linear optical effects in gases I. Classical calculation for spherical molecules.** Sep. BULLETIN DE L'ACADEMIE POLONAISE DES SCIENCES, v. 11, n.4, p.

- 193 - 199, 1963. (Série des Sciences Math., Astr. et Phys.).
SP OT 335 - P.39
- 484 - PTIZER, Kenneth S; SCOTT, Donald W. **Molecular structure of benzene and its methyl derivatives.** S. n. t., 6p. Datilogr. original.
SP OT 336 - P.39
- 485 - KHAMBATÁ, S. J. **Raman spectrum of magnesium oxide.** S. n. t., s. d. 2p.
SP OT 337 - P.39
- 486 - KHATER, A. F. **One - magnon light scattering in garnets and ferrites with and without compensations temperatures.** Sep. JOURNAL PHYS. C : SOLID STATE PHYS., v. 11, p. 577 - 587, 1978.
SP OT 338 - P.39
- 487 - KHATER, A. F. **Temperature dependence of one - magnon light scattering in ferrimagnets: I.** Sep. J. PHYS. C: SOLID STATE PHYS., v. 11, p. 563 - 575, 1978.
SP OT 339 - P.39
- 488 - KIEL, A.; PORTO, Sérgio Pereira da Silva. **Selection rules for the electronic Raman effect.** S. n. t., s. d. Prova para editoração.
SP OT 340 - P.39
- 489 - KIELICH, S. **Non - linear optical effects in gases, II. Quantum mechanical calculation.** Sep. BULLETIN DE L'ACADEMIE POLONAISE DES SCIENCES, v. 11, n.4, p. 201 - 209, 1963. (Série des Sciences Math. Astr. et Phys.).
SP OT 341 - P.39
- 490 - KIELICH, S. **Light scattering by a gas in the presence of an inhomogeneous electric field.** Sep. PHYSICA, v. 29, p. 938 - 947, 1963.
SP OT 342 - P.39
- 491 - KIELICH, S. **On non - linear light scattering in gases.** Sep. ACTA PHYSICA POLONICA, v. 23, n.3, p. 321 - 332, mar. 1963.
SP OT 343 - P.40
- 492 - KIESS, N. H.; DIEKE, G. H. **Energy levels of Er³⁺ and Pr³⁺ in hexagonal LaBr₃.** Sep. THE JOURNAL OF CHEMICAL PHYSICS, v. 45, n.8, P.272902734, 15 out. 1966.
SP OT 344 - P.40
- 493 - KING, Gilbert W.; HAINER, R. M.; CROSS, Paul C. **The asymmetric rotor: I - Calculation and symmetry classification of energy levels.** Reimpresso de: THE JOURNAL OF CHEMICAL PHYSICS, v. 11, n.1, P.27 - 42, 1943.
SP OT 345 - P.40
- 494 - KING, Gilbert W.; HAINER, R. M.; CROSS, Paul C. **Expected microwave absorption coefficients of water and related molecules.** Reimpresso de: THE PHYSICAL REVIEW, v. 71, n.7, p. 433 - 443, 01 abr. 1947.
SP OT 346 - P.40
- 495 - KINGSLEY, J. D.; PRENER, J. S. **Spectroscopy and luminescence properties of CdF₂:Eu.** Sep. PHYSICAL REVIEW, v. 126, n.2, p. 458 - 465, abr. 1961.

- SP OT 347 - P.40
- 496 - KISLIUK, P.P. **Solid - State maser with external mirrors.** S. n. t., s. d. 5p.
SP OT 348 - P.40
- 497 - KISLIUK, P.P.; MOORE, C. A. **Radiation from the 4T2 State of Cr³⁺ in ruby and esmerald.** S. n. t., s. d. 26p.
SP OT 349 - P.40
- 498 - KISS, Zoltan J. **Crystal field splitting in CaF₂:Nd³⁺.** Sep. THE JOURNAL OF CHEMICAL PHYSICS, v. 38, n.7, p. 1476 - 1480, 01 abr. 1963.
SP OT 350 - P.40
- 499 - KISS, Zoltan J.; DUNCAN, R. C. **Optical maser action in CaF₂:Tm²⁺.** PROCEEDING OF THE IRE, jun. [1972]. 2p.
SP OT 351 - P.40
- 500 - KLEIN, Driles V. **Raman scattering by localized phonon excitations.** S. n. t., s. d., 20p. Apresentado em International Seminar. "Selected problems in the theory of impurity centres in crystals", Tallin, 21 - 26 set. 1970, publicado em coleção sobre o título de "Physics of Impurity Centres in Crystals" pela Academy of Sciences of Estonian.
SP OT 352 - P.40
- 501 - KLEINERMAN, M.; AZARRAGA, L.; MCGLYNN, S. P. **The photoconductive and emission spectroscopic properties of organic molecular materials.** [Sep. LUMINESCENCE OF ORGANIC AND INORGANIC MATERIALS. s. l. : KALLMAN & SPRUCH, 1962, p. 196 - 225].
SP OT 353 - P.40
- 502 - KLEINERMAN, Marcos; MCGLYNN, S. P. **Photo conductivity of organic molecular crystals and the triplet state.** Reimpresso de JOURNAL OF CHEMICAL PHYSICS, v. 37, n.6, p. 1369 - 1370, 15 set. 1969.
SP OT 354 - P.40
- 503 - KLEINMAN, Leonard. **Polarization effects in two - phonon Raman scattering in cubic crystals.** Sep. SOLID STATE COMMUNICATIONS, v. 3, p. 47 - 53, 1965.
SP OT 355 - P.40
- 504 - KOEHLER, Thomas R. **Theory of the self - consistent harmonic approximation with application to solid neon.** Sep. PHYSICAL REVIEW LETTERS, v. 17, n.2, p. 89 - 92, 11 jul. 1966.
SP OT 356 - P.40
- 505 - KOLOS, W.; ROOTHAAN, C. C. J. **Accurate electronic wave functions for the H₂ Molecule.** Reimpresso de: REVIEWS OF MODERN PHYSICS, v. 32, n.2, p. 219 - 232, abr. 1962.
SP OT 357 - P.40
- 506 - KOLOS, W.; ROOTHAAN, C. C. J. **Accurate electronic wave functions for the H₂ molecule.** Reimpresso de: REVIEWS OF MODERN PHYSICS, v. 32, n.2, p. 219 - 232, abr. 1960.
SP OT 358 - P.40

- 507 - KOLOS, W.; ROOTHAAN, C. C. J. **Correlated orbitals for the ground state of the hydrogen molecule.** Reimpresso de: REVIEW OF MODERN PHYSICS, v. 32, n.2, p. 205 - 210, abr. 1960.
SP OT 359 - P.41
- 508 - KOMPFNER, R.; RIGROD, W. W. **High level performance of optical maser.** S. I., BELL THELEPHONE LABORATORIES, 9 jul. 1962. 18p.
SP OT 360 - P.41
- 509 - KRAUZMAN, M.; PICK, R. M.; POULET, H., et alii. **Raman detection of one phonon - two phonon interactions in CuCl.** S. n. t., s. d. 10p.
SP OT 361 - P.41
- 510 - KRAUZMAN, M. Michel, présentée par René Lucas. **Effet Raman - étude expérimentale en lumière polarisée du spectre de diffusion Raman du second ordre de l'iodure de potassium.** Sep. C. R. ACAD. SC. Paris, v. 265, p. 689 - 692, 18 set. 1967. Note.
SP OT 362 - P.41
- 511 - KRAUZMAN, M. Michel, présentée par René Lucas. **Effet Raman - étude expérimentale en lumière polarisée du spectre de diffusion Raman du second ordre du bromure de potassium.** Sep. C. R. ACAD. SC. Paris, v. 268, p. 1029 - 1031, 6 nov. 1967. Note.
SP OT 363 - P.41
- 512 - KRAUZMAN, M. Michel, présentée par René Lucas. **Effet Raman - étude expérimentale en lumière polarisée du spectre de diffusion Raman du second ordre du chlorure de sodium.** Sep. C. R. ACAD. SC. Paris, v. 266, 15 jan. 1968. Note.
SP OT 364 - P.41
- 513 - KREUZER, L. B.; KENYON, N. D.; PATEL, C. K. N. **Air pollution: sensitive detection of ten pollutant gases by carbon monoxide and carbon dioxide lasers.** Reimpresso: SCIENCE, v. 177, p. 347 - 349, 28 jul. 1972. Incluso: Analitical Chemistry, v. 45, n.4, abr. 1973. Correspondência.
SP OT 365 - P.41
- 514 - KRISTOFEL, N. N., ZAVT, G. S. **The condon approximation and the optical properties of impurity centers.** Sep. SOVIET PHYSICS - SOLID STATE, v. 5, n.5, p. 932 - 936, nov. 1963.
SP OT 366 - P.41
- 515 - KUROIWA, Akihiko; SAITO, Hiroshi,; SHIONOYA, Shigeo. **Single exciton - to - excitonic molecule optical conversion in CdS.** Sep. SOLID STATE COMMUNICATIONS, v. 18, p. 1107 - 1109, 1976.
SP OT 367 - P.41
- 516 - KURTZ, S. K.; RICH, T. C.; COLE, W. J. **Optical properties of ABO₃ perovskite ferroelectrics - part 1. Correlation of vaccum ultraviolet reflectivity with electronic band structure an refractive index in the visible.** S. I. : BELL TELEPHONE LABORATORIES, 18 abr. 1966. c. 60p.
SP OT 368 - P.41

- 517 - LAGAKOS, N.; CUMMINS, H. Z. **Preliminary observation of a central peak in the light - scattering spectrum of KH₂PO₄.** Sep. THE PHYSICAL REVIEW B., v. 4, n.3, p. 1063 - 1069, 1 ago. 1974.
SP OT 369 - P.42
- 518 - LANDO, Jerome B.; PUTERMAN, M.; KONIG, J. L. **Raman studies of the effect of stereoregularity on conformational transition during neutralization of acidic and basic polymers.** S. n. t., s. d. 2p.
SP OT 370 - P.42
- 519 - LANG, H. de. **Polarization properties of optical resonators passive and active.** S. n. t. [1966]. 76p. Fragmento. Tese: University of utrecht, dez. 1966. Promotor: Prof. Dr. H. G. van Bueren.
SP OT 371 - P.42
- 520 - LANGENBERG, D. N. **Resource letter OEPM - 1 on the ordinary electronic properties of metals.** Reimpresso de: AMERICAN JOURNAL OF PHYSICS, v. 36, n.9, p. 1 - 11, set. 1968.
SP OT 372 - P.42
- 521 - LARNAUDIE, Marcel, présentée par Jean Cabannes. **Spectroscopie: une solution simple du problème de la fonction potentielle et des coordonnées normales pour les molécules polyatomiques.** Extraído de: COMPTES RENDUS DES SÉANCES DE L'ACADEMIE DES SCIENCES, v. 234, p. 1150 - 1152, 10 mar. 1952.
SP OT 373 - P.42
- 522 - **Laser excited Raman spectroscopy of solids: proposal.** S. n. t., jun. 1967. Submetido ao National Science Foundation, Washington, pr Electronis Sciences Laboratory. University of Southern California, University Park, Los Angeles, Califórnia. Investigador principal: Sérgio P.S. Porto, prof of Physical and Electrical Engineering.
SP OT 374 - P.42
- 523 - LAUVRENCIC, B. B.; LEUSTEK, I.; COPIC, T., et alii. **Brillouin scattering in NaH₃(SeO₃)₂.** S. n. t. 2p.
SP OT 375 - P.42
- 524 - LECOMTE, J. **Lettre a la rédaction.** Extraído de: BULLETIN DE LA SOCIETE CHIMIQUE DE FRANCE, p. 1026, 1955.
SP OT 376 - P.42
- 525 - LEGOTATE, Jean. **Remarques sur l'absorption du tétrachlorure de carbone dans la region de 12 microns.** Extraído de: JOURNAL DE PHYSIQUE ET LE RADIUM, v. 16, p. 815 - 816, out. 1955.
SP OT 377 - P.42
- 526 - LECOMTE, Jean. **Le spectre infrarouge au dela de 20 microns I. Spectrographes a prismes.** Extraído de: CAHIER DE PHYSIQUE, n.77, p. 1 - 11, jan. 1957.
SP OT 378 - P.42
- 527 - LECOMTE, Jean; BOULLÉ, André; LANG - DUPON, Marcelle, presen - tée par Paul Lebeau. **Spectroscopie moleculaire: - étude par spectroscopie infrarouge de la déshydratation et de la rehydratation du phosphate bicalcique.** Extraído de:

- COMPTE RENDU DES SÉANCES DE L'ACADEMIE DES SCIENCES, v. 241, p. 1927 - 1929, 19 dez. 1955. Note.
- SP OT 379 - P.42
- 528 - LECOMTE, Jean; NAVES, Yves - Renné. **Nº60 - Sur l'emploi de la spectrographie infrarouge pour l'étude structurale des substances organiques complexes.** Extraído de JOURNAL DE CHIMIE PHYSIQUE, p. 462, 1956.
- SP OT 380 - P.42
- 529 - LEE, Allen B.; CRADDOCK, Brian R. **The cerenkov effect experiment 1.** S. n. t., 17 maio 1972. Trabalho sob orientação de Sérgio Porto, físico.
- SP OT 381 - P.42
- 530 - LEE HUEI LIN. **The watershed: by Arthur Koestler.** S. n. t., 17 maio 1972. Trabalho sob orientação de Sérgio Porto, físico.
- SP OT 382 - P.42
- 531 - LEE, Allen B.; CRADDOCK, Brian R. **Vacuum systems.** S. n. t. . 14 jan. 1969. Trabalho sob orientação do prof. Sérgio Porto, físico.
- SP OT 383 - P.42
- 532 - LEIES, Gerard M. **Theoretical vibrational energy levels of H₂ associated with various combinations of molecular orbital configurations.** Sep. THE JOURNAL OF CHEMICAL PHYSICS, v. 37, n.7, p. 1418 - 1424, 01 out. 1962.
- SP OT 384 - P.43
- 533 - LEITE, R. C. C.; SCOTT, J. F.; DAMEN, T. C. **Multiple phonon resonant Raman scattering in CdS.** S. I. : BELL TELEPHONE LABORATORIES, 2 jan. 1969. 11p.
- SP OT 385 - P.43
- 534 - LEMOS, V.; CERDEIRA, F.; SCARPADO, M. A. F., KATYIAR, R. S. **Stress induced changes in the Raman spectrum of paratellure.** Sep. PHYSICAL REVIEW B, v. 16, n.12, p. 5560 - 5569, 15 dez. 1977. 9 cópia.
- SP OT 386 - P.43
- 535 - LEMPICKI, Alexander; HELLER, Adam. **Characteristics of the Nd³⁺:SeOCl₂ liquid laser.** Reimpresso de: APPLIED PHYSICS LETTERS, v. 9, n.3, p. 108 - 110, 01 ago. 1966.
- SP OT 387 - P.43
- 536 - LEMPICKI, Alexander; SAMELSON, Harold. **Stimulated processes in organic compounds.** Sep. APPLIED PHYSICS LETTERS, v. 2, n.8, p. 159 - 161, 18 abr. 1963.
- SP OT 388 - P.43
- 537 - LENHAM, A. P.; TREHERNE, D. M.; METCALFE, R. J. **Optical properties of antimony and bismuth crystals.** JOURNAL OF OPTICAL SOCIETY OF AMERICA, v. 55, n.9, p. 1072 - 1074, set. 1965.
- SP OT 389 - P.43
- 538 - LENZO, P.V.; SPENCER, E. G.; BALLMAN, A. A. **Optical activity and electrooptic effect in bismuth germanium oxide (Bi₁₂GeO₂₀).** Sep. APPLIED OPTICS, v. 5, n.10, p. 1688, out. 1966.

- SP OT 390 - P.43
- 539 - LENZO, P.V.; SPENCER, E. G.; BALLMAN, A. A. **Photoactivity in bismuth germanium oxide.** Reimpresso de: PHYSICAL REVIEW LETTERS, v. 19, n.11, p. 641 - 644, 11 set. 1967.
SP OT 391 - P.43
- 540 - LETOKHOV, V. S. **Future applications of selective laser photophysics and photochemistry.** S. n. t., s. d. 26p.
SP OT 392 - P.43
- 541 - LICHTMAN, David; READY, J. F. **Laser beam induced electron emission.** Sep. PHYSICAL REVIEW LETTERS, v. 10, n.8, p. 342 - 345, 15 abr. 1963.
SP OT 393 - P.43
- 542 - LIEHR, Andrew D. **The coupling of vibrational and electronic motions in degenerate electronic states of inorgâniccomplexes: Part 2: States of triple degeneracy and systems of lower symmetry.** CHEMICAL PHYSICS RESEARCH SEMINAR. Prog. Inorg. Chem. , v. 4, 1962. c. 60p.
SP OT 394 - P.44
- 543 - LINARES, R. C. **Growth of sapphire and ruby by a modified pulling techine.** S. n. t. 3p.
SP OT 395 - P.44
- 544 - LIPPINCOTT, Ellis R.; O'REILLY, Edward J. **Vibrational spectra and assignment of naphthalene and naphthalene d - 8.** Sep. THE JOURNAL OF CHEMICAL PHYSICS, v. 23, n.2, p. 238 - 244, fev. 1955.
SP OT 396 - P.44
- 545 - LIPPINCOTT, Ellis R.; SCHROEDER, Rudolph. **General relation between potential energy and internuclear distance for diatomic and polyatomic molecules I.** Sep. JOURNAL OF CHEMICAL PHYSICS, v. 23, n.6, jun. 1955.
SP OT 397 - P.44
- 546 - LITUAK, A. G. **Self - focusing of powerful light beams by thermal effects.** S. n. t., 230p.
SP OT 398 - P.44
- 547 - LIU, S. T. **Evaluation of Curie constants of ferroelectric crystals from pyroelectric response.** S. n. t. 2p. APENSO: LIU, S. T.; KYONKA, J. **Further study of the pyroelectrc of Lanthanum - modified PZT ferroelectric ceramics.** s. n. t. 2p.
SP OT 399 - P.44
- 548 - LONG, Lewis M. K. **The Brasilien student in the United States; a study of physiological change.** [Tese Harward University, Department of Social Relations, dez. 1955].
SP OT 400 - P.44
- 549 - LOUDON, R. **The Raman effect in crystals.** [ADVAN. PHYS. v. 13, p. 423 - 481, 1964]. APENSO: LOUDON, R. **Theory of the first - order Raman effect in crystals.** s. n. t., 3p.
SP OT 401 - P.44

- 550 - LOUDON, R. **Theory of stimulated Raman scattering from lattice vibrations.** Reimpresso de: PROCEEDING OF THE PHYSICAL SOCIETY, v. 82, part 3, n.527, p. 393 - 400, 1963.
SP OT 402 - P.44
- 551 - LOREE, T. R.; CANTRELL, C. D.; BARKER, D. L. **Tunable middle in raman lasers.** LASER FOR ISOTOPE SEPARATION CONFERENCE. Albuquerque, New México: ERDA/LASL, 13 e 14 abr. 1976. 3p.
SP OT 403 - P.45
- 552 - LOREE, T. R.; CANTRELL, C. D.; BARKER, D. L. **Simulated raman emission at 9, 2 milimicrons from hydrogen gas.** Sep. OPTICS COMMUNICATIONS, v. 17, n.2, p. 160 - 162, maio 1976.
SP OT 404 - P.45
- 553 - LUZZI, Roberto. **Inelastic scattering of light by paramagnetic spin - waves.** Sep. PROGRESS OF THEOREICAL PHYSICS, v. 47, n.1, p. 1 - 12, jan. 1972.
SP OT 405 - P.45
- 554 - LUZZI, Roberto. **Light scattering by coupled landau - level - LO - phonon system.** Reimpresso de: PROGRESS OF THEOREICAL PHYSICS, v. 47, n.1, p. 13 - 21, jan. 1972.
SP OT 406 - P.45
- 555 - LUZZI, Roberto. **On magneto raman scattering in semiconductors.** Sep. SOLID STATE COMMUNICATIONS, v. 9, p. 2147 - 2150, 1971.
SP OT 407 - P.45
- 556 - LYMAN, John L.; ROCKWOOD, Stephen D. **Enrichment of boron, carbon, and silicon isotopes by multiple - phonon absorption of 10. 6 - milimicrons laser radiation.** Sep. JOURNAL OF APPLIED PHYSICS, v. 47, n.2, p. 595 - 601, fev. 1976.
SP OT 408 - P.45
- 557 - LYMAN, John L.; JENSEN, Reed J.; RICK, John, et alii. **Isotopic enrichment of SF₆, in Sby multiple absorption of CO₂ laser radiation.** Sep. APPLIED PHYSICS LETTERS, v. 27, n.2, p. 87 - 89, 15 jul. 1975.
SP OT 409 - P.45
- 558 - MARGOLIS, J. S. **Energy Levels of PrCl₃***. Sep. JOURNAL OF CHEMICAL PHYSICS. v. 35, n.4, p.1367 - 1373, out. 1961.
SP OT 410 - P.45
- 559 - MCALOREN, J. T. **A reproducible magnesium oxide standard for reflectance measurement from 0 - 3 to 2 - 6 microns.** NATURE, n.4843, p. 797 - 798, 25 ago. 1962.
SP OT 411 - P.45
- 560 - MCCUBIN, Jr, , T. K. **Optical methods of molecular spectroscopy.** Sep. APPLIED OPTICS, v. 5, n.7, p. 1093 - 1095, jul. 1966.
APENSO: HOWARD, John N. **From the editor.** Sep. APPLIED OPTICS, v. 5, n.7, p. 1096, jul. 1966. HAND, C. W.; KAUFMANN, P.Z.; HEXTER, R. M. **Kinetic**

- spectroscopy in the infrared: a rapid scan infrared spectrometer.** Sep. APPLIED OPTICS, v. 5, n.7, p. 1097, jul. 1966.
SP OT 412 - P.45
- 561 - MCCUMBER, D. E. **Einstein relations connecting broadband emission and absorption spectra.** S. I. : BELL TELEPHONE LABORATORIES, 15 maio 1964. 17p.
SP OT 413 - P.45
- 562 - MCCUMBER, D. E. **Theory of cavity masers.** S. I., BELL TELEPHONE LABORATORIES, 25 maio 1962. 78p. e apêndices.
SP OT 414 - P.45
- 563 - MCCUMBER, D. E. **Unified theory of steady - state cavity masers.** S. I. BELL TELEPHONE, 4 fev. 1963. 10p.
SP OT 415 - P.46
- 564 - MCCUMBER, D. E.; PLATZMAN, P.M. **Super radiance effects in hot plasmas.** S. I. : BELL TELEPHONE, 11 mar. 1963. 27p.
SP OT 416 - P.46
- 565 - MCLCLUNG, F. J.; HELLWARTH, R. W. **Giant optical pulsations from ruby.** Sep. JOURNAL OF APPLIED, v. 55, n.3, p. 828 - 829, mar. 1962.
SP OT 417 - P.46
- 566 - MCDONALD, H. F.; KLEIN, Miles V.; MARTIN, T. P. **Experimental and theoretical study of the far infrared spectra of mono - valent impurities in sodium chloride.** s. n. t., 62p.
SP OT 418 - P.46
- 567 - MCCLURE, Donald S. **Optical spectra of transition - metal ions in corundum.** Sep. THE JOURNAL OF CHEMICAL PHYSICS, v. 36, n.10, P.2757 - 2779, 15 maio 1962.
SP OT 419 - P.46
- 568 - MCFARLANE, R. A. **Precision spectroscopy of new infrared emission systems of molecular nitrogen.** s. I. : BELL TELEPHONE LABORATORIES, 25 abr. 1966. 11p.
SP OT 420 - P.46
- 569 - McDOWELL, R. S.; GALBRAITH, H. W.; KRONH, B. J., et alii. **Identification of these SF₆ transitions pumped by a CO₂ laser.** Sep. OPTICS COMMUNICATIONS, v. 17, n.2, p. 178 - 182, maio 1976.
SP OT 421 - P.47
- 570 - MCGLYNN, S. P. **Energetics of molecular complexes.** Sep. CHEMICAL REVIEWS, v. 58, n.6, p. 1113 - 1155, dez. 1958.
SP OT 422 - P.47
- 571 - MCGLYNN, S. P.; BOGGUS, J. D.; ELDER, E. **Energy transfer in molecular complexes II. The anthracene - Sym - Trinitrobenzene.** Reimpresso: JOURNAL OF CHEMICAL PHYSICS, v. 32, n.2, p. 357 - 361, fev. 1960.
SP OT 423 - P.47
- 572 - MCGLYNN, S. P.; SMITH, J. K. **The electronic structure, spectra, and magnetic**

- properties of actinyl ions. Part 2: Neptunyl, and the ground states of other actinyls.** Reimpresso de: JOURNAL OF MOLECULAR SPECTROSCOPY, v. 6, n.1, p. 188 - 198, jan. 1961.
SP OT 424 - P.47
- 573 - MCGLYNN, S. P.; SMITH, J. K. **The electronic structure, spectra, and magnetic properties of actinyl ions.** Reimpresso de: JOURNAL OF MOLECULAR SPECTROSCOPY, v. 6, n.1, p. 164 - 187, jan. 1961.
SP OT 425 - P.47
- 574 - MCGLYNN, S. P.; SUNSERI, R.; CHRISTODOULEAS, N. **External heavy - atom spin - orbital coupling effect. I. The nature of interation.** Reimpresso de JOURNAL OF CHEMICAL PHYSICS, v. 37, n.8, p. 1818 - 1824, 15 out. 1962.
SP OT 426 - P.47
- 575 - MCINTYRE, Donald. **An absolute light scattering photometer: II. Direct determination of scattered light from solutions.** Reimpresso de: JOURNAL OF RESEARCH OF THE NATIONAL BUREAU OF STANDARDS - A, Physics and chemistry: v. 68A, n.1, p. 87 - 96, jan. - fev. 1964,
SP OT 427 - P.47
- 576 - MACIOLEK, R. B.; LIU, S. T. **Preparations and proper - ties of low loss Sr(1 - x)Ba(x)Nb₂O₆ ferroelectric single crystals.** Sep. JOURNAL OF ELECTRONIC MATERIALS, v. 2, n.2, p. 191 - 200, 1973.
SP OT 428 - P.47
- 577 - MCLAUGHLIN, J. W.; PAVLISCAK, T. J.; KUEBLER, N. A. **Test of the light output of second new xenon flash lamp.** S. I. : BELL TELEPHONE LABORATORIES, 1 ago. 1962. 4p.
SP OT 429 - P.47
- 578 - MCTAGUE, J. P.; BIRNBAUM, George. **Collision induced light scattering in gases, I. The rare gases: Ar, Kr, and Xe.** S. n. t., 28p.
SP OT 430 - P.47
- 579 - MAIMAN, T. H. **Stimulated optical emission in fluorescent solids I. Theoretical considerations.** Reimpresso de: THE PHYSICAL REVIEW, v. 123, n.4, p. 1145 - 1150, 15 ago. 1961.
SP OT 431 - P.47
- 580 - MAIMAN, T. H.; HOSKINS, R. H.; D'HAENENS, I. J., et alii. **Stimulated optical emission in fluorescent solids II. spectroscopy and stimulated emission un ruby.** Reimpresso de: THE PHYSICAL REVIEW, v. 123, n.4, p. 1151 - 1157, 15 ago. 1961.
SP OT 432 - P.47
- 581 - MARGOLIS, Jack S.; BIRNBAUN, George. **Multiple quantum transision and Raman action in three - level systems.** Sep. JOURNAL OF APPLIED PHYSICS, v. 36, n.3, (two parts - part 1), p. 726 - 731, mar. 1965.
SP OT 433 - P.47
- 582 - MARQUÍNEZ, E.; CAMUÑAS, A. **Applicacion de un sistema de diafragmas graduados al espectrografo littrow de optica de vidrio II.** Sep. ANALES DE LA REAL SOCIEDAD ESPAÑOLA DE FISICA Y QUIMICA: Serie A - Fisica, v. 48, n.5 e 6, p. 175 - 186, maio/jun. 1952.

SP OT 434 - P.47

- 583 - MARLOW, P.G.; RUSSELL, J. P.; SENNET, C. T. **Polarization of the second order Raman spectrum of gallium phosphide.** Sep. PHYSICS LETTERS, v. 20, n.6, p. 610 - 612, 1 abr. 1966.

SP OT 435 - P.47

- 584 - MARLING, J. B.; HAWLEY, J. G.; LISTON, E. M., et alii. **Lasing characteristics of seventeen visible - wavelengtii dyes using a coaxical - flashlamp - pumped laser.** s. n. t., [1974]. 11p.

SP OT 436 - P.47

- 585 - MALITSON, Living H.; MURPHY, Frederick V.; RODNEY, William S. **Refractive index of synthetic saphire.** BULLETIN INDUSTRIAL CRISTALS, Nova York, N. Y., 1958, 1p. Reimpresso de: JOURNAL OF THE OPRICAL SOCIETY OF AMERICA.

SP OT 437 - P.47

- 586 - MAKER, P.D. **Spectral broadening of elastic second harmonic light scattering in liquids.** s. n. t. 80p.

SP OT 438 - P.48

- 587 - MARBUGER, J. H. **Dynamical formation of a smal - scale filament.** Sep. PHYSICAL REVIEW LETTERS, v.21, n.8, p. 556 - 558, 19 ago. 1968.

SP OT 439 - P.48

- 588 - MARBURGER, J. H.; WAGNER, W. G. **Self - focusing as a pulse sharpening mechanism.** Reimpresso: IEEE JOURNAL OF QUANTUM ELECTRONICS, v. GE - 3, n.10, p. 415 - 416, out. 1967.

SP OT 440 - P.48

- 589 - MARLING, Jack B.; HERMAN, Irving P. **Photochemical deuterium separation: problems and prospects.** California: University of California, Lawrence Livermore Laboratoty, 1978. 16p. Trabalho preparado por Electro Optics Laser 78. Conference, Boston, Massachusetts, 19 - 21 set. 1978. Pré print.

SP OT 441 - P.48

- 590 - MARSHAL R.; MITRA, S. S. **Optical properties of cuprous sulfide.** Sep. JOURNAL OF APPLIED PHYSICS, v. 36, n.12, dez. 1961.

SP OT 442 - P.48

- 591 - MARSH, J. M. **Magnetic phases in rare earth chlorides.** Sep. PHYSICS LETTERS, v. 20, n.4, p. 355 - 356, 1 mar. 1966.

SP OT 443 - P.48

- 592 - MARTIN, Richard M.; FALICOV, L. M. **Raman scattering in solids. Chapter R: resonant Raman scattering.** Publicado em: RAMAN SCATTERING IN SOLIDS, edited by M. Cardona, em volume de TOPICS IN APPLIED PHYSICS, séries of Springer - Verlag. 50p. Preprint.

SP OT 444 - P.48

- 593 - MASON, E. A.; MUNN, R. J.; SMITH, F. J. **Recent work on the determination of the intermolecular potential function.** s. n. t., [1965], 8p.

SP OT 445 - P.48

- 594 - MATHIAS, L. E. S.; PARKER, J. T. **Visible laser oscillations from carbon monoxide.** PHYSICS LETTERS, v. 7, n.3, p. 194 - 196, 15 nov. 1963.
SP OT 446 - P.48
- 595 - MAVROYANNIS, C. **Resonant coherent pairing of exitons in molecular crystals.** Sep. PHYSICAL REVIEW B, v. 10, n.4, p. 1741 - 1747, 15 ago. 1974.
SP OT 447 - P.48
- 596 - MAIO, S. D.; STRYLAND, J. C.; WELSH, H. L. **Raman spectra of H₂ and CH₄ at high pressures.** Reimpresso de: THE JOURNAL OF CHEMICAL PHYSICS, v. 30, n.4, p. 1099 - 1100, abr. 1959.
SP OT 448 - P.48
- 597 - MEGGERS, Willian F. **Emission spectroscopy.** Reimpresso de: ANALITICAL CHEMISTRY, v. 26, p. 54 - 58, jan. 1954.
SP OT 449 - P.48
- 598 - MELAMED, N. T.; HIRAYAMA, C.; DAVIS, E. K. **Laser action in neodymium - doped glass produced through energy transfer.** Sep. APPLIED PHYSICS LETTERS, v. 7, n.6, p. 170 - 172, 15 set. 1965.
SP OT 450 - P.48
- 599 - MENZIES, A. C. **Raman effect in solids.** Reimpresso de: REPORTS ON PROGRESS IN PHYSICS, The Physical Society, v. 16, p. 83 - 107, 1953.
SP OT 451 - P.48
- 600 - MENZIES, A. C.; SKINNER, J. **La diffusion Raman polarisée dans le bromures de sodium et de rubidium.** Sep. COLLOQUES INTERNATIONAUX, n.7, 7 abr. 1948. 2p.
SP OT 452 - P.48
- 601 - MENZIES, A. C.; SKINNER, J. **Spectre Raman des cris - taux d'halogénures alcalins.** Sep. LE JOURNAL DE PHYSIQUE ET LE RADIUM, v. 1, (série 8), p. 93 - 98, mar. 1948.
SP OT 453 - P.48
- 602 - MERTEN, L.; CLAUS, R. **Dispersion of dielectric axes in monoclinic and triclinic crystals related to lattice dynamics.** Sep. PHYS. STAT. SOL., v. 89, p. 159 - 163, 1978.
SP OT 454 - P.48
- 603 - MIKOLAJ, P.G.; PINGS, C. J. **Direct determination of the intermolecular potential function for argon from x - ray scattering data.** Sep. PHYSICAL REVIEW LETTERS, v. 16, n.1, p. 4 - 6, 3 jan. 1966.
SP OT 455 - P.48
- 604 - MILLER, E. L.; WITTRY, D. B. **Temperature controlled stage for electron probe microanalyzers.** Reimpresso de: THE REVIEW OF SCIENTIFIC INSTRUMENTS, v. 37, n.1, p. 115 - 116, jan. 1966.
SP OT 456 - P.48
- 605 - MILLER, R. C. **Photoelectric detectors.** S. n. t. 7p.

- SP OT 457 - P.48
- 606 - MILLER, Robert C.; BOYD, G. D.; SAVAGE, A. **Nonlinear optical interactions in LiNbO₃ without double refraction.** Reimpresso de: APPLIED PHYSICS LETTERS, v. 6, n.4, p. 77 - 79, 15 fev. 1965.
- SP OT 458 - P.49
- 607 - MILLS, B. Y.; LITTLE, A. G.; SHERIDAN, K. V., et alii. **A high resolution radio telescope for use at 3, 5 M.** Sep. PROCEEDINGS OF THE INSTITUTE OF RADIO ENGINEERS, v. 46, n.1, p. 67 - 84, jan. 1958.
- SP OT 459 - P.49
- 608 - MINOH, Arimichi; SHIMUZU, Tadao; KOBAYASHI, Shunsuke; SHIMODA, Koichi. **Far-infrared and submillimeter maser oscillators with H₂O and D₂O.** Reimpresso de: JAPANESE JOURNAL OF APPLIED PHYSICS, v. 6, n.8, p. 921 - 930, ago. 1967.
- SP OT 460 - P.49
- 609 - MITCHELL, N.; NELSON, D. C. **Some new Raman shiffts for naphthalene at low frequencies.** S. n. t., [1963]. 3p.
- SP OT 461 - P.49
- 610 - MITRA, S. S.; BERNSTEIN, H. J. **Vibration spectra of naphthalene - do, alfa d4, and d8 molecules.** Reimpresso de: CANADIAN JOURNAL OF CHEMISTRY, v. 37, p. 553 - 562, 1959.
- SP OT 462 - P.49
- 611 - MITRA, S. S.; BRADA, Y. **U - Center local mode phonon interactions in alkali halides.** Sep. PHYSICS LETTERS, v. 17, n.1, p. 19 - 20, 15 jun. 1968.
- SP OT 463 - P.49
- 612 - MIZUSHIMA, Masataka. **Theory of resonance frequency shifft due to radiation field.** Sep. PHYSICAL REVIEW, v. 133, n.2A, p. A414 - A418, 20 jan. 1964.
- SP OT 464 - P.49
- 613 - MOELLER, Zerald; BRANTLEY, J. Calvin. **The rare earths: spectrophometric estimation of certain rare earth elements.** Sep. ANALITICAL CHEMISTRY, v. 22, n.3, p. 433 - 441, mar. 1950.
- SP OT 465 - P.49
- 614 - MOORADIAN, A. **Light scattering from single - particle electron excitations in semiconductors.** Sep. PHYSICAL REVIEW LETTERS, v. 20, n.20, p. 1102 - 1104, 13 maio 1968.
- SP OT 466 - P.49
- 615 - MOORADIAN, A.; BRUECK, S. R. J.; BLUM, F. A. **Continuous stimulated spin - flip Raman scattering in InSb.** Preprint. Submetido a: Applied Physics Letters, ago. 1970. 10p.
- SP OT 467 - P.49
- 616 - MONFILS, A. **The absorption spectra of the molecules H₂HD, and D₂. Part VI. Rotational analysis of the B', B'', D, D', D'' states.** Sep. JOURNAL OF MOLECULAR SPECTROSCOPY, v. 15, p. 265 - 397, 1965.
- SP OT 468 - P.49

- 617 - MONFILS, A. **Spectroscopie; perturbations hétérogènes entre les états B₊ sigma+ u et C₊ dans la molécule H₂.** Extraído: BULLETIN DE L'ACADEMIE ROYALE DE BELGIQUE - Classe des Sciences - 5^a série, v. 47, p. 585 - 598, 10 jun. 1961.
SP OT 469 - P.49
- 618 - MONFILS, A. **Spectroscopie moléculaire: états D₊(3p) et D₊ u(4p) dans les molécules H₂, HD et D₂.** Extraído: BULLETIN DE L'ACADEMIE ROYALE BELGIQUE - Classe des Sciences, 5^a série, v. 47, p. 816 - 823, 29 jul. 1961.
SP OT 470 - P.49
- 619 - MONFILS, A. **Spectroscopie moléculaire: les spectres d'absorption des molécules H₂, HD, et D₂.** Extraído: BULLETIN DE L'ACADEMIE ROYALE BELGIQUE - Classe des Sciences, 5^a série, v. 48, p. 460 - 481, 7 abr. 1962.
SP OT 471 - P.49
- 620 - MONOSTORI, Benedict J.; WEBER, Alfons. **The pure rotational Raman spectra of furan and cyclopentene.** Reimpresso de: JOURNAL OF MOLECULAR SPECTROSCOPY, v. 15, n.2, p. 158 - 167, fev. 1965.
SP OT 472 - P.50
- 621 - MONOSTORI, Benedict J.; WEBER, Alfons. **The pure rotational Raman spectra of 1, 4 - cyclohexadiene and 1, 3, 5 - cycloheptatriene.** Reimpresso de: JOURNAL OF MOLECULAR SPECTROSCOPY, v. 2, n.2, p. 129 - 145, fev. 1964.
SP OT 473 - P.50
- 622 - MON, Jean Pierre, presentée par René Lucas. **Effect Raman: spectres de vibrations des quelques cristaux d'iodures métalliques à structure lamellaire.** Extraído de: C. R. ACAD. SC. C PARIS, v. 262, Série B, p. 493 - 495, 14 fev. 1966. Notas.
SP OT 474 - P.50
- 623 - MOORADIAN, A. **Light scattering from single - particle electron and hole excitations in semiconductors.** s. n. t., 18p.
SP OT 475 - P.50
- 624 - MORANTZ, D. J.; WHITE, B. G.; WRIGHT, A. J. C. **Phosphorescence and simulated emission in organic molecules.** Sep. JOURNAL OF CHEMICAL PHYSICS, v. 37, n.9, p. 2041 - 2048, 1 nov. 1962.
SP OT 476 - P.50
- 625 - MOROZOV, V. A. **On the theory of resonant rotational Raman scattering I. Intensities of rotational - vibration lines.** [Opt. Spectros. v. 18, p. 111 - 114, fev. 1965].
SP OT 477 - P.50
- 626 - MOROZOV, V. A., REUT, E. G.; RYSKIN, A. I. **Luminescence absorption, and level diagram of the Pr³⁺ ion in PbMoO₄ monocrystals.** S. n. t., [1965]. 5p.
SP OT 478 - P.50
- 627 - MORTENSEN, O. Sonnich, KONINGSTEIN, J. A. **Electronic Raman effect II - on the asymmetry of the scattering tensor for electronic Raman transitions.** S. n. t., [1967]. 23p. Apresentado parte: Symposium on Molecular Structure and Spectroscopy, 2. Columbus: Ohio State University, set. 1967.
SP OT 479 - P.50

- 628 - MORTENSEN, O. Sonnich, KONINGSTEIN, J. A. **Vibronic coupling and the electronic Raman effect.** Sep. CHEMICAL PHYSICS LETTERS, v. 1, n.9, p. 409 - 410, nov. 1967.
SP OT 480 - P.50
- 629 - MORTON, Jack A. **From research to Technology.** Reimpresso de: SCIENCE AND TECHNOLOGY, maio 1964. 12p.
SP OT 481 - P.50
- 630 - MOULD, H. M.; PRICE, W. C. e WILKINSON, G. R. **Infra - red emission from gases excited by a radio - frequency discharge.** SPECTROCHIMICA ACTA, v. 16, p.479 - 492, s.l., 1960.
SP OT 482 - P.50
- 631 - MOUTAIN, Raymond D. **Spectral distribution of scattered light in a simple fluid.** Sep. REVIEW OF MODERN PHYSICS, v. 38, n.1, p. 205 - 214, jan. 1966.
SP OT 483 - P.50
- 632 - MOUTAIN, Raymond D. **Thermal relaxation and brillouin scattering in liquids.** Sep. JOURNAL OF RESEARCH OF THE NATIONAL BUREAU OF STANDARDS - A, PHYSICS AND CHEMISTRY, v. 70A, n.3, p. 207 - 220, maio/jun. 1966.
SP OT 484 - P.50
- 633 - MURASE, Kasuo; KATAYAMA, Shin'ichi; KAWAMURA, Hajimu; ANDO, Yoichi. **Study of the dispersion relations of the coupled phonon - damped plasmon mode in n - GaAs by light scattering.** Reimpresso de: PROGRESS OF THEORETICAL PHYSICS, n.57, p. 115 - 124, 1975. Suplemento.
SP OT 485 - P.50
- 634 - NAI - TENG YU; KUCK Jr., John F. R. **Focusing on lenses with laser Raman spectroscopy.** THE SPEX SPEAKER, Metuchen, N. J., set. 1978. 11p.
SP OT 486 - P.51
- 635 - NAKASHIMA, Schin - ichi, TOKUMOTO, Takaaki; MITSUISHI, Akoyoshi, et alii. **Lattice vibrations of Mg(x)Cd(1 - x)Te mixed crystal.** Reimpresso: JOURNAL OF THE PHYSICAL SOCIETY OF JAPAN, v. 35, n.5, p. 1437 - 1441, nov. 1973.
SP OT 487 - P.51
- 636 - NASSAU, Kurt; PRESOCOTT, Betty E.; WOOD, D. L. **The deep blue maxixe - type color center in beryl.** Sep. AMERICAN MONIRALOGIST, v. 61, p. 100 - 107, 1976.
SP OT 488 - P.51
- 637 - NASSAU, Kurt; WOOD, D. L. **The nature of the new maxixe - type beryl.** Sep. LAPIDARY JOURNAL, v. 27, p. 1032 - 1039, 1052 - 1053, out. 1973.
SP OT 489 - P.51
- 638 - NARAHARI RAO, K. **The band spectrum of CO+. 2 Comet - tail system (A²II - X²sigma).** s. n. t., [1949], 10p.
SP OT 490 - P.51
- 639 - NARAHARI RAO, K. **The band spectrum of CO+ I. First negative system (B²II - X²sigma).** s. n. t., [1949], 10p.
SP OT 491 - P.51

- 640 - NARAYANASWAMY, P.K. **The alfa - beta transformation in quartz.** [Proc. Ind. Sci., 28A, 417 - 422, 1948].
SP OT 492 - P.51
- 641 - NAUMAN, R. V.; DEBYE, P. **Light scattering investigations of carefully filtered sodium silicate solutions.** Reimpresso de: THE JOURNAL OF PHYSICAL & COLLOID CHEMISTRY, v. 55, n.1, p. 1 - 9, jan. 1951.
SP OT 493 - P.51
- 642 - **Near infrared transmission filters.** INFRA - RED. New York, N. Y. : Bauseh & Lomb Optical, 8 st, 1958. 11p. (Progres Report, 3).
SP OT 494 - P.51
- 643 - NITSCH, W.; CLAUS, R. **Interaction of isotopic modes with polaritons.** [Z. NATURFORCH, v. 29A, p. 1017 - 1022, 25 abr. 1974].
SP OT 495 - P.51
- 644 - OHTAKA, K. **Raman spectrum of polaritons in the presence of mass defects.** PHYS. STAT. SOL. (b), n.57, p. 51 - 62, 1973.
SP OT 496 - P.51
- 645 - **Proposal: Optical frequency mixing spectroscopy.** S. n. t., [1967]. 14p. com apêndices. Submetida ao: National Science Foundation Division of Materials Research, Washington, por: University of Southern California, University Park, Los Angeles, California.
SP OT 497 - P.51
- 646 - OTT, Christiane, présentée par Jean Cabannes. **Spectroscopie moléculaire: sur la structure des oxydes de cuivre hydratés.** Extraído de: COMPTES RENDUS DES SEANCES DE L'ACADEMIE DES SCIENCES, v. 236, p. 2224 - 2226, 08 jun. 1953. Nas.
SP OT 498 - P.51
- 647 - OZIER, Living; FOX, Kenneth. **Theory of the collision - induced rotational spectrum of tetrahedral molecules.** s. n. t. 6p.
SP OT 499 - P.51
- 648 - PAPPALARDO, R.; WOOD, D. L. **Spectrum of Yb^{3+} in yttrium gallium garnet.** Reimpresso: THE JOURNAL OF CHEMICAL PHYSICS, v. 33, n.6, p. 1734 - 1742, dez. 1960. (Yb).
SP OT 500 - P.52
- 649 - PATEL, C. K. N.; BENNETT Jr., W. R.; FAUST, W. L. **Infrared spectroscopy using stimulated emission techniques.** Reimpresso de: PHYSICAL REVIEW LETTERS, v. 9, n.3, p. 102 - 104, 1 ago. 1962.
SP OT 501 - P.52
- 650 - PATEL, C. K. N.; SHAW, E. D. **Tunable stimulated Raman scattering from mobile carriers in semiconductors.** Sep. PHYSICAL REVIEW B., v. 3, n.4, p. 1279 - 1295, 15 fev. 1971.
SP OT 502 - P.52
- 651 - PATEL, C. K. N.; SHAW, E. D. **Tunable stimulated Raman scattering from conductior electrons in InSb.** Reimpresso de PHYSICAL REVIEW LETTERS, v. 24,

- n.9, p. 451 - 455, 2 mar. 1970. SP OT 503 - P.52
- 652 - PATEL, C. K. N.; SHAW, E. D.; KERL, R. J. **Tunable spin - flip laser and infrared spectroscopy.** Reimpresso de: PHYSICAL REVIEW LETTERS, v. 25, n.1, p. 8 - 11, 6 jul. 1970. SP OT 504 - P.52
- 653 - **Physics Today.** American Institute of Physics, v. 6, n.10, p. 1 - 14, out. 1953. SP OT 505 - P.52
- 654 - PESHAN, P.S.; LACINA. W. B. **The random impurity problem.** s. n. t., 16p. SP OT 506 - P.52
- 655 - PETERSON, D. G.; YARIV, Amnon. **Interferometry and laser control with solid fabry - perot etalons.** Sep. APPLIED OPTICS, v. 5, n.6, p. 985 - 991, jun. 1966. SP OT 507 - P.52
- 656 - PILTCH, Martin S.; RINK, John; TALLMAN, Charles. **Pulsed infrared difference frequency generation in CdGeAs₂.** Sep. OPTICS COMMUNICATIONS, v. 15, n.1, p. 112 - 114, set. 1975. SP OT 508 - P.52
- 657 - PLACZEK, G. **The Raman effect and molecular structure.** [Murray Hill, N. J. : BELL TELEPHONE, 25 ago. 1960]. SP OT 509 - P.52
- 658 - PLACZEK, G.; TELLER, E. **The rotational strucuture of the Raman bands of polyatomic molecules.** In: Zeit. fur Physik, v. 81, n.209, 1933. Traduzido por A. Weber. SP OT 510 - P.52
- 659 - PLYLER, E. K. **Furthe infra - red measurements with a caesium iodide prism.** Reimpresso de: MOLECULAR SPECTROSCOPY, Institute of Petroleum, p. 77 - 80, 1955. SP OT 511 - P.52
- 660 - PLYLER, E. K.; ACQUISTA, Nicolo. **Infrared absorption spectra of five halomethanes.** Sep. JOURNAL OF RESEARCH OF THE NATIONAL BUREAU OF STANDARDS, v. 48, n.1, p. 92 - 97, jan. 1952. SP OT 512 - P.52
- 661 - PLYLER, E. K.; TIDWELL, Eugene D. **The precise measurement of the infrared spectra of molecules of the atmosphere.** Extraído de: Memoires Soc. R. S. C., 4^a serie - v. 18, p. 427 - 449, s. d. Fascículo único. SP OT 513 - P.52
- 662 - PREVORSEK, Dusan, présentée par Gustave Ribaud. **Spectroscopie moléculaire: bands d'absorption infrarouges dues à des vibrations de déformation des groupes NH et NH₂ chez les hydrazides d'acides carboxyliques.** Extraído de: COMPTES RENDUS DES SÉANCES DE L'ACADEMIE DES SCIENCES, v. 245, p. 2041 - 2044, 4 dez. 1957. SP OT 514 - P.52
- 663 - QUICK Jr., C. R.; WITTING, C. **Ir photodissociation of fluorinated ethanes and**

- ethylenes: collisional effects in the multiple photon absorption process.** s. n. t., [1978], 24p.
SP OT 515 - P.52
- 664 - QUICK Jr., C. R.; WITTING, C. Lr photo dissociation of vinyl fluoride time resolved emission under collisionless conditions. Reimpresso de: CHEMICAL PHYSICS, v. 32, n.1, p. 75 - 80. 15 jul. 1978.
SP OT 516 - P.52
- 665 - RAIZER, Y. V. P. **Self - focusing of a homogeneous light beam a transparent medium, due to weak absorption.** [Physic Lett., v. 23, out. 1966]. Submetido ao Institute of Mechanics Problems USSR Academy of Sciences, 30 maio 1966, ZLETF Pesma, v. 4, nC4, 1240128, 15 ago. 1966.
SP OT 517 - P.53
- 666 - RAJESWARA RAO, N; RAMANAIAH, K. V. **Asymmetrical Raman scattering by water and sulphuric acid.** Reimpresso de: INDIAN JOURNAL OF PHYSICS, v. 40, n.11, p. 627 - 630, 1966.
SP OT 518 - P.53
- 667 - RAJESWARA RAO, N; RAMANAIAH, K. V. **Depolarization study of the components of the Raman band of water: evaluation of the relative abundance of the (H₂O) species.** Reimpresso de: INDIAN JOURNAL OF PURE & APPLIED PHYSICS, v. 4, n.3, p. 105 - 108, 1966.
SP OT 519 - P.53
- 668 - RAJESWARA RAO, N; RAMANAIAH, K. V. **Evidence for symmetric type lattice oscillations in some liquids.** Reimpresso de: INDIAN JOURNAL OF PURE & APPLIED PHYSICS, v. 4, n.5, p. 206 - 209, 1966.
SP OT 520 - P.53
- 669 - RANDALL, R. P. **Operating characteristics of a 4 stage cascade image intensifier.** Hayes: EMI Eletronics, 1965. 20p.
SP OT 521 - P.53
- 670 - RANK, D. H.; EASTMAN, D. P.; RAO, B. S., et alii. **The rotational and vibrational constants of the HCl³⁵ and DCI³⁵ molecules.** s. n. t., s. d. 22p.
SP OT 522 - P.53
- 671 - RANK, D. H.; BENNETT, J. M.; BENNETT, H. E. **Measurement of interferometric secondary wavelength standards in the near infrared.** Reimpresso de: JOURNAL OF THE OPTICAL SOCIETY OF AMERICA, v. 46, n.7, p. 477 - 484, jul. 1956.
SP OT 523 - P.53
- 672 - RANK, D. H.; GUENTER, A. H.; SAKSENA, G. D., et alii. **Teartiyer interferometric wavelength standards from measurements on lines of the 2 - 0 band of carbon monoxide and derived wavelength standards for some lines of the 1 - 0 band of carbon monoxide. The velocity of light derived from a band spectrum method. IV.** Reimpresso de: JOURNAL OF THE OPTICAL SOCIETY OF THE AMERICA, v. 47, n.8, p. 686 - 689, ago. 1957.
SP OT 524 - P.53
- 673 - RANK, D. H.; GUENTER, A. H.; SHEARER, J. N., et alii. **Precision determination of the velocity derived from a band spectrum method III.** Reimpresso de: JOURNAL OF THE OPTICAL SOCIETY OF AMERICA, v. 47, n.2, p. 148 - 150, fev. 1957.
SP OT 525 - P.53
- 674 - RANK, D. H.; SHEARER, J. N. **Linear gas mass flow device with applications to**

- interferometry.** Reimpresso de JOURNAL OF THE OPTICAL SOCIETY OF AMERICA, v. 46, n.6, p. 463 - 464, jun. 1956.
SP OT 526 - P.53
- 675 - RAYMER, M. G.; CARLSTEN, J. L. **Simultaneous observations of stimulated Raman Scattering and Stimulated collision - induced fluorescente.** Sep. PHYSICAL REVIEW LETTERS, v. 39, n.21, p. 1326 - 1329, 21 nov. 1877.
SP OT 527 - P.53
- 676 - REBANE, K.; HIZHNYAKOV, V.; TEHVER, I. **Problems of the theory of secondary radiation by impurity centres in crystals.** EESTI NSV TEADUST AKADEEMIA TOIMETISED, v. 16, n.2, Füüsika: Matematica, 1967. Separata.
SP OT 528 - P.53
- 677 - REICHERT, John D.; WAGNER, William G. **Self - trapped optical beams in liquids.** Reimpresso de: IEEE JOURNAL OF QUANTUM ELECTRONICS, v. QE - 4, n.4, p. 221 - 225, abr. 1968.
SP OT 529 - P.53
- 678 - REINHART, F. K.; NELSON, D. F. **Light modulation by the electro - optic effect in reverse - biased gallium phosphide P - N junctions.** S. I. : BELL TELEPHONE LABORATORIES, 30 jul. 1964.
SP OT 530 - P.53
- 679 - REINHART, F. K. **Reserved biased gallium phosphide diodes as high frequency light modulators.** S. I. : BELL TLEPHONE LABORATORIES, 17 abr. 1967.
SP OT 531 - P.53
- 680 - REISLER, Hanna; WITTIG, Curt. **Temperature dependence of electronic to vibrational energy transfer from Br(4²P_{1/2}) to _²CO₂ and _³CO₂.** S. n. t., [1jun. 1978]. 26p.
SP OT 532 - P.54
- 681 - RENTZEPIS, P.M.; GIORDMAINE, J. A.; WECHT, K. W. **Coherent optical mixing in optically active liquids.** S. I. : BELL TELEPHONE LABORATORIES, 1 abr. 1966. 12p.
SP OT 533 - P.54
- 682 - RENTZEPIS, P.M.; DUGUAY, M. A. **Picosecond light pulse display using two different optical frequencies.** s. n. t., s. d. 16p.
SP OT 534 - P.54
- 683 - RICHARD, Jaques, présentée par Gustave Ribaud. **Cou - ches minces: étude expérimentale des propriétés optiques des couches minces d'or dans le proche infrarouge.** Extraído de: COMPT REND L'ACADEMIE DES SCIENCES, P.2762 - 2764, 9 abr. 1962. Notas.
SP OT 535 - P.54
- 684 - RICE, Dennis K. **Absorption measurements of carbon monoxide laser radiation by water vapor.** Hawthorne, California: Northrop, Laser Systems Department, jul. 1972, 35p.
SP OT 536 - P.54
- 685 - RICE, Dennis K. **Atmospheric attenuation measurements for several highly absorbed CO laser lines.** s. n. t., s. d. 10p.
SP OT 537 - P.54
- 686 - RICHMAN, Isaac. **Vibronic spectra of SrF₂:Sm²⁺ and BaF₂:Sm²⁺.** Sep. PHYSICAL REVIEW, v. 133, nº5A, p. A1364 - A1366, 2 mar. 1964.
SP OT 538 P.54

- 687 - RICHMAN, Isaac. **Vibronic spectra of SrF₂:Sm²⁺ and BaF₂:Sm²⁺**. Sep. PHYSICAL REVIEW, V. 133, n.5A, p. A1364 - A1366, 2 mar. 1964.
SP OT 539 - P.54
- 688 - RIESZ, R. P. **A germanium high - speed photodetector**. s. n. t., s. d. 7p.
SP OT 540 - P.54
- 689 - RIGDEN, J. D.; GORDON, E. I. **On the granularity pf scattered optical maser light**. S. I. : BELL TELEPHONE LABORATORIES, 19 out. 1962. 1p. Fragmento.
SP OT 541 - P.54
- 690 - RIGDEN, J. D.; WHITE, A. D. **Simultaneous gas maser action in the visible and infrared**. S. I. : BELL TELEPHONE LABORATORIES, 20 jul. 1962. 10p.
SP OT 542 - P.54
- 691 - RIGROD, W. W. **High - loss maser oscillators**. S. I. : BELL TELEPHONE, 10 set. 1964. 17p.
SP OT 543 - P.55
- 692 - RIGROD, W. W. **Isolation of axi - symmetrical optical**. S. I. : BELL TELEPHONE LABORATORIES, 02 nov. 1962. 8p.
SP OT 544 - P.55
- 693 - RIGROD, W. W. **Small - signal energy conservation in electron beams**. S. I. : BELL TELEPHONE LABORATORIES, 5 fev. 1962. 7p.
SP OT 545 - P.55
- 694 - RIGROD, W. W.; HOGELNIK, H.; BRANGACCIO, D. J., et alii. **Gaseous optical maser with external concave mirrors**. S. I. : BELL TELEPHONE LABORATORIES, 1 jun. 1961. 9p.
SP OT 546 - P.55
- 695 - ROBERTS, Charles S. **Inelastic scattering from a diatomic molecule: rotational excitation upon collision between He and H₂ and H₂ and H₂**. PHYSICAL REVIEW, v. 131, n.1, p. 209 - 217, 1 jul. 1963.
SP OT 547 - P.55
- 696 - ROBERTS, Charles S. **Interaction energy between a helium atom and a hidrogen molecule**. Sep. PHYSICAL REVIEW, v. 131, n.1, p. 203 - 209, 1 jul. 1963.
SP OT 548 - P.55
- 697 - ROCHA, Manuel. **Organization, management and activity of the "Laboratório Nacional de Engenharia Civil"**. Lisbon: Ministério das Obras Públicas: Laboratório Nacional de Engenharia Civil, 1956. 28p. (Publicação, 79).
SP OT 549 - P.55
- 698 - ROCKWOOD, Stephen D. **Laser induced chemiluminescence of BCl₃/H₂S mixtures**. Sep. CHEMICAL PHYSICS, v. 10, p. 453 - 457, 1974.
SP OT 550 - P.55
- 699 - ROCKWOOD, Stephen D. **Uranium isotope separation and its demand on laser developement**. Los Alamos, New Mexico: University of California, Scientific Laboratories, maio 1976. 22p. Submetido a: Laser Spectroscopy Conference Loen, Norway.
SP OT 551 - P.55
- 700 - ROCKWOOD, Stephen D.; RABIDEAU, Sherman W. **Boron isotope separation by laser - induced photochemistry**. Los Alamos, New Mexico: University of California, s. d. Submetido a: IEE Quantum Electronics Conference.
SP OT 552 - P.55

- 701 - ROKNI, M.; YATSIN, S. **Resonance Raman effect in free atoms of potassium.** Jerusalem, Israel: The Hebrew University, Department of Physics, Microwave Division, s. d. 10p.
SP OT 553 - P.56
- 702 - JOURNAL OF CHEMICAL PHYSICS, v.40, n.06, p.1664 - 1670, mar. 1964.
SP OT 554 - P.56
- 703 – ROLF, J.; LIPSETT, F. R. E KING, W. J. **Optical Absorption and Fluorescence of Oxygen in Alkali Halide Crystals.** PHYSICAL REVIEW, v.123, n.2, p.447 - 454, jul. 1961.
SP OT 555 - P.56
- 704 - ROSNER, R. D.; TURNER, E. H. **Electrooptic coefficients in calcium pyroniobate.** S. I. : BELL TELEPHONE, 17 maio 1967. 13p.
SP OT 556 - P.56
- 705 - ROSENSHEIN, J. S.; WHITNEY, W. M. **Phase diagram of solid methane.** Sep. LOW TEMPERATURE PHYSICS - LT9 (Part B), p. 1114 - 1117, 1965. Anexo; Bibliografia. (Cópia).
SP OT 557 - P.56
- 706 - THIELE, A. A.; WHITNEY, W. M. **Ultrasonic propagation in solid methane.** S. n. t., p. 1122 - 1125, s. d. ROSENSHEIN, J. S.; WHITNEY, W. M.; WOLF, R. P.; WHITNEY, W. M. **Proton magnetic - resonance absorption in solid methane.** S. n. t., p. 1118 - 1121, s. d.
SP OT 558 - P.56
- 707 - ROUNDY, C. B.; BYER, R. L. **Sensitive LiTaO₃ pyroelectric detector.** Sep. J. APPL. PHYS., v. 44, n.2, p. 929 - 931, 1973.
SP OT 559 - P.56
- 708 - ROUSSEAU, D. L.; BUTLER, M. A.; GUGGENHEIM, H. J., et alii. **Raman scattering and infrared absorption from the C - N stretching modes of K₂Pt(CN)₄ BrO₃ · 3H₂O.** Sep. PHYSICAL REVIEW B, v. 10, n.6, p. 2281 - 2285, 15 set. 1974.
SP OT 560 - P.56
- 709 - ROUSSEAU, D. L.; WILLIAMS, P.F. **Resonance Raman scattering of light from a diatomic molecule.** Sep. THE JOURNAL OF CHEMICAL PHYSICS, v. 64, n.9, p. 3519 - 3537, 1 maio 1976.
SP OT 561 - P.56
- 710 - RUBIN, J. J. **A study of the alkali metal rare earth tungstates and molybdates for optical maser applications.** S. I. : BELL TELEPHONE LABORATORIES, 14 nov. 1962.
SP OT 562 - P.56
- 711 - RUSSEL, Philip G.; MCCLURE, Donald S.; STOUT, J. W. **Zeeman splitting of narrow lines in crystalline MnF₂, FeF₂, and CoF₂ evidence for spin - wave excitations.** Sep. PHYSICAL REVIEW LETTERS, v. 16, n.5, p. 176 - 178, 31 jan. 1966.
SP OT 563 - P.56
- 712 - RUSSEL, J. P. **The Raman spectrum of calcium fluoride.** [Proc. Phys. Soc. (London), v. 85, p. 194 - 196, jan. 1965].
SP OT 564 - P.56
- 713 - RUSSEL, J. P.; LOUDON, R. **The first - order Raman Spectrum of calcium**

- tungstate.** Sep. PROC. PHYS. SOC., v. 85, p. 1029 - 1033, maio 1965.
SP OT 565 - P.56
- 714 - RUVALDS, J.; ECONOMOU, E. N.; NGAI, K. L. **Electron coupling to bound phonon pairs.** s. n. t., s. d. 12p.
SP OT 566 - P.56
- 715 - RUVALDS, J.; ZAWADOWSKI, A. **Phonon hybridization in solids.** s. n. t., s. d. 15p.
SP OT 567 - P.56
- 716 - RUVALDS, J.; ZAWADOWSKI, A. **Two - phonon resonances and hybridization of the resonance with single - phonon states.** Virginia: The University Department of Physics, s. d. 13p.
SP OT 568 - P.56
- 717 - SAITO, Hiroshi; KURIBAIASHI, Shizuma; SHIONOYA, Shigeo. **A high sensitivity television camera system for picosecond spectroscopy.** Sep. JAPAN J. APPL. PHYS., v. 15, n.5, p. 947 - 948, 1976.
SP OT 569 - P.57
- 718 - SAKURAI, Katsumi; SHIMODA, Koichi. **Hyperfine spectrum of xenon in the 3, 5 milimicrom maser transition.** Sep. J. PHYS. SOC. JAPAN, v. 21, p. 1214, 1966.
SP OT 570 - P.57
- 719 - SAKURAI, Katsumi; SHIMODA, Koichi. **The pressure dependence of absorption coefficient in organic gases at 3. 3913 milimicrom and 3. 5070 milimicrom.** Sep. JAPAN J. APPL. PHYS., v. 5, p. 744, 1966.
SP OT 571 - P.57
- 720 - SAKURAI, Katsumi; SHIMODA, Koichi; TAKAMI, Michio. **High resolution spectroscopy of formadehyde by a tunable infrared maser.** Sep. J. PHYS. SOC. JAPAN., v. 21, p. 1838, 1966. SAKURAI, Katsumi; SHIMODA, Koichi. **Collision diameters of H₂CO and CH₄ measured by the infrared maser spectrograph.** Sep. J. PHYS. SOC. JAPAN, v. 21, p. 1842 - 1843, 1961. SAKURAI, Katsumi; UEDA, Yoshifumi; TAKAMI, Michio, et alii. **Isotope shift of neon in the 3. 39 milimicron maser transition.** Sep. J. PHYS. SOC. JAPAN, v. 21, p. 2090, 1961.
SP OT 572 - P.57
- 721 - SALZBERG, Calvin D. **Infrared transmittance of strontium titanate from room temperature to 180°C.** Sep. J. OPT. SOC. AM., v. 51, p. 1149 - 1150, out. 1961.
SP OT 573 - P.57
- 722 - SAMELSON H.; LEMPICKI, A. **Fluorescence and lifetimes of Eu chelates.** Sep. THE JOURNAL OF CHEMICAL PHYSICS, v. 39, n.1, p. 110 - 112, 1 jul. 1963.
SP OT 574 - P.57
- 723 - SAMELSON H.; LEMPICKI, A.; BRECHER, C., et alii. Sep. APPLIED PHYSICS LETTERS, v. 5, n.9, p. 73 - 74, nov. 1964.
SP OT 575 - P.57
- 724 - SAMOILOVICH, A. G.; KORENBLIT, L. L. **Magnetooptic properties of the exciton.** Sep. DOKLADY, AN USSR, v. 100, n.1, p. 43 - 44, 1955. Transcrito por Morris D. Friedman, Lincoln Laboratory.
SP OT 576 - P.57
- 725 - SANDERCOCK, J. R.; PALMER, S. B.; ELLIOTT, R. J., et alii. **Brillouin scattering, ultrasonic and theoretical studies of acoustic anomalies in crystals showing Jahn Teller phase transitions.** s. n. t., s. d. 43p.
SP OT 577 - P.57

- 726 - SAUR, Roger L. **Appearance criteria for uncolored anodized aluminum surfaces.** Sep. APPLIED OPTICS, v. 2, n.4, p. 448 - 449, abr. 1963. SP OT 578 - P.57
- 727 - SAWADA, Akikatsu; ADAGAWA, Masayuki; NAKAMURA, Terutaro. **Proper ferroelastic transition in piezoelectric lithium ammonium tartrate.** s. n. t., [13 jun. 1977]. 14p. SP OT 579 - P.57
- 728 - SAVAGE, A. **Mesurements of second harmonic generation of the ruby laser line in piezoelectric crystals.** S. I. : BELL TELEPHONE LABORATORIES, 26 fev. 1962. 14p. SP OT 580 - P.57
- 729 - SCHAWLOW, A. L. **Fine - line spectra of chromium ions in crystals.** S. I. : BELL TELEPHONE LABORATORIES, 19 set. 1961. 19p. SP OT 581 - P.57
- 730 - SCHAWLOW, A. L. **Measuring the wavelength of light with a ruler.** Reimpresso: AMERICAM JOURNAL OF PHYSICS, v. 33, n.11, p. 922 - 923, nov. 1965. SP OT 582 - P.57
- 731 - SCHAWLOW, A. L.; DEVLIN, G. E. **Simultaneous optical maser action in two ruby satelite lines.** s. n. t., s. d. 7p. SP OT 583 - P.57
- 732 - SHAWLOW, A. L.; TOWNES, C. H. **Infrared and optical masers.** New York, N. Y. : BELL TELEPHONE LABORATORIES, 1958. Reimpresso: THE PHYSICAL REVIEW, v. 29, p. 1940 - 1949, dez. 1958. SP OT 584 - P.57
- 733 - SCHIMITSCHEK, Erhardj.; TRIAS, John A.; NEHRICH Jr., Richard B. **Stimulated emission in an europium chelate solution at room temperature.** Sep. J. APPL. PHYS., v. 36, p. 867 - 868, mar. 1965. SP OT 585 - P.57
- 734 - SCHULTZ, G. V. **Comparison of the absorptions spectra of ruby in the ground state and the excited metastable state.** Sep. PHYSICS LETTERS, v. 8, n.2, p. 93 - 95, 15 jan. 1964. SP OT 586 - P.58
- 735 - SCHWARZ, Helmul. **Electron beam processes at different voltages.** Windsor Locks, Connecticut: Hamilton Satandart, Division of United Aircraft, [1961]. 24p. Trabalho apresentado a convite: The Second International Vacuum Congress, Washington, D. C., 16 - 19 out. 1961. SP OT 587 - P.58
- 736 - SCHWARZ, Helmul. **Method of measuring and controlling evaporation rates during the production of thin films in vacuum.** Reimpresso: THE REVIEW OF SCIENTIFIC INTRUMENTS, v. 32, n.2, p. 194 - 199, fev. 1961. SP OT 588 - P.58
- 737 - SCHWARZ, Helmul. **The reflection of electrons from standing light waves.** Sep. ZEITSCHRIFT FÜR PHYSIK, v. 204, P.276 - 289, 1967. SP OT 589 - P.58
- 738 - SCHWARZ, Helmul. **Temperature coefficient of resis - tance of thin metal films on ceramics surfaces.** Sep. ZEITSCHFT FÜR PHYSIK, v. 162, p. 402 - 409, 1961. SP OT 590 - P.58
- 739 - SCHWARZ, Helmul. **A wide range resonance vacuum gauge.** Windsor locks,

- Connecticut: Hamilton Standard, Divisum of United Aircraft, [1961]. 15p. Trabalho apresentado: The Second intenational Vacuum Congress, Washington, d. l., 16 - 19 out. 1961.
- SP OT 591 - P.58
- 740 - SCHWARZ, Helmuth; DEMARIA, A. J. **Electron ion, and light beams as present and future working tools.** East Hartford, CONN: United Aircraft, Resarch Laboratories, 1962. Trabalho apresentado em 1962, a National Electronics Conference, Chicago, Illinois, 8 - 10 out. 1962.
- SP OT 592 - P.58
- 741 - SCHWARZ, Helmuth; TOURTELLOTTE, H. A.; GAERTNER, W. W. **Direct observation of nonlinear scattering of electrons by laser beam.** Reimpresso: PHYSICS LETTERS, v. 19, n.3, p. 202 - 203, 15 out. 1965.
- SP OT 593 - P.58
- 742 - SCOTT, James F. **Hybrid phonons and anharmonic interactions in AlPO₄.** s. n. t., s. d. 13p.
- SP OT 594 - P.58
- 743 - SCOTT, James F. **Lattice pertubations in CaWO₄ and CaMoO₄.** S. n. t., s. d. 9p.
- SP OT 595 - P.58
- 744 - SCOTT, James F. **Stimulated Raman scattering in quartz.** S. n. t., s. d. 6p.
- SP OT 596 - P.58
- 745 - SCOTT, James F.; DAMEN, T. C.; LEITE, R. C. C., et alii. **Light scattering from plasmons and single particle excitations in cadmium sulfide near resonance.** S. l., BELL TELEPHONE LABORATORIES, 3 nov. 1969. 12p.
- SP OT 597 - P.58
- 746 - SCOTT, James F.; NAKAHARI RAO, K. **Infrared absorption bands of acetylene, Part III: analysys of the bands at e microns.** Reimpresso: JOURNAL OF MOLECULAR SPECTROSCOPY, v. 20, n.4, p. 438 - 460, ago. 1966.
- SP OT 598 - P.58
- 747 - SENNET, C. T. **The effect of the lattice on the optical absorption band width and the Raman effect of the U - centre.** Sep. J. PHYS. CHEM. SOLIDS, v. 26, p. 1097 - 1106, 1965.
- SP OT 599 - P.58
- 748 - SEARS, Francis Weston. **Answer to problems: Mechanics, Heat and Sound.** 2^a ed. Cambridge, Mass. Addison - Wesley, s. d. Não paginado. (Addison - Wesley Physics Séries. Ed. : Francis Weston Sears).
- SP OT 600 - P.59
- 749 - SESHADEVI, K. S.; JONES, R. Norman. **The shapes and intensities of infrared absorption bands - A review.** Sep. SPECTROCHIMICA ACTA, v. 19, p. 1013 - 1085, 1963.
- SP OT 601 - P.59
- 750 - SHAH, Jadeep. **A new output coupling scheme for CW dye lasers.** S. n. t., s. d. 9p.
- SP OT 602 - P.59
- 751 - SHAND, M. L.; CHING, L. Y.; BURSTEIN, E. **Raman scattering by optical phonons and polaritons in CuCl.** Sep. SOLID COMMUNICATIONS, v. 15, p. 1209 - 1212, 1974.
- SP OT 603 - P.59

- 752 - SHAPIRO, Stephen, M.; GAMMON, Robert W.; CUMMINS, Herman Z. **Brillouin scattering spectra of crystalline quartz, fused quartz and glass.** S. n. t., s. d. 9p.
SP OT 604 - P.59
- 753 - SHAPIRO, Stephen, M.; O'SHEA, Doanld C.; CUMMINS, Herman Z. **Raman scattering study of the alfa - beta phase transition in quartz.** S. n. t., s. d. 13p.
SP OT 605 - P.59
- 754 - SHAUFELE, R. F.; WEBER, M. J. **Raman scattering by lithium niobate.** S. n. t., s. d. 12p.
SP OT 606 - P.59
- 755 - SHAW, D. E.; WELSH, H. L. **The Raman spectrum of ethane - 1, 1, 1 - d31.** Sep. CANADIAN JOURNAL OF PHYSICS, v. 45, p. 3823 - 3835, 1967.
SP OT 607 - P.59
- 756 - SHEN, Y. R.; BLOEMBERGEN, N. **Interaction between light waves and spin waves.** sep. PHYSICAL REVIEW, v. 143, n.2, p. 372 - 384, mar. 1966.
SP OT 608 - P.59
- 757 - SHIMANOUCHI, Takeshiko. **Annual Progress Report, 2: april 1960 - march 1961.** Tokio, Japan: University of Tokio, Faculty of Science, Department of Chemistry, 1961. 18p.
SP OT 609 - P.59
- 758 - SHIMANOUCHI, Takeshiko. **Annual Progress Report, 3: (april 1962 - march 1962) and 4: (april 1963 - march 1963).** Tokio, Japan: University of Tokio, Faculty of Science, Department of Chemistry, 1963. 40p.
SP OT 610 - P.59
- 759 - SHIMANOUCHI, Takeshiko; TSUBOI, Masamichi; MIYAZWA, Tatsuo. **Optically active lattice vibrations as treated by the GF - Matrix Method.** Reimpresso: JOURNAL OF CHEMICAL OF PHISICS, v. 35, n.5, 1597 - 1612, nov. 1961.
SP OT 611 - P.60
- 760 - SHIMIZO, Fujio. **Study of the intensy dependence refractive index in liquids.** Reimpresso: JOURNAL OF THE PHYSICAL SOCIETY OF JAPAN, v. 22, n.4, p. 1070 - 1077, abr. 1967.
SP OT 612 - P.60
- 761 - SHIMODA, Koichi. **Gain, frequency shift, and angular distribution of stimulated Raman radations under multimode excitation.** Reimpresso: JAPANESE JOURNAL OF APPLIED PHYSICS, v. 5, n.7, p. 615 - 623, jul. 1966.
SP OT 613 - P.60
- 762 - SHIMODA, Koichi. **Angular distribution of stimulated Raman radation.** Reimpresso: JAPANESE JOURNAL OF APPLIED PHYSICS, v. 5, n.1, p. 86 - 92, jan. 1966.
SP OT 614 - P.60
- 763 - SHIOKICHI, Iyanaga. **Algebraic theory of numbers.** Sep. SCIENCE IN JAPAN, p. 81 - 112, s. d.
SP OT 615 - P.60
- 764 - SHLICHTA, Paul J. **A contact rule for rigid - sphere models of crystal structures.** Pasadena, California, Institute of Technology, Jet Propulsion Laboratory, 1958. (Technical Report, 32 - 1299).
SP OT 616 - P.60
- 765 - SIEGMAN, A. E.; QUATE, C. F.; BJORKHOLM, J., et alii. **Frequency translation of an He - Ne lasers output frequency by acoustic output coupling insid the resonant**

- cavity.** Sep. APPLIED PHYSICS LETTERS, v. 5, n.1, p. 1 - 2, 1 jul. 1964. SP OT 617 - P.60
- 766 - SILBERG, Paul, A. **Laser interaction with a mercury surface.** Sep. CANADIAN JOURNAL OF PHYSICS, v. 43, p. 2078 - 2085, nov. 1965. SP OT 618 - P.60
- 767 - SILVA, W. J. da, TEIXEIRA, J. P.F.; ARRUDA, P., et alii. **Nutrimaiz, um cultivar de milho de alto valor nutritivo.** S. n. t., s. d. 16p. SP OT 619 - P.60
- 768 - SILVERA, Isaac F.; HARDY, Walter N.; METAQUE, John P. **Rotational excitations in solid hydrogen deuterium in the ordered state.** S. n. t., [1968]. Com anexos: correspondência do autor a S. P.S. Porto, prof. Dep. of Physics, University of Southern California, Los Angeles, California, 14 abr. 1970, Sep. e currículo.
- APENSO:
- HALLEY, J. Words; SILVERA, I. **Odd - exciton magnon interaction and explanation of anomalous far infrared absorption in antiferromagnetic FeF₂.** Sep. PHYSICAL REVIEW LETTERS, v. 15, n.16, p. 654 - 656, 18 out. 1965.
- LEMAIRE, R.; PAUTHENET, R.; SCHUWEIZER, J. et alii. **Proprietes magnetiques des alliages de formule TCo₃, dans laquelle T designe l'yttrium ou une terre rare.** Sep. J. PHYS. CHEM. SOLIDS, v. 28, p. 2471 - 2475, 1967. apenso do n.181. SP OT 620 - P.60
- 769 - SINGH, N. L.; JAIN, D. C. **The Rydberg - Klein - Rees methods of constructing the true potential energy curves of diatomic molecules.** Sep. PROC. PHYS. SOC., v. 79, P.274 - 278, 1962. SP OT 621 - P.60
- 770 - SINGH, S.; BONNER, W. A.; GRODKEWICZ, W. H., et alii. **Nd - doped yttrium aluminum garnet with improvet fluorescent lifetime of the F3/2 state.** S. I. : BELL LABORATORIES, 11 mar. 1976. 12p. SP OT 622 - P.60
- 771 - SINGH, S.; GEUSIC, J. E. **Observation and saturation of a multiphoton process in NdCl₃.** S. I. : BELL TELEPHONE LABORATORIES, 27 jun. 1966. 12p. SP OT 623 - P.60
- 772 - SINGH, S.; GEUSIC, J. E. **Observation and saturation of a multiphoton process in NdCl₃.** S. I. : BELL TELEPHONE LABORATORIES, 12 set. 1966. 12p. SP OT 624 - P.60
- 773 - SKINNER, J. G.; NILSEN, W. G. **An absolute Raman scattering cross - section measurements of the 992 Cm, line of benzene.** S. I. : BELL TELEPHONE LABORATORIES, 2 jan. 1967. 26p. SP OT 625 - P.61
- 774 - SLUSHER, R. E.; PATEL, C. K. N.; FLEURY, P.A. **Inelastic high scattering from landau - level electrons in semiconductors.** Reimpresso: PHYSICAL REVIEW LETTERS, v. 18, n.3, p. 78 - 80, 16 jan. 1967. SP OT 626 - P.61
- 775 - SMITH, F. J.; SMITH, J. K.; MCGLYNN, S. P. **Low temperature double path absorption cell.** Sep. THE REVIEW OF SCIENTIFIC INSTRUMENTS, v. 33, n.12, p. 1367 - 1371, dez. 1962. SP OT 627 - P.61
- 776 - SMITH, P.W. **Phase locking of a laser modes by continuous cavity length**

- variation.** S. I. : BELL TELEPHONE LABORATORIES, 17 out. 1966. 9p.
SP OT 628 - P.61
- 777 - SMITH, P.W. **Stabilized, single - frequency output from a long laser cavity.** S. I. : BELL TELEPHONE LABORATORIES, 12 jul. 1965. 28p.
SP OT 629 - P.61
- 778 - SOKOLOFF, J. B. **Polar spin waves in ferromagnetic metals.** S. n. t., s. d. 56p.
SP OT 630 - P.61
- 779 - SOKOLOFF, J. B. **Theory of longitudinal spin fluctuations and the antiferromagnetic phase transition in chromium metal.** S. n. t., s. d. 13p.
SP OT 631 - P.61
- 780 - SOKOLOFF, J. B. **Theory of neutron scattering in the itinerant model of antiferromagnetic metals.** Reimpresso THE PHYSICAL REVIEW, v. 185, n.2, p. 783 - 789, 10 set. 1969.
SP OT 632 - P.61
- 781 - SOKOLOFF, J. B. **Theory of neutron scattering in the itinerant model of antiferromagnetic metals II.** S. n. t., s. d. 34p.
SP OT 633 - P.62
- 782 - SOLOMON, Ionel, présentée par Louis Leprince - Ringuet. **Resonance nucléaire dans les solides.** Extraído: COMPTES RENDUS DÉS SCIENCES DE L'ACADEMIE DES SCIENCES, v. 245, p. 1011 - 1014, 16 set. 1957. Notes.
SP OT 634 - P.62
- 783 - SOLOMON, R.; SHER, A.; MULLER, M. W. **Polarization in LaF₃.** sep. JOURNAL OF APPLIED PHYSICS, v. 37, n.9, p. 3427 - 3432, ago. 1966.
SP OT 635 - P.62
- 784 - SONIN, A. S. **Space symmetry and induce polarization.** Sep. SOVIET PHYSICS - SOLID STATE, v. 9, n.10, p. 2371 - 2372, abr. 1968. Traduzido de: Fizika Tverdogo Tela, v. 9, n.10, P.3008 - 3010, out. 1967.
SP OT 636 - P.62
- 785 - SOOTS, V.; ALLIN, Elizabeth J.; WELSH, H. L. **Variations of the Raman spectrum of solid hydrogen with ortho - para ratio.** Sep. CANADIAN JOURNAL OF PHYSICS, v. 43, p. 1985 - 1995, 1965.
SP OT 637 - P.62
- 786 - SOOY, W. R.; GELLER, M.; BORTFELD, D. P. **Switching of semiconductor reflectivity by a grant pulse laser.** S. n. t., s. d. 8p.
SP OT 638 - P.62
- 787 - SOROKIN, P.P.; STEVENSON, M. J.; LANKARD, J. R., et alii. **Spectroscopy and optical maser action in SrF₂:Sm²⁺.** Sep. PHYSICAL REVIEW, v. 127, n.2, p. 503 - 508, 15 jul. 1962.
SP OT 639 - P.62
- 788 - SPENCER, D. J.; WITTING, C. **Atomic bromine electronic transition chemical lasers.** S. n. t., s. d. 12p.
SP OT 640 - P.62
- 789 - SPIRO, Thomas G. **Raman spectra of crystalline chlorothallates.** Sep. INORGANIC CHEMISTRY, v. 4, n.9, p. 1290 - 1293, set. 1965.
SP OT 641 - P.62
- 790 - SPITZER, W. G.; MILLER, Robert C.; KLEINMAN, D. A., et alii. **Far infrared dielectric**

- dispersion in BaTiP₃, SrTiO₃ and TiO₂.** Reimpresso: THE PHYSICAL REVIEW, v. 126, n.5, p. 1710 - 1721, 1 jun. 1962.
SP OT 642 - P.62
- 791 - STAHL, H. Adrian. **Radiation of the Huggins - Bol, type A, high pressure mercury lamp.** Sep. CANADIAN OF THE OPTICAL SOCIETY OF AMERICA, v. 49, n.4, p. 381 - 384, abr. 1959.
SP OT 643 - P.62
- 792 - STANNREICH, H. **The raman spectrum of bromine.** Reimpresso: THE PHYSICAL REVIEW, v. 78, n.1, p. 79 - 80, abr. 1950.
SP OT 644 - P.62
- 793 - STARUNOV, V. S. **Interpretation of the spectral composition of light scattered by fluctuations of anisotropy in liquids.** Sep. SOVIET PHYSICS DOKLADY, v. 8, n.12, p. 1206 - 1208, jun. 1964.
SP OT 645 - P.62
- 794 - STEFFEN, H.; STEFFEN, J.; MOSER, F, et alii. **Stimulated emission up to 0, 538 milimetres wavelength from cyanic compounds.** Sep. PHYSICS LETTERS, v. 20, n.1, p. 20 - 21, 15 jan. 1966.
SP OT 646 - P.63
- 795 - STEIGMEIER, E. F., AUDERSET, H. **Dynamic critical behaviour at the structural phase transition in SrTiO₃.** ZURICH: RCA, [1973]. Reimpresso: SOLID STATE COMMUNICATIONS, v. 12, n.6, p. 565 - 568, 1973.
SP OT 647 - P.63
- 796 - STEIGMEIER, E. F.; AUDERSET, H.; HARBEKE, G. **Critical opalescence in SrTiO₃.** Zurich: RCA, [1973]. Reimpresso: SOLID STATE COMMUNICATIONS, v. 12, p. 1077 - 1081, 1973.
SP OT 648 - P.63
- 797 - STEIGMEIER, E. F.; AUDERSET, H.; HARBEKE, G. **Soft mode and critical opalescence in SrTiO₃.** Zurich: RCA, [1974]. Reimpresso: RISTE, T., ed. ANAROMATIC LATTICES, STRUCTURAL TRANSITIONS AND MELTING, p. 153 - 160. (NATO - A. S. I. Applied Sciences, Séries 1).
SP OT 649 - P.63
- 798 - STEINFELD, J. I.; JENSEN, C. C. **Double resonance and energy transfer in sulfur hexafluoride.** S. n. t., s. d. 3p.
SP OT 650 - P.63
- 799 - STEKHANOV, A. I.; ELIASHBERG, M. B. **Raman scattering of light by quasilocal oscilations.** Sep. SOVIET PHYSICS - SOLID STATE, v. 6, n.11, P.2718 - 2721, maio 1965.
SP OT 651 - P.63
- 800 - STECKHANOV, A. I.; MAKSIMOVA, T. I. **Raman scattering of light by quasilocal vibrations near Na, Cs and Rb impurities in KCl crystal.** Sep. SOVIET PHYSICS - SOLID STATE, v. 8, n.3, p. 737 - 739, set. 1966.
SP OT 652 - P.63
- 801 - STEVENSON, M. J.; REUTER, W.; BRASLAU, N., et alii. Sep. JOURNAL OF APPLIED PHYSICS, v. 34, n.3, p. 500 - 509, mar. 1963.
SP OT 653 - P.63
- 802- STITCH, Malcon L. **What happened at the Paris laser exposition and symposium?** Sep. MICROWAVES, LASER TECHNOLOGY SECTION, p. 74 - 75, jan. 1970.

- SP OT 654 - P.63
- 803 - STOICHEFF, B. P. **Characteristics of stimulated Raman radiation generated by coherent light.** Sep. PHYSICS LETTERS, v. 7, n.3, p. 186 - 188, 15 nov. 1963.
SP OT 655 - P.63
- 804 - STOICHEFF, B. P. **High resolution Raman spectroscopy of gases IX. Spectra of H₂, HD, and D₂.** Reimpresso: CANADIAN JOURNAL OF PHYSICS, v. 35, p. 730 - 741, 1957.
SP OT 656 - P.63
- 805 - STRONG, John. **Interferometry for the far infrared.** Reimpresso: JOURNAL OF THE OPTICAL SOCIETY OF AMERICA, v. 47, n.5, p. 354 - 357, maio 1957.
SP OT 657 - P.63
- 806 - STRONG, John. **Investigation in the spectral region between 20 and 40 microns.** Reimpresso: PHYSICAL REVIEW, v. 37, n.12, p. 1565 - 1572, 15 jun. 1931.
SP OT 658 - P.63
- 807 - STRONG, John. **A new radation pyrometer.** J. D. S. A, v. (?), p. 521 - 530, dez. 1939.
SP OT 659 - P.63
- 808 - STRONG, John; WOO, S. C. **Far infrared spectra of gases.** Reimpresso: PHYSICAL REVIEW, v. 42, n.2, p. 267 - 278, 15 out. 1932.
SP OT 660 - P.63
- 809 - STRYLAND, J. C.; MAIO, A. D. **Optical cell for the obsevation of Raman scattering in gases at high pressures.** Reimpresso: THE REVIEW OF SCIENTIFIC INSTRUMENTS, v. 31, n.4, p. 414 - 415, abr. 1960.
SP OT 661 - P.63
- 810 - STURGE, M. D., INGERSOLL, K. A. **Direct evidence for a dynamic Jahn - Teller effect in the T_{2g} excited state of V in MgO.** S. I. : BELL TELEPHONE LABORATORIES, 9 set. 1964. 13p.
SP OT 662 - P.63
- 811 - SUGAI, Shunji. **Resonant Raman scattering in CuGaS₂.** Sep. JOURNAL OF THE PHYSICAL SOCIETY OF JAPAN, v. 43, n.2, p. 592 - 599, ago. 1977.
SP OT 663 - P.63
- 812 - SUGAI, Shunji; MURASE, K.; KAWAMURA, H. **Observation of soft to phonon in Sn Te by Raman scattering.** Sep. SOLID STATE COMMUNICATIONS, v. 23, p. 127 - 129, 1977.
SP OT 664 - P.63
- 813 - SUGAI, Shunji; MURASE, K.; KAWAMURA, H., et alii **Carrier density dependence of soft phonon in Sn Te by Raman scattering.** Sep. SOLID STATE COMMUNICATIONS, v. 24, p. 407 - 409, 1977.
SP OT 665 - P.63
- 814 - SWINNEY, H. L.; CUMMINS, Herman Z. **Thermal diffusivity of CO₂ in the critical region.** S. n. t., s. d. 32p. A ser publicado em THE PHYSICAL REVIEW.
SP OT 666 - P.63
- 815 - TAKUMA, H.; JENNINGS, D. A. **Characteristics of a Raman laser excited by an ordinary ruby laser.** Reimpresso: PROCEEDING OF THE IEEE, v. 35, p. 146 - 149, fev. 1965.
SP OT 667 - P.64
- 816 - TANG, C. L. **Saturation and spectral characteristics of the stokes emission in the**

- stimulated brillouin process.** Sep. JOURNAL OF APPLIED PHYSICS, v. 37, n.8, p.2945 - 2955, jul. 1966. SP OT 668 - P.64
- 817 - TANG, C. L.; STATZ, H; DEMARS, G. A., et alii. **Spectral properties of a single - mode ruby laser: evidence of homogeneous broadening of the zero - phonon lines in solids.** Sep. THE PHYSICAL REVIEW, second series, v. 136, n.1A, p. A1 - 8, 5 out. 1964. SP OT 669 - P.64
- 818 - TANNENWALD, P.E.; THAXTER, J. B. **Stimulated brillouin and Raman scattering in quartz at 2, 1º to 293 Kelvin.** Reimpresso: SCIENCE, v. 154, n. 3754, p. 1319 - 1320, 9 dez. 1966. SP OT 670 - P.64
- 819 - TAUBE NETTO, Miguel; PERIN FILHO, Clovis; LIBERATO JR., José. **Modelo markoviano para programação de pacientes em ambulatórios.** [São José dos Campos: Instituto de Pesquisas Espaciais], 1974. Parte do Projeto ANAH - Análise de Sistemas e Administração Hospitalar. SP OT 671 - P.64
- 820 - TELL, B.; WORLOCK, J. M.; MARTIN, R. J. **Enhancement of elastic - optic constants in the neighborhood of a band gap. in ZnO and CdS.** Reimpresso de: APPLIED PHYSICS LETTERS, v. 6, n.7, p. 123 - 124, 01 abr. 1965. SP OT 672 - P.64
- 821 - TENG, M. K.; MASSOT, M.; BALKANSKI, M., et alii. **Influence of the Sb by Bi substitution on the soft mode behaviour in Bi(x)Sb(1 - x)Si.** S. n. t., s. d. 2p. SP OT 673 - P.64
- 822 - TERHUNE, R. W.; MAKER, P.D.; SAVAGE, C. M. **Measurements of nonlinear light scattering.** Dearborn, Michigan. Ford Motor, Scientific Laboratory, 17 mar. 1965. 14p. SP OT 674 - P.64
- 823 - TIETZ, T. **Potential - energy function for diatomic molecules.** [JOURNAL OF CHEMICAL PHYSICS, v. 38, P.3036 - 3037, 15 jun. 1963]. SP OT 675 - P.64
- 824 - TIMMERMANS, J. **Plastic crystals: a historical review.** PHYS. CHEM. SOLIDS, v. 18, n.1, p. 1 - 8, 1961. SP OT 676 - P.64
- 825 - TITLE, R. S.; SOROKIN, P.P.; STEVENSON, M. J., et alii. **Optical spectra and paramagnetic resonance of U⁴⁺ ions in alkaline earth fluoride lattices.** Sep. PHYSICAL REVIEW, v. 128, n.1, p. 62 - 66, out. 1962. SP OT 677 - P.64
- 826 - TOMINAGA, Yasunori; NAKAMURA, Terutaro; UDAGAWA, Masayuki. **E - Symmetry Raman spectra of KH₂PO₄.** Reimpresso de: JOURNAL OF THE PHYSICAL SOCIETY OF JAPAN, v. 46, n.2, p. 574 - 576, fev. 1979. SP OT 678 - P.64
- 827 - TONEGAWA, Takashi. **Theory of magnon sidebands in MnF₂.** Reimpresso de: PROGRESS OF THEORETICAL PHYSICS, v. 41, n.1, p. 1 - 24, jan. 1969. SP OT 679 - P.64
- 828 - TSU, Raphael. **Landau damping and dispersion of phonon, plasmon and photon in polar semiconductors.** S. n. t., s. d. 21p. Anexo: Correspondência do autor ao Prof. Sérgio P.S. Porto, University of Southern California, Department of Physics. SP OT 680 - P.64

- 829 - TSU, Raphael; WHITE, Donald L. **Interaction of optical and acoustic phonons with longitudinal plasma waves.** Reimpresso: ANNALS OF PHYSICS, v. 32, n.1, p. 100 - 113, mar. 1965.
SP OT 681 - P.64
- 830 - TUFTE, O. N.; STELZER, E. L. **Piezoresistive properties of silicon diffused layers.** Sep. JOURNAL OF APPLIED PHYSICS, v. 34, n.2, P.313 - 318, fev. 1963.
SP OT 682 - P.64
- 831 - TZOAR, N.; FOO, E. Ni. **Light scattering from many - valley semiconductors.** S. n. t., s. d. 8p.
SP OT 683 - P.64
- 832 - UDAGAWA, Masayuki; KOHN, Kay; NAKAMURA, Terutaro. **Brillouin scattering study of LiNH₄C₄O₆. H₂O in paraelectric phase.** Sep. FERROELECTRICS, v. 21, p. 329 - 331, 1978.
SP OT 684 - P.64
- 833 - UEDA, Yoshifumi; SHIMODA, Koichi. **Observation of stimulated Raman emission and stimulated Rayleigh - wing scattering from self - trapped filaments of a laser beam.** Reimpresso: JAPANESE JOURNAL OF APPLIED PHYSICS, v. 6, n.5, p. 628 - 633, maio 1967.
SP OT 685 - P.64
- 834 - USHIODA, S.; McMULLEN, J. D. **Measurements of the frequency dependence of the phonon damping function by Raman scattering from polaritons in GaP.** Sep. : SOLID STATE COMMUNICATIONS, v. 11, P.299 - 304, 1972.
SP OT 686 - P.64
- 835 - VALITOV, R. A.; KALININ, Yu A.; KUZ'MISCHEV, V. M. **Measurement of the energy and power of lasers.** [Sep. MEAS. TECH., n.5, p. 438 - 43, maio 1965]. Traduzido do: IZMERITEL'NAYA TEKHNIKA, v. 5, p. 37 - 41, maio 1965.
SP OT 687 - P.65
- 836 - VANDERSLICE, J. T.; MASON, E. A.; MAISCH, W. G., et alii. **Ground state of hidrogen by the Rydberg - Klein - Rees method.** Reimpresso: MOLECULAR SPECTROSCOPY, v. 3, n.1, p. 17 - 29, 1959.
SP OT 688 - P.65
- 837 - VAN TRAN, N.; SPALTER, J.; HANUS, J.; et alii. **Generation of the difference fequency by non - collinear light beams in K. D. P. crystal.** Sep. PHYSICS LETTERS, v. 19, n.4, 1 nov. 1965.
SP OT 689 - P.65
- 838 - VAN UITER, L. G. **Factors influencing the fluorescence or rare earth ions in solids.** S. n. t. 12p.
SP OT 690 - P.65
- 839- VAN UITER, L. G.; SODEN, R. R. **Multiple emission spec - tra of trivalent europium in the scheelite structure.** Reimpresso: THE JOURNAL OF CHEMICAL PHYSICS, v. 32, n.6, p. 1687 - 1689, jun. 1960.
SP OT 691 - P.65
- 840 - VAN UITER, L. G.; SODEN, R. R. **Emission spectra of trivalent terbium.** Reimpresso: THE JOURNAL OF CHEMICAL PHYSICS, v. 32, p. 1161 - 1164, abr. 1960.
SP OT 692 - P.65
- 841 - VAN UITER, L. G.; SODEN, R. R. **Emission spectra of erbium in the scheelite,**

- structure.** Reimpresso: THE JOURNAL OF CHEMICAL PHYSICS, v. 33, n.2, p. 567 - 570, ago. 1960.
SP OT 693 - P.65
- 842 - VAN UITERT, L. G.; SODEN, R. R. **Emission spectra of erbium in the scheelite structure.** Reimpresso: THE JOURNAL OF CHEMICAL PHYSICS, v. 33, n.2, p. 567 - 570, ago. 1960. (Er).
SP OT 694 - P.65
- 843 - VAN UITERT, L. G.; SODEN, R. R. **Emission spectra of trivalent terbium.** Reimpresso: THE JOURNAL OF CHEMICAL PHYSICS, v. 32, n.4, p. 1161 - 1164, abr. 1960. (Tb).
SP OT 695 - P.65
- 844 - VAN UITERT, L. G.; SODEN, R. R. **Emission spectrum of trivalent holmium in the scheelite structure.** Reimpresso: THE JOURNAL OF CHEMICAL PHYSICS, v. 33, n°5, p. 1532 - 1534, nov. 1960. (Ho).
SP OT 696 - P.65
- 845 - VAN UITERT, L. G.; SODEN, R. R. **Multiple emission spectra of trivalent europium in the scheelite structure.** Reimpresso: JOURNAL OF CHEMICAL PHYSICS, v. 32, n.6, p. 1687 - 1689, jun. 1960. (Eu).
SP OT 697 - P.65
- 846 - VAN UITERT, L. G.; SODEN, R. R. **Emission spectra of trivalent thulium.** Reimpresso: THE JOURNAL OF CHEMICAL PHYSICS, v. 34, n.1, P.276 - 279, jan. 1961. (Tm).
SP OT 698 - P.65
- 847 - VAN VLECK, J. H. **On the isotope corrections in molecular spectra.** Sep. JOURNAL OFF CHEMICAL PHYSICS, v. 4, n.6, p. 327 - 338, jun. 1936.
SP OT 699 - P.65
- 848 - VAN ZANDT, L. L.; MEYER, James W. **Theory of the schwarz - hora effect.** Sep. JOURNAL OF APPLIED PHYSICS, v. 41, n.11, p. 4470 - 4475, out. 1970.
SP OT 700 - P.65
- 849 - VARSANTI, F.; DIEKE, G. H. **Monochromatically excited fluorescence in rare earth salts.** Reimpresso: JOURNAL OF CHEMICAL PHYSICS, v. 31, n.4, p. 1066 - 1070, out. 1959.
SP OT 701 - P.65
- 850 - VARSANTI, F.; DIEKE, G. H. **Energy levels of hexagonal ErCl₃.** THE JOURNAL OF CHEMICAL PHYSICS, v. 36, n.11, P.2951 - 2961, 1 jun. 1962.
SP OT 702 - P.65
- 851 - VASICEK, Antonin. **Historical remarks on the drude formulae.** Sep. APPLIED OPTICS, v. 4, n.8, p. 1032 - 1034, ago. 1965.
SP OT 703 - P.65
- 852 - VERLAN, E. M. **Raman scattering of light by gases in the region of an absorption band.** S. n. t., [1964]. 4p.
SP OT 704 - P.65
- 853 - VERLAN, E. M. **Investigation of the form of the tensor and the temperature dependence of Raman scattering of polyatomic gas molecules.** S. n. t. 6p.
SP OT 705 - P.65
- 854 - VERLEUR, H. W.; BARKER, A. S. **Optical phonons in mixed crystals in CdSeyS (1 - y).** S. n. t.: BELL TELEPHONE LABORATORIES, 27 jul. 1966, Ca70p.

- SP OT 706 - P.65
- 855 - VICENT - GEISSE, Josette, présentée par Jean Cabannes. **Spectroscopie moléculaire: mesures d'intensité et de largeur des raies d'absorption dans l'infrarouge, variation avec la pression.** Extraído: COMPTES RENDU DES SEANCES DE L'ACADEMIE DES SCIENCES, v. 237, p. 149 - 151, 15 jul. 1953.
SP OT 707 - P.66
- 856 - VICENT - GEISSE, Josette; LECOMTE, Jean, présentée par Jean Cabannes. **Réfractométrie: mesure de la dispersion de liquides dans l'infrarouge par une méthode interférométrique.** Extrait: COMPTES RENDUS DES SÉANCES DE L'ACADEMIE DES SCIENCES, v. 244, p. 577 - 580, 28 jan. 1957.
SP OT 708 - P.66
- 857 - VICENT - GEISSE, Josette; LECOMTE, Jean, présentée par Gustave Ribaud. **Interférométrie: quelques anomalies présentées dans les spectre infrarouge par des franges d'intéférences obtues avec des couches semi - refléchissantes.** Extraído: COMPTES RENDUS DES SÉANCES DE L'ACADEMIE DES SCIENCES, v. 244, p. 2152 - 2155, 15 abr. 1957. Nota.
SP OT 709 - P.66
- 858 - VIDAL, C. R.; HESSEL, M. M. **Heat - pipe oven for homogenous mixtures of saturated and unsaturated vapors: application to NaLi.** Sep. J. APPL. PHYS., v. 43, n.6, P.2776 - 2780, jun. 1972.
SP OT 710 - P.66
- 859 - VIENOR, Jean Charles; FROEHLY, Claude, présentée par Alfred Kastler. **Électronique quantique: interprétation des phénomènes liés à l'émission du second harmonique dans un cristal non linéaire excité par la raie R4 d'un laser à rubis.** C. R. Accol. Sc. Paris, v. 261, p. 91093, 5 jul. 1965.
SP OT 711 - P.66
- 860 - VINH, Luu Dang; REYNAUD, Joseph; LAFONT, Robert, présentée par Alfred Kastler. **Physique des solides: effet Raman de substances colorées (bichromates): utilisations d'un laser à gaz hélium - néon; solutions.** Sep. C. R. ACAD. SC. PARIS, v. 263, série B, p. 192 - 195, 11 jul. 1966.
SP OT 712 - P.66
- 861 - WAGNER, William G.; HAUS, Hermann A.; GUSTAFSON, Kenneth T. **Hight rate optical amplification.** Sep. IEEE JOURNAL OF QUANTUM ELECTRONICS, v. QE - 4, n.5, p. 267 - 273, maio 1968.
SP OT 713 - P.66
- 862 - WANES, R. E. de; WOLFRAM, T. **Magnetostatic surface modes in axially magnetized elliptical cylinder.** S. n. t., s. d. 10p.
SP OT 714 - P.66
- 863 - WARREN, H. E. **Sets in C(x) analytically equivalent to the open ball.** Sep. DUKE MATHEMATICAL JOURNAL, v. 39, n.4, p. 711 - 717, dez. 1972.
SP OT 715 - P.66
- 864 - WATSON JR., James; ANDERSON, Richard J. **Excitation of the E, F₋ sigma g+ states of H₂ by electron impact.** Sep. JOURNAL OF CHEMICAL PHYSICS, v. 66, n.9, p. 4025 - 4030, 1 maio 1977.
SP OT 716 - P.66
- 865 - WEIL, Annette; MATHIEU, Jean Paul, présentée par Jean Cabannes. **Optique cristalline: effet Raman et symétrie de l'ion ClO₄ dans les cristaux de**

- perchlorates de magnésium, de zinc et de cadmium.** Extraído de: ACADEMIE DES SCIENCES, v. 238, p. 2510 - 2511, 28 jun. 1954. Note. SP OT 717 - P.66
- 866 - WEISSLER, G. L. **UV laser applications.** S. n. t., [1972]. 13p. Anexo: Correspondência e currículo do autor enviado a Sérgio Porto, de University of Southern California, Department of Physics. SP OT 718 - P.66
- 867 - WENZEL, Robert G.; ARNOLD, George P. **Parametric oscillator - HF oscillator - amplifier pumped CdSe parametric oscillator tunable from 14. 1 milimicrons to 16, 4 milimicrons.** Reimpresso: APPLIED OPTICS, v. 15, p. 1322 - 1326, maio 1976. SP OT 719 - P.66
- 868 - WILFORD, John Noble. **Nixon men map new aid to technology.** THE NEW YORK TIMES, 31 out. 1971. 3p. SP OT 720 - P.66
- 869 - WILLIAMS, Philip C.; STEVENSON, Susan G.; STARKEY, Patricia M., et alii. **The application of near infrared reflectance spectroscopy to protein - testing in pulse breeding programmes.** Sep. J. SCI. FD. AGRIC., v. 29, P.285 - 292, 1978. SP OT 721 - P.66
- 870 - WILLIAMS, P. F.; ROUSSEAU, D. L. **Resonant Raman scattering from iodine spectral changes with excitation frequency.** Sep. PHYSICAL REVIEW LETTERS, v. 30, n.20, p. 951 - 954, 14 maio 1973. SP OT 722 - P.66
- 871 - WILLIAMS, P. F.; ROUSSEAU, D. L.; DWORTSKY, S. H. **Resonance fluorescence and resonance Raman scattering: lifetimes in molecular iodine.** PHYSICAL REVIEW LETTERS, v. 32, n.5, 196 - 199, 4 fev. 1974. SP OT 723 - P.66
- 872 - WU, F. Y.; GOVE, R. E.; EZEKIEL, S. **Investigation of the spectrum of resonance fluorescence induced by a monochromatic field.** PHYSICAL REVIEW LETTERS, v. 35, n.21, p. 1426 - 1429, 24 nov. 1975. SP OT 724 - P.66
- 873 - YANAGIDA, Hiroaki; KRÖGER, F. A. **The system Al - O.** Reimpresso: JOURNAL OF THE AMERICAN CERAMIC SOCIETY, v. 51, n.12, p. 700 - 706, dez. 1968. SP OT 725 - P.66
- 874 - YANEY, Perry P. **The pulsed laser and gated detection in Raman spectroscopy: a survey of the spectra of common substances incluind study of the surface of He₂O₃.** S. n. t, s. d. 24p. Com anexos, SP OT 726 - P.66
- 875 - ZIGONE, M.; BERSERMAN, R.; FAIR, H. D. **Pressure dependance of impurity induced vibrational modes in II - VI compounds.** S. n. t, s. d. 2p. SP OT 727 - P.66
- 876 - **Zone melting of single crystal with a CO₂ laser.** INDUSTRIAL LASER APPLICATION NOTES. Palo Alto, CA: Coherent Radiation, s. d. 2p. (Application Note=14). SP OT 728 - P.66

OUTROS TRABALHOS

877 - AMERICAN Institute of Physics: director's report for 1951. Reimpresso: PHYSICS TODAY, v. 5, n.5, p. 4 - 10, maio 1952.

SP OT 729 - P.67

878 - BELL LABORATORIES RECORD, v. 42, n.7, p. 226 - 265, jul. - ago. 1964.

SP OT 730 - P.67

879 - FREITAS, João Alberti Holanda de. **Contribuição ao tratamento das oclusões venosas da retina pelo laser argônio.** Campinas, 1981. Tese apresentada à Faculdade de Ciências Médicas da Pontifícia Universidade Católica de Campinas para o concurso livre - Docência. Aprovada em 19 dez. 1981.

SP OT 731 - P.67

880 - HADNI, Armand. **1º thèse: Contribution a l'étude théorique et expérimentale de l'infrarouge lointain. 2º thèse: Propositions données par la faculté.** Dissertação (Doutorado em Ciências Físicas) - Faculté des Sciences de l'Université de Paris, 1956. Tese.

SP OT 732 - P.67

881 - RECUEIL de travaux du laboratoire de Physique. Université de Louvain, département de Physique Nucléaire et Moléculaire, 1959.

SP OT 733 - P.68

882 - OS RUMOS do desenvolvimento brasileiro. [Brasília]. Secretaria de Planejamento, Câmara dos Deputados, s. d. Pronunciamento do Ministro João Paulo dos Reis Veloso em 22 jun. 1977.

SP OT 734 - P.68

883 - UNIVERSIDADE ESTADUAL DE CAMPINAS. Instituto de Biologia. Laboratório de Genética Vegetal. Genética e melhoramento de milho para produção de alimentos. Campinas, 15 mar. 1979. Projeto de Pesquisa submetido à Diretoria de Indústria e Comércio do Estado de São Paulo. 2 ex.

SP OT 735 - P.68

LIVROS E REVISTAS

- 884 - ADLER, Richard B.; SMITH, Arthur C.; JANAK, James F. **Electronic condition in solids.** New York: McGraw - Hill Book Company, 1967.
- 885 - AGRANOVICH. V. M.; BIRMAN, J. L. **The theory of light scattering in solids.** Moscow: Publishing House "Nauka". v. 1, 1976.
- 886 - **Annual Progress Report ou Laser Fusion Program, September 1976 - August 1977.** Osaka: Osaka University. Institute of Laser Engineering, 1976.
- 887 - **Annual Review of material science.** Palo Alto, Califórnia: Anual Review, Inc. v. 4 - 8, 1974 - 78.
- 888 - **Applied Optics.** The Optical Society of America. v. 11, n. 4, abr., 1972. n. 6, jun., 1972. v. 14, n. 12, dez., 1975. v. 15, n. 1 - 3, jan. - mar., 1976.
- 889 - ATKIS, K. R. **Physics.** New York: John Willy e Sons, Inc. 1965.
- 890 - ÁZATOFF, Leonid V.; BROPHY, J. J. **Electronic processes inmaterial.** New York: McGraw - Hill Book Company, Inc. 1963.
- 891 - BEISER, Arthur. **Theory and problems of physical science.** New York: McGraw - Hill Book Company, 1974.
- 892 - BLAKEMORE, J. S. **Solids state physics.** 2. ed. Philadelphia: W. B. Saunders Company, 1974.
- 893 - BLOEMBERGEN, N. **Nuclear magnetic relaxation.** New York: W. A. Benjamin, Inc. 1961.
- 894 - BOROWITZ, Sidney; BEISER, Arthur. **Essentials of physics.** Massachusetts: Addison - Wesley Publishing Company, Inc. 1966.
- 895 - **Fundamentals of quantum mechanics: particles, waves and wave mechanics.** New York: W. A. Benjamin, Inc. 1967.
- 896 - BRITLOUIN, L. **Wave propagation in periodic structures:electric filters and crystal lattices.** 2. ed. NewYork: Dover Publications Inc. 1953.
- 897 - BROCKETT, Roger W. **Finite dimensional linear systems.** New York: John Willy and Sons, Inc., 1970.
- 898 - **BULLLETIN OF THE AMERICAN PHYSICAL SOCIETY – Programme of the Columbus Meeting at the Ohio state University, mar. 1952.**
- 899 - **Center for laser studies.** University of SouthernCalifornia. s. d.
- 900 - **Conselho Nacional de Desenvolvimento Científico e Tecnológico: legislação.** Rio de Janeiro, 1975.
- 901 - COURTOY, Charles P. **Spectre infrage a grande dispersion et constantes moléculaires du CO₂.** Sep. Annales de la Société Scientifique de Bruxelles, tome 73, n. 1, 1959. p. 5 - 230. (Tese).
- 902 - CROMER, Alan H.; Boughton, Robert T. **Laboratory manual to accompany physics for the life sciences.** New York: McGraw - Hill Book Company, 1974.
- 903 - **Physics for the life sciences: text and laboratory.** New York: MacGraw - Hill Book Company, 1974.

- 904 - **Study guide to accompany physics for the life sciences.** New York: McGraw - Hill Book Company, 1974.
- 905 - CROSGNANI, Bruno; PORTO, Paolo Di; BERTOLOTTI, Mario. **Statistical properties of scattered light.** New York: Academic Press, 1975.
- 906 - CURTMAN, Louis J. **Qualitative chemical analysis.** New York: The Macmillan Company, 1943.
- 907 - DÉCOURT, Paulo. **Química.** 2. ed. São Paulo: Edições Melhoramentos, 1946.
- 908 - DERR, V. E. **Remote sensing of the troposphere.** Washington U. S. Government Printing Office. 1972.
- 909 - DIEKE, Gerhard Heinrich. **The hydrogen molecule wavelength tables.** New York: John Wiley & Sons, Inc., 1968.
- 910 - **Dierectory of physics & astronomy facultaties in north American Colleges & Universities, 1969 - 1970.** New York: American Institute of Physics, s. d.
- 911 - DUBES, Richard C. **The theory of applied probability.** Michigan: Prentice - Hall, Inc., 1968.
- 912 - **Earth photographs from Gemini III, IV, and V.** Washington: Scientific and Technical Information Division Office of Technology Utilization National Aeronautics and Administration, 1967.
- 913 - EDWARDS, Steve. **Physics: a discovery approach.** New York: John Wiley & Sons, Inc., 1971.
- 914 - ENGE, Harold A. **Introduction to nuclear physics.** Ontario: Addison - Wesley Publishing Company, Inc., 1966.
- 915 - FENSTER, Saul K.; ARTHUR, Wallace. **Mechanics.** New York: Rinehart and Winston, Inc. 1969.
- 916 - FESTSCHRIFT, Raman. **Mateirals research bulletin.** New York: Pergamon Press, v. 4 n. 8., 1969. 2 ex.
- 917 - FEYNNAN, Richard P.; LEIGHTON, Robert B.; SANDS, Matthin. **The Feynman lectures on physics: mainly electromagnetism and matter.** California: Addison - Weslwey Publishing Company, 1964.
- 918 - FIESER, Louis; FIESES, Mary. **Organic chemistry.** Boston D. C. : Heath and Company, 1944.
- 919 - FORD, Kenneth W. e PARKER, Allen W. **Physics Laboratory Manual.** Los Angeles: Ed. Lucas Brothers Publishers, 1968.
- 920 - FOSTER, Laurence S. **Problem syllabus for general chemistry.** Michigan: Edwards Brothers, Inc., 1941.
- 921 - FOURMAN, Maximilian. **Science russian course.** London:University Tutorial Press, 1958.
- 922 - FRENCH, A. P. **Newtonian mechanics.** New York: W. W. Norton & Company, Inc., 1971.
- 923 - **Vibration and waves.** New York: W. W. Norton & Company, Inc., 1971.

- 924 - GATTERMANN, L. **Práticas de química orgânica.** 29. ed. Provenza: Manuel Marin, 1945.
- 925 - GRAY, Dwight E. (org.). **American Institute of Physics Handbook.** New York: McGraw - Hill Book Company, Inc., 1957.
- 926 - HALLIDAY, David. **Introductory nuclear physics.** 2. ed. New York: Wiley e Sons, Inc., 1955.
- 927 - _____, RESNICK, Robert. **Physics: parts I, and II.** New York: John Willy e Sons, Inc. 1970.
- 928 - HARNWELL, Gaylord P. **Principles of eletricity and electromagnetism.** 2. ed. New York: McGraw - Hill Book Company, Inc., 1949.
- 929 - HAYES, Wilian; LOUDON, Rodney. **Scattering of light by crystals.** New York: John Willi e Sons, 1978.
- 930 - HEMENWAY, Curtis L.; HENRY, Richard W.; CAULTON, Martin. **Physical Eletronic.0** New York: John Willy and Sons, Inc., 1962.
- 931 - HERWITT, G. Paul. **Conceptual physics: a new introduction to your environment.** San Francisco: Lithography by Rip Off Press, 1970.
- 932 - HERZBERG, Gerhard. **Atomic spectro and atomic structure.** New York: Dover Publications, 1945.
- 933 - _____ **Molecular spectra and molecular structure.** New York: Van Nostrand Reinhold Company, 1966.
- 934 - HEWITT, Paul G. **Conceptual physics, a new introduction to your environment.** San Francisco: Little, Brown an Company, 1970.
- 935 - HIGHSMITH, Phillip E.; HOWARD, Andrew S. **Adventures in physics.** Philadelphia: W. B. Saunders Company, 1972.
- 936 - HIGHSMITH, Phillip E.; HOWARD, Andrew S. **Adventures in physics laboratory manual.** Philadelphia: W. B. Saunders Company, 1972.
- 937 - HON, David Takwei. **Raman scattering from localized vibratio nal modes in gallium phosphide and dielectric parameteri zation of Raman lineshapes of plasman - phonon coupled mode.** California. 1973. (Tese de Doutorado)
- 938 - HOUSNER, George W.; HUDSON, Donald E. **Applied mechanics dynamics.** 2. ed. New York: Van Nostrand Reinhold Company, 1959.
- 939 - HUANG, Kirson. **Statistical mechanics.** New York: John Willy e Sons, Inc. 1966.
- 940 - HUGGINS, Elisha R. **Physics 1.** New York and Amsterdam: W. A. Benjamin, Inc. 1968.
- 941 - _____ **Supplement to physics 1.** New York:W. A. Benjamin, Inc. 1968.
- 942 - HUNTER, H. E. **Dimensional analysis.** New York: Dover Publications, Inc. 1967.
- 943 - **Informations Scientifiques Françaises.** Ministére des Affaires Etrangères. n. 2, abr. - jun. 1959
- 944 - INGLIS, David Rittenhouse. **Nuclear energy - its physics and its social challenge.** Massachusetts: Addison - Wesley Publishing Company, 1973
- 945 - INGLIS, Stuart J. **Physics: an ebb and flow of ideas.** New York: John Willey e Sons, Inc. 1970.

- 946 - **International Arrangements for Nuclear Fuel Reprocessing.** Cambridge: Abram Chayes, W. Bennet Lewis, 1977.
- 947 - **International conference on light scattering in solids, 2.** Paris, 19 - 23 jul., 1971. Proceedings. . . Ed. M. Balkanski. Paris: Flammarion Sciences, 1971.
- 948 - **International conference on light scattering in solids, 3.** Campinas, 25 - 30 jul. 1975. Proceedings. . . Ed. M. Balkanski, R. C. C.; Leite, S. P.; Sérgio Porto. Paris: Flammarion Sciences, 1976.
- 949 - **International Symposium on Molecular Structure and Spectroscopy.** Proceedings. . . Tokio: Science Council of Japan, 1962.
- 950 - **International Union of Pure and Applied Chemistry.** Tables of wavenum - bers for the calibration of infra - red spectrometers. Washington: Butterworths, 1961.
- 951 - JEANS, Sir James. **And introduction to the kinetic theory of gases.** Cambridge: At the University Press, 1952.
- 952 - **Journal of raman spectroscopy.** Ottawa, Canadá: D. Reidel Publishing Company, v. 1, n. 4, out. 1973.
- 953 - KAPPEL, Frederick R. **Business purpose and performance.** New York: Duell, Sloan and Pearce, 1964.
- 954 - KARPLUS, Robert. **Introductory Physics a model approach.** New York: W. A. Benjamin Inc., 1969.
- 955 - KISLIUK, Paul; TOWNES, Charles H. **Molecular Microwave Spectra Tables.** Washington: National Bureau of Standards Circular 518, 1952. 2 ex.
- 956 - KITTEL, Charles. **Introduction to solid state physics.** 2. ed. New York: John Willy e Sons Inc., 1963.
- 957 - _____; KNIGHT, Walter D.; RUDERMAN, Malvin A. **Mechanics: berkeley physics course vol. I.** New York: McGraw - Hill Book Company, 1964.
- 958 - _____; KNIGHT, Walter D.; RUDERMAN, Malvin A. **Mechanics berkely physics course - v. I.** New York: McGraw - Hill Book Company, 1965.
- 959 - KOHLRAUSCH, K. W. F. **Struktur and eigenschaften der materie.** Berlin: Verlag Von Julius Springer, 1938.
- 960 - LANCASTER, Gordon. **DC and AC circuits.** Oxford: Clarendon Press, 1974.
- 961 - LEVINE, Sumner N. **Principles of solid state microelectronics.** New York: Holt, Rinehart and Winston, 1963.
- 962 - LINDMAYER, Joseph; WRIGLEY, Charles Y. **Fundamentals of semiconductor devices.** Princeton: D. Van NostrandCompany Inc., 1966.
- 963 - LINDSAY, Robert Bruce. **Basic concepts of physics.** New York: Van Nostrand Reinhold Company, 1971.
- 964 - LONDON, E. U.; ODISHAW, Hugh. **Handbook of physics.** New York: McGraw - Hill Book Company Inc., 1958.
- 965 - LORENTZ, H. A.; EINSTEIN, A.; MINKOWISKI H. e WEYL H. **The principle of relativity.** Dover Publications Inc., s. d.

- 966 - LUCIE, Pierre. **Física Básica 1: a gênese do método científico.** v. 1. Rio de Janeiro: Editora Campus Ltda, 1977.
- 967 - MACEDO, Horácio. **Dicionário de física ilustrado.** Rio de Janeiro: Editora Nova Fronteira, 1976.
- 968 - MARADUDIN, A. A.; LIFSHITZ J. M.; KOSEVICH, A. M.; COCHRAN W.; MUSGRE, M. J. P. **Lattice dynamics.** New York: W. A. Benjamin Inc, 1969.
- 969 - _____; MONTROLL, E. W.; WEIS, G. H.; IPATOVA, I. P. **Theory of lattice dinamics in the harmonic approximation.** 2. ed. New York: Academic Press, 1971.
- 970 - MARION, Jerry B.; DAVIDSON, Ronald C. **Mathematical preparation for general physics.** Philadelphia: W. B. Saunders Company, 1972.
- 971 - MATHIEU, Jean - Paul. **Spectres de vibration et symétrie des molécules et des cristaux.** Paris: Hermann et Cie. Editeurs, 1945.
- 972 - MEGGERS, Willian F.; CORLISS, Charles H.; SERIBNER, Bourdon F. **Tables of spectral - line intensities: Part I arranged by elements.** Washington: National Bureau of Standards, 1961.
- 973 - MESSIAH, Albert. **Quantum mechanics.** Amsterdam: North Holland Publishing Company. v. I., 1968.
- 974 - OLDENBERG, Otto. **Introduction to atomic physics.** 1. ed. New York:McGraw - Hill Book Company, Inc., 1949.
- 975 - **Optical Engineering.** Society of Photo Optical Instrumentation Engineers. v. 11, n. 4 - 5, jul. - out. 1972.
- 976 - **Optical methods of investigating solid bodies.** Authorizade translation from the Russian. v. 25. New York: Edited by Academician D. V. Skobel'tsyn, 1965.
- 977 - OREAR, Jay. **Programmed Manual of college physics.** New York: John Willy e Sons Inc., 1968.
- 978 - PARKES, G. D.; PHIL, M. A. **Mellor's moderns inorganic chemistry.** 7. ed. London: Longmans, Green and Co., 1945.
- 979 - PAULING, Linus; GOUDSMITH, Samuel. **The structure of line spectra.** New York: McGraw - Hill Book Company, Inc., 1930.
- 980 - PEARSE, R. W. B. e GAYDON, A. G. **The identification of molecular spectra.** 2. ed. New York: John Willy e Sons Inc., 1950.
- 981 - **Physics.** Watertownm, Massachusetts: Malacaster Scientific Corporation, 1966. (Catálogo de empresa)
- 982 - **Physics Abstracts.** Institution of Electrical Engineers. London. v. 65, n. 778 - 779; Subject Index Number, 1962. v. 66, n. 781, 784 - 785, 791, Author Index Number, 1963.
- 983 - **Physics Today.** American Institute of Physics. New York. v. 27, n. 4, abr. 1974.
- 984 - PINES, David. **Elementary excitations in solids lectures on phonon, electrons and plasmons.** New York: W. A. Benjamin Inc., 1964.
- 985 - POLLARD, Ernest C.; HUSTON, Douglas C. **Physics an introduction poets physics.** New York: Oxford University Press, 1969.

- 986 - POUSIN, J. de La Valléi. **Cours d'analyse infinitésimale.** Tome 1. New York: Dover Publications, 1946.
- 987 - PRENER, J. S.; AVEN, M. **Physics and chemistry of II - VI compounds.** Amsterdam: North - Holland Publishing Company, 1967.
- 988 - PURCELL, E. M. **Electricity and magnetism: berkeley physics course - v. 2.** New York: McGraw - Hill Book Company, 1966.
- 989 - **Radioastrofísica e Radiociência; contribuições científicas originais publicadas em 1971 - 1974.** São Paulo: Universidade Mackenzie - CRAAM, 1975.
- 990 - RAINVILLE, Earl D.; BIDENT, Phillip E. **Elementary differential equations.** 4 ed. London:Collier - Macmillan, 1969.
- 991 - **Raman Newsletter.** Washington. n. 15 - 16, fev. - mar., 1970 n.34, out., 1971.
- 992 - RAMOS, Athos de Silveira. **Pirólise dos lipídios e hidrocarbonetos cancerígenos.** Rio de Janeiro. 1947. (Tese).
- 993 - RAPPORT, Samuel; WRIGHT, Helen. **Science: method and meaning.** New York: Washington Square Press, Inc., 1963.
- 994 - **Rare Fine Chemicals.** Cleveland: ICN K&K, 1973. catalog. n. 9.
- 995 - REMICK, A Edward. **Electronic interpretation of organic chemistry.** New York: John Wiley e Sons, Inc.
- 996 - REPLEY Jr., J. A. **The elements and structure of physical the science.** New York: John Willy e Sons, Inc., 1964.
- 997 - RUTHERFORD, F. James; HOLTON, Gerald; WATSON, Fletcher G. **The project physics course.** New York: Holt, Rinehart and Winston, 1970.
- 998 - SAXON, David S. **Physics.** California: Holt, Rinehart and Winston, Inc., 1968.
- 999 - _____; FRETTER, Willian B. **Physics for the liberal arts student.** New York: Holt, Rinehart and Winston, Inc., 1971.
- 1000 - SCHMID, E. D., KRISHMAN, R. S., KUFER, W., SCHRÖTTER, H. W. **Proceedings of the Sixth International Conference on Raman Spectroscopy.** Bangalore, Índia, 4 - 9, set. 1978. v. 2 . London, Heyden.
- 1001 - SEARS, Francis Weston. **College physics: mechanics, heat and sound.** 2 ed. Massachusetts: Addison - Wesley Press Inc., 1952.
- 1002 - SEARS, Francis Weston. **Física magnetismo eletricida - de.** Editora Gertum Carneiro, 1947.
- 1003 - SEARS, Francis Weston. **Física: mecânica - calor - acústica.** Editora Gertum Carneiro, 1947.
- 1004 - SEARS, Francis Weston. **Principles of physics series:Mechanics, heat and sound.** Massachusetts: Addison - Wesley Publishing Company Inc., 1956. 2 ex.
- 1005 - SEARS, Francis Weston. **Principles of physics series: electricity and magnetism.** Massachusetts: Addison. Wesley Press Inc., 1951.
- 1006 - SEHIEBER, M.; LOW, W. **Applied solid state physics.** Jerusalem: Weizmann Science Press, 1970.

- 1007 - **Selected papers or coherence and flutuations of light: with bibliography.** New York: L. Mandel, E. Wolf, 1970. v. 1 1850 - 1960; v. 2 1961 - 1966.
- 1008 - SERIES. G. W. **The spectrum of atomic hidrogen.** Oxford: Oxford University Press, 1957.
- 1009 - SÍBENNE, C.; BALKANSKI, M. **Physique: 2 ondes et phénomènes vibratoires.** Paris: DUNOD, 1969.
- 1010 - SOUTHWELL, R. V. **Relaxation methods in theoretical physics.** Oxford: At the Clarendon Press, 1946.
- 1011 - **Spectrochimie infrarouge et raman; rapport d'activi - te: d'octobre 1974 à octobre 1978.** s. l. Centre National de la Recherche Scientifique, s. d.
- 1012 - **Spectroscopy Letters.** New York: Marcel Dekker.
v. 6, n. 4, 8, 10, 12, 1973
v. 7, n. 2 - 5, 9 - 11, 1974
v. 8, n. 1 - 3, 5 - 12, 1975
v. 9, n. 1 - 12, 1976 - dupl. 1 - 12 - 6, 7 (2)
v. 10, n. 1 - 12, 1977 - dupl. 1 - 8
v. 11, n. 1 - 4, 6 - 8, 10 - 11, 1978
v. 12, n. 1 - 4, 1979
- 1013 - STRONG, John (org.)**Infrared Spectroscopy and Infrared Properties of Atmospheric Gases.** Baltimore: U. S. Government Printing Office, 1962.
- 1014 - TAYLOR, Lloyd Willian. **Physics the pioneer science: mechanics, heat, sound.** v. 1. New York: Dover Publications, Inc., 1941.
- 1015 - **The project physics course.** New York: Holt, Rinehart and Winston, s. d. (Catálogo de empresa).
- 1016 - **The Theory of Light Scattering in Solids.** Soviet American Symposium, 1. Proceedings... Moscow, 26 - 30 maio, 1975. Moscow: Nauka, 1976. v. II.
- 1017 - TIMOSHENKO, S.; YOUNG, D. H. **Mecânica técnica estatística.** Rio de Janeiro: Editora Gertum Carneiro. 1945.
- 1018 - TIMOSHENKO, S. **Theory of plates and shells.** New York: McGraw - Hill Book Company, Inc., 1940.
- 1019 - TILBURY, Glen. **Problems solving in chemistry: dimensional approach.** Chicago: Lyons and Carnahan, 1967.
- 1020 - TOLANSKY, S. **Hyperfine structure in line spectra and nuclear spin.** London: Methuen e Co. Ltd., 1953.
- 1021 - THOMAS Jr, George B. **Cálculo I.** 5. ed. Rio de Janeiro: Ao Livro Técnico S. A., 1970.
- 1022 - **Topical Meeting on Optical Fiber Transmission.** Williamsburg, Virginia: Post - dead - line papers, 7 - 9 jan. 1975.
- 1023 - TOWNES, C. H.; Sehawloe, A. L. **Microwave spectros - copy.** New York: McGraw - Hill Book Company, Inc., 1955.
- 1024 - VAN NAME Jr., F. W. **Elementary physics.** New Jersey: Prentice - Hall, Inc., 1966.
- 1025 - VELZEL, C. H. F.; VAN HUL, A. C. S. **What is light.** New York, Toronto: McGraw - Hill Book Company, 1968.

- 1026 - VUYFSTIKE, Arthur A. **Elements of maser theory.** New Jersey: D. Van Nostrand Company, Inc., 1960.
- 1027 - YOUNG, Hugh D. **Fundamentals of mechanics and heat.** New York: McGraw - Hill Book Company, 1974.
- 1028 - WANG, Shyh. **Solid state electronic.** McGraw - Hill Book Company, 1966.
- 1029 - WEBER, Robert L; MANNING, Kenneth V.; WHITE, Marsh W.; WEYGAND, George A. **College physics.** 5 ed. New York: McGraw - Hill Book Company, 1974.
- 1030 - WUDNER, Richard T.; SELLS, Robert L. **Elementary clasical physics: mechanic, kinetic theory, thermodinamics.** v. 1. Boston: Allyn And Bacon Inc., 1965.
- 1031 - WEISSBERGER, Arnold. **Physical methode of organic chemistry.** v. 1. New York: Interscience Publishers Inc., 1945.
- 1032 - WOOD, Robert W. **Physics Optics.** New York: Dover Publications Inc., 1967.

DOSSIÊ MATERIAL DIDÁTICO

Com gráficos e tabelas de trabalhos científicos

- 1033 - Diapositivos em vidro, medindo 10x8cm. 93 unidades.
- 1034 - Negativos em vidro, medindo 10x8cm. 31 unidades.
- 1035 - Diapositivos em base flexível, medindo 10x8cm. 18 unidades.
- 1036 - Negativos em base flexível, medindo 10x8cm. 05 unidades
- 1037 - Diapositivos em base flexível, medindo 5x5cm. 17 unidades.
- 1038 - Slide em base flexível, medindo 5x5cm. 08 unidades.

Tabela de Códigos utilizados nos verbetes

[] = informações aproximadas
AA = Antonio Augusto de Almeida
c.ass. - com assinatura
c/dedic. - com dedicatória
color. - colorido
cop. - cópia
cop. datil. - cópia datilografada
cop.fot. - cópia fotográfica
datil. - datilografado
datil.c/anot.ms. - datilografado com anotações manuscritas
+ rasc. - acompanhado de rascunho
ms. - manuscrito
mimeo - mimeografado
mimeo c/anot.ms. - mimeografado com anotações manuscritas
orig. - original
orig.datil.- original datilografado
orig.datil.c/anot.ms - original datilografado com anotações manuscritas
p. - página
p&b - preto e branco
s.ass. - sem assinatura
s.d. - sem data
s.l.d. - sem local e data
s.ref. - sem referência

EXPEDIENTE

ARQUIVO CENTRAL DO SISTEMA DE ARQUIVOS - SIARQ

Praça Henfil, 50 - Cidade Universitária "Zeferino Vaz" - Barão Geraldo
Caixa Postal 6166 - CEP 13083-970 Campinas - São Paulo - Brasil.
Telefone: +55 19 3788-6439
Fax: +55 19 3788-6446
E-mail: siarq@unicamp.br
Site: www.unicamp.br/siarq

HORÁRIO DE ATENDIMENTO

De 2^a a 6^a feira - das 9:00 às 11:00 e das 13:00 às 17:00 horas

EQUIPE

Administração

Neire do Rossio Martins
Maria Aparecida Forti
Vera Lúcia do Nascimento dos Santos
Fábio Rodrigo Pinheiro da Silva
Maria de Lourdes Silvério

Serviço Arquivo Intermediário/Apoio aos Arquivos Setoriais

José Ednilson Lima Pinto
José Aparecido Calderaro
Maria Amélia Viaes Marques
Paulo Sebastião da Silva
Gesiane Maira Machado
Lidiane Mariana da Silva Gomes

Serviço de Arquivo Permanente

Márcia Aparecida Marques Silveira
Cristina Correia Dias Barbieri
Vânia Regina Personeni de Miranda
Eva Cristina Leite da Silva
Benedita Aparecida Batista Mendes
Arlete Auxiliadora Roveran Awaihara
Rosa Amélia Leal Pereira
Viviane de Faria da Silva

Apoio a Informática

Humberto Celeste Innarelli
Andressa Cristiani Piconi