

Ole Sonnich Mortensen: Publikationer

Foruden de videnskabelige publikationer og lærebøgerne omfattende interaktivt undervisningsmateriale i Chemometrics, Internetteknologi og Formidling.

Lærebøger:

Mortensen OS, Dahl J, Kraaer J. EXERGI: det korrekte mål for energiforbrug. Fysisk Institut, Odense Universitet 1982.

Mortensen OS. Photons and Molecules I. Quantum Theory of Radiation. Fysisk Institut, Odense Universitet 1982.

Mortensen OS. Photons and Molecules II. Theory of Optical Processes. Fysisk Institut, Odense Universitet 1982.

Mortensen OS. Photons and Molecules III. Rotational Symmetry and Angular Momentum. Fysisk Institut, Odense Universitet 1982.

Videnskabelige publikationer:

Keszthelyi T, Grage MML, Offersgaard JF, Wilbrandt R, Svendsen C, Mortensen OS, Pedersen JK, Jensen HJAa. 2,2'-Bithiophene Radical Cation: An Experimental and Computational Study. *J Phys Chem A* 2000; 104: 2808-2823.

Keszthelyi T, Grage MML, Offersgaard JF, Wilbrandt R, Svendsen C, Mortensen OS. The Radical Cation of Bithiophene: An Experimental and Theoretical Study. *Laser Chem* 1999; 19: 393-396.

Brouwer AM, Svendsen C, Mortensen OS, Wilbrandt R. Anharmonicity of Excited State Potential Energy Surfaces: Quantum Chemical Analysis and Resonance Raman Intensities. *J Raman Spectr* 1998; 29: 439-445.

Brouwer AM, Zwier JM, Svendsen C, Mortensen OS, Langkilde FW, Wilbrandt R. Radical Cation of N,N-Dimethylpiperazine: Dramatic Structural Effects of Orbital Interactions Through Bonds. *J Am Chem Soc* 1998; 120: 3748-3757.

Svendsen C, Nielsen MJ, Mortensen OS, Allers SJR, Clark RJH. A study of the $1B_2$ excited state geometries of the metal-metal quadruply bonded compounds $Mo_2X_4(PMe_3)_4$ ($X = Cl, Br$ or I). *Chem Phys* 1997; 215: 89-96.

Svendsen C, Mortensen OS, Henriksen NE. Calculation of optical absorption and resonance Raman correlators using time-dependent recursion relationships. *Chem Phys Lett* 1996; 260: 627-32.

Clark RJH, Owens SJR, Svendsen C, Nielsen MJ, Mortensen OS. A study of the geometry of the $[\text{Re}_2\text{Br}_8]^{2-}$, $[\text{Re}_2\text{I}_8]^{2-}$ and $[\text{Mo}_2\text{Cl}_8]^{4-}$ ions in the lowest $^1\text{A}_{2u}$ excited state by the application of sum-over-states method to resonance Raman band intensities. *Inorg Chim Acta* 1996; 243: 249-54.

Svendsen C, Mortensen OS, Clark RJH. Transform methods in resonance Raman scattering based on Heller theory. *Chem Phys* 1994; 187: 349-64.

Kjaergaard HG, Henry BR, Wei H, Lefebvre S, Carrington T Jr., Mortensen OS, Sage ML. Calculation of vibrational fundamental and overtone band intensities of H_2O . *J Chem Phys* 1994; 100: 6228-39.

Berg RW, Boghosian S, Bjerrum NJ, Fehrmann R, Krebs B, Sträter N, Mortensen OS, Papatheodorou GN. Crystal Structure and Spectroscopic Characterization of $\text{CsV}(\text{SO}_4)_2$. Evidence for an electronic Raman transition. *Inorg Chem* 1993; 32: 4714-20.

Pilch M, Pawlikowski M, Mortensen OS. Magnetic circular dichroism (MCD) study of low-energy $1\text{A}_g \rightarrow 1\text{T}_{1u}$ transitions in Fullerene. *Chem Phys* 1993; 172: 277-83.

Jensen J, Mortensen OS, Svendsen EN. Doppler Effect Derived from Time-Dependent Perturbation Theory. *J Mol Spec* 1993; 158: 484-86.

Mortensen OS, Svendsen C. Theory of Natural and Magnetic Resonance Raman Optical Activity. In: Kiefer W, Cardona M, Schaack G, Schneider FW, Schrötter HW, eds. Thirteenth International Conference on Raman Spectroscopy. John Wiley, 1992: 58-59.

Pawlikowski M, Pilch M, Mortensen OS. Vibronic Theory of Magnetic Vibrational Circular Dichroism in Systems with Four-fold Symmetry: Theoretical Analysis for Copper Tetraphenylporphyrin. *J Chem Phys* 1992; 96: 4982-90.

Mortensen OS. A Localized Mode Approach to Vibrations of Large Molecules. In: Hester RE, Girling RB, eds. Spectroscopy of Biological Molecules. The Royal Society of Chemistry, 1991: 23-24.

Pawlikowski M, Mortensen OS. Symmetry and Magnetic Vibrational Circular Dichroism Spectra of a Doubly Degenerate Vibration and Its Combinations With Non-degenerate Vibrational Modes. *Chem Phys* 1991; 151: 73-76.

Pawlikowski M, Mortensen OS. The Vibronic Theory of Magnetic Vibrational Circular Dichroism Spectra of Metallporphyrins. *Chem Phys Letters* 1990; 168: 140-44.

Kjaergaard HG, Mortensen OS. The Quantum Mechanical Hamiltonian in Generalized Coordinates. *Am J Phys* 1990; 58: 344-47.

Kjaergaard HG, Mortensen OS. The Nature of Molecular Vibrations Selected by Various Excitation Processes. *Chem Phys* 1989; 138: 237-44.

Pawlikowski M, Mortensen OS. Symmetry and Magnetic Vibrational Circular Dichroism (MVCD) Spectra of Doubly Degenerate Vibrational Modes. *Chem Phys Letters* 1989; 158: 289-92.

Mortensen OS, Siebrand W, Tarr AW. Local Mode Analysis of Radiationless Triplet Decay in Condensed Aromatic Hydrocarbons. *Chem Phys* 1988; 125: 231-45.

Mortensen OS. A Noncommuting-Generator Approach to Molecular Symmetry. *Struct Bond* 1987; 68: 1-28.

Mortensen OS, Ahmed MK, Henry BR, Tarr AW. Intensities in Local Mode Overtone Spectra: Dichloromethane and Deuterated Dichloromethane. *J Chem Phys* 1985; 82: 3903-11.

Henry BR, Tarr AW, Mortensen OS, Murphy WF, Compton DAC. Raman and Infrared Excitation of Local Mode States in Neopentane. *J Chem Phys* 1983; 79: 2583-89.

Mortensen OS. The Local Mode Picture of Molecular Vibrations. In: Atkinson GH, ed. *Time Resolved Spectroscopy*. Academic Press, 1983: 23-29.

Mortensen OS, Svendsen EN. Initial and Final States as Virtual States in Two-Photon Processes. *J Chem Phys* 1981; 74: 3185-89.

Mortensen OS, Henry BR, Mohammadi MA. The Effects of Symmetry Within the Local Mode Picture: A Reanalysis of the Overtone Spectra of the Dihalomethanes. *J Chem Phys* 1981; 75: 4800-9.

Mortensen OS. Raman Dispersion Spectroscopy (RADIS). I Phenomenology. *J Raman Spectrosc* 1981; 11: 329-33.

Hassing S, Mortensen OS. The Roles of Vibronic Coupling and the Duschinsky Effect in Resonance Raman Scattering. *J Mol Spectrosc* 1981; 87: 1-17.

Mortensen OS, Hassing S. The Local Mode Picture in Electronic Spectroscopy. *Proceedings VIIth International Conference on Raman Spectroscopy*. North-Holland, 1980: 312-13.

Mortensen OS. Raman Dispersion Spectroscopy (RADIS). *Proceedings VIIth International Conference on Raman Spectroscopy*. North-Holland, 1980: 175-77.

Hassing S, Mortensen OS. Kramers-Kronig Relations and Resonance Raman Scattering. *J Chem Phys* 1980; 73: 1078-83.

Moller H, Mortensen OS. Vibrational Motion in the Local- and Normal Mode Pictures. *Chem Phys Lett* 1979; 66: 539-43.

Mortensen OS, Hassing S. Polarization and Interference Phenomena in Resonance Raman Scattering. *Adv Infrar Raman Spectr* 1979; 6: 1-60.

Hassing S, Mortensen OS. Vibrational Interference in Resonance Raman Scattering. *Chem Phys Lett* 1977; 47: 115-18.

Mortensen OS. Polarization Dispersion in Resonance Raman Scattering. The Effect of Inhomogeneous Broadening. *Chem Phys Lett* 1976; 43: 576-80.

Hassing S, Mortensen OS. Polarization Properties of Resonance Raman Spectra. In: Schmid ED, ed. *Proceedings Vth International Conference on Raman Spectroscopy* 1976: 290-91.

Hassing S, Mortensen OS. Interference Effects in Resonance Raman Scattering. In: Schmid ED, ed. *Proceedings Vth International Conference on Raman Spectroscopy* 1976: 288-89.

Mortensen OS. Polarization Dispersion in Resonance Raman Scattering. *Chem Phys Lett* 1975; 30: 406-9.

Koningstein JA, Mortensen OS. Electronic Raman Transitions. In: Anderson A, ed. *The Raman Effect*. Dekker, 1973: 519-42.

Mortensen OS. A Relation Between Resonance Raman and Absorption Spectra. *Mol Phys* 1971; 21: 179-82.

Mortensen OS. Resonance Raman Scattering of the I₂ molecule in Solution. *J Mol Spec* 1971; 39: 48-56.

Mortensen OS. Depolarization Ratios in Resonance Raman Scattering. *Chem Phys Lett* 1970; 5: 515-18.

Mortensen OS, Munn RW, Williams DF. Phenomenological Theory of the Hall Effect in Insulators. *J Appl Phys* 1969; 42: 1192-1203.

Koningstein JA, Mortensen OS. Observation and Interpretation of Electronic and Vibrational Raman Effects of Rare Earth Doped Garnets. In: Wright GB, ed. *Light Scattering Spectra of Solids*. Springer-Verlag, 1969: 239-43.

Mortensen OS. Determination of Electronic Symmetries from Resonance Raman Spectra. *Chem Phys Lett* 1969; 3: 4-5.

Koningstein JA, Mortensen OS. Laser Excited Phonon Raman Spectrum of Garnets. *J Mol Spec* 1968; 27: 343-50.

Koningstein JA, Mortensen OS. Electronic Raman Spectra. IV. Relation Between the Scattering Tensor and the Symmetry of the Crystal Field. *J Opt Soc Am* 1968; 58: 1208-13.

Koningstein JA, Mortensen OS. On the Electronic Raman Scattering Tensor of the Trivalent Cerium Ion in a Hexagonal Crystal Field. *Chem Phys Lett* 1968; 1: 693-95.

Mortensen OS, Koningstein JA. Electronic Raman Effect. II. Asymmetry of the Scattering Tensor for Electronic Raman Transitions. *J Chem Phys* 1968; 48: 3971-77.

Mortensen OS, Koningstein JA. Experimental Observation of an Antisymmetric Raman Scattering Tensor. *Nature* 1968; 217: 445-46.

Koningstein JA, Mortensen OS. Electronic Raman Spectra. III. Absolute Cross Sections for Electronic Raman Scattering and Rayleigh Scattering. *Phys Rev* 1968; 168: 75-78.

Mortensen OS, Koningstein JA. Vibronic Coupling and the Electronic Raman Effect. *Chem Phys Lett* 1967; 1: 409-10.

Koningstein JA, Mortensen OS. Polarized Electronic Raman Effect of Trivalent Europium in Yttrium Vanadate. *Phys Rev Lett* 1967; 18: 831-32.

Mortensen OS. Vibronic Spectra of Transition Metal Complexes. I. Polarized Emission and Absorption Spectra of $\text{NaMg}[\text{Cr}(\text{C}_2\text{O}_4)_3] \cdot 9\text{H}_2\text{O}$. *J Chem Phys* 1967; 47: 4215-22.

Mortensen OS. Polarized Crystal Spectrum of Potassium Tetrachloroplatinite (II) at Liquid Helium Temperatures. *Acta Chem Scand* 1965; 19: 1500-2.