

## Publication W. Leo Meerts

1. The Hyperfine  $\Lambda$ -doubling spectra of  $^{14}\text{N}^{16}\text{O}$  and  $^{15}\text{N}^{16}\text{O}$ . W.L. Meerts and A. Dymanus. *J. Mol. Spectrosc.* 44 (1972) 320-346
2. Electric and magnetic properties of OCS in the  $(0, 1^{-1}, 0)$  vibrational state measured by molecular beam electric resonance spectroscopy. J.M.L.J. Reinartz, W.L. Meerts and A. Dymanus. *Chem. Phys. Lett.* 16 (1972) 576-580
3. Accurate frequencies below 5 GHz of the lower  $J$  states of OD. W.L. Meerts and A. Dymanus. *The Astrophys. J.* 180 (1973) L93
4. Electric dipole moment of OH and OD by molecular beam electric resonance. W.L. Meerts and A. Dymanus. *Chem. Phys. Lett.* 23 (1973) 45-47
5. The hyperfine  $\Lambda$ -doubling spectrum of sulfur hydride in the  $^2\Pi_{3/2}$  state. W.L. Meerts and A. Dymanus. *The Astrophys. J.* 187 (1974) L45-L47.
6. Stark-Zeeman hyperfine structure of  $\text{H}^{79}\text{Br}$  and  $\text{H}^{81}\text{Br}$  by molecular beam electric-resonance spectroscopy. O.B. Daboussi, W.L. Meerts, F.H. de Leeuw and A. Dymanus. *Chem. Phys.* 2 (1973) 473-477.
7. A molecular beam electric resonance study of the hyperfine  $\Lambda$ -doubling spectrum of OH, OD, SH and SD. W.L. Meerts and A. Dymanus. *Can. J. Phys.* 53 (1975) 2123-2141.
8. Observations of population inversion between the  $\Lambda$ -doublet states of OH. J.J. ter Meulen, W.L. Meerts, G.W.M. v. Mierlo and A. Dymanus. *Phys. Rev. Lett.* 36 (1976) 1031-1034.
9. A theoretical reinvestigation of the rotational  $\Lambda$  doubling spectrum of diatomic molecules with a  $^2\Pi$  state: The spectrum of NO. W.L. Meerts. *Chem. Phys.* 14 (1976) 421-425.
10. Electric and magnetic properties of Ozone by molecular beam electric resonance spectroscopy. W.L. Meerts, S. Stolte and A. Dymanus. *Chem. Phys.* 19 (1977) 467-472.
11. On the microwave spectrum of the  $\text{X}^2\Pi$  state of the hydroxyl radical. W.L. Meerts. *Chem. Phys. Lett.* 46 (1977) 24-28.
12. Electric and magnetic properties of carbon monoxide by molecular beam electric resonance spectroscopy. W.L. Meerts, F.H. de Leeuw and A. Dymanus. *Chem. Phys.* 22 (1977) 319-324.
13. Avoided crossing molecular beam electric resonance spectroscopy: The observation of forbidden ( $\Delta K = \pm 1, \pm 2, \pm 3$ ) transitions in phosphoryl fluoride ( $\text{OPF}_3$ ). I. Ozier and W.L. Meerts. *Phys. Rev. Lett.* 40 (1978) 226-229.
14. Hyperfine structure, electric and magnetic properties of  $^{14}\text{N}_2^{16}\text{O}$  in the ground and first excited bending vibrational state. J.M.L.J. Reinartz, W.L. Meerts and A. Dymanus. *Chem. Phys.* 31 (1978) 19-29.
15. A new method of studying internal rotation in a symmetric rotor. W.L. Meerts and I. Ozier. *Phys. Rev. Lett.* 41 (1978) 1109-1112.
16. The high resolution hyperfine  $\Lambda$  doubling spectrum of vibrationally excited OH. J.P. Bekooy, W.L. Meerts and A. Dymanus. *Astrophys. J.* 224 (1978) L77-L78.

17. Vibrational effects in the hydroxyl radical by molecular beam electric resonance spectroscopy. W.L. Meerts, J.P. Bekooy and A. Dymanus. Mol. Phys. 37 (1979) 425-439.
18. Rotational cooling in a seeded OCS beam. W.L. Meerts, G. ter Horst, J.M.L.J. Reinartz and A. Dymanus. Chem. Phys. 35 (1978) 253-258.
19. Reply to comments on ‘Rotational cooling in a seeded OCS beam’. W.L. Meerts and A. Dymanus. Chem. Phys. 35 (1978) 260-260.
20. The molecular beam electric resonance spectrum of  $\text{OPF}_3$ . W.L. Meerts, I. Ozier and A. Dymanus. Can. J. Phys. 57 (1979) 1163-1173.
21. Molecular beam electric resonance study of cyanogen chloride ( $\text{ClCN}$ ). J.M.L.J. Reinartz, W.L. Meerts and A. Dymanus. Chem. Phys. 45 (1980) 387-392.
22. The Zeeman spectrum of the NO molecule. W.L. Meerts and L. Veseth. J. Mol. Spectrosc. 82 (1980) 202-213.
23. High resolution tunable spectroscopy of rotational transitions of NO near  $30 \text{ cm}^{-1}$ . F.C. van den Heuvel, W.L. Meerts and A. Dymanus. J. Mol. Spectrosc. 84 (1980) 162-169.
24. Rotational spectrum and structure of KCN. T. Törring, J.P. Bekooy, W.L. Meerts, J. Hoeft, E. Tiemann and A. Dymanus. J. Chem. Phys. 73 (1980) 4875-4882.
25. Avoided crossing molecular beam electric resonance spectroscopy of symmetric tops (I): Phosphoryl fluoride ( $\text{OPF}_3$ ). I. Ozier and W.L. Meerts. Can. J. Phys. 59 (1981) 150-172.
26. Hyperfine  $\Lambda$  doubling parameters for the  $v=1$  state of NO from infrared-radiofrequency double resonance. R.S. Lowe, A.R.W. McKellar, P. Veillette and W.L. Meerts. J. Mol. Spectrosc. 88 (1981) 372-377.
27. Avoided crossing molecular beam experiments on fluoroform ( $\text{CF}_3\text{H}$ ) and fluoroform-d ( $\text{CF}_3\text{D}$ ). W.L. Meerts and I. Ozier. J. Chem. Phys. 75 (1981) 596-603.
28. The stark and zeeman effects in methyl silane. I. Ozier and W.L. Meerts. J. Mol. Spectrosc. 93 (1982) 164-178.
29. Internal rotation in methyl silane by avoided crossing molecular beam spectroscopy. W.L. Meerts and I. Ozier. J. Mol. Spectrosc. 94 (1982) 38-54.
30. The far infrared rotational spectrum of the CF radical. F.C. van den Heuvel, W.L. Meerts and A. Dymanus. Chem. Phys. 88 (1982) 59-62.
31. Avoided crossing molecular beam spectroscopy of  $\text{CH}_3\text{SiF}_3$ . W.L. Meerts and I. Ozier. Chem. Phys. 71 (1982) 401-415.
32. Structure of sodium cyanide by molecular beam electric resonance spectroscopy. J.J. van Vaals, W.L. Meerts and A. Dymanus. J. Chem. Phys. 77 (1982) 5245-5246.
33. Determination of the  $\rho$ -doubling and hyperfine structure in the  $A^2\Sigma_{1/2}, v = 0$  and  $v=1$  states of OH. J.J. ter Meulen, W.A. Majewski, W.L. Meerts and A. Dymanus. Chem. Phys. Lett. 94 (1983) 25-28.
34. Rotational hyperfine spectrum of the NH radical around 1 THz. F.C. van den Heuvel, W.L. Meerts and A. Dymanus. Chem. Phys. Lett. 92 (1982) 215-218.

35. Spectrum of the molecular eigenstates of pyrazine. B.J. van der Meer, H.Th. Jonkman, J. Kommandeur, W.L. Meerts and W.A. Majewski. *Chem. Phys. Lett.* 92 (1982) 565-569.
36. Rotational spectrum, hyperfine spectrum and structure of lithium isocyanide. J.J. van Vaals, W.L. Meerts and A. Dymanus. *Chem. Phys.* 82 (1983) 385-393.
37. High resolution laser-RF spectroscopy on the  $A^2\Pi \leftarrow X^2\Pi$  system of iodine-oxide (IO). J.P. Bekooij, W.L. Meerts and A. Dymanus. *J. Mol. Spectrosc.* 102 (1983) 320-343.
38. Study of the torsion-rotation hamiltonian for symmetric tops using the mm wave spectrum of methyl silane. M. Wong, I. Ozier and W.L. Meerts. *J. Mol. Spectrosc.* 102 (1983) 89-111.
39. Near U.V. spectra with fully resolved structure of naphthalene and perdeurated naphthalene. W.A. Majewski and W.L. Meerts. *J. Mol. Spectrosc.* 104 (1984) 271-281.
40. Near U.V. high resolution molecular spectroscopy. The rovibronic spectra of large organic molecules and their van der Waals complexes. W.L. Meerts and W.A. Majewski. *Laser Spectroscopy VI* (1983) 147-149.
41. High resolution molecular beam spectroscopy of NaCN and Na<sup>13</sup>CN. J.J. van Vaals, W.L. Meerts and A. Dymanus. *Chem. Phys.* 86 (1984) 147-159.
42. Molecular beam electric resonance study of KCN, K<sup>13</sup>CN and KC<sup>15</sup>N. J.J. van Vaals, W.L. Meerts and A. Dymanus. *J. Mol. Spectrosc.* 106 (1984) 280-298.
43. Internal rotation, Stark effect and rotational moments in CH<sub>3</sub>CD<sub>3</sub>. I. Ozier and W.L. Meerts. *Can. J. Phys.* 62 (1984) 1844-1854.
44. Erratum to: Internal rotation, Stark effect and rotational moments in CH<sub>3</sub>CD<sub>3</sub>. I. Ozier and W.L. Meerts. *Can. J. Phys.* 63 (1985) 1375-1375.
45. The structure of fluorene (C<sub>13</sub>H<sub>10</sub>) and the fluorene-argon van der Waals complex from a high resolution near U.V. spectrum. W.L. Meerts, W.A. Majewski and W.M. van Herpen. *Can. J. Phys.* 62 (1984) 1293-1299.
46. Sub-mm spectroscopy on OH<sup>+</sup>: The rotational transition at 1 THz. J.P. Bekooij, P. Verhoeve, W.L. Meerts and A. Dymanus. *J. Chem. Phys.* 82 (1985) 3868-3869.
47. The zeeman spectrum of the OH  $^2\Pi_{1/2}$  state. W.M. van Herpen, W.L. Meerts and L. Veseth. *Chem. Phys. Lett.* 120 (1985) 247-251.
48. Laserspectroscopie met Moleculaire Bundels. W.L. Meerts en W.M. van Herpen. *Botsbrief* 21 (1985) 17-21.
49. Pyrimidine, an intermediate state molecule? W.L. Meerts and W.A. Majewski. *Laser Chemistry* 5 (1986) 339-350.
50. Rotationally resolved spectroscopy of tetracene and its van der Waals complexes with inert gas atoms. W.M. van Herpen, W.L. Meerts and A. Dymanus. *Laser Chemistry* 6 (1986) 37-46.
51. FIR-spectroscopy of OD<sup>+</sup>. P. Verhoeve, J.P. Bekooij, W.L. Meerts, J.J. ter Meulen and A. Dymanus. *Chem. Phys. Lett.* 125 (1986) 286-289.

52. Observation of the lowest transition of  $\text{NH}^+$  with resolved hyperfine structure P. Verhoeve, J.J. ter Meulen, W.L. Meerts and A. Dymanus. *Chem. Phys. Lett.* 132 (1986) 213-217.
53. Internal rotation in  $\text{CH}_3\text{CD}_3$ : Raman spectroscopy of torsional overtones. K. van Helvoort, R. Fantoni, W.L. Meerts and J. Reuss. *Chem. Phys. Lett.* 128 (1986) 494-500.
54. Infrared ( $9 - 11\mu\text{m}$ ) dissociation of the hydrogen bonded clusters  $(\text{NH}_3)_n$  ( $n \geq 2$ ) detected by bolometer techniques. M. Snels, R. Fantoni and W.L. Meerts. *Structure and Dynamics of Weakly Bound Molecular Complexes*, A.Weber Ed. (Reidhel Publ., Dordrecht 1987), p 495-500.
55. Spectroscopy in the visible and near ultraviolet region of some organic molecules and their van der Waals complexes. W.M. van Herpen, W.A. Majewski, D.W. Pratt and W.L. Meerts *Structure and Dynamics of Weakly Bound Molecular Complexes*, A.Weber Ed. (Reidhel Publ., Dordrecht 1987), p 279-290.
56. Microwave anticrossing spectrum of ammonia. I. Ozier and W.L. Meerts. *J. Chem. Phys.* 86 (1986) 2548-2556.
57. High resolution lifetime measurements of the perturbed  $J'=0$  state of the  ${}^1\text{B}_{3u}$  state of pyrazine. W.M. van Herpen, W.L. Meerts, K.E. Drabe and J. Kommandeur. *J. Chem. Phys.* 86 (1987) 4396-4400.
58. Rotationally resolved laser spectroscopy of tetracene and its van der Waals complexes with inert gas atoms. W.M. van Herpen, W.L. Meerts and A. Dymanus. *J. Chem. Phys.* 87 (1987) 182-190.
59. The absolute value of the quantum yield of the  $\text{B}_{3u} 0^0$  state of pyrazine as a function of the rotational quantum numbers. P.J. de Lange, B.J. van der Meer, K.E. Drabe, J. Kommandeur, W.L. Meerts and W.A. Majewski. *J. Chem. Phys.* 86 (1987) 4004-4010.
60. IR dissociation of Ammonia clusters. M. Snels, R. Fantoni, R. Sanders and W.L. Meerts. *Chem. Phys.* 115 (1987) 79-91.
61. Pyrazine. An exact solution to the problem of radiationless transitions. D.W. Pratt, W.L. Meerts and J. Kommandeur. *Annual Reviews of Physical Chemistry*, 38 (1987) 433-462.
62. Hoge resolutie Ver-Infrarood spectroscopie aan moleculaire ionen. P. Verhoeve, J.J. ter Meulen, W.L. Meerts and A. Dymanus. *Botsbrief* 24 (1987) 28-35.
63. High resolution laser spectroscopy as a tool to investigate dynamics in large molecules and molecular clusters. W.L. Meerts and W.M. van Herpen. *J. Mol. Struc.* 173 (1988) 201-213.
64. Absorption spectrum versus excitation spectrum of pyrazine. K.E. Drabe, J. Kommandeur, W.M. van Herpen and W.L. Meerts. *Berichte der Bunsen-Gesellschaft für Phys. Chemie* 92 (1988) 319-322.
65. High Resolution Spectroscopy of  $\text{CF}_2\text{Cl}_2$  in a molecular jet. M. Snels and W.L. Meerts. *Applied Physics B* 45 (1988) 27-31.
66. Rotationally resolved spectroscopy of deuterated fluorene and the fluorene-argon van der Waals complex. W.M. van Herpen and W.L. Meerts. *Chem. Phys. Lett.* 147 (1988) 7-12.
67. The analysis of intensity fluctuation for a fully resolved spectrum: Pyrazine. J. Kommandeur, W.L. Meerts, Y.M. Engel and R.D. Levine. *J. Chem. Phys.* 88 (1988) 6810-6813.

68. Sub-mm laser sideband spectroscopy of  $\text{H}_3\text{O}^+$ . P.A.M. Verhoeve, J.J. ter Meulen, W.L. Meerts and A. Dymanus. *Chem. Phys. Lett.* 143 (1988) 501-504.
69. Ultra high resolution fluorescence excitation of  ${}^1\text{B}_1$  pyrimidine in a molecular beam. Structure assignment, identification of singlet-triplet perturbations, and implications for intersystem crossing in the isolated molecule. J.A. Konings, W.A. Majewski, Y. Matsumoto, D.W. Pratt and W.L. Meerts. *J. Chem. Phys.* 89 (1988) 1813-1826.
70. High resolution quantum beat spectroscopy of the perturbed  $J'=1$  level of the  ${}^1\text{B}_{3u}$  state of pyrazine. W.M. van Herpen, K.E. Drabe and W.L. Meerts. *Chem. Phys. Lett.* 145 (1988) 305-308.
71. High Resolution absorption spectrum of the molecular eigenstates of pyrazine. W.M. van Herpen, P.A.M. Uijt de Haag and W.L. Meerts. *J. Chem. Phys.* 89 (1988) 3939-3944.
72. Influence of an AC Stark effect on multiphoton transitions. W.L. Meerts, J.T. Hougen and I. Ozier. *J. Chem. Phys.* 90 (1989) 4681-4688.
73. Analysis and deconvolution of some  $J \neq 0$  rovibronic transitions in the high resolution  $S_1 \leftarrow S_0$  fluorescence excitation spectrum of pyrazine. W. Siebrand, W.L. Meerts, D.W. Pratt. *J. Chem. Phys.* 90 (1989) 1313-1321.
74. Torsion-Rotation-Vibration Effects in the degenerate vibrational fundamental ( $\nu_{12} = 1 \leftarrow 0$ ) of  $\text{CH}_3\text{SiH}_3$ . I. Ozier, N. Moazzen-Ahmadi and W.L. Meerts. *J. Mol. Spectrosc.* 137 (1989) 166-203.
75. High Resolution Laser spectroscopy on the  $A{}^1\text{B}_1(0, 6, 0) \leftarrow X{}^1\text{A}_1(0, 0, 0)$  transition in  $\text{SiCl}_2$ . G. Meijer, J. Heinze, J. Schleipen, J.J. ter Meulen, W.L. Meerts and J.T. Hougen. *J. Mol. Spectrosc.* 138 (1989) 251-263
76. High Resolution absorption spectrum of the molecular eigenstates of pyrazine. W.M. van Herpen, P.A.M. Uijt de Haag and W.L. Meerts Condensation and Commentary Edited by B.Pate and G.Scoles, *Chemtracts Analytical and Physical Chemistry* 1 (1989) 191-193
77. Methyl torsional barriers in different electronic states. Simultaneous determination form the rotationally resolved fluorescence spectrum of a large molecule. X.-Q. Tan, W.A. Majewski, D.F. Plusquellec, D.W. Pratt and W.L. Meerts. *J. Chem. Phys.* 90 (1989) 2521-2522
78. Study of dark states in naphthalene, pyrimidine and pyrazine by detection of phosphorescence after UV laser excitation. P.A.M. Uijt de Haag and W.L. Meerts. *Chem. Phys.* 135 (1989) 139-147.
79. A LIF monitor for potato sprout inhibitors. Isomer selective detection of dimethylnaphthalene. M. Ebben, R. Spooren, J.J. ter Meulen and W.L. Meerts. *J. Phys. D; Appl. Phys.* 22 (1989) 1549-1551.
80. Far Infrared laser sideband spectroscopy of  $\text{H}_3\text{O}^+$ : The pure inversion spectrum around  $55 \text{ cm}^{-1}$ . P. Verhoeve, M. Versluis, J.J. ter Meulen, W.L. Meerts and A. Dymanus. *Chem. Phys. Lett.* 161 (1989) 195-201.
81. Meesterspel met deeltjes. W.L. Meerts, J.J. ter Meulen, J. Reuss and S. Stolte. *Nederlands tijdschrift voor Natuurkunde* B55 (1989) 145-147

82. Nobelprijswinnaars 1989. S. Stolte, W.L. Meerts, J.J. ter Meulen and J. Reuss. Natuur en Techniek (1989).
83. Bixon - Jortner Revisited. J. Kommandeur and W.L. Meerts. Israel J. of Chem. 30 (1990) 131-134.
84. Internal Rotation in 1,4-dimethylnaphthalene studied by high resolution Laser spectroscopy. P. Uijt de Haag, R. Spooren, M. Ebben, W.L. Meerts and J.T. Hougen. Mol. Phys. 69 (1990) 265-280.
85. trans-Stilbene is a Rigid, Planar Asymmetric Top in the Zero-Point Vibrational levels of its  $S_0$  and  $S_1$  Electronic states. B.B. Champagne, J.F. Pfannstiel, D.F. Plusquellec, D.W. Pratt, W.M. van Herpen, W.L. Meerts. J. Phys. Chem. 94 (1990) 6-8.
86. The ( $K_a = 0 \rightarrow 1$ ) Submillimeter Rotation-Tunneling spectrum of the Water Dimer. E. Zwart, J.J. ter Meulen and W. Leo Meerts. Chem. Phys. Lett. 166 (1990) 500-502.
87. A Far Infrared Laser Sideband Spectrometer in the frequency region 550-2700 GHz. P. Verhoeve, E. Zwart, M. Versluis, M. Drabbels, J.J. ter Meulen, W.L. Meerts, A. Dymanus and D.B. McLay. Rev. Scient. Instrum. 61 (1990) 1612-1625.
88. Determination of the electric dipole moment of  $\text{NH}_2^+$ . M. Havenith, E. Zwart, J.J. ter Meulen and W.L. Meerts. J. Chem. Phys. 93 (1990) 8446-8451.
89. The Submillimeter Rotation Tunneling Spectrum of  $(\text{D}_2\text{O})_2$ . E. Zwart, J.J. ter Meulen and W.L. Meerts. Chem. Phys. Lett. 173 (1990) 115-121.
90. The use of extended permutation-inversion groups in constructing hyperfine Hamiltonians for symmetric-top internal rotor molecules like  $\text{H}_3\text{CSiH}_3$ . J.T. Hougen, W.L. Meerts and I. Ozier. J. Mol. Spectrosc. 146 (1991) 8-48.
91. Rotational Assignments in the  $S_1(^1\text{B}_{3u})$  state of Pyrazine by UV-UV Pump-Probe laser Spectroscopy. P. Uijt de Haag, J. Heinze and W.L. Meerts. Chem. Phys. Lett. 177 (1991) 357
92. Vibrational and Rotational effects on the Intersystem crossing in Pyrazine and Pyrimidine. P. Uijt de Haag and W.L. Meerts. Chem. Phys. 156 (1991) 197-207.
93. A Study of the  $S_1 6^1(^1\text{A}''_2)$  vibronically excited state of sym-triazine by High Resolution UV Laser Spectroscopy. P. Uijt de Haag, W.L. Meerts and J.T. Hougen. Chem. Phys. 151 (1991) 371-383.
94. The Submillimeter Rotation Tunneling Spectrum of Ar- $\text{D}_2\text{O}$  and Ar- $\text{NH}_3$ . E. Zwart and W.L. Meerts. Chem. Phys. 151 (1991) 407-418.
95. The Submillimeter Rotation Tunneling Spectrum of the Water Dimer. E. Zwart, J.J. ter Meulen, W.L. Meerts and L.H. Coudert. J. Mol. Spectrosc. 147 (1991) 27-39.
96. Microwave and Submillimeter spectroscopy of Ar- $\text{NH}_3$  states correlated with Ar +  $\text{NH}_3$  ( $j = 1, |k| = 1$ ). E. Zwart, H. Linnartz, W.L. Meerts, G.T. Fraser, D.D. Nelson, Jr. and W. Klemperer. J. Chem. Phys. 95 (1991) 793
97. Avoided Crossing Molecular Beam Study of the Torsion-Rotation Energy Levels of  $\text{CF}_3\text{CH}_3$ . W.L. Meerts and I. Ozier. Chem. Phys. 152 (1991) 241-259.

98. Preface to the Special Issue Level Crossing/Anticrossing Spectroscopy. W.L. Meerts, I. Ozier and R.W. Field. *Chem. Phys.* 152(3), 1991.
99. Nonradiative processes: papers in honour of J. Kommandeur on the occasion of his 60th birthday/ guest editors W.L. Meerts, J. Jortner and A.H. Zewail, Amsterdam, North Holland, 1991, p 157-307 (*Chem. Phys.* 156:2)
100. Preface to the Special Issue Non Radiative Processes. W.L. Meerts, J. Jortner and A.H. Zewail. *Chem. Phys.* 156(2), 1991.
101. The trans-stilbene-Ar van der Waals complex. vibrationally averaged substitution structure in its  $S_0$  and  $S_1$  electronic states. B.B. Champagne, D.F. Plusquellic, J.F. Pfanstiel, D.W. Pratt, W.M. van Herpen and W.L. Meerts. *Chem. Phys.* 156 (1991) 251-260.
102. Spectroscopy on Triphenylamine and its van der Waals complexes. G. Meijer, G. Berden, W.L. Meerts, H. E. Hunziker, M.S. de Vries and H.R. Wendt. *Chem. Phys.* 163 (1992) 209-222.
103. An infrared-far-infrared double resonance study on  $(\text{NH}_3)_2$  in a jet. M. Havenith, H. Linnartz, E. Zwart, A. Kips, J.J. ter Meulen and W.L. Meerts. *Chem. Phys. Lett.* 193 (1992) 261-268.
104. Laser-Induced Fluorescence Imaging in a 100 kW Natural Gas Flame. M. Versluis, M. Boogaarts, R. Klein-Douwel, B. Thus, W. de Jongh, A. Braam, J.J. ter Meulen, W.L. Meerts and G. Meijer. *Appl. Phys.* B55 (1992) 164-170.
105. Determination of the electric dipole moment of  $\text{KrH}^+$ . H. Linnartz, M. Havenith, E. Zwart, W.L. Meerts and J.J. ter Meulen. *J. Mol. Spectrosc.* 153 (1992) 710-717.
106. Acetone, a laser-induced fluorescence study with rotational resolution at 320 nm. H. Zuckermann, Y. Haas, M. Drabbels, J. Heinze, W.L. Meerts and J. Reuss. *Chem. Phys.* 163 (1992) 193-208.
107. High resolution laser induced fluorescence study of a cage molecule, 1,4-diazabicyclo[2.2.2]octane, DABCO. D. Consalvo, M. Drabbels, G. Berden, W.L. Meerts, D.H. Parker, and J. Reuss. *Chem. Phys.* 174 (1993) 267-276.
108. High Resolution double resonance spectroscopy on Rydberg states of CO. M. Drabbels, J. Heinze, J.J. ter Meulen and W.L. Meerts. *J. Chem. Phys.* 99 (1993) 5701-5711.
109. Determination of electric dipole moments and transition probabilities of low-lying singlet states of CO. M. Drabbels, W.L. Meerts and J.J. ter Meulen. *J. Chem. Phys.* 99 (1993) 2352-2358.
110. High-resolution laser-induced fluorescence and microwave-ultraviolet double resonance spectroscopy on 1-cyanonaphthalene. G. Berden, W.L. Meerts and W. Kreiner. *Chem. Phys.* 174 (1993) 247-253.
111. Niet-Lineaire IR-Interacties met Moleculen; 2-foton processen. A.F. Linskens, S. te Lintel Hekkert, I. Holleman, F. Harren, N. Dam, W.L. Meerts en J. Reuss Van A tot Q 4 (1993) 40-45.
112. The electric dipole moment of  $(\text{NH}_3)_2$  for  $G : |\mathbf{K}| = 1$ . H. Linnartz, A. Kips, W.L. Meerts and M. Havenith. *J. Chem. Phys.* 99 (1993) 2449.

113. Het amoniak dimer. Complexe dynamica met een dynamisch complex. H. Linnartz, A. Kips, W.L. Meerts and M. Havenith. Van A tot Q 5 (1993) 20-24.
114. A study of the singlet-triplet perturbation in the  $\tilde{A}^1 A_u$  state of acetylene by high resolution UV spectroscopy. M. Drabbels, J. Heinze and W.L. Meerts. J. Chem. Phys., 100 (1994) 165.
115. Detection of Sodium Cyanide (NaCN) in IRC10216. B. E. Turner, T.C. Steimle and W.L. Meerts. Astrophys. J., 426 (1994) 97.
116. Tunable infrared and far infrared direct absorption Spectroscopy of molecular Ions in a Supersonic jet expansion G. Hilpert, H. Linnartz, M. Havenith, J.J. ter Meulen and W.L. Meerts. Chem. Phys. Lett. 219 (1994) 384.
117. Accurate determination of predissociation rates and absolute transition frequencies for Carbon Monoxide. W. Ubachs, K.S.E. Eikema, P.F. Levelt, W. Hogervorst, M. Drabbels, W.L. Meerts and J.J. ter Meulen. Astrophys. Journal 427 (1994) L55-L58.
118. Rotationally resolved spectroscopy on the 1-cyanonaphthalene/triethylamine van der Waals complex in a molecular beam. G. Berden and W.L. Meerts. Chem. Phys. Lett. 224 (1994) 405-410.
119. Rotationally resolved UV spectroscopy on the 2H-tautomer of benzotriazole in a molecular beam. G. Berden, E. Jalviste and W. Leo Meerts. Chem. Phys. Letters 226 (1994) 305.
120. The ammonia dimer. New Infrared-Far Infrared double resonance results. H. Linnartz, W. L. Meerts and M. Havenith. Chem. Phys 193 (1995) 327-338.
121. The ammonia dimer. Complex Dynamics with a Dynamical Complex. H. Linnartz M. Havenith and W. L. Meerts. Comments on Atomic and Molecular Physics (CAMPs) 30 (1995) 315.
122. Rotationally resolved UV spectroscopy of indole, indazole and benzimidazole, inertial axis reorientation in the  $S_1(^1L_b) \leftarrow S_0$  transitions. G. Berden, W. Leo Meerts and E. Jalviste. J. Chem. Phys. 103 (1995) 9596-9606
123. High resolution UV spectroscopy of phenol and the hydrogen bonded phenol-water cluster. G. Berden, W.L. Meerts, M. Schmitt and K. Kleinermanns. J. Chem. Phys. 104 (1996) 972-982
124. High resolution fluorescence excitation spectroscopy of 1-aminonaphthalene.  $S_0$  and  $S_1$  geometries and  $S_1 \leftarrow S_0$  transition moment orientations. G. Berden, W.L. Meerts, D.F. Plusquellec, I. Fujita and D.W. Pratt. J. Chem. Phys. 104 (1996) 3935-3646
125. Stark effect and dipole moments of the ammonia dimer in different vibration-rotation-tunneling states. G. Cotti, H. Linnartz, W.L. Meerts, A. van der Avoird and E.H.T. Olthof. J. Chem. Phys., 104 (1996) 3898-3906
126. Het ammoniak dimer; Complexe dynamica met een dynamisch complex. H. Linnartz, W.L. Meerts and M. Havenith. Nederlands Tijdschrift voor Natuurkunde 19 (1995) 323-326
127. High Resolution pulsed-CW Double-Resonance Spectroscopy on the  $B^1\Sigma^+(v' = 0) \leftarrow A^1\Pi(v'' = 0)$  system of CO. M. Drabbels, J.J. ter Meulen and W.L. Meerts. Chem. Phys. Lett. 267 (1997) 127-131.

128. Imaging and post-processing of laser-induced fluorescence from NO in a diesel engine. Th. M. Brugman, G.G.M. Stoffels, N. Dam, W.L. Meerts and J.J. ter Meulen. *Appl. Phys.* B64 (1997) 717.
129. Light driven growth of nanostructures. E. Jurdik, F. Bentivegna, A.V. Petukhov, A. van Etteger, M. van Rij, W.L. Meerts. Th. Rasing en H. van Kempen. *Van A tot Q* 11 (1997) 29-33.
130. In-cylinder measurements of NO in a running Diesel Engine by means of LIF diagnostics. G.G.M. Stoffels, Th. M. Brugman, S.M.I. Spaanjaars, N. Dam, W. L. Meerts and J.J. ter Meulen. *Challenges in Propellants and Combustion*, 972-982. Ed. Kenneth K. Kuo, Begellhouse Inc., New York (1997)
131. Rotationally resolved UV spectroscopy of 4-aminobenzonitrile (4-ABN). G. Berden, J. van Rooy, W.L. Meerts and K.A. Zachariasse. *Chem. Phys. Lett.* 278 (1997) 373.
132. Déposition de nanostructures magnétiques par lithographie atomique: une simulation semi-classique. E. Jurdik, F. Bentivegna, A.V. Petukhov, W.L. Meerts. Th. Rasing et H. van Kempen. *Ann. Phys. Fr.* 23 (C1-195-196) 1998.
133. Internal rotation effects in the rotationally resolved  $S_1(^1L_b) \leftarrow S_0$  origin bands of 3-methylindole and 5-methylindole. K. Remmers, E. Jalviste, I. Mistrík, G. Berden and W.L. Meerts. *J. Chem. Phys.* 108 (1998) 8436-8445.
134. Internal Rotation and Stark effect in  $\text{CH}_3\text{SiD}_3$ . I. Ozier and W.L. Meerts, *J. Chem. Phys.* 109 (1998) 4823-4832
135. Laser diagnostics of Nitric Oxide inside a two-stroke DI Diesel engine. G.G.M. Stoffels, E.J. van den Boom, C.M.I. Spaanjaars, N. Dam, W.L. Meerts and J.J. ter Meulen. To be published in: *Laser Technics applied to fluid mechanics, selected papers from the 9th International Symposium, Lisabon, Portugal 13-16 juli 1998*, Springer Verlag, Berlin (1999).
136. In-cylinder measurements of NO formation in a Diesel engine. G.G.M. Stoffels, E.J. van den Boom, C.M.I. Spaanjaars, N. Dam, W.L. Meerts and J.J. ter Meulen, J.L.C. Duff and D.J. Rickard. *SAE Technical paper series*, 1999-01-1487(1999).
137. Structural information on the  $S_0$  and  $S_1$  state of o-fluorophenol by hole burning and high resolution UV spectroscopy. K. Remmers, W.L. Meerts, A. Zehnacker-Rentien, K. Le Barbu and F.Lahmani. *J. Chem. Phys.* 112 (2000) 6237-6244.
138. Gas-phase infrared spectroscopy on the lowest triplet state of the pyrazine-argon complex. K. Remmers, R.G. Satink, G. von Helden, H. Piest, G. Meijer and W.L. Meerts. *Chem. Phys. Lett.* 317 (2000) 197-202
139. Proton tunneling in the benzoic acid dimer studied by high reolution UV spectroscopy. K. Remmers, W.L. Meerts and I. Ozier. *J. Chem. Phys.* 112 (2000) 10890-10894
140. Direct Determination of Molecular Constants from Rovibronic Spectra with Genetic Algorithms. J.A. Hageman, R. Wehrens, R. de Gelder, W.L. Meerts and L.M.C. Buydens. *J. Chem. Phys.* 113 (2000) 7955-7962.
141. Fitting fluorescence spectra with genetic algorithms. J.A. Hageman, R. Wehrens, R. de Gelder, W.L. Meerts, and L.M.C. Buydens. *Parallel Problem Solving from Nature VI*, page 702. Springer Verlag, 2000. *Lecture Notes in Computer Science*.

142. Nitric oxide inside a realistic heavy-duty diesel engine. E.J. van de Boom, C.M.I. Spaanjaars, W.L. Meerts, P.B. Monkhouse, N.J. Dam and J.J. ter Meulen. Submitted: Twenty eighth International Symposium on Combustion, 30 Juli to 4 August 2000, Scotland.
143. E.J. van den Boom, P.B. Monkhouse, C.M.I. Spanjaars, W.L. Meerts, N.J. Dam, and J.J. ter Meulen, in: V.I. Vlad (Ed.), ROMOPTO 2000: Sixth Conference on Optics, Proc. SPIE 4430, 593-606 (2001).
144. Anomalous transitions in two-level systems driven by the ac Stark effect. W.L. Meerts, I. Ozier and J.T. Hougen. Can. J. Phys. 79 (2001) 533-545.
145. Performance optimization of an external enhancement resonator for optical second harmonic generation. E. Jurdik, J. Hohlfeld, A.F. van Etteger, A.J. Toonen, W.L. Meerts, H. van Kempen and J. Rasing. J. Opt. Soc. Am. B 19 (2002) 1660-1667.
146. Structure of tetracene-argon and tetracene-krypton complexes from high resolution laser experiments. I. Szydlowicz, G. Myszkiewicz and W.L. Meerts. Chem. Phys. 283 (2002) 371-377.
147. K. Verbiezen, A.J. Donkerbroek, A.P. van Vliet, W.L. Meerts, R.J.H. Klein-Douwel, N.J. Dam, and J.J. ter Meulen, in: C. Chauveau, C. Vovelle (Eds.), Proceedings of the European Combustion Meeting, 2003, paper 88.
148. The structure of the phenol-nitrogen cluster. A joint experimental and ab initio study. M. Schmitt, C. Ratzer and W.L. Meerts. J. Chem. Phys. 120 (2004) 2752-2758
149. Quasiperiodic structures via atom-optical nanofabrication. E. Jurdik, G. Myszkiewicz, J. Hohlfeld, A. J. Toonen, A.F. van Etteger, J. Gerritsen, J. Hermsen, S. Goldbach-Aschemann, W.L. Meerts, H. van Kempen and Th. Rasing. Phys. Rev. B (Rapid Communications) 69 (2004) 201102(R)1-4.
150. New applications of the Genetic Algorithms in the automated analysis of High Resolution spectra. W.L. Meerts, M. Schmitt and G. C. Groenenboom. Can. J. Chem. 82 (2004) 804-819.
151. Determination of the structure of 7-azaindole in the electronic ground and excited state using high resolution ultraviolet spectroscopy and an automated assignment based on a genetic algorithm. M. Schmitt, C. Ratzer, K. Kleinermanns and W.L. Meerts. Mol. Phys. 102 (2004) 1605-1614.
152. Laser manipulation of iron for nanofabrication. G. Myszkiewicz, J. Hohlfeld, A.J. Toonen, A.F. van Etteger, O.I. Shklyarevskii, W.L. Meerts, Th. Rasing and E. Jurdik. Appl. Phys. Lett. 85 (2004) 3842-3844.
153. Microwave and Mmwave Study of  $\text{CH}_3\text{SiH}_3$  including the Perturbation-Allowed Torsion-Vibration Difference Band ( $v_{12}=0$ ,  $v_6=3$ )  $\leftarrow$  ( $v_{12}=1$ ,  $v_6=0$ ). I. Ozier, A. Bauder, W.L. Meerts, N. Moazzen-Ahmadi and J. Schroderus. J. Mol. Spectrosc. 228 (2004) 279-292.
154. Twisted intramolecular charge transfer states. Rotationally resolved fluorescence excitation spectra of 4,4'-dimethylaminobenzonitrile in a molecular beam. A. E. Nikolaev, G. Myszkiewicz, G. Berden, W. L. Meerts, J. F. Pfansiel and D. W. Pratt. J. Chem. Phys. 122 (2005) 084309-1-10.

155. Structure and barrier to internal rotation of 4-methylstyrene in the S<sub>0</sub>- and S<sub>1</sub>-state. M. Schmitt, Ch. Ratzer, Ch. Jacoby and W. L. Meerts. *J. Mol. Struct.* 742 (2005) 123–130.
156. Rotational isomers of hydroxy deuterated o- and m-cresols studied by ultraviolet high resolution experiments. G. Myszkiewicz, W. L. Meerts, Ch. Ratzer and M. Schmitt. *Phys. Chem. Chem. Phys.* 7 (2005) 2142 – 2150.
157. Structural selection by microsolvation: Conformational locking of tryptamine. Michael Schmitt, Marcel Böhm, Christian Ratzer, Chau Vu, Ivo Kalkman and W. Leo Meerts, *J. Am. Chem. Soc.* 127 (2005) 10356–10364.
158. Structure determination of resorcinol rotamers by high resolution UV spectroscopy. G. Myszkiewicz, W. L. Meerts, Ch. Ratzer and M. Schmitt. *ChemPhysChem* 6 (2005) 2129-2136.
159. The structure of 4-methylphenol and its water cluster revealed by rotationally resolved UV-spectroscopy using a genetic algorithm approach. Grzegorz Myzkiewich, W. Leo Meerts, Christian Ratzer and Michael Schmitt. *J. Chem. Phys.* 123 (2005) 044304 (1-7).
160. A new automated assign and analyzing method for high resolution rotationally resolved spectra using Genetic Algorithms. W. L. Meerts and Michael Schmitt. *Phys. Scr.* 73 (2006) C47-C52.
161. A genetic algorithm based determination of the ground and excited (<sup>1</sup>L<sub>b</sub>) state structure and the orientation of the transition dipole moment of benzimidazole. Michael Schmitt, Daniel Krügler, Marcel Böhm, Christian Ratzer, Violetta Bednarska, Ivo Kalkman and W. Leo Meerts. *Phys. Chem. Chem. Phys.* 8 (2006) 228-235.
162. Attenuation corrections for in-cylinder NO LIF measurements in a heavy-duty Diesel engine. K. Verbiezen, R. J. H. Klein-Douwel, A. J. Donkerbroek, A. P. van Vliet, W. L. Meerts, N. J. Dam, J. J. ter Meulen, *Appl. Phys. B: Lasers and Optics* 83 (2006) 155-166. DOI: 10.1007/s00340-006-2141-1.
163. Absorption of NO laser-induced fluorescence by hot O<sub>2</sub> and CO<sub>2</sub>. K. Verbiezen, A. P. van Vliet, W. L. Meerts, N. J. Dam, and J. J. ter Meulen. *Combust. Flame* 144 (2006) 638-641.
164. Laser-induced incandescence particle size measurements in a heavy-duty diesel engine. B. Bougie, L. C. Ganippa, A. P. van Vliet, W. L. Meerts, N. J. Dam and J. J. ter Meulen. *Combust. Flame* 145 (2006) 635-637.
165. Determining the Intermolecular Structure in the S<sub>0</sub> and S<sub>1</sub> States of the Phenol Dimer by Rotationally Resolved Electronic Spectroscopy. M. Schmitt. M. Böhm, Ch. Ratzer, D. Krügler, K. Kleinermanns, I. Kalkman, Giel Berden and W. L. Meerts. *ChemPhysChem*. 7 (2006) 1241–1249.
166. Application of Genetic Algorithms in automated assignments of high resolution spectra. W. Leo Meerts and Michael Schmitt. *Int. Rev. Phys. Chem.* 25 (2006) 353–406.
167. Electronic excitation in the benzonitrile dimer: The intermolecular structure in the S<sub>0</sub> and S<sub>1</sub> state determined by rotationally resolved electronic spectroscopy. Michael Schmitt, Marcel Böhm, Christian Ratzer, Swen Siegert, Marloes van Beek and W. Leo Meerts. *J. Mol. Struct.* 795 (2006) 234–241.

168. Electronically excited states of tryptamine and its microhydrated complex. Michael Schmitt, Robert Brause, Christel M. Marian, Susanne Salzmann and W. Leo Meerts. *J. Chem. Phys.* 125 (2006) 124309 (1-10).
169. Soot particulate size characterization in a heavy-duty diesel engine for different engine loads by laser-induced incandescence. B. Bougie, L. C. Ganippa, A. P. van Vliet, W. L. Meerts, N. J. Dam, and J. J. ter Meulen. (*Proceedings of the Combustion Symposium 2006*, Heidelberg), *Proc. Comb. Inst.* 31 (2007) 685-691.
170. Quantitative laser-induced fluorescence measurements of nitric oxide in a heavy-duty Diesel engine. K. Verbiezen, R.J.H. Klein-Douwel, A.P. van Vliet, A.J. Donkerbroek, W.L. Meerts, N.J. Dam, and J.J. ter Meulen. (*Proceedings of the Combustion Symposium 2006*, Heidelberg), *Proc. Comb. Inst.* 31 (2007) 765-773.
171. Isomer-specific ultraviolet spectroscopy of m- and p-divinylbenzene. T. M. Selby, W. L. Meerts and T. Zwier. *J. Phys. Chem A* 111 (2007) 3697-3709.
172. A simple two-step automatic assignment procedure for complicated NMR spectra of solutes in liquid crystals using genetic algorithms. W. Leo Meerts, C. A. de Lange, A. C. J. Weber, and E. E. Burnell. *Chem. Phys. Lett.* 441 (2007) 324-346.
173. Diesel combustion: In-cylinder NO concentrations in relation to injection timing. K. Verbiezen, A.J. Donkerbroek, R.J.H. Klein-Douwel, A.P. van Vliet, P.J.M. Frijters, X.L.J. Seykens, R.S.G. Baert, W.L. Meerts, N.J. Dam and J.J. ter Meulen. *Combustion and Flame* 151 (2007) 333-346.
174. Rotationally resolved electronic spectroscopy of water clusters of 7-azaindole. Thi Bao Chau Vu, Ivo Kalkman, W. Leo Meerts, Yuriy N. Svartsov, Christoph Jacoby and Michael Schmitt. *J. Chem. Phys* 128 (2008) 214311-1-8.
175. Spectroscopy of the  $\tilde{A}^1A_2 \leftarrow \tilde{X}^1A_1$  transition of formaldehyde in the 30140–30790 cm<sup>-1</sup> range: the  $2_0^1 \leftarrow 4_0^3$  and  $2_0^2 \leftarrow 4_0^1$  rovibrational bands. Michael Motsch, Markus Schenk, Martin Zeppenfeld, Michael Schmitt, W. Leo Meerts, Pepijn W.H. Pinkse and Gerhard Rempe. *J. Mol Spectroc.* 252 (2008) 25-30.
176. The tunneling splittings in the benzoic acid dimer S<sub>0</sub> and S<sub>1</sub> state determined by high resolution UV spectroscopy. Ivo Kalkman, Chau Vu, Michael Schmitt and W. Leo Meerts. *ChemPhysChem* 9 (2008) 1788-1797.
177. Evolutionary Algorithms to Solve Complicated NMR Spectra. W. Leo Meerts, C.A. de Lange, A.C.J. Weber and E.E. Burnell. *J. Chem. Phys.* 139 (2009) 044504 (1-8).
178. The conformational landscape of 5-methoxytryptamine studied by rotationally resolved fluorescence spectroscopy and resonant ionization spectroscopy. Thi Bao Chau Vu, Ivo Kalkman, W. Leo Meerts, Christian Brand, Yuriy N. Svartsov, Sascha Wiedemann, Rainer Weinkauf and Michael Schmitt. Accepted to *PhysChemPhys* (2009).
179. Structure and internal rotation in the S<sub>0</sub> and S<sub>1</sub> states of o-toluidine studied by high resolution UV spectroscopy. Ivo Kalkman, Chau Vu, Michael Schmitt and W. Leo Meerts. Submitted to *PhysChemChemPhys* (2009).

180. Rotationally Resolved Electronic Spectroscopy and Automatic Assignment Techniques using Evolutionary Algorithms. Michael Schmitt and W. Leo Meerts. Chapter in the book *Handbook of High Resolution Spectroscopy*, Edited by Martin Quack and Frédéric Merkt. John Wiley and sons (2009)

January 31, 2009