

Marcel Nn Snels

List of Publications by Year in descending order

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88
papers

1,495
citations

304743

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32
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98
docs citations

98
times ranked

1339
citing authors

#	ARTICLE	IF	CITATIONS
1	Spectroscopic evidence for NAT, STS, and ice in MIPAS infrared limb emission measurements of polar stratospheric clouds. <i>Atmospheric Chemistry and Physics</i> , 2006, 6, 1201-1219.	4.9	82
2	The intermolecular vibrations of Ar ⁺ styrene and Ar ⁺ fluorostyrene complexes. <i>Journal of Chemical Physics</i> , 1993, 99, 8398-8406.	3.0	58
3	Climatology of polar stratospheric clouds based on lidar observations from 1993 to 2001 over McMurdo Station, Antarctica. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	56
4	High-resolution infrared spectrum and analysis of the ν_1 , $A_2u(B_2)$ fundamental band of $^{12}C_6H_6$ and $^{13}C_6H_6$. <i>Molecular Physics</i> , 1990, 71, 759-768.	1.7	53
5	Measurements and modelling of high pressure pure CO ₂ spectra from 750 to 8500 cm ⁻¹ . Central and wing regions of the allowed vibrational bands. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2011, 112, 925-936.	2.3	51
6	IR dissociation of ammonia clusters. <i>Chemical Physics</i> , 1987, 115, 79-91.	1.9	49
7	Polar Stratospheric Clouds: Satellite Observations, Processes, and Role in Ozone Depletion. <i>Reviews of Geophysics</i> , 2021, 59, e2020RG000702.	23.0	49
8	The NH and ND stretching fundamentals of $^{14}ND_2H$. <i>Journal of Chemical Physics</i> , 2003, 119, 7893-7902.	3.0	42
9	Van der waals modes and rotational fine structure in C ₂ H ₄ dimers. <i>Chemical Physics Letters</i> , 1986, 124, 1-7.	2.6	41
10	Morphology of the tropopause layer and lower stratosphere above a tropical cyclone: a case study on cyclone Davina (1999). <i>Atmospheric Chemistry and Physics</i> , 2008, 8, 3411-3426.	4.9	38
11	The ν_1 and ν_3 bands of ND ₃ . <i>Molecular Physics</i> , 2000, 98, 837-854.	1.7	37
12	Induction effects on IR-predissociation spectra of (SF ₆) ₂ , (SiF ₄) ₂ and (SiH ₄) ₂ . <i>Chemical Physics Letters</i> , 1987, 140, 543-547.	2.6	36
13	Variability of aerosol vertical distribution in the Sahel. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 12005-12023.	4.9	35
14	The characteristics of the O ₂ Herzberg II and Chamberlain bands observed with VIRTIS/Venus Express. <i>Icarus</i> , 2013, 223, 609-614.	2.5	31
15	Mode selective tunneling dynamics observed by high resolution spectroscopy of the bending fundamentals of N ₁₄ H ₂ D and N ₁₄ D ₂ H. <i>Journal of Chemical Physics</i> , 2006, 125, 194319.	3.0	30
16	Development and airborne operation of a compact water isotope ratio infrared spectrometer. <i>Isotopes in Environmental and Health Studies</i> , 2009, 45, 303-320.	1.0	28
17	Experimental CO ₂ absorption coefficients at high pressure and high temperature. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2013, 117, 21-28.	2.3	27
18	Rotational analysis of the ν_1 band of trichlorofluoromethane from high resolution Fourier transform and diode laser spectra of supersonic jets and isotopically enriched samples. <i>Journal of Chemical Physics</i> , 1995, 103, 8846-8853.	3.0	26

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19	IR dissociation of dimers of high symmetry molecules: SF ₆ , SiF ₄ and SiH ₄ . Chemical Physics, 1986, 109, 67-83.	1.9	25
20	Detection and identification of TNT, 2,4-DNT and 2,6-DNT by near-infrared cavity ringdown spectroscopy. Chemical Physics Letters, 2010, 489, 134-140.	2.6	25
21	High resolution Fourier transform infrared spectroscopy of CHCl ₂ F in supersonic jets: Analysis of $\hat{\nu}_{23}$, $\hat{\nu}_{27}$, and $\hat{\nu}_{28}$. Journal of Chemical Physics, 1991, 95, 6355-6361.	3.0	24
22	Multiple-photon excitation spectra of SiH ₄ measured in the 10 $\hat{\nu}_{4m}$ range by a continuously tunable CO ₂ laser. Chemical Physics Letters, 1985, 122, 480-488.	2.6	23
23	Estimate of the Arctic Convective Boundary Layer Height from Lidar Observations: A Case Study. Advances in Meteorology, 2012, 2012, 1-9.	1.6	23
24	Spectroscopy of 4-fluorostyrene clusters. Journal of Molecular Structure, 1993, 293, 197-200.	3.6	22
25	Excited vibrational states of benzene: High resolution FTIR spectra and analysis of some out-of-plane vibrational fundamentals of C ₆ H ₅ D. Chemical Physics, 1997, 225, 107-130.	1.9	22
26	Diode Laser Jet Spectra and Analysis of the $\hat{\nu}_{23}$ and $\hat{\nu}_{28}$ Fundamentals of CHF ₂ Cl. Journal of Molecular Spectroscopy, 2001, 209, 1-10.	1.2	22
27	The NH and ND stretching fundamentals of ¹⁴ NH ₂ D. Journal of Molecular Spectroscopy, 2006, 237, 143-148.	1.2	22
28	Infrared predissociation of SiF ₄ and CF ₃ Br clusters in a molecular-beam experiment. Chemical Physics Letters, 1984, 106, 377-381.	2.6	21
29	Calibration method for depolarization lidar measurements. International Journal of Remote Sensing, 2009, 30, 5725-5736.	2.9	19
30	Determination of polar stratospheric cloud particle refractive indices by use of in situ optical measurements and T-matrix calculations. Applied Optics, 2005, 44, 3302.	2.1	17
31	Carbon dioxide opacity of the Venus ^{x3} atmosphere. Planetary and Space Science, 2014, 103, 347-354.	1.7	17
32	High resolution analysis of the complex symmetric CF ₃ stretching chromophore absorption in CF ₃ I. Journal of Chemical Physics, 2002, 116, 974-983.	3.0	15
33	Classification and scales of Antarctic polar stratospheric clouds using wavelet decomposition. Journal of Atmospheric and Solar-Terrestrial Physics, 2005, 67, 293-300.	1.6	15
34	Balloonborne lidar for cloud physics studies. Applied Optics, 2006, 45, 5701.	2.1	15
35	A comparison of light backscattering and particle size distribution measurements in tropical cirrus clouds. Atmospheric Measurement Techniques, 2011, 4, 557-570.	3.1	15
36	Evaluation of stratospheric ozone, temperature, and aerosol profiles from the LOANA lidar in Antarctica. Polar Science, 2012, 6, 209-225.	1.2	15

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37	High-resolution spectroscopy of CF ₂ Cl ₂ in a molecular jet. Applied Physics B, Photophysics and Laser Chemistry, 1988, 45, 27-31.	1.5	14
38	Analysis of the $\hat{\nu}_2 + \hat{\nu}_7$ combination band of CF ₂ Cl ₂ from spectra obtained by high resolution diode laser and FTIR supersonic jet techniques Electronic supplementary information (ESI) available: line assignments for diode laser spectra for transitions $\hat{\nu}_2 + \hat{\nu}_7$ of CF ₂ Cl ₂ (Table S1) and CF ₂ Cl ₂ (Table S2). See http://www.rsc.org/suppdata/cp/b1/b110919g . Physical Chemistry Chemical Physics, 2002, 4, 1531-1536.	2.8	14
39	Radiosonde stratospheric temperatures at Dumont d'Urville (Antarctica): trends and link with polar stratospheric clouds. Atmospheric Chemistry and Physics, 2010, 10, 3813-3825.	4.9	14
40	Comparison of Antarctic polar stratospheric cloud observations by ground-based and space-borne lidar and relevance for chemistry-climate models. Atmospheric Chemistry and Physics, 2019, 19, 955-972.	4.9	14
41	Diode Laser Jet Spectra and Analysis of the $\hat{\nu}_1$ and $\hat{\nu}_4$ Fundamentals of CCl ₃ F. Journal of Molecular Spectroscopy, 2001, 205, 102-109.	1.2	13
42	Carbon dioxide absorption at high densities in the $\hat{\nu}_4$ band. http://www.w3.org/1998/Math/MathML altimg="si0002.gif" overflow="scroll" style="width: 1.18em; margin-left: 0.25em; margin-right: 0.25em; margin-bottom: 0.25em;">$\hat{\nu}_4$ nightside transparency window of Venus. Journal of Quantitative Spectroscopy and Radiative Transfer, 2014, 133, 464-471.	2.3	13
43	Shape and width of IR absorption lines of ammonia expanded in a supersonic jet. Applied Physics B, Photophysics and Laser Chemistry, 1988, 47, 277-282.	1.5	12
44	The AMMA MULID network for aerosol characterization in West Africa. International Journal of Remote Sensing, 2011, 32, 5485-5504.	2.9	12
45	High-resolution infrared spectrum and analysis of the $\hat{\nu}_2$ band of CF ₃ Cl. Journal of Molecular Spectroscopy, 1988, 130, 337-343.	1.2	11
46	High-resolution Fourier-transform infrared spectroscopy of the $\hat{\nu}_3$ (F ₂) fundamental of RuO ₄ . Molecular Physics, 1991, 72, 145-158.	1.7	11
47	Molecular dynamics simulations for CO ₂ spectra. IV. Collisional line-mixing in infrared and Raman bands. Journal of Chemical Physics, 2013, 138, 244310.	3.0	11
48	Observation of polar stratospheric clouds over McMurdo (77.85°S, 166.67°E) (2006-2010). Journal of Geophysical Research D: Atmospheres, 2014, 119, 5528-5541.	3.3	11
49	Luminescence and ESCA analysis of laser-ablated materials. Applied Surface Science, 1990, 46, 321-325.	6.1	10
50	Pressure broadening in the second overtone of NO, measured with a near infrared DFB diode laser. Optics Communications, 1999, 159, 80-83.	2.1	10
51	High resolution FTIR spectra and analysis of the $\hat{\nu}_1$ fundamental and of the $\hat{\nu}_2 + \hat{\nu}_{11}$, $\hat{\nu}_5 + \hat{\nu}_{12}$ and $\hat{\nu}_7 + \hat{\nu}_{16}$ combination bands of C ₆ D ₆ . Molecular Physics, 2002, 100, 981-1001.	1.7	10
52	Laser deposition of thin films of high T _c superconductors. Applied Surface Science, 1993, 69, 365-369.	6.1	9
53	Torsional splittings in the diode laser slit-jet spectra of the $\hat{\nu}_6$ fundamental of 1-chloro-1,1-difluoroethane (HCFC-142b). Journal of Molecular Spectroscopy, 2009, 254, 108-118.	1.2	9
54	High-resolution spectra and analysis of the hot bands of the ν_2 vibration of CF ₃ Cl ($\nu_2 + \nu_n - \nu_n, n = 3, 5$). http://www.rsc.org BT / Overlock 10 Tf	1.7	8

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55	High-Resolution Spectra and Analysis of the $\hat{1}/28$ Band of Methylene Chloride. Journal of Molecular Spectroscopy, 1995, 173, 113-119.	1.2	8
56	Orientalional hole burning for dimers in the limit of large rotational quantum numbers. Chemical Physics, 1985, 94, 1-6.	1.9	7
57	High Resolution Spectroscopy of CF3Br by Diode Laser in the Frequency Range 1070â€“1090 cmâ€“1. Laser Chemistry, 1988, 8, 61-78.	0.5	7
58	Terrestrial <scp>OH</scp> nightglow measurements during the <scp>Rosetta</scp> flyby. Geophysical Research Letters, 2015, 42, 5670-5677.	4.0	7
59	Quasi-coincident observations of polar stratospheric clouds by ground-based lidar and CALIOP at Concordia (Dome C, Antarctica) from 2014 to 2018. Atmospheric Chemistry and Physics, 2021, 21, 2165-2178.	4.9	7
60	High resolution infrared spectrum and analysis of the ν_2 band of CF3I. Molecular Physics, 1989, 68, 327-332.	1.7	6
61	Laser studies of polystyrene precursors performed through resonant two photon ionization processes in a supersonic molecular beam. Applied Surface Science, 1993, 69, 340-344.	6.1	6
62	Diode laser slit-jet spectra and analysis of the $\hat{1}/214$ fundamental of 1-chloro-1,1-difluoroethane (HCFC-142b). Journal of Molecular Spectroscopy, 2003, 217, 72-78.	1.2	6
63	High Resolution IR Study of the Coriolis Coupling between $\hat{1}/23$ and $\hat{1}/29$ in Methylene Chloride. Journal of Molecular Spectroscopy, 1995, 174, 581-586.	1.2	5
64	Laser ablation of BiSrCaCuO superconducting thin film: analysis of intermediate species in real time. Applied Surface Science, 1995, 86, 45-49.	6.1	5
65	High Resolution IR Study of the Coriolis Coupling between $\hat{1}/23$ and $\hat{1}/29$ in CH235Cl37Cl. Journal of Molecular Spectroscopy, 1997, 183, 224-227.	1.2	5
66	Diode laser slit-jet spectra and analysis of the fundamental of 1-chloro-1,1-difluoroethane (HCFC-142b). European Physical Journal D, 2002, 21, 137-142.	1.3	5
67	Diode laser jet spectra and analysis of the $\hat{1}/214$ fundamental of 1,1,1,2-tetrafluoroethane (HFC-134a). Journal of Molecular Spectroscopy, 2003, 221, 156-162.	1.2	5
68	Comment on â€œHigh-Resolution FTIR Spectrum and Rotational Structure of the $\hat{1}/28$ Band of Methylene Chlorideâ€•[J. Mol. Spectrosc.175,363â€“369 (1996)]. Journal of Molecular Spectroscopy, 1996, 177, 320.	1.2	4
69	Fermi interaction between the $\hat{1}/21$ and the $\hat{1}/22+4\hat{1}/2s$ bands of Arâ€“DN2+. Journal of Chemical Physics, 2006, 124, 224315.	3.0	4
70	Near-infrared Rayleigh scattering of SF6. Molecular Physics, 2013, 111, 2314-2319.	1.7	4
71	Temperature dependence of collisional induced absorption (CIA) bands of CO2 with implications for Venusâ€™ atmosphere. Journal of Quantitative Spectroscopy and Radiative Transfer, 2018, 204, 242-249.	2.3	4
72	Lidar observations of cirrus clouds in Palau (7Â°33â€“N, 134Â°48â€“E). Atmospheric Chemistry and Physics, 2021, 21, 7947-7961.	4.9	4

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73	High-resolution infrared spectrum and analysis of the $\hat{1}/2$ band of CF ₃ Br. Journal of Molecular Spectroscopy, 1989, 138, 413-422.	1.2	3
74	High resolution infrared spectrum and analysis of the $2\nu_3$, $3\nu_3 - \nu_3$ and $\nu_1 - \nu_3$ bands of CF ₃ Br. Molecular Physics, 1989, 68, 333-340.	1.7	3
75	High Resolution Spectra and Rotational Analysis of the $2\hat{1}/2$, $\hat{1}/2 + \hat{1}/2$, and $2\hat{1}/2$ Bands in Methylene Chloride. Journal of Molecular Spectroscopy, 1997, 182, 124-131.	1.2	3
76	<title>First results obtained with a lidar fluorescence sensor system</title>. , 2000, , .		3
77	Lagrangian analysis of microphysical and chemical processes in the Antarctic stratosphere: a case study. Atmospheric Chemistry and Physics, 2015, 15, 6651-6665.	4.9	3
78	Comparison of Coincident Optical Particle Counter and Lidar Measurements of Polar Stratospheric Clouds Above McMurdo (77.85°S, 166.67°E) From 1994 to 1999. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD033572.	3.3	3
79	High-resolution infrared spectrum and analysis of the $2\hat{1}/3$ band of CF ₃ Cl. Journal of Molecular Spectroscopy, 1989, 135, 131-143.	1.2	2
80	Production and reactivity of ionic clusters. Applied Surface Science, 1992, 54, 171-174.	6.1	2
81	High resolution FTIR spectra and analysis of the $\hat{1}/11$ fundamental band of. Chemical Physics Letters, 2001, 350, 57-62.	2.6	2
82	A simulation chamber for absorption spectroscopy in planetary atmospheres. Atmospheric Measurement Techniques, 2021, 14, 7187-7197.	3.1	2
83	Resonant twophoton ionization processes of van der Waals adducts: Spectroscopy and reactivity of styrenes clustered with various molecules. Journal of Chemical Sciences, 1993, 105, 773-782.	1.5	1
84	High-Resolution FTIR Spectra of CD ₂ Cl ₂ : Analysis of the $\hat{1}/3$ / $\hat{1}/7$ / $\hat{1}/9$ Triad. Journal of Molecular Spectroscopy, 2002, 216, 191-196.	1.2	1
85	High resolution FTIR spectra and analysis of the $\hat{1}/4 + \hat{1}/8$ combination band and of the $2\hat{1}/4 + \hat{1}/8$ $\hat{1}/4$ hot band of CH ₂ Cl ₂ . Molecular Physics, 2003, 101, 799-803.	1.7	1
86	Analysis of FTIR spectra of CH ₂ Br ₃ Cl; the $\hat{1}/4$ and $\hat{1}/5$ fundamentals and their hot-bands $\hat{1}/4 + \hat{1}/6$ $\hat{1}/6$ and $\hat{1}/5 + \hat{1}/6$ $\hat{1}/6$. Journal of Molecular Spectroscopy, 2004, 224, 13-17.	1.2	1
87	<title>Study of atmospheric trace gases by sub-Doppler diode laser spectroscopy</title>. , 2000, 4070, 94.		0
88	Analysis of FTIR spectra of CH ₂ Br ₃ Cl; the $\hat{1}/3$ and $\hat{1}/9$ fundamentals. Molecular Physics, 2004, 102, 1469-1473.	1.7	0