Manfred Birk

List of Publications by Year
in descending order

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65 papers	14,659 citations	185998 28 h-index	110170 64 g-index
65 all docs	65 docs citations	65 times ranked	8988 citing authors

#	Article	IF	Citations
1	The HITRAN 2008 molecular spectroscopic database. Journal of Quantitative Spectroscopy and Radiative Transfer, 2009, 110, 533-572.	1.1	3,129
2	The HITRAN2016 molecular spectroscopic database. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 203, 3-69.	1.1	2,840
3	The HITRAN2012 molecular spectroscopic database. Journal of Quantitative Spectroscopy and Radiative Transfer, 2013, 130, 4-50.	1.1	2,810
4	The HITRAN 2004 molecular spectroscopic database. Journal of Quantitative Spectroscopy and Radiative Transfer, 2005, 96, 139-204.	1.1	2,601
5	The HITRAN2020 molecular spectroscopic database. Journal of Quantitative Spectroscopy and Radiative Transfer, 2022, 277, 107949.	1.1	770
6	MIPAS: an instrument for atmospheric and climate research. Atmospheric Chemistry and Physics, 2008, 8, 2151-2188.	1.9	596
7	The GEISA spectroscopic database: Current and future archive for Earth and planetary atmosphere studies. Journal of Quantitative Spectroscopy and Radiative Transfer, 2008, 109, 1043-1059.	1.1	161
8	The 2003 edition of the GEISA/IASI spectroscopic database. Journal of Quantitative Spectroscopy and Radiative Transfer, 2005, 95, 429-467.	1.1	146
9	The rotational spectrum and structure of chlorine peroxide. Journal of Chemical Physics, 1989, 91, 6588-6597.	1.2	131
10	The rotational-torsional spectrum of carbodiimide: A probe for the unusual dynamics. Journal of Molecular Spectroscopy, 1989, 136, 402-445.	0.4	85
11	HIGH RESOLUTION WAVENUMBER STANDARDS FOR THE INFRARED. Journal of Molecular Spectroscopy, 1996, 177, 164-179.	0.4	82
12	The H216O molecule: Line position and line intensity analyses up to the second triad. Journal of Molecular Spectroscopy, 2008, 251, 339-357.	0.4	62
13	Parylene anti-reflection coating of a quasi-optical hot-electron-bolometric mixer at terahertz frequencies. Infrared Physics and Technology, 2001, 42, 41-47.	1.3	61
14	Rotational Spectra of cis-HCOOH, trans-HCOOH, and trans-H13COOH. Journal of Molecular Spectroscopy, 2002, 216, 259-265.	0.4	58
15	Absorption cross-sections of ozone in the ultraviolet and visible spectral regions: Status report 2015. Journal of Molecular Spectroscopy, 2016, 327, 105-121.	0.4	57
16	Collisional parameters of lines: effect of temperature. Journal of Quantitative Spectroscopy and Radiative Transfer, 2005, 92, 211-230.	1.1	55
17	MIPAS Level 1B algorithms overview: operational processing and characterization. Atmospheric Chemistry and Physics, 2007, 7, 1395-1406.	1.9	54
18	The Rotational Spectrum and Molecular Structure of Chlorine Chlorate. Journal of Molecular Spectroscopy, 1995, 170, 383-396.	0.4	45

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19	New infrared spectroscopic database for chlorine nitrate. Journal of Quantitative Spectroscopy and Radiative Transfer, 2003, 82, 443-460.	1.1	42
20	The Rotational Spectrum and Anharmonic Force Field of Chlorine Dioxide, OClO. Journal of Molecular Spectroscopy, 1997, 186, 177-188.	0.4	41
21	Infrared absorption cross-sections in HITRAN2016 and beyond: Expansion for climate, environment, and atmospheric applications. Journal of Quantitative Spectroscopy and Radiative Transfer, 2019, 230, 172-221.	1.1	41
22	Molecular structure and spectroscopic properties of carbodiimide (HNî—»Cî—»NH). Chemical Physics, 1988, 122, 305-315.	0.9	40
23	Further Investigations of the ClO Rotational Spectrum. Journal of Molecular Spectroscopy, 2001, 207, 4-9.	0.4	40
24	Temperature-dependent air broadening of water in the 1250â€“1750cmâ^'1 range. Journal of Quantitative Spectroscopy and Radiative Transfer, 2012, 113, 889-928.	1.1	36
25	The Far Infrared Spectrum of HOCl: Line Positions and Intensities. Journal of Molecular Spectroscopy, 1998, 191, 362-367.	0.4	35
26	Accurate line intensities for water transitions in the infrared: Comparison of theory and experiment. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 203, 88-102.	1.1	34
27	First remote sensing measurements of ClOOCl along with ClO and ClONO₂ in activated and deactivated Arctic vortex conditions using new ClOOCl IR absorption cross sections. Atmospheric Chemistry and Physics, 2010, 10, 931-945.	1.9	33
28	Observation of stratospheric OH at 2.5 THz with an airborne heterodyne system. Infrared Physics and Technology, 1995, 36, 883-891.	1.3	32
29	The rotation-vibration spectrum of gaseous cyanamide (H2NCN). Chemical Physics Letters, 1986, 123, 382-385.	1.2	29
30	Improving the TROPOMI CO data product: update of the spectroscopic database and destriping of single orbits. Atmospheric Measurement Techniques, 2019, 12, 5443-5455.	1.2	29
31	Validation of stratospheric and mesospheric ozone observed by SMILES from International Space Station. Atmospheric Measurement Techniques, 2013, 6, 2311-2338.	1.2	28
32	Antireflection coated, wedged, single-crystal silicon aircraft window for the far-infrared. IEEE Transactions on Geoscience and Remote Sensing, 1999, 37, 1997-2003.	2.7	27
33	Measurement of positions, intensities and self-broadening line shape parameters of H2O lines in the spectral ranges 1850â€“2280 cmâ^'1 and 2390â€“4000 cmâ^'1. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 203, 119-132.	1.1	26
34	The rotation-vibration spectrum of gaseous carbodiimide (HNCNH). Chemical Physics Letters, 1986, 123, 386-389.	1.2	25
35	Temperature-dependence laws of absorption line shape parameters ofÂtheÂCO2â€‰Î½3Âband. Journal of Quantitative Spectroscopy and Radiative Transfer, 2018, 206, 296-305.	1.1	25
36	Spectroscopic parameters for ozone and its isotopes: recent measurements, outstanding issues, and prospects for improvements to HITRAN. Journal of Quantitative Spectroscopy and Radiative Transfer, 2003, 82, 207-218.	1.1	24

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37	Pressure broadening, -shift, speed dependence and line mixing in the Î½ 3 rovibrational band of N 2 O. Journal of Quantitative Spectroscopy and Radiative Transfer, 2015, 151, 300-309.	1.1	24
38	Measurement of air-broadening line shape parameters and temperature dependence parameters of H2O lines in the spectral ranges 1850â€“2280 cmâ¯1 and 2390â€“4000 cmâ¯1. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 203, 103-118.	1.1	21
39	Experimental Linestrengths of Far-Infrared Pure Rotational Transitions of Ozone. Journal of Molecular Spectroscopy, 1994, 163, 245-261.	0.4	20
40	Superconducting hot-electron bolometer mixer for terahertz heterodyne receivers. IEEE Transactions on Applied Superconductivity, 2003, 13, 168-171.	1.1	20
41	HCl and ClO in activated Arctic air; first retrieved vertical profiles from TELIS submillimetre limb spectra. Atmospheric Measurement Techniques, 2012, 5, 487-500.	1.2	19
42	High accuracy CO2 Fourier transform measurements in the range 6000â€“7000 cmâ¯1. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 272, 107791.	1.1	18
43	The High Resolution Fourier-Transform Far Infrared Spectrum of Cyanamide, H2NCN. Journal of Molecular Spectroscopy, 1993, 159, 69-78.	0.4	17
44	Linestrengths in the Î½3â¯Î½2 Hot Band of Ozone. Journal of Molecular Spectroscopy, 1994, 163, 262-275.	0.4	16
45	High-Resolution FTIR Spectrum of HSSH in the SH-Stretching Region: The Î½5 Band. Journal of Molecular Spectroscopy, 1994, 164, 390-394.	0.4	16
46	Voigt profile introduces optical depth dependent systematic errors â€“ Detected in high resolution laboratory spectra of water. Journal of Quantitative Spectroscopy and Radiative Transfer, 2016, 170, 159-168.	1.1	15
47	Level 1b error budget for MIPAS on ENVISAT. Atmospheric Measurement Techniques, 2018, 11, 5657-5672.	1.2	15
48	Ozone intensities in the rotational bands. Journal of Quantitative Spectroscopy and Radiative Transfer, 2019, 226, 60-65.	1.1	15
49	New infrared spectroscopic database for bromine nitrate. Journal of Molecular Spectroscopy, 2016, 326, 95-105.	0.4	14
50	Partitioning and budget of inorganic and organic chlorine species observed by MIPAS-B and TELIS in the Arctic in March 2011. Atmospheric Chemistry and Physics, 2015, 15, 8065-8076.	1.9	13
51	Improvement of the spectroscopic parameters of the air- and self-broadened N<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si3.svg"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>O and CO lines for the HITRAN2020 database applications. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 271, 107735.	1.1	13
52	The update of the line positions and intensities in the line list of carbon dioxide for the HITRAN2020 spectroscopic database. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 276, 107896.	1.1	11
53	Airborne far-infrared heterodyne remote sensing of stratospheric OH: A feasibility study. Journal of Infrared, Millimeter and Terahertz Waves, 1992, 13, 1241-1268.	0.6	10
54	3ÂÂµm Water vapor self- and foreign-continuum: New method for determination and new insights into the self-continuum. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 253, 107134.	1.1	10

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55	Detector quantum efficiency: An important parameter for FT-IR spectroscopy. Mikrochimica Acta, 1988, 95, 243-247.	2.5	7
56	Photon induced far-infrared absorption in pure single crystal silicon. Infrared Physics and Technology, 1999, 40, 447-451.	1.3	7
57	First high-resolution analyses of the Î½8and Î½8+ Î½9spectral regions of35ClONO2: determination of the Î½9band centre. Molecular Physics, 2003, 101, 1527-1533.	0.8	6
58	Impact of using a new ultraviolet ozone absorption cross-section dataset on OMI ozone profile retrievals. Atmospheric Measurement Techniques, 2020, 13, 5845-5854.	1.2	6
59	High-resolution analysis of the 12.6â€Âµm spectral region of the nitryl chloride ClNO2 molecule. Journal of Quantitative Spectroscopy and Radiative Transfer, 2019, 224, 217-221.	1.1	4
60	High resolution ro-vibrational analysis of the Î½2spectral region of chlorine nitrate. Molecular Physics, 2005, 103, 521-526.	0.8	3
61	REPRINT OF: Infrared absorption cross-sections in HITRAN2016 and beyond: Expansion for climate, environment, and atmospheric applications. Journal of Quantitative Spectroscopy and Radiative Transfer, 2019, 238, 106708.	1.1	3
62	Impact of Molecular Spectroscopy on Carbon Monoxide Abundances from TROPOMI. Remote Sensing, 2020, 12, 3486.	1.8	3
63	Performance Assessment of Balloon-Borne Trace Gas Sounding with the Terahertz Channel of TELIS. Remote Sensing, 2018, 10, 315.	1.8	2
64	Line parameters for hot methane <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si3.svg"><mml:msub><mml:mi>Î½</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math> band broadened by H<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si2.svg"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math> from 296 to 1100 K. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 263, 107557.	1.1	1
65	Analysis of the Î½ 8 and Î½ 8 â€+â€Î½ 9 band spectral regions of BrONO 2 and first determination of the Î½ 9 band center at 111.9(7) cm â^'1. Chemical Physics Letters, 2017, 690, 82-85.	1.2	0