

# Manfred Birk

## List of Publications by Year in descending order

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65  
papers

14,659  
citations

185998

28  
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110170

64  
g-index

65  
all docs

65  
docs citations

65  
times ranked

8988  
citing authors

#	ARTICLE	IF	CITATIONS
1	The HITRAN2020 molecular spectroscopic database. Journal of Quantitative Spectroscopy and Radiative Transfer, 2022, 277, 107949.	1.1	770
2	Line parameters for hot methane $\nu_2$ band broadened by H <sub>2</sub> from 296 to 1100 K. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 263, 107557.	1.1	1
3	High accuracy CO <sub>2</sub> Fourier transform measurements in the range 6000–7000 cm <sup>-1</sup> . Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 272, 107791.	1.1	18
4	Improvement of the spectroscopic parameters of the air- and self-broadened N <sub>2</sub> O and CO lines for the HITRAN2020 database applications. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 271, 107735.	1.1	13
5	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
6	Impact of Molecular Spectroscopy on Carbon Monoxide Abundances from TROPOMI. Remote Sensing, 2020, 12, 3486.	1.8	3
7	3.4 μm 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
8	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
9	Ozone intensities in the rotational bands. Journal of Quantitative Spectroscopy and Radiative Transfer, 2019, 226, 60-65.	1.1	15
10	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
11	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
12	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
13	High-resolution analysis of the 12.6 μm spectral region of the nitryl chloride ClNO <sub>2</sub> molecule. Journal of Quantitative Spectroscopy and Radiative Transfer, 2019, 224, 217-221.	1.1	4
14	Temperature-dependence laws of absorption line shape parameters of the CO <sub>2</sub> ν <sub>2</sub> band. Journal of Quantitative Spectroscopy and Radiative Transfer, 2018, 206, 296-305.	1.1	25
15	Level 1b error budget for MIPAS on ENVISAT. Atmospheric Measurement Techniques, 2018, 11, 5657-5672.	1.2	15
16	Performance Assessment of Balloon-Borne Trace Gas Sounding with the Terahertz Channel of TELIS. Remote Sensing, 2018, 10, 315.	1.8	2
17	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
18	Measurement of air-broadening line shape parameters and temperature dependence parameters of H <sub>2</sub> O lines in the spectral ranges 1850–2280 cm <sup>-1</sup> and 2390–4000 cm <sup>-1</sup> . Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 203, 103-118.	1.1	21

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19	Measurement of positions, intensities and self-broadening line shape parameters of H <sub>2</sub> O lines in the spectral ranges 1850–2280 cm <sup>-1</sup> and 2390–4000 cm <sup>-1</sup> . Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 203, 119-132.	1.1	26
20	Analysis of the $\hat{1}/2$ 8 and $\hat{1}/2$ 8 $\hat{+}$ $\hat{1}/2$ 9 band spectral regions of BrONO <sub>2</sub> and first determination of the $\hat{1}/2$ 9 band center at 111.9(7) cm <sup>-1</sup> . Chemical Physics Letters, 2017, 690, 82-85.	1.2	0
21	The HITRAN2016 molecular spectroscopic database. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 203, 3-69.	1.1	2,840
22	New infrared spectroscopic database for bromine nitrate. Journal of Molecular Spectroscopy, 2016, 326, 95-105.	0.4	14
23	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
24	Voigt profile introduces optical depth dependent systematic errors – Detected in high resolution laboratory spectra of water. Journal of Quantitative Spectroscopy and Radiative Transfer, 2016, 170, 159-168.	1.1	15
25	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
26	Pressure broadening, -shift, speed dependence and line mixing in the $\hat{1}/2$ 3 rovibrational band of N <sub>2</sub> O. Journal of Quantitative Spectroscopy and Radiative Transfer, 2015, 151, 300-309.	1.1	24
27	The HITRAN2012 molecular spectroscopic database. Journal of Quantitative Spectroscopy and Radiative Transfer, 2013, 130, 4-50.	1.1	2,810
28	Validation of stratospheric and mesospheric ozone observed by SMILES from International Space Station. Atmospheric Measurement Techniques, 2013, 6, 2311-2338.	1.2	28
29	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
30	Temperature-dependent air broadening of water in the 1250–1750 cm <sup>-1</sup> range. Journal of Quantitative Spectroscopy and Radiative Transfer, 2012, 113, 889-928.	1.1	36
31	First remote sensing measurements of ClOOCl along with ClO and ClONO <sub>2</sub> 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
32	The HITRAN 2008 molecular spectroscopic database. Journal of Quantitative Spectroscopy and Radiative Transfer, 2009, 110, 533-572.	1.1	3,129
33	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
34	The H <sub>2</sub> 16O molecule: Line position and line intensity analyses up to the second triad. Journal of Molecular Spectroscopy, 2008, 251, 339-357.	0.4	62
35	MIPAS: an instrument for atmospheric and climate research. Atmospheric Chemistry and Physics, 2008, 8, 2151-2188.	1.9	596
36	MIPAS Level 1B algorithms overview: operational processing and characterization. Atmospheric Chemistry and Physics, 2007, 7, 1395-1406.	1.9	54

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37	Collisional parameters of lines: effect of temperature. Journal of Quantitative Spectroscopy and Radiative Transfer, 2005, 92, 211-230.	1.1	55
38	The HITRAN 2004 molecular spectroscopic database. Journal of Quantitative Spectroscopy and Radiative Transfer, 2005, 96, 139-204.	1.1	2,601
39	The 2003 edition of the GEISA/IASI spectroscopic database. Journal of Quantitative Spectroscopy and Radiative Transfer, 2005, 95, 429-467.	1.1	146
40	High resolution ro-vibrational analysis of the $\hat{1}\frac{1}{2}$ spectral region of chlorine nitrate. Molecular Physics, 2005, 103, 521-526.	0.8	3
41	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
42	New infrared spectroscopic database for chlorine nitrate. Journal of Quantitative Spectroscopy and Radiative Transfer, 2003, 82, 443-460.	1.1	42
43	Superconducting hot-electron bolometer mixer for terahertz heterodyne receivers. IEEE Transactions on Applied Superconductivity, 2003, 13, 168-171.	1.1	20
44	First high-resolution analyses of the $\hat{1}\frac{1}{2}8$ and $\hat{1}\frac{1}{2}8 + \hat{1}\frac{1}{2}9$ spectral regions of $^{35}\text{Cl}^{16}\text{O}^{16}\text{O}_2$ : determination of the $\hat{1}\frac{1}{2}9$ band centre. Molecular Physics, 2003, 101, 1527-1533.	0.8	6
45	Rotational Spectra of cis-HCOOH, trans-HCOOH, and trans-H $^{13}\text{C}$ OOH. Journal of Molecular Spectroscopy, 2002, 216, 259-265.	0.4	58
46	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
47	Further Investigations of the ClO Rotational Spectrum. Journal of Molecular Spectroscopy, 2001, 207, 4-9.	0.4	40
48	Photon induced far-infrared absorption in pure single crystal silicon. Infrared Physics and Technology, 1999, 40, 447-451.	1.3	7
49	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
50	The Far Infrared Spectrum of HOCl: Line Positions and Intensities. Journal of Molecular Spectroscopy, 1998, 191, 362-367.	0.4	35
51	The Rotational Spectrum and Anharmonic Force Field of Chlorine Dioxide, OClO. Journal of Molecular Spectroscopy, 1997, 186, 177-188.	0.4	41
52	HIGH RESOLUTION WAVENUMBER STANDARDS FOR THE INFRARED. Journal of Molecular Spectroscopy, 1996, 177, 164-179.	0.4	82
53	The Rotational Spectrum and Molecular Structure of Chlorine Chlorate. Journal of Molecular Spectroscopy, 1995, 170, 383-396.	0.4	45
54	Observation of stratospheric OH at 2.5 THz with an airborne heterodyne system. Infrared Physics and Technology, 1995, 36, 883-891.	1.3	32

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55	Experimental Linestrengths of Far-Infrared Pure Rotational Transitions of Ozone. Journal of Molecular Spectroscopy, 1994, 163, 245-261.	0.4	20
56	Linestrengths in the $\hat{1}/23\hat{a}^{\hat{1}}/2$ Hot Band of Ozone. Journal of Molecular Spectroscopy, 1994, 163, 262-275.	0.4	16
57	High-Resolution FTIR Spectrum of HSSH in the SH-Stretching Region: The $\hat{1}/25$ Band. Journal of Molecular Spectroscopy, 1994, 164, 390-394.	0.4	16
58	The High Resolution Fourier-Transform Far Infrared Spectrum of Cyanamide, H <sub>2</sub> NCN. Journal of Molecular Spectroscopy, 1993, 159, 69-78.	0.4	17
59	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
60	The rotational-torsional spectrum of carbodiimide: A probe for the unusual dynamics. Journal of Molecular Spectroscopy, 1989, 136, 402-445.	0.4	85
61	The rotational spectrum and structure of chlorine peroxide. Journal of Chemical Physics, 1989, 91, 6588-6597.	1.2	131
62	Detector quantum efficiency: An important parameter for FT-IR spectroscopy. Mikrochimica Acta, 1988, 95, 243-247.	2.5	7
63	Molecular structure and spectroscopic properties of carbodiimide (HN $\hat{1}$ $\rightarrow$ C $\hat{1}$ $\rightarrow$ NH). Chemical Physics, 1988, 122, 305-315.	0.9	40
64	The rotation-vibration spectrum of gaseous cyanamide (H <sub>2</sub> NCN). Chemical Physics Letters, 1986, 123, 382-385.	1.2	29
65	The rotation-vibration spectrum of gaseous carbodiimide (HNCNH). Chemical Physics Letters, 1986, 123, 386-389.	1.2	25