

James Hannigan

List of Publications by Year in descending order

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70
papers

3,040
citations

186209

28
h-index

182361

51
g-index

95
all docs

95
docs citations

95
times ranked

3500
citing authors

#	ARTICLE	IF	CITATIONS
1	On the Radiative Impact of Biomass-Burning Aerosols in the Arctic: The August 2017 Case Study. Remote Sensing, 2022, 14, 313.	1.8	10
2	The CU Airborne Solar Occultation Flux Instrument: Performance Evaluation during BB-FLUX. ACS Earth and Space Chemistry, 2022, 6, 582-596.	1.2	7
3	Global Atmospheric OCS Trend Analysis From 22 NDACC Stations. Journal of Geophysical Research D: Atmospheres, 2022, 127, .	1.2	12
4	Analyzing ozone variations and uncertainties at high latitudes during sudden stratospheric warming events using MERRA-2. Atmospheric Chemistry and Physics, 2022, 22, 5435-5458.	1.9	11
5	Retrievals of Ozone in the Troposphere and Lower Stratosphere Using FTIR Observations Over Greenland. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-12.	2.7	0
6	The Airborne Infrared Spectrometer: Development, Characterization, and the 2017 August 21 Eclipse Observation. Astronomical Journal, 2022, 164, 39.	1.9	4
7	First retrievals of peroxyacetyl nitrate (PAN) from ground-based FTIR solar spectra recorded at remote sites, comparison with model and satellite data. Elementa, 2021, 9, .	1.1	7
8	Characterization and potential for reducing optical resonances in Fourier transform infrared spectrometers of the Network for the Detection of Atmospheric Composition Change (NDACC). Atmospheric Measurement Techniques, 2021, 14, 1239-1252.	1.2	9
9	COVID-19 Crisis Reduces Free Tropospheric Ozone Across the Northern Hemisphere. Geophysical Research Letters, 2021, 48, e2020GL091987.	1.5	51
10	Ubiquitous atmospheric production of organic acids mediated by cloud droplets. Nature, 2021, 593, 233-237.	13.7	71
11	Validation of methane and carbon monoxide from Sentinel-5 Precursor using TCCON and NDACC-IRWG stations. Atmospheric Measurement Techniques, 2021, 14, 6249-6304.	1.2	57
12	Observed Hemispheric Asymmetry in Stratospheric Transport Trends From 1994 to 2018. Geophysical Research Letters, 2020, 47, e2020GL088567.	1.5	13
13	Spaceborne Measurements of Formic and Acetic Acids: A Global View of the Regional Sources. Geophysical Research Letters, 2020, 47, e2019GL086239.	1.5	21
14	Detection and attribution of wildfire pollution in the Arctic and northern midlatitudes using a network of Fourier-transform infrared spectrometers and GEOS-Chem. Atmospheric Chemistry and Physics, 2020, 20, 12813-12851.	1.9	26
15	TROPOMI Sentinel-5 Precursor formaldehyde validation using an extensive network of ground-based Fourier-transform infrared stations. Atmospheric Measurement Techniques, 2020, 13, 3751-3767.	1.2	66
16	Unprecedented Atmospheric Ammonia Concentrations Detected in the High Arctic From the 2017 Canadian Wildfires. Journal of Geophysical Research D: Atmospheres, 2019, 124, 8178-8202.	1.2	25
17	An intercomparison of total column-averaged nitrous oxide between ground-based FTIR TCCON and NDACC measurements at seven sites and comparisons with the GEOS-Chem model. Atmospheric Measurement Techniques, 2019, 12, 1393-1408.	1.2	17
18	Separation of Methane Emissions From Agricultural and Natural Gas Sources in the Colorado Front Range. Geophysical Research Letters, 2019, 46, 3990-3998.	1.5	34

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19	Tropospheric water vapor profiles obtained with FTIR: comparison with balloon-borne frost point hygrometers and influence on trace gas retrievals. <i>Atmospheric Measurement Techniques</i> , 2019, 12, 873-890.	1.2	8
20	Solar Eclipse Observations from the Ground and Air from 0.31 to 5.5 Microns. <i>Solar Physics</i> , 2019, 294, 1.	1.0	10
21	Atmospheric Implications of Large C ₂ and C ₅ Alkane Emissions From the U.S. Oil and Gas Industry. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 1148-1169.	1.2	12
22	Tropospheric Ozone Assessment Report: Tropospheric ozone from 1877 to 2016, observed levels, trends and uncertainties. <i>Elementa</i> , 2019, 7, .	1.1	103
23	MLS measurements of stratospheric hydrogen cyanide during the 2015–2016 El Niño event. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 691-703.	1.9	10
24	Discovery of New Coronal Lines at 2.843 and 2.853 μ m. <i>Astrophysical Journal Letters</i> , 2018, 856, L29.	3.0	14
25	The Network for the Detection of Atmospheric Composition Change (NDACC): history, status and perspectives. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 4935-4964.	1.9	162
26	NDACC harmonized formaldehyde time series from 21 FTIR stations covering a wide range of column abundances. <i>Atmospheric Measurement Techniques</i> , 2018, 11, 5049-5073.	1.2	37
27	Using an Inverse Model to Reconcile Differences in Simulated and Observed Global Ethane Concentrations and Trends Between 2008 and 2014. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 11,262.	1.2	14
28	Tropospheric Ozone Assessment Report: Present-day distribution and trends of tropospheric ozone relevant to climate and global atmospheric chemistry model evaluation. <i>Elementa</i> , 2018, 6, .	1.1	240
29	Revisiting global fossil fuel and biofuel emissions of ethane. <i>Journal of Geophysical Research D: Atmospheres</i> , 2017, 122, 2493-2512.	1.2	43
30	Comparison of the GOSAT TANSO-FTS TIR CH ₄ volume mixing ratio vertical profiles with those measured by ACE-FTS, ESA MIPAS, IMK-IAA MIPAS, and 16 NDACC stations. <i>Atmospheric Measurement Techniques</i> , 2017, 10, 3697-3718.	1.2	10
31	Validation of the CrIS fast physical NH ₃ retrieval with ground-based FTIR. <i>Atmospheric Measurement Techniques</i> , 2017, 10, 2645-2667.	1.2	52
32	The CU mobile Solar Occultation Flux instrument: structure functions and emission rates of NH ₃ , NO ₂ and C ₂ H ₆ . <i>Atmospheric Measurement Techniques</i> , 2017, 10, 373-392.	1.2	22
33	Validation of MOPITT carbon monoxide using ground-based Fourier transform infrared spectrometer data from NDACC. <i>Atmospheric Measurement Techniques</i> , 2017, 10, 1927-1956.	1.2	44
34	First characterization and validation of FORLI-HNO ₃ vertical profiles retrieved from IASI/Metop. <i>Atmospheric Measurement Techniques</i> , 2016, 9, 4783-4801.	1.2	15
35	Development of a digital mobile solar tracker. <i>Atmospheric Measurement Techniques</i> , 2016, 9, 963-972.	1.2	13
36	Toward a chemical reanalysis in a coupled chemistry–climate model: An evaluation of MOPITT CO assimilation and its impact on tropospheric composition. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 7310-7343.	1.2	37

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37	Reference Upper-Air Observations for Climate: From Concept to Reality. Bulletin of the American Meteorological Society, 2016, 97, 123-135.	1.7	79
38	Towards understanding the variability in biospheric CO ₂ fluxes: using FTIR spectrometry and a chemical transport model to investigate the sources and sinks of carbonyl sulfide and its link to CO ₂ . Atmospheric Chemistry and Physics, 2016, 16, 2123-2138.	1.9	20
39	An evaluation of IASI-NH ₃ with ground-based Fourier transform infrared spectroscopy measurements. Atmospheric Chemistry and Physics, 2016, 16, 10351-10368.	1.9	56
40	Evaluating ethane and methane emissions associated with the development of oil and natural gas extraction in North America. Environmental Research Letters, 2016, 11, 044010.	2.2	82
41	Reversal of global atmospheric ethane and propane trends largely due to US oil and natural gas production. Nature Geoscience, 2016, 9, 490-495.	5.4	149
42	Trends of ozone total columns and vertical distribution from FTIR observations at eight NDACC stations around the globe. Atmospheric Chemistry and Physics, 2015, 15, 2915-2933.	1.9	76
43	Measurements of the Absorption Cross Section of ¹³ CHO ¹³ CHO at Visible Wavelengths and Application to DOAS Retrievals. Journal of Physical Chemistry A, 2015, 119, 4651-4657.	1.1	0
44	Recent Northern Hemisphere stratospheric HCl increase due to atmospheric circulation changes. Nature, 2014, 515, 104-107.	13.7	110
45	First intercalibration of column-averaged methane from the Total Carbon Column Observing Network and the Network for the Detection of Atmospheric Composition Change. Atmospheric Measurement Techniques, 2013, 6, 397-418.	1.2	24
46	Top-down estimation of carbon monoxide emissions from the Mexico Megacity based on FTIR measurements from ground and space. Atmospheric Chemistry and Physics, 2013, 13, 1357-1376.	1.9	31
47	Observed and simulated time evolution of HCl, ClONO ₂ , and HF total column abundances. Atmospheric Chemistry and Physics, 2012, 12, 3527-3556.	1.9	72
48	Intense Arctic Ozone Depletion in the Spring of 2011. Arctic, 2012, 65, .	0.2	0
49	Importance of secondary sources in the atmospheric budgets of formic and acetic acids. Atmospheric Chemistry and Physics, 2011, 11, 1989-2013.	1.9	266
50	The temporal trend of stratospheric carbonyl sulfide. Journal of Atmospheric Chemistry, 2010, 67, 61-70.	1.4	8
51	Multi-decade measurements of the long-term trends of atmospheric species by high-spectral-resolution infrared solar absorption spectroscopy. Journal of Quantitative Spectroscopy and Radiative Transfer, 2010, 111, 376-383.	1.1	4
52	Semiautonomous FTS Observation System for Remote Sensing of Stratospheric and Tropospheric Gases. Journal of Atmospheric and Oceanic Technology, 2009, 26, 1814-1828.	0.5	43
53	Validation of ozone measurements from the Atmospheric Chemistry Experiment (ACE). Atmospheric Chemistry and Physics, 2009, 9, 287-343.	1.9	134
54	Airborne Fourier transform spectrometer observations in support of EOS Aura validation. Journal of Geophysical Research, 2008, 113, .	3.3	9

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55	Validation of MIPAS ClONO ₂ measurements. Atmospheric Chemistry and Physics, 2007, 7, 257-281.	1.9	65
56	Nitric acid measurements at Eureka obtained in winter 2001–2002 using solar and lunar Fourier transform infrared absorption spectroscopy: Comparisons with observations at Thule and Kiruna and with results from three-dimensional models. Journal of Geophysical Research, 2007, 112, .	3.3	12
57	Long-term trends of tropospheric carbon monoxide and hydrogen cyanide from analysis of high resolution infrared solar spectra. Journal of Quantitative Spectroscopy and Radiative Transfer, 2007, 104, 40-51.	1.1	11
58	Observations of upper tropospheric/lower stratospheric water vapor and its isotopes. Journal of Geophysical Research, 2006, 111, .	3.3	16
59	Long-term trend of at northern mid-latitudes: Comparison between ground-based infrared solar and surface sampling measurements. Journal of Quantitative Spectroscopy and Radiative Transfer, 2006, 97, 457-466.	1.1	11
60	Long-term evolution in the tropospheric concentration of chlorofluorocarbon 12 (CCl ₂ F ₂) derived from high-spectral resolution infrared solar absorption spectra: retrieval and comparison with in situ surface measurements. Journal of Quantitative Spectroscopy and Radiative Transfer, 2005, 92, 201-209.	1.1	12
61	Comparisons between ACE-FTS and ground-based measurements of stratospheric HCl and ClONO ₂ loadings at northern latitudes. Geophysical Research Letters, 2005, 32, .	1.5	28
62	Validation of Measurements of Pollution in the Troposphere (MOPITT) CO retrievals with aircraft in situ profiles. Journal of Geophysical Research, 2004, 109, n/a-n/a.	3.3	209
63	Ozone depletion events observed in the high latitude surface layer during the TOPSE aircraft program. Journal of Geophysical Research, 2003, 108, TOP 4-1.	3.3	75
64	Airborne spectroscopic observations of chlorine activation and denitrification of the 1999/2000 winter Arctic stratosphere during SOLVE. Journal of Geophysical Research, 2002, 107, SOL 46-1-SOL 46-6.	3.3	6
65	A reconstructed view of polar stratospheric chemistry. Journal of Geophysical Research, 1999, 104, 8295-8316.	3.3	5
66	Network for the Detection of Stratospheric Change Fourier transform infrared intercomparison at Table Mountain Facility, November 1996. Journal of Geophysical Research, 1999, 104, 30481-30503.	3.3	53
67	Title is missing!. Journal of Atmospheric Chemistry, 1998, 30, 103-118.	1.4	3
68	Ground-based infrared solar spectroscopic measurements of carbon monoxide during 1994 Measurement of Air Pollution From Space flights. Journal of Geophysical Research, 1998, 103, 19317-19325.	3.3	23
69	On the use of HF as a reference for the comparison of stratospheric observations and models. Journal of Geophysical Research, 1997, 102, 12901-12919.	3.3	35
70	Compact friction and wear machine. Review of Scientific Instruments, 1988, 59, 1420-1422.	0.6	0