Michel Grutter

List of Publications by Year
in descending order

74 papers	2,900 citations	172207 29 h-index	197535 49 g-index
109 all docs	109 docs citations	109 times ranked	3315 citing authors

#	Article	IF	Citations
1	Evaluation of nitrogen dioxide chemiluminescence monitors in a polluted urban environment. Atmospheric Chemistry and Physics, 2007, 7, 2691-2704.	1.9	343
2	Tropospheric emissions: Monitoring of pollution (TEMPO). Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 186, 17-39.	1.1	239
3	Distribution, magnitudes, reactivities, ratios and diurnal patterns of volatile organic compounds in the Valley of Mexico during the MCMA 2002 & 2003 field campaigns. Atmospheric Chemistry and Physics, 2007, 7, 329-353.	1.9	167
4	Characterizing the Aging of Biomass Burning Organic Aerosol by Use of Mixing Ratios: A Meta-analysis of Four Regions. Environmental Science & Technology, 2012, 46, 13093-13102.	4.6	109
5	Electronic absorption spectra of linear carbon chains in neon matrices. IV. C2n+1 n=2â€"7. Journal of Chemical Physics, 1996, 104, 4954-4960.	1.2	100
6	Modelling constraints on the emission inventory and on vertical dispersion for CO and SO&lt;sub&gt;2&lt;/sub&gt; in the Mexico City Metropolitan Area using Solar FTIR and zenith sky UV spectroscopy. Atmospheric Chemistry and Physics, 2007, 7, 781-801.	1.9	82
7	Building the COllaborative Carbon Column Observing Network (COCCON): long-term stability and ensemble performance of the EM27/SUN Fourier transform spectrometer. Atmospheric Measurement Techniques, 2019, 12, 1513-1530.	1.2	82
8	Mapping carbon monoxide pollution from space down to city scales with daily global coverage. Atmospheric Measurement Techniques, 2018, 11, 5507-5518.	1.2	75
9	SO&lt;sub&gt;2&lt;/sub&gt; emissions from PopocatÃ©petl volcano: emission rates and plume imaging using optical remote sensing techniques. Atmospheric Chemistry and Physics, 2008, 8, 6655-6663.	1.9	67
10	TROPOMIâ€"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
11	Formaldehyde levels in downtown Mexico City during 2003. Atmospheric Environment, 2005, 39, 1027-1034.	1.9	59
12	Electronic absorption spectra of linear C6, C8 and cyclic C10, C12 in neon matrices. Journal of Chemical Physics, 1999, 111, 7397-7401.	1.2	58
13	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
14	Electronic Absorption Spectra of the Polyacetylene Chains HC2nH, HC2nH-, and HC2n-1N- (n = 6âˆ'12) in Neon Matrixes. Journal of Physical Chemistry A, 1998, 102, 9785-9790.	1.1	56
15	An evaluation of IASI-NH&lt;sub&gt;3&lt;/sub&gt; with ground-based Fourier transform infrared spectroscopy measurements. Atmospheric Chemistry and Physics, 2016, 16, 10351-10368.	1.9	56
16	Validation of the CrIS fast physical NH&lt;sub&gt;3&lt;/sub&gt; retrieval with ground-based FTIR. Atmospheric Measurement Techniques, 2017, 10, 2645-2667.	1.2	52
17	First detection of ammonia (NH&lt;sub&gt;3&lt;/sub&gt;) in the Asian summer monsoon upper troposphere. Atmospheric Chemistry and Physics, 2016, 16, 14357-14369.	1.9	51
18	Infrared bands of mass-selected carbon chains Cn (n = 8âˆ'12) and Cnâˆ' (n = 5âˆ'10, 12) in neon matrices. Chemical Physics, 1997, 216, 401-406.	0.9	49

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19	Electronic absorption spectra of C4â˜’ and C6â˜’ chains in neon matrices. Journal of Chemical Physics, 1997, 107, 22-27.	1.2	45
20	Global distribution and variability of formic acid as observed by MIPASâ€ENVISAT. Journal of Geophysical Research, 2010, 115, .	3.3	41
21	Electronic Absorption Spectra of BC, BC-, BC2, and B in Neon Matrices. Journal of Physical Chemistry A, 1998, 102, 9106-9108.	1.1	38
22	Electronic absorption spectra of C2nHâ˜’, C2nâ˜’1Nâ˜’â€‰(n=4â€"7), and C2nâ˜’1Nâ€‰(n=3â€"7) chains in neon matrices. Journal of Chemical Physics, 1999, 110, 1492-1496.	1.2	38
23	Electronic spectra of long odd-number carbon chains C17â€"C21 and C13â˜’â€"C21â˜’. Chemical Physics Letters, 1999, 304, 35-38.	1.2	37
24	Technical note: Evaluation of standard ultraviolet absorption ozone monitors in a polluted urban environment. Atmospheric Chemistry and Physics, 2006, 6, 3163-3180.	1.9	37
25	Gas composition of PopocatÃ©petl Volcano between 2007 and 2008: FTIR spectroscopic measurements of an explosive event and during quiescent degassing. Earth and Planetary Science Letters, 2011, 301, 502-510.	1.8	37
26	Volcanic SO_2 and SiF_4 visualization using 2-D thermal emission spectroscopy â€" Part 1: Slant-columns and their ratios. Atmospheric Measurement Techniques, 2012, 5, 275-288.	1.2	37
27	NDACC harmonized formaldehyde time series from 21 FTIR stations covering a wide range of column abundances. Atmospheric Measurement Techniques, 2018, 11, 5049-5073.	1.2	37
28	The 3Î£uâ˜’ â†•X3Î£gâ˜’ electronic absorption spectrum of linear C4 in a neon matrix. Chemical Physics Letters, 1996, 249, 191-194.	1.2	35
29	Electronic Absorption Spectra of Carbon Chain Anions (n = 2â˜’5) in Neon Matrices. Journal of Physical Chemistry A, 1997, 101, 5292-5295.	1.1	34
30	Physical and chemical properties of the regional mixed layer of Mexico's Megapolis. Atmospheric Chemistry and Physics, 2009, 9, 5711-5727.	1.9	34
31	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
32	Impact of the COVID-19 Lockdown on Air Quality and Resulting Public Health Benefits in the Mexico City Metropolitan Area. Frontiers in Public Health, 2021, 9, 642630.	1.3	31
33	NO_2 vertical profiles and column densities from MAX-DOAS measurements in Mexico City. Atmospheric Measurement Techniques, 2019, 12, 2545-2565.	1.2	29
34	Electronic absorption spectra of carbon chain anions C2nâ˜’ (n=4â€"7) in neon matrices. Journal of Chemical Physics, 1997, 107, 4468-4472.	1.2	27
35	Variability of the Mixed-Layer Height Over Mexico City. Boundary-Layer Meteorology, 2018, 167, 493-507.	1.2	27
36	Tropospheric water vapour isotopologue data ($H_2^{16}O$,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 6 Earth System Science Data, 2017, 9, 15-29.	3.7	26

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37	Using ground-based solar and lunar infrared spectroscopy to study the diurnal trend of carbon monoxide in the Mexico City boundary layer. Atmospheric Chemistry and Physics, 2009, 9, 8061-8078.	1.9	24
38	Electronic Absorption Spectra of SiC- and SiC in Neon Matrices. Journal of Physical Chemistry A, 1997, 101, 275-277.	1.1	23
39	Evolution of anthropogenic aerosols in the coastal town of Salina Cruz, Mexico: Part I particle dynamics and land–sea interactions. Science of the Total Environment, 2006, 367, 288-301.	3.9	23
40	Monitoring CO emissions of the metropolis Mexico City using TROPOMI CO observations. Atmospheric Chemistry and Physics, 2020, 20, 15761-15774.	1.9	22
41	Electronic spectra of carbon chain anions: $C_{2n}H^-$‰(n=5–12). Journal of Chemical Physics, 1999, 111, 9280-9286.	1.2	21
42	Higher Excited Electronic Transitions of Polyacetylene Cations $HC_2{}_nH^{+}$ n = 2–7 in Neon Matrixes. Journal of Physical Chemistry A, 2007, 111, 11831-11836.	1.1	20
43	Continuous measurements of SiF 4 and SO 2 by thermal emission spectroscopy: Insight from a 6-month survey at the Popocatépetl volcano. Journal of Volcanology and Geothermal Research, 2017, 341, 255-268.	0.8	20
44	Investigating differences in DOAS retrieval codes using MAD-CAT campaign data. Atmospheric Measurement Techniques, 2017, 10, 955-978.	1.2	20
45	$A^2\Sigma^+ \leftarrow X^2\Pi$ Electronic Absorption Spectrum of CCO-in a Neon Matrix. Journal of Physical Chemistry A, 1998, 102, 3459-3461.	1.1	19
46	Variability in the Gas Composition of the Popocatépetl Volcanic Plume. Frontiers in Earth Science, 2019, 7, .	0.8	18
47	New observations of NO_2 in the upper troposphere from TROPOMI. Atmospheric Measurement Techniques, 2021, 14, 2389-2408.	1.2	18
48	Emission spectrum of mass-selected C_4^-:$C^2\Pi_u \rightarrow X^2\Pi_g$ in a neon matrix. Chemical Physics Letters, 1996, 260, 406-408.	1.2	17
49	Implementation of a Markov Chain Monte Carlo method to inorganic aerosol modeling of observations from the MCMA-2003 campaign — Part I: Model description and application to the La Merced site. Atmospheric Chemistry and Physics, 2006, 6, 4867-4888.	1.9	16
50	Detection of pollution transport events southeast of Mexico City using ground-based visible spectroscopy measurements of nitrogen dioxide. Atmospheric Chemistry and Physics, 2009, 9, 4827-4840.	1.9	16
51	Volcanic SO_2 and SiF_4 visualization using 2-D thermal emission spectroscopy – Part 2: Wind propagation and emission rates. Atmospheric Measurement Techniques, 2013, 6, 47-61.	1.2	16
52	Tecnical Note: Analysis of non-regulated vehicular emissions by extractive FTIR spectrometry: tests on a hybrid car in Mexico City. Atmospheric Chemistry and Physics, 2006, 6, 5339-5346.	1.9	14
53	Nitrogen dioxide DOAS measurements from ground and space: comparison of zenith scattered sunlight ground-based measurements and OMI data in Central Mexico. Atmosfera, 2013, 26, 401-414.	0.3	13
54	Characterization of a UV camera system for SO2 measurements from Popocatépetl Volcano. Journal of Volcanology and Geothermal Research, 2019, 370, 82-94.	0.8	12

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55	Global Atmospheric OCS Trend Analysis From 22 NDACC Stations. Journal of Geophysical Research D: Atmospheres, 2022, 127, .	1.2	12
56	Characterization of aerosol particles during a high pollution episode over Mexico City. Scientific Reports, 2021, 11, 22533.	1.6	11
57	An evaluation of the hybrid car technology for the Mexico Mega City. Journal of Power Sources, 2011, 196, 5704-5718.	4.0	10
58	Solar absorption infrared spectroscopic measurements over Mexico City: Methane enhancements. Atmosfera, 2014, 27, 173-183.	0.3	10
59	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. Atmospheric Measurement Techniques, 2017, 10, 3697-3718.	1.2	10
60	Temporal variations of black carbon, carbon monoxide, and carbon dioxide in Mexico City: Mutual correlations and evaluation of emissions inventories. Urban Climate, 2021, 37, 100855.	2.4	10
61	Improved calibration procedures for the EM27/SUN spectrometers of the COllaborative Carbon Column Observing Network (COCCON). Atmospheric Measurement Techniques, 2022, 15, 2433-2463.	1.2	10
62	Evolution of anthropogenic aerosols in the coastal town of Salina Cruz, Mexico: Part II particulate phase chemistry. Science of the Total Environment, 2006, 372, 287-298.	3.9	9
63	Ground-based remote sensing of O_3 by high- and medium-resolution FTIR spectrometers over the Mexico City basin. Atmospheric Measurement Techniques, 2017, 10, 2703-2725.	1.2	9
64	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
65	Fostering a Collaborative Atmospheric Chemistry Research Community in the Latin America and Caribbean Region. Bulletin of the American Meteorological Society, 2016, 97, 1929-1939.	1.7	8
66	Background CO_2 levels and error analysis from ground-based solar absorption IR measurements in central Mexico. Atmospheric Measurement Techniques, 2017, 10, 2425-2434.	1.2	8
67	Diffusion of mass-selected carbon atoms and molecules in argon and neon matrices. Journal of Chemical Physics, 1997, 107, 5356-5360.	1.2	6
68	NO2 fluxes from Tijuana using a mobile mini-DOAS during Cal-Mex 2010. Atmospheric Environment, 2013, 70, 532-539.	1.9	6
69	Spatial distribution and transport patterns of NO 2 in the Tijuana – San Diego area. Atmospheric Pollution Research, 2015, 6, 230-238.	1.8	6
70	The MAX-DOAS network in Mexico City to measure atmospheric pollutants. Atmosfera, 2016, 29, 157.	0.3	6
71	A low-cost long-term model of coastal observatories of global change. Journal of Operational Oceanography, 2019, 12, 34-46.	0.6	4
72	Formaldehyde total column densities over Mexico City: comparison between multi-axis differential optical absorption spectroscopy and solar-absorption Fourier transform infrared measurements. Atmospheric Measurement Techniques, 2021, 14, 595-613.	1.2	4

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73	Physical and chemical properties of the regional mixed layer of Mexico's Megapolis Part II: evaluation of measured and modeled trace gases and particle size distributions. Atmospheric Chemistry and Physics, 2012, 12, 10161-10179.	1.9	2
74	Evaluation of OMI NO2 Vertical Columns Using MAX-DOAS Observations over Mexico City. Remote Sensing, 2021, 13, 761.	1.8	2