Rainer M Volkamer

List of Publications by Citations

187	11,806	59	106
papers	citations	h-index	g-index

250	13,461	6.6	5.94
ext. papers	ext. citations	avg, IF	L-index

#	Paper	IF	Citations
187	Secondary organic aerosol formation from anthropogenic air pollution: Rapid and higher than expected. *Geophysical Research Letters*, **2006**, 33,	4.9	895
186	Mexico City aerosol analysis during MILAGRO using high resolution aerosol mass spectrometry at the urban supersite (T0) Part 1: Fine particle composition and organic source apportionment. *Atmospheric Chemistry and Physics*, **2009**, 9, 6633-6653	6.8	440
185	A missing sink for gas-phase glyoxal in Mexico City: Formation of secondary organic aerosol. *Geophysical Research Letters*, **2007**, 34,	4.9	376
184	Development of a detailed chemical mechanism (MCMv3.1) for the atmospheric oxidation of aromatic hydrocarbons. *Atmospheric Chemistry and Physics*, **2005**, 5, 641-664	6.8	364
183	Recent advances in understanding secondary organic aerosol: Implications for global climate forcing. *Reviews of Geophysics*, **2017**, 55, 509-559	23.1	359
182	Characterization of ambient aerosols in Mexico City during the MCMA-2003 campaign with Aerosol Mass Spectrometry: results from the CENICA Supersite. *Atmospheric Chemistry and Physics*, **2006**, 6, 925-946	6.8	302
181	An overview of the MILAGRO 2006 Campaign: Mexico City emissions and their transport and transformation. *Atmospheric Chemistry and Physics*, **2010**, 10, 8697-8760	6.8	296
180	Secondary Organic Aerosol Formation from Acetylene (C₂H₂): seed effect on SOA yields due to organic photochemistry in the aerosol aqueous phase. *Atmospheric Chemistry and Physics*, **2009**, 9, 1907-1928	6.8	292
179	Glyoxal processing by aerosol multiphase chemistry: towards a kinetic modeling framework of secondary organic aerosol formation in aqueous particles. *Atmospheric Chemistry and Physics*, **2010**, 10, 8219-8244	6.8	279
178	Evaluation of nitrogen dioxide chemiluminescence monitors in a polluted urban environment. *Atmospheric Chemistry and Physics*, **2007**, 7, 2691-2704	6.8	279
177	Simultaneous global observations of glyoxal and formaldehyde from space. *Geophysical Research Letters*, **2006**, 33,	4.9	237
176	Evaluation of recently-proposed secondary organic aerosol models for a case study in Mexico City. *Atmospheric Chemistry and Physics*, **2009**, 9, 5681-5709	6.8	236
175	Temperature dependent absorption cross-sections of O2-O2 collision pairs between 340 and 630 nm and at atmospherically relevant pressure. *Physical Chemistry Chemical Physics*, **2013**, 15, 15371-81	3.6	235
174	Primary and Secondary Glyoxal Formation from Aromatics: Experimental Evidence for the Bicycloalkyl Radical Pathway from Benzene, Toluene, and p-Xylene. *Journal of Physical Chemistry A*, **2001**, 105, 7865-7874	2.8	227
173	Organic aerosol composition and sources in Pasadena, California, during the 2010 CalNex campaign. *Journal of Geophysical Research D: Atmospheres*, **2013**, 118, 9233-9257	4.4	201
172	High-resolution absorption cross-section of glyoxal in the UV vis and IR spectral ranges. *Journal of Photochemistry and Photobiology A: Chemistry*, **2005**, 172, 35-46	4.7	190
171	DOAS measurement of glyoxal as an indicator for fast VOC chemistry in urban air. *Geophysical Research Letters*, **2005**, 32,	4.9	189

170	Atmospheric oxidation in the Mexico City Metropolitan Area (MCMA) during April 2003. *Atmospheric Chemistry and Physics*, **2006**, 6, 2753-2765	6.8	183
169	The 2010 California Research at the Nexus of Air Quality and Climate Change (CalNex) field study. *Journal of Geophysical Research D: Atmospheres*, **2013**, 118, 5830-5866	4.4	178
168	Impacts of HONO sources on the photochemistry in Mexico City during the MCMA-2006/MILAGO Campaign. *Atmospheric Chemistry and Physics*, **2010**, 10, 6551-6567	6.8	172
167	Global impacts of tropospheric halogens (Cl, Br, I) on oxidants and composition in GEOS-Chem. *Atmospheric Chemistry and Physics*, **2016**, 16, 12239-12271	6.8	160
166	Mexico city aerosol analysis during MILAGRO using high resolution aerosol mass spectrometry at the urban supersite (T0) Part 2: Analysis of the biomass burning contribution and the non-fossil carbon fraction. *Atmospheric Chemistry and Physics*, **2010**, 10, 5315-5341	6.8	157
165	The influence of natural and anthropogenic secondary sources on the glyoxal global distribution. *Atmospheric Chemistry and Physics*, **2008**, 8, 4965-4981	6.8	149
164	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	6.8	149
163	OH-initiated oxidation of benzene. *Physical Chemistry Chemical Physics*, **2002**, 4, 1598-1610	3.6	146
162	Characterizing ozone production in the Mexico City Metropolitan Area: a case study using a chemical transport model. *Atmospheric Chemistry and Physics*, **2007**, 7, 1347-1366	6.8	134
161	Intercomparison of the DOAS and LOPAP techniques for the detection of nitrous acid (HONO). *Atmospheric Environment*, **2006**, 40, 3640-3652	5.3	131
160	Simulation of semi-explicit mechanisms of SOA formation from glyoxal in aerosol in a 3-D model. *Atmospheric Chemistry and Physics*, **2014**, 14, 6213-6239	6.8	129
159	Oxidative capacity of the Mexico City atmosphere Part 1: A radical source perspective. *Atmospheric Chemistry and Physics*, **2010**, 10, 6969-6991	6.8	124
158	Intercomparison of four different in-situ techniques for ambient formaldehyde measurements in urban air. *Atmospheric Chemistry and Physics*, **2005**, 5, 2881-2900	6.8	124
157	Estimation of the mass absorption cross section of the organic carbon component of aerosols in the Mexico City Metropolitan Area. *Atmospheric Chemistry and Physics*, **2008**, 8, 6665-6679	6.8	119
156	Separation of emitted and photochemical formaldehyde in Mexico City using a statistical analysis and a new pair of gas-phase tracers. *Atmospheric Chemistry and Physics*, **2006**, 6, 4545-4557	6.8	116
155	Inherent calibration of a blue LED-CE-DOAS instrument to measure iodine oxide, glyoxal, methyl glyoxal, nitrogen dioxide, water vapour and aerosol extinction in open cavity mode. *Atmospheric Measurement Techniques*, **2010**, 3, 1797-1814	4	115
154	Atmospheric Oxidation of Toluene in a Large-Volume Outdoor Photoreactor: In Situ Determination of Ring-Retaining Product Yields. *Journal of Physical Chemistry A*, **1998**, 102, 10289-10299	2.8	115
153	Ship-based detection of glyoxal over the remote tropical Pacific Ocean. *Atmospheric Chemistry and Physics*, **2010**, 10, 11359-11371	6.8	113

152	Multicomponent new particle formation from sulfuric acid, ammonia, and biogenic vapors. *Science Advances*, **2018**, 4, eaau5363	14.3	105
151	Measurements of OH and HO₂ concentrations during the MCMA-2006 field campaign Part 2: Model comparison and radical budget. *Atmospheric Chemistry and Physics*, **2009**, 9, 6655-6675	6.8	94
150	Measurements of OH and HO₂ concentrations during the MCMA-2006 field campaign Part 1: Deployment of the Indiana University laser-induced fluorescence instrument. *Atmospheric Chemistry and Physics*, **2009**, 9, 1665-1685	6.8	92
149	Effective Henry's law partitioning and the salting constant of glyoxal in aerosols containing sulfate. *Environmental Science & Technology*, **2013**, 47, 4236-44	10.3	91
148	Aircraft measurements of BrO, IO, glyoxal, NO₂, H₂O, O₂O₂ and aerosol extinction profiles in the tropics: comparison with aircraft-/ship-based in situ and lidar measurements. *Atmospheric Measurement Techniques*, **2015**, 8, 2121-2148	4	87
147	Characterization of Chromophoric Water-Soluble Organic Matter in Urban, Forest, and Marine Aerosols by HR-ToF-AMS Analysis and Excitation-Emission Matrix Spectroscopy. *Environmental Science & Technology*, **2016**, 50, 10351-10360	10.3	87
146	Modeling the observed tropospheric BrO background: Importance of multiphase chemistry and implications for ozone, OH, and mercury. *Journal of Geophysical Research D: Atmospheres*, **2016**, 121, 11,819	4.4	86
145	Modeling the multiday evolution and aging of secondary organic aerosol during MILAGRO 2006. *Environmental Science & Technology*, **2011**, 45, 3496-503	10.3	85
144	Iodine's impact on tropospheric oxidants: a´global model study in GEOS-Chem. *Atmospheric Chemistry and Physics*, **2016**, 16, 1161-1186	6.8	79
143	Detection of iodine monoxide in the tropical free troposphere. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 2035-40	11.5	79
142	Overview of the 2010 Carbonaceous Aerosols and Radiative Effects Study (CARES). *Atmospheric Chemistry and Physics*, **2012**, 12, 7647-7687	6.8	79
141	Active and widespread halogen chemistry in the tropical and subtropical free troposphere. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 9281-6	11.5	78
140	Modelling constraints on the emission inventory and on vertical dispersion for CO and SO₂ in the Mexico City Metropolitan Area using Solar FTIR and zenith sky UV spectroscopy. *Atmospheric Chemistry and Physics*, **2007**, 7, 781-801	6.8	77
139	Rayleigh scattering cross-section measurements of nitrogen, argon, oxygen and air. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2014**, 147, 171-177	2.1	76
138	Measurements of HNO₃ and N₂O₅ using ion drift-chemical ionization mass spectrometry during the MILAGRO/MCMA-2006 campaign. *Atmospheric Chemistry and Physics*, **2008**, 8, 6823-6838	6.8	73
137	Rapid growth of new atmospheric particles by nitric acid and ammonia condensation. *Nature*, **2020**, 581, 184-189	50.4	72
136	The CU Airborne MAX-DOAS instrument: vertical profiling of aerosol extinction and trace gases. *Atmospheric Measurement Techniques*, **2013**, 6, 719-739	4	72
135	Correction of the oxygen interference with UV spectroscopic (DOAS) measurements of monocyclic aromatic hydrocarbons in the atmosphere. *Atmospheric Environment*, **1998**, 32, 3731-3747	5.3	72

134	Measurements of Volatile Organic Compounds Using Proton Transfer Reaction Mass Spectrometry during the MILAGRO 2006 Campaign. *Atmospheric Chemistry and Physics*, **2009**, 9, 467-481	6.8	71
133	MAX-DOAS detection of glyoxal during ICARTT 2004. *Atmospheric Chemistry and Physics*, **2007**, 7, 1293-1303	6.8	68
132	Secondary organic aerosol formation from semi- and intermediate-volatility organic compounds and glyoxal: Relevance of O/C as a tracer for aqueous multiphase chemistry. *Geophysical Research Letters*, **2013**, 40, 978-982	4.9	63
131	Ozone response to emission changes: a modeling study during the MCMA-2006/MILAGRO Campaign. *Atmospheric Chemistry and Physics*, **2010**, 10, 3827-3846	6.8	63
130	OH-initiated oxidation of benzene. *Physical Chemistry Chemical Physics*, **2002**, 4, 4399-4411	3.6	63
129	Update of the HITRAN collision-induced absorption section. *Icarus*, **2019**, 328, 160-175	3.8	62
128	Impact of primary formaldehyde on air pollution in the Mexico City Metropolitan Area. *Atmospheric Chemistry and Physics*, **2009**, 9, 2607-2618	6.8	58
127	Measurements of hydroxyl and hydroperoxy radicals during CalNex-LA: Model comparisons and radical budgets. *Journal of Geophysical Research D: Atmospheres*, **2016**, 121, 4211-4232	4.4	58
126	Glyoxal and Methylglyoxal Setschenow Salting Constants in Sulfate, Nitrate, and Chloride Solutions: Measurements and Gibbs Energies. *Environmental Science & Technology*, **2015**, 49, 11500-8	10.3	55
125	Oxidative capacity of the Mexico City atmosphere Part 2: A RO_x radical cycling perspective. *Atmospheric Chemistry and Physics*, **2010**, 10, 6993-7008	6.8	53
124	Characterizing ozone production and response under different meteorological conditions in Mexico City. *Atmospheric Chemistry and Physics*, **2008**, 8, 7571-7581	6.8	51
123	Formation of gas-phase carbonyls from heterogeneous oxidation of polyunsaturated fatty acids at the air water interface and of the sea surface microlayer. *Atmospheric Chemistry and Physics*, **2014**, 14, 1371-1384	6.8	50
122	The CU ground MAX-DOAS instrument: characterization of RMS noise limitations and first measurements near Pensacola, FL of BrO, IO, and CHOCHO. *Atmospheric Measurement Techniques*, **2011**, 4, 2421-2439	4	49
121	Potential of Aerosol Liquid Water to Facilitate Organic Aerosol Formation: Assessing Knowledge Gaps about Precursors and Partitioning. *Environmental Science & Technology*, **2017**, 51, 3327-3335	10.3	45
120	Modeling the weekly cycle of NOx and CO emissions and their impacts on O3 in the Los Angeles-South Coast Air Basin during the CalNex 2010 field campaign. *Journal of Geophysical Research D: Atmospheres*, **2016**, 121, 1340-1360	4.4	43
119	Injection of iodine to the stratosphere. *Geophysical Research Letters*, **2015**, 42, 6852-6859	4.9	41
118	The Convective Transport of Active Species in the Tropics (CONTRAST) Experiment. *Bulletin of the American Meteorological Society*, **2017**, 98, 106-128	6.1	40
117	Instrument intercomparison of glyoxal, methyl glyoxal and NO₂ under simulated atmospheric conditions. *Atmospheric Measurement Techniques*, **2015**, 8, 1835-1862	4	40

116	Measurements of diurnal variations and eddy covariance (EC) fluxes of glyoxal in the tropical marine boundary layer: description of the Fast LED-CE-DOAS instrument. *Atmospheric Measurement Techniques*, **2014**, 7, 3579-3595	4	40
115	Dealkylation of alkylbenzenes: a significant pathway in the toluene, o-, m-, p-xylene + OH reaction. *Journal of Physical Chemistry A*, **2009**, 113, 9658-66	2.8	40
114	Observational constraints on glyoxal production from isoprene oxidation and its contribution to organic aerosol over the Southeast United States. *Journal of Geophysical Research D: Atmospheres*, **2016**, 121, 9849-9861	4.4	38
113	First detection of ammonia (NH₃) in the Asian summer monsoon upper troposphere. *Atmospheric Chemistry and Physics*, **2016**, 16, 14357-14369	6.8	37
112	Quantitative detection of iodine in the stratosphere. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 1860-1866	11.5	35
111	Aqueous phase oxidation of sulphur dioxide by ozone in cloud droplets. *Atmospheric Chemistry and Physics*, **2016**, 16, 1693-1712	6.8	35
110	Oxidative capacity of the Mexico City atmosphere – Part 1: A radical source perspective		35
109	UV photochemistry of carboxylic acids at the air-sea boundary: A relevant source of glyoxal and other oxygenated VOC in the marine atmosphere. *Geophysical Research Letters*, **2017**, 44, 1079-1087	4.9	34
108	Technical note: Evaluation of standard ultraviolet absorption ozone monitors in a polluted urban environment. *Atmospheric Chemistry and Physics*, **2006**, 6, 3163-3180	6.8	34
107	The CU 2-D-MAX-DOAS instrument – Part 1: Retrieval of 3-D distributions of NO₂ and azimuth-dependent OVOC ratios. *Atmospheric Measurement Techniques*, **2015**, 8, 2371-2395	4	32
106	Detailed comparisons of airborne formaldehyde measurements with box models during the 2006 INTEX-B and MILAGRO campaigns: potential evidence for significant impacts of unmeasured and multi-generation volatile organic carbon compounds. *Atmospheric Chemistry and Physics*, **2011**, 11, 11867-11894	6.8	32
105	Molecular understanding of new-particle formation from <i></i>-pinene between −50 and +25 °C. *Atmospheric Chemistry and Physics*, **2020**, 20, 9183-9207	6.8	32
104	Heterogeneous photochemistry of imidazole-2-carboxaldehyde: HO₂ radical formation and aerosol growth. *Atmospheric Chemistry and Physics*, **2016**, 16, 11823-11836	6.8	31
103	Role of iodine oxoacids in atmospheric aerosol nucleation. *Science*, **2021**, 371, 589-595	33.3	31
102	Intercomparison of NO₂, O₄, O₃ and HCHO slant column measurements by MAX-DOAS and zenith-sky UV–visible spectrometers during CINDI-2. *Atmospheric Measurement Techniques*, **2020**, 13, 2169-2208	4	30
101	Stratospheric Injection of Brominated Very Short-Lived Substances: Aircraft Observations in the Western Pacific and Representation in Global Models. *Journal of Geophysical Research D: Atmospheres*, **2018**, 123, 5690-5719	4.4	30
100	Computational study of the effect of glyoxal-sulfate clustering on the Henry's law coefficient of glyoxal. *Journal of Physical Chemistry A*, **2015**, 119, 4509-14	2.8	29
99	Implementation of a Markov Chain Monte Carlo method to inorganic aerosol modeling of observations from the MCMA-2003 campaign – Part II: Model application to the CENICA, Pedregal and Santa Ana sites. *Atmospheric Chemistry and Physics*, **2006**, 6, 4889-4904	6.8	29

98	Fast gas chromatography with luminol chemiluminescence detection for the simultaneous determination of nitrogen dioxide and peroxyacetyl nitrate in the atmosphere. *Review of Scientific Instruments*, **2004**, 75, 4595-4605	1.7	29
97	Mercury oxidation from bromine chemistry in the free troposphere over the southeastern´US. *Atmospheric Chemistry and Physics*, **2016**, 16, 3743-3760	6.8	28
96	Photo-oxidation of Aromatic Hydrocarbons Produces Low-Volatility Organic Compounds. *Environmental Science & Technology*, **2020**, 54, 7911-7921	10.3	26
95	MAX-DOAS measurements of HONO slant column densities during the MAD-CAT campaign: inter-comparison, sensitivity studies on spectral analysis settings, and error budget. *Atmospheric Measurement Techniques*, **2017**, 10, 3719-3742	4	25
94	Weakening of the weekend ozone effect over California's South Coast Air Basin. *Geophysical Research Letters*, **2015**, 42, 9457-9464	4.9	25
93	Parameterizing radiative transfer to convert MAX-DOAS dSCDs into near-surface box-averaged mixing ratios. *Atmospheric Measurement Techniques*, **2013**, 6, 1521-1532	4	25
92	Airborne MAX-DOAS measurements over California: Testing the NASA OMI tropospheric NO2 product. *Journal of Geophysical Research D: Atmospheres*, **2013**, 118, 7400-7413	4.4	25
91	Global nitrous acid emissions and levels of regional oxidants enhanced by wildfires. *Nature Geoscience*, **2020**, 13, 681-686	18.3	25
90	Chemistry of Volatile Organic Compounds in the Los Angeles Basin: Formation of Oxygenated Compounds and Determination of Emission Ratios. *Journal of Geophysical Research D: Atmospheres*, **2018**, 123, 2298-2319	4.4	24
89	Effect of sea salt aerosol on tropospheric bromine chemistry. *Atmospheric Chemistry and Physics*, **2019**, 19, 6497-6507	6.8	22
88	Importance of reactive halogens in the tropical marine atmosphere: a´regional modelling study using WRF-Chem. *Atmospheric Chemistry and Physics*, **2019**, 19, 3161-3189	6.8	22
87	The Two-Column Aerosol Project: Phase I–Overview and impact of elevated aerosol layers on aerosol optical depth. *Journal of Geophysical Research D: Atmospheres*, **2016**, 121, 336-361	4.4	22
86	BrO and inferred Br_{<i>y</i>} profiles over the western Pacific: relevance of inorganic bromine sources and a Br_{<i>y</i>} minimum in the aged tropical tropopause layer. *Atmospheric Chemistry and Physics*, **2017**, 17, 15245-15270	6.8	22
85	Ground-based direct-sun DOAS and airborne MAX-DOAS measurements of the collision-induced oxygen complex, O₂O₂, absorption with significant pressure and temperature differences. *Atmospheric Measurement Techniques*, **2015**, 8, 793-809	4	22
84	Enhanced growth rate of atmospheric particles from sulfuric acid. *Atmospheric Chemistry and Physics*, **2020**, 20, 7359-7372	6.8	21
83	Formaldehyde in the Tropical Western Pacific: Chemical sources and sinks, convective transport, and representation in CAM-Chem and the CCMI models. *Journal of Geophysical Research D: Atmospheres*, **2017**, 122, 11201-11226	4.4	21
82	Elevated aerosol layers modify the O2O2 absorption measured by ground-based MAX-DOAS. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2016**, 176, 34-49	2.1	20
81	MAX-DOAS observations from ground, ship, and research aircraft: maximizing signal-to-noise to measure 'weak' absorbers **2009**,		18

80	Oxidative capacity of the Mexico City atmosphere – Part 2: A RO_x radical cycling perspective		18
79	Separation of Methane Emissions From Agricultural and Natural Gas Sources in the Colorado Front Range. *Geophysical Research Letters*, **2019**, 46, 3990-3998	4.9	17
78	The CU mobile Solar Occultation Flux instrument: structure functions and emission rates of NH₃, NO₂ and C₂H₆. *Atmospheric Measurement Techniques*, **2017**, 10, 373-392	4	17
77	Investigating differences in DOAS retrieval codes using MAD-CAT campaign data. *Atmospheric Measurement Techniques*, **2017**, 10, 955-978	4	17
76	Molecular understanding of the suppression of new-particle formation by isoprene. *Atmospheric Chemistry and Physics*, **2020**, 20, 11809-11821	6.8	16
75	Molecular Composition and Volatility of Nucleated Particles from α-Pinene Oxidation between -50 °C and +25 °C. *Environmental Science & Technology*, **2019**, 53, 12357-12365	10.3	14
74	Contribution of dissolved organic matter to submicron water-soluble organic aerosols in the marine boundary layer over the eastern equatorial Pacific. *Atmospheric Chemistry and Physics*, **2016**, 16, 7695-7707	6.8	14
73	Can COSMOTherm Predict a Salting in Effect?. *Journal of Physical Chemistry A*, **2017**, 121, 6288-6295	2.8	14
72	Parameterization retrieval of trace gas volume mixing ratios from Airborne MAX-DOAS. *Atmospheric Measurement Techniques*, **2016**, 9, 5655-5675	4	14
71	Secondary organic aerosol formation from acetylene (C₂H₂): seed effect on SOA yields due to organic photochemistry in the aerosol aqueous phase		11
70	Model representations of aerosol layers transported from North America over the Atlantic Ocean during the Two-Column Aerosol Project. *Journal of Geophysical Research D: Atmospheres*, **2016**, 121, 9814-9848	4.4	11
69	Overview of the 2010 Carbonaceous Aerosols and Radiative Effects Study (CARES)		10
68	Development of a digital mobile solar tracker. *Atmospheric Measurement Techniques*, **2016**, 9, 963-972	4	10
67	Glyoxal processing outside clouds: towards a kinetic modeling framework of secondary organic aerosol formation in aqueous particles		9
66	Erratum to “Rayleigh scattering cross-section measurements of nitrogen, argon, oxygen and air” J Quant Spectrosc Radiat Transf 147 (2014) 171–177. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2017**, 189, 281-282	2.1	8
65	Determination of the collision rate coefficient between charged iodic acid clusters and iodic acid using the appearance time method. *Aerosol Science and Technology*, **2021**, 55, 231-242	3.4	8
64	The driving factors of new particle formation and growth in the polluted boundary layer. *Atmospheric Chemistry and Physics*, **2021**, 21, 14275-14291	6.8	8
63	Remote Sensing of Glyoxal by Differential Optical Absorption Spectroscopy (DOAS): Advancements in Simulation Chamber and Field Experiments **2006**, 129-141		8

62	The influence of natural and anthropogenic secondary sources on the glyoxal global distribution		7
61	Inter-comparison of MAX-DOAS measurements of tropospheric HONO slant column densities and vertical profiles during the CINDI-2 campaign. *Atmospheric Measurement Techniques*, **2020**, 13, 5087-5116	4	7
60	The CU 2-D-MAX-DOAS instrument Part 2: Raman scattering probability measurements and retrieval of aerosol optical properties. *Atmospheric Measurement Techniques*, **2016**, 9, 3893-3910	4	7
59	Global tropospheric halogen (Cl, Br, I) chemistry and its impact on oxidants. *Atmospheric Chemistry and Physics*, **2021**, 21, 13973-13996	6.8	7
58	An assessment of the radiative effects of ice supersaturation based on in situ observations. *Geophysical Research Letters*, **2016**, 43, 11,039-11,047	4.9	6
57	Impacts of HONO sources on the photochemistry in Mexico City during the MCMA-2006/MILAGO Campaign		6
56	Characterizing ozone production and response under different meteorological conditions in Mexico City		6
55	Instrument inter-comparison of glyoxal, methyl glyoxal and NO₂ under simulated atmospheric conditions		6
54	Halogen activation and radical cycling initiated by imidazole-2-carboxaldehyde photochemistry. *Atmospheric Chemistry and Physics*, **2019**, 19, 10817-10828	6.8	5
53	Direct sun and airborne MAX-DOAS measurements of the collision induced oxygen complex, O₂O₂ absorption with significant pressure and temperature differences **2014**,		5
52	Measurements of OH and HO₂ concentrations during the MCMA-2006 field campaign Part 1: Deployment of the Indiana University laser-induced fluorescence instrument		5
51	Mexico City aerosol analysis during MILAGRO using high resolution aerosol mass spectrometry at the urban supersite (T0) Part 2: Analysis of the biomass burning contribution and the modern carbon fraction		5
50	Intercomparison of NO₂, O₄, O₃ and HCHO slant column measurements by MAX-DOAS and zenith-sky UV-Visible spectrometers during the CINDI-2 campaign		5
49	Simulation of semi-explicit mechanisms of SOA formation from glyoxal in a 3-D model		5
48	Synergistic HNO-HSO-NH upper tropospheric particle formation.. *Nature*, **2022**, 605, 483-489	50.4	5
47	Mexico City aerosol analysis during MILAGRO using high resolution aerosol mass spectrometry at the urban supersite (T0) Part 1: Fine particle composition and organic source apportionment		4
46	Ozone response to emission changes: a modeling study during the MCMA-2006/MILAGRO campaign		4
45	Validation of IASI Satellite Ammonia Observations at the Pixel Scale Using In Situ Vertical Profiles. *Journal of Geophysical Research D: Atmospheres*, **2021**, 126, e2020JD033475	4.4	4

44	Heterogeneous photochemistry of imidazole-2-carboxaldehyde: HO₂ radical formation and aerosol growth **2016**,		4
43	Importance of reactive halogens in the tropical marine atmosphere: A regional modelling study using WRF-Chem **2017**,		3
42	Measurements of diurnal variations and Eddy Covariance (EC) fluxes of glyoxal in the tropical marine boundary layer: description of the Fast LED-CE-DOAS instrument **2014**,		3
41	Inherent calibration of a novel LED-CE-DOAS instrument to measure iodine oxide, glyoxal, methyl glyoxal, nitrogen dioxide, water vapour and aerosol extinction in open cavity mode **2010**,		3
40	The CU Airborne MAX-DOAS instrument: ground based validation, and vertical profiling of aerosol extinction and trace gases **2012**,		3
39	The CU Airborne Solar Occultation Flux Instrument: Performance Evaluation during BB-FLUX. *ACS Earth and Space Chemistry*,	3.2	3
38	Quantifying Carbon Monoxide Emissions on the Scale of Large Wildfires. *Geophysical Research Letters*, **2022**, 49,	4.9	3
37	Characterisation of African biomass burning plumes and impacts on the atmospheric composition over the south-west Indian Ocean. *Atmospheric Chemistry and Physics*, **2020**, 20, 14821-14845	6.8	3
36	Ship-based detection of glyoxal over the remote tropical Pacific Ocean		3
35	Estimation of the mass absorption cross section of the organic carbon component of aerosols in the Mexico City Metropolitan Area (MCMA)		3
34	Global impacts of tropospheric halogens (Cl, Br, I) on oxidants and composition in GEOS-Chem **2016** ,		3
33	The driving factors of new particle formation and growth in the polluted boundary layer		3
32	Biomass burning nitrogen dioxide emissions derived from space with TROPOMI: methodology and validation. *Atmospheric Measurement Techniques*, **2021**, 14, 7929-7957	4	3
31	Aircraft measurements of bromine monoxide, iodine monoxide, and glyoxal profiles in the tropics: comparison with ship-based and in situ measurements **2015**,		2
30	Implications of the In-Situ Measured Mass Absorption Cross Section of Organic Aerosols in Mexico City on the Atmospheric Energy Balance, Satellite Retrievals, and Photochemistry **2009**,		2
29	Development and characterization of the CU ground MAX-DOAS instrument: lowering RMS noise and first measurements of BrO, IO, and CHOCHO near Pensacola, FL **2011**,		2
28	Light emitting diode cavity enhanced differential optical absorption spectroscopy (LED-CE-DOAS): a novel technique for monitoring atmospheric trace gases **2009**,		2
27	Modelling the gas-particle partitioning and water uptake of isoprene-derived secondary organic aerosol at high and low relative humidity. *Atmospheric Chemistry and Physics*, **2022**, 22, 215-244	6.8	2

26	Field observational constraints on the controllers in glyoxal (CHOCHO) reactive uptake to aerosol. *Atmospheric Chemistry and Physics*, **2022**, 22, 805-821	6.8	2
25	Iodine's impact on tropospheric oxidants: a global model study in GEOS-Chem		2
24	The CU 2-dimensional MAX-DOAS instrument Part 1: Retrieval of NO₂ in 3 dimensions and azimuth dependent OVOC ratios		2
23	Development of a digital mobile solar tracker		2
22	Impact of primary formaldehyde on air pollution in the Mexico City Metropolitan Area		2
21	Global tropospheric halogen (Cl, Br, I) chemistry and its impact on oxidants		2
20	Measurement of iodine species and sulfuric acid using bromide chemical ionization mass spectrometers. *Atmospheric Measurement Techniques*, **2021**, 14, 4187-4202	4	2
19	Molecular characterization of ultrafine particles using extractive electrospray time-of-flight mass spectrometry. *Environmental Science Atmospheres*, **2021**, 1, 434-448		2
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