Gonzalo Gonzalez Abad

List of Publications by Year
in descending order

#	Article	IF	Citations
1	Importance of secondary sources in the atmospheric budgets of formic and acetic acids. Atmospheric Chemistry and Physics, 2011, 11, 1989-2013.	4.9	266
2	The Ozone Monitoring Instrument: overview of 14 years in space. Atmospheric Chemistry and Physics, 2018, 18, 5699-5745.	4.9	259
3	Tropospheric emissions: Monitoring of pollution (TEMPO). Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 186, 17-39.	2.3	239
4	Evaluating a Spaceâ€Based Indicator of Surface Ozoneâ€NO_{<i>x</i>}â€VOC Sensitivity Over Midlatitude Source Regions and Application to Decadal Trends. Journal of Geophysical Research D: Atmospheres, 2017, 122, 10-461.	3.3	165
5	New Era of Air Quality Monitoring from Space: Geostationary Environment Monitoring Spectrometer (GEMS). Bulletin of the American Meteorological Society, 2020, 101, E1-E22.	3.3	165
6	Updated Smithsonian Astrophysical Observatory Ozone Monitoring Instrument (SAO OMI) formaldehyde retrieval. Atmospheric Measurement Techniques, 2015, 8, 19-32.	3.1	142
7	Formaldehyde (HCHO) As a Hazardous Air Pollutant: Mapping Surface Air Concentrations from Satellite and Inferring Cancer Risks in the United States. Environmental Science & Technology, 2017, 51, 5650-5657.	10.0	131
8	Observing atmospheric formaldehyde (HCHO) from space: validation and intercomparison of six retrievals from four satellites (OMI, GOME2A, GOME2B, OMPS) with SEAC⁴RS aircraft observations over the southeast US. Atmospheric Chemistry and Physics, 2016, 16, 13477-13490.	4.9	99
9	Anthropogenic emissions of highly reactive volatile organic compounds in eastern Texas inferred from oversampling of satellite (OMI) measurements of HCHO columns. Environmental Research Letters, 2014, 9, 114004.	5.2	95
10	Evaluating Sentinel-5P TROPOMI tropospheric NO₂ column densities with airborne and Pandora spectrometers near New York City and Long Island Sound. Atmospheric Measurement Techniques, 2020, 13, 6113-6140.	3.1	85
11	Glyoxal yield from isoprene oxidation and relation to formaldehyde: chemical mechanism, constraints from SENEX aircraft observations, and interpretation of OMI satellite data. Atmospheric Chemistry and Physics, 2017, 17, 8725-8738.	4.9	72
12	Longâ€term (2005â€“2014) trends in formaldehyde (HCHO) columns across North America as seen by the OMI satellite instrument: Evidence of changing emissions of volatile organic compounds. Geophysical Research Letters, 2017, 44, 7079-7086.	4.0	68
13	Glyoxal retrieval from the Ozone Monitoring Instrument. Atmospheric Measurement Techniques, 2014, 7, 3891-3907.	3.1	67
14	The 2005â€“2016 Trends of Formaldehyde Columns Over China Observed by Satellites: Increasing Anthropogenic Emissions of Volatile Organic Compounds and Decreasing Agricultural Fire Emissions. Geophysical Research Letters, 2019, 46, 4468-4475.	4.0	66
15	Revisiting the effectiveness of HCHO/NO2 ratios for inferring ozone sensitivity to its precursors using high resolution airborne remote sensing observations in a high ozone episode during the KORUS-AQ campaign. Atmospheric Environment, 2020, 224, 117341.	4.1	65
16	A physics-based approach to oversample multi-satellite, multispecies observations to a common grid. Atmospheric Measurement Techniques, 2018, 11, 6679-6701.	3.1	64
17	High-resolution inversion of OMI formaldehyde columns to quantify isoprene emission on ecosystem-relevant scales: application to the southeast US. Atmospheric Chemistry and Physics, 2018, 18, 5483-5497.	4.9	64
18	Mapping hydroxyl variability throughout the global remote troposphere via synthesis of airborne and satellite formaldehyde observations. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 11171-11180.	7.1	58

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19	DETECTING INDUSTRIAL POLLUTION IN THE ATMOSPHERES OF EARTH-LIKE EXOPLANETS. Astrophysical Journal Letters, 2014, 792, L7.	8.3	53
20	Nitrogen dioxide observations from the Geostationary Trace gas and Aerosol Sensor Optimization (GeoTASO) airborne instrument: Retrieval algorithm and measurements during DISCOVER-AQ Texas 2013. Atmospheric Measurement Techniques, 2016, 9, 2647-2668.	3.1	50
21	Chinese Regulations Are Workingâ€"Why Is Surface Ozone Over Industrialized Areas Still High? Applying Lessons From Northeast US Air Quality Evolution. Geophysical Research Letters, 2021, 48, e2021GL092816.	4.0	50
22	Smithsonian Astrophysical Observatory Ozone Mapping and Profiler Suite (SAO OMPS) formaldehyde retrieval. Atmospheric Measurement Techniques, 2016, 9, 2797-2812.	3.1	48
23	Hotspot of glyoxal over the Pearl River delta seen from the OMI satellite instrument: implications for emissions of aromatic hydrocarbons. Atmospheric Chemistry and Physics, 2016, 16, 4631-4639.	4.9	47
24	Adjoint inversion of Chinese non-methane volatile organic compound emissions using space-based observations of formaldehyde and glyoxal. Atmospheric Chemistry and Physics, 2018, 18, 15017-15046.	4.9	46
25	Inter-comparison of integrated water vapor from satellite instruments using reference GPS data at the Iberian Peninsula. Remote Sensing of Environment, 2018, 204, 729-740.	11.0	45
26	Global distribution of upper tropospheric formic acid from the ACE-FTS. Atmospheric Chemistry and Physics, 2009, 9, 8039-8047.	4.9	43
27	Water vapor retrieval from OMI visible spectra. Atmospheric Measurement Techniques, 2014, 7, 1901-1913.	3.1	40
28	ACE-FTS measurements of trace species in the characterization of biomass burning plumes. Atmospheric Chemistry and Physics, 2011, 11, 12169-12179.	4.9	39
29	Observation of sulfate aerosols and SO₂ from the Sarychev volcanic eruption using data from the Atmospheric Chemistry Experiment (ACE). Journal of Geophysical Research, 2012, 117, .	3.3	39
30	Nitrogen dioxide and formaldehyde measurements from the GEOstationary Coastal and Air Pollution Events (GEO-CAPE) Airborne Simulator over Houston, Texas. Atmospheric Measurement Techniques, 2018, 11, 5941-5964.	3.1	39
31	The role of OH production in interpreting the variability of CH₂O columns in the southeast U.S.. Journal of Geophysical Research D: Atmospheres, 2016, 121, 478-493.	3.3	38
32	OMI air-quality monitoring over the Middle East. Atmospheric Chemistry and Physics, 2017, 17, 4687-4709.	4.9	35
33	An inversion of NO_{<i>x</i>} and non-methane volatile organic compound (NMVOC) emissions using satellite observations during the KORUS-AQ campaign and implications for surface ozone over East Asia. Atmospheric Chemistry and Physics, 2020, 20, 9837-9854.	4.9	30
34	Characterization and verification of ACAM slit functions for trace-gas retrievals during the 2011 DISCOVER-AQ flight campaign. Atmospheric Measurement Techniques, 2015, 8, 751-759.	3.1	27
35	Ethane, ethyne and carbon monoxide concentrations in the upper troposphere and lower stratosphere from ACE and GEOS-Chem: a comparison study. Atmospheric Chemistry and Physics, 2011, 11, 9927-9941.	4.9	26
36	Which processes drive observed variations of HCHO columns over India?. Atmospheric Chemistry and Physics, 2018, 18, 4549-4566.	4.9	26

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37	Five decades observing Earthâ€™s atmospheric trace gases using ultraviolet and visible backscatter solar radiation from space. Journal of Quantitative Spectroscopy and Radiative Transfer, 2019, 238, 106478.	2.3	26
38	ACE-FTS observations of pyrogenic trace species in boreal biomass burning plumes during BORTAS. Atmospheric Chemistry and Physics, 2013, 13, 4529-4541.	4.9	25
39	Unraveling pathways of elevated ozone induced by the 2020 lockdown in Europe by an observationally constrained regional model using TROPOMI. Atmospheric Chemistry and Physics, 2021, 21, 18227-18245.	4.9	25
40	Optimizing Ground-based Observations of O₂ in Earth Analogs. Astronomical Journal, 2019, 158, 24.	4.7	23
41	Validation of satellite formaldehyde (HCHO) retrievals using observations from 12 aircraft campaigns. Atmospheric Chemistry and Physics, 2020, 20, 12329-12345.	4.9	21
42	Ozone Continues to Increase in East Asia Despite Decreasing NO2: Causes and Abatements. Remote Sensing, 2021, 13, 2177.	4.0	20
43	Validation of integrated water vapor from OMI satellite instrument against reference GPS data at the Iberian Peninsula. Science of the Total Environment, 2017, 580, 857-864.	8.0	18
44	Sensitivity of formaldehyde (HCHO) column measurements from a geostationary satellite to temporal variation of the air mass factor in East Asia. Atmospheric Chemistry and Physics, 2017, 17, 4673-4686.	4.9	18
45	Ozone Monitoring Instrument (OMI) Total Column Water Vapor version 4 validation and applications. Atmospheric Measurement Techniques, 2019, 12, 5183-5199.	3.1	18
46	Validation and update of OMI Total Column Water Vapor product. Atmospheric Chemistry and Physics, 2016, 16, 11379-11393.	4.9	17
47	Spatiotemporal structure of a laser beam over 144Âkm in a Canary Islands experiment. Applied Optics, 2012, 51, 7374.	1.8	16
48	Development and characterisation of a state-of-the-art GOME-2 formaldehyde air-mass factor algorithm. Atmospheric Measurement Techniques, 2015, 8, 4055-4074.	3.1	16
49	Description of a formaldehyde retrieval algorithm for the Geostationary Environment Monitoring Spectrometer (GEMS). Atmospheric Measurement Techniques, 2019, 12, 3551-3571.	3.1	16
50	Towards a satellite formaldehyde â€" in situ hybrid estimate for organic aerosol abundance. Atmospheric Chemistry and Physics, 2019, 19, 2765-2785.	4.9	15
51	Satellite observations of the global distribution of hydrogen peroxide (H2O2) from ACE. Journal of Quantitative Spectroscopy and Radiative Transfer, 2013, 115, 66-77.	2.3	14
52	Deriving the slit functions from OMI solar observations and its implications for ozone-profile retrieval. Atmospheric Measurement Techniques, 2017, 10, 3677-3695.	3.1	13
53	High-resolution Spectroscopy Using Fabryâ€"Perot Interferometer Arrays: An Application to Searches for O2 in Exoplanetary Atmospheres. Astrophysical Journal, 2018, 861, 79.	4.5	13
54	Water vapor satellite products in the European Arctic: An inter-comparison against GNSS data. Science of the Total Environment, 2020, 741, 140335.	8.0	13

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55	Greenhouse gas measurements over a 144 km open path in the Canary Islands. Atmospheric Measurement Techniques, 2012, 5, 2309-2319.	3.1	11
56	Explicit Aerosol Correction of OMI Formaldehyde Retrievals. Earth and Space Science, 2019, 6, 2087-2105.	2.6	11
57	Satellite-Based Diagnosis and Numerical Verification of Ozone Formation Regimes over Nine Megacities in East Asia. Remote Sensing, 2022, 14, 1285.	4.0	11
58	Precipitable water vapor over oceans from the Maritime Aerosol Network: Evaluation of global models and satellite products under clear sky conditions. Atmospheric Research, 2019, 215, 294-304.	4.1	10
59	Source and variability of formaldehyde (HCHO) at northern high latitudes: an integrated satellite, aircraft, and model study. Atmospheric Chemistry and Physics, 2022, 22, 7163-7178.	4.9	9
60	An Inversion Framework for Optimizing Nonâ€Methane VOC Emissions Using Remote Sensing and Airborne Observations in Northeast Asia During the KORUSâ€AQ Field Campaign. Journal of Geophysical Research D: Atmospheres, 2022, 127, .	3.3	8
61	OMI total bromine monoxide (OMBRO) data product: algorithm, retrieval and measurement comparisons. Atmospheric Measurement Techniques, 2019, 12, 2067-2084.	3.1	6
62	Quantifying the Impact of Excess Moisture From Transpiration From Crops on an Extreme Heat Wave Event in the Midwestern U.S.: A Topâ€Down Constraint From Moderate Resolution Imaging Spectroradiometer Water Vapor Retrieval. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD031941.	3.3	5
63	Retrieval and validation of carbon dioxide, methane and water vapor for the Canary Islands IR-laser occultation experiment. Atmospheric Measurement Techniques, 2015, 8, 3315-3336.	3.1	5
64	Analysis of ACAM Data for Trace Gas Retrievals during the 2011 DISCOVER-AQ Campaign. Journal of Spectroscopy, 2015, 2015, 1-7.	1.3	4
65	A Fast Retrieval of Cloud Parameters Using a Triplet of Wavelengths of Oxygen Dimer Band around 477 nm. Remote Sensing, 2021, 13, 152.	4.0	4
66	Radiative transfer acceleration based on the principal component analysis and lookup table of corrections: optimization and application to UV ozone profile retrievals. Atmospheric Measurement Techniques, 2021, 14, 2659-2672.	3.1	3
67	Corrigendum to "Greenhouse gas measurements over a 144 km open path in the Canary Islands" published in Atmos. Meas. Tech., 5, 2309â€"2319, 2012. Atmospheric Measurement Techniques, 2012, 5, 2349-2349.	3.1	0
68	Validation of Atmospheric Water Vapor from Several Satellite Instruments Using GPS Measurements at Spanish Stations Under Cloud-Free Conditions. , 2018, , .		0
69	An optimal estimation-based retrieval of upper atmospheric oxygen airglow and temperature from SCIAMACHY limb observations. Atmospheric Measurement Techniques, 2022, 15, 3721-3745.	3.1	0