Robert J Griffin

List of Publications by Year
in descending order

80 papers	4,796 citations	145106 33 h-index	120465 65 g-index
83 all docs	83 docs citations	83 times ranked	4360 citing authors

#	Article	IF	Citations
1	Traffic, transport, and vegetation drive VOC concentrations in a major urban area in Texas. Science of the Total Environment, 2022, 838, 155861.	3.9	5
2	Disparities in air quality downscaler model uncertainty across socioeconomic and demographic indicators in North Carolina. Environmental Research, 2022, 212, 113418.	3.7	2
3	Apportioned primary and secondary organic aerosol during pollution events of DISCOVER-AQ Houston. Atmospheric Environment, 2021, 244, 117954.	1.9	5
4	A zero-dimensional view of atmospheric degradation of levoglucosan (LEVCHEM_v1) using numerical chamber simulations. Geoscientific Model Development, 2021, 14, 907-921.	1.3	1
5	Simulation of potential formation of atmospheric pollution from aboveground storage tank leakage after severe storms. Atmospheric Environment, 2021, 248, 118225.	1.9	4
6	Captive Aerosol Growth and Evolution (CAGE) chamber system to investigate particle growth due to secondary aerosol formation. Atmospheric Measurement Techniques, 2021, 14, 3351-3370.	1.2	1
7	Bayesian variable selection for understanding mixtures in environmental exposures. Statistics in Medicine, 2021, 40, 4850-4871.	0.8	9
8	SIBaR: a new method for background quantification and removal from mobile air pollution measurements. Atmospheric Measurement Techniques, 2021, 14, 5809-5821.	1.2	7
9	FORest Canopy Atmosphere Transfer (FORCAsT) 2.0: model updates and evaluation with observations at a mixed forest site. Geoscientific Model Development, 2021, 14, 6309-6329.	1.3	4
10	Transport-driven aerosol differences above and below the canopy of a mixed deciduous forest. Atmospheric Chemistry and Physics, 2021, 21, 17031-17050.	1.9	0
11	Characterizing Elevated Urban Air Pollutant Spatial Patterns with Mobile Monitoring in Houston, Texas. Environmental Science & Technology, 2020, 54, 2133-2142.	4.6	41
12	Seasonal differences in formation processes of oxidized organic aerosol near Houston, TX. Atmospheric Chemistry and Physics, 2019, 19, 9641-9661.	1.9	24
13	Bouncier Particles at Night: Biogenic Secondary Organic Aerosol Chemistry and Sulfate Drive Diel Variations in the Aerosol Phase in a Mixed Forest. Environmental Science & Technology, 2019, 53, 4977-4987.	4.6	72
14	Anhydrosugars as tracers in the Earth system. Biogeochemistry, 2019, 146, 209-256.	1.7	29
15	Thermal effects of an ICL-based mid-infrared CH4 sensor within a wide atmospheric temperature range. Infrared Physics and Technology, 2018, 89, 299-303.	1.3	13
16	Source apportionment of particulate matter and trace gases near a major refinery near the Houston Ship Channel. Atmospheric Environment, 2018, 173, 16-29.	1.9	32
17	The impacts of regional shipping emissions on the chemical characteristics of coastal submicron aerosols near Houston, TX. Atmospheric Chemistry and Physics, 2018, 18, 14217-14241.	1.9	16
18	Source apportionment of fine particulate matter in Houston, Texas: insights to secondary organic aerosols. Atmospheric Chemistry and Physics, 2018, 18, 15601-15622.	1.9	34

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19	An omnipresent diversity and variability in the chemical composition of atmospheric functionalized organic aerosol. Communications Chemistry, 2018, 1, .	2.0	25
20	Exploratory study of atmospheric methane enhancements derived from natural gas use in the Houston urban area. Atmospheric Environment, 2018, 176, 261-273.	1.9	11
21	Simulated sensitivity of secondary organic aerosol in the South Coast Air Basin of California to nitrogen oxides and other chemical parameters. Aerosol Science and Technology, 2018, 52, 679-692.	1.5	3
22	Development and field deployment of a mid-infrared methane sensor without pressure control using interband cascade laser absorption spectroscopy. Sensors and Actuators B: Chemical, 2017, 244, 365-372.	4.0	61
23	CW DFB-QCL- and EC-QCL-based sensor for simultaneous NO and NO2 measurements via frequency modulation multiplexing using multi-pass absorption spectroscopy. , 2017, , .		0
24	Dual quantum cascade laser-based sensor for simultaneous NO and NO2 detection using a wavelength modulation-division multiplexing technique. Applied Physics B: Lasers and Optics, 2017, 123, 1.	1.1	19
25	Vehicle Emissions as an Important Urban Ammonia Source in the United States and China. Environmental Science & Technology, 2017, 51, 2472-2481.	4.6	202
26	Nitrate radicals and biogenic volatile organic compounds: oxidation, mechanisms, and organic aerosol. Atmospheric Chemistry and Physics, 2017, 17, 2103-2162.	1.9	307
27	Differences in BVOC oxidation and SOA formation above and below the forest canopy. Atmospheric Chemistry and Physics, 2017, 17, 1805-1828.	1.9	12
28	Regional background O₃ and NO_{<i>x</i>} in the Houstonâ€"Galvestonâ€"Brazoria (TX) region: a decadal-scale perspective. Atmospheric Chemistry and Physics, 2017, 17, 6565-6581.	1.9	8
29	Development of aroCACM/MPMPO 1.0: a model to simulate secondary organic aerosol from aromatic precursors in regional models. Geoscientific Model Development, 2016, 9, 2143-2151.	1.3	19
30	Composition and Sources of Particulate Matter Measured near Houston, TX: Anthropogenic-Biogenic Interactions. Atmosphere, 2016, 7, 73.	1.0	15
31	Compact CH4 sensor system based on a continuous-wave, low power consumption, room temperature interband cascade laser. Applied Physics Letters, 2016, 108, .	1.5	101
32	Infrared Dual-Gas CH₄/C₂H₆Sensor Using Two Continuous-Wave Interband Cascade Lasers. IEEE Photonics Technology Letters, 2016, 28, 2351-2354.	1.3	34
33	Signatures of Biomass Burning Aerosols in the Plume of a Saltmarsh Wildfire in South Texas. Environmental Science & Technology, 2016, 50, 9308-9314.	4.6	30
34	CW EC-QCL-based sensor for simultaneous detection of H_2O, HDO, N_2O and CH_4 using multi-pass absorption spectroscopy. Optics Express, 2016, 24, 10391.	1.7	59
35	Mid-infrared dual-gas sensor for simultaneous detection of methane and ethane using a single continuous-wave interband cascade laser. Optics Express, 2016, 24, 16973.	1.7	74
36	Compact, low power consumption methane sensor based on a novel miniature multipass gas cell and a CW, room temperature interband cascade laser emitting at 3.3 Î¼m. Proceedings of SPIE, 2016, , .	0.8	2

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37	Support Vector Machine Modeling Using Particle Swarm Optimization Approach for the Retrieval of Atmospheric Ammonia Concentrations. Environmental Modeling and Assessment, 2016, 21, 531-546.	1.2	13
38	CW EC-QCL Based Sensor for Simultaneous HOD/H2O, N2O and CH4 Detection by Multi-pass Absorption Spectroscopy. , 2016, , .		1
39	Simultaneous atmospheric nitrous oxide, methane and water vapor detection with a single continuous wave quantum cascade laser. Optics Express, 2015, 23, 2121.	1.7	112
40	Simulated impact of NO x on SOA formation from oxidation of toluene and m -xylene. Atmospheric Environment, 2015, 101, 217-225.	1.9	32
41	Modeling regional secondary organic aerosol using the Master Chemical Mechanism. Atmospheric Environment, 2015, 102, 52-61.	1.9	70
42	Atmospheric CH_4 and N_2O measurements near Greater Houston area landfills using a QCL-based QEPAS sensor system during DISCOVER-AQ 2013. Optics Letters, 2014, 39, 957.	1.7	62
43	Hydrogen peroxide detection with quartz-enhanced photoacoustic spectroscopy using a distributed-feedback quantum cascade laser. Applied Physics Letters, 2014, 104, .	1.5	44
44	Multi-pass absorption spectroscopy for H₂O₂ detection using a CW DFB-QCL. Advanced Optical Technologies, 2014, 3, 549-558.	0.9	6
45	Measurements of carbon monoxide mixing ratios in Houston using a compact high-power CW DFB-QCL-based QEPAS sensor. Applied Physics B: Lasers and Optics, 2014, 117, 519-526.	1.1	7
46	Carbonaceous content and waterâ€soluble organic functionality of atmospheric aerosols at a semiâ€rural New England location. Journal of Geophysical Research, 2012, 117, .	3.3	32
47	Lignin-Derived Phenols in Houston Aerosols: Implications for Natural Background Sources. Environmental Science & Technology, 2011, 45, 8268-8275.	4.6	35
48	Partitioning phase preference for secondary organic aerosol in an urban atmosphere. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 6705-6710.	3.3	17
49	A detailed aerosol particle plume analysis. Journal of Geophysical Research, 2010, 115, .	3.3	0
50	Secondary Organic Aerosol from Photooxidation of Polycyclic Aromatic Hydrocarbons. Environmental Science & Technology, 2010, 44, 8134-8139.	4.6	99
51	Characteristics and Sources of Carbonaceous, Ionic, and Isotopic Species of Wintertime Atmospheric Aerosols in Kathmandu Valley, Nepal. Aerosol and Air Quality Research, 2010, 10, 219-230.	0.9	53
52	Secondary aerosol formation from the oxidation of toluene by chlorine atoms. Atmospheric Environment, 2008, 42, 7348-7359.	1.9	40
53	Deviations from ozone photostationary state during the International Consortium for Atmospheric Research on Transport and Transformation 2004 campaign: Use of measurements and photochemical modeling to assess potential causes. Journal of Geophysical Research, 2007, 112, .	3.3	27
54	Source apportionment of secondary organic aerosol during a severe photochemical smog episode. Atmospheric Environment, 2007, 41, 576-591.	1.9	55

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55	Verification of a source-oriented externally mixed air quality model during a severe photochemical smog episode. Atmospheric Environment, 2007, 41, 1521-1538.	1.9	50
56	Simulation and analysis of secondary organic aerosol dynamics in the South Coast Air Basin of California. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	53
57	Secondary aerosol formation from the oxidation of biogenic hydrocarbons by chlorine atoms. Journal of Geophysical Research, 2006, 111, .	3.3	45
58	ORILAM-SOA: A computationally efficient model for predicting secondary organic aerosols in three-dimensional atmospheric models. Journal of Geophysical Research, 2006, 111, .	3.3	39
59	Application of the CACM and MPMPO modules using the CMAQ model for the eastern United States. Journal of Geophysical Research, 2006, 111, .	3.3	32
60	Modeling secondary organic aerosol formation from oxidation of -pinene, -pinene, and -limonene. Atmospheric Environment, 2005, 39, 7731-7744.	1.9	65
61	Theoretical Modeling of the Size-Dependent Influence of Surface Tension on the Absorptive Partitioning of Semi-Volatile Organic Compounds. Journal of Atmospheric Chemistry, 2005, 50, 139-158.	1.4	12
62	Calculations of Incremental Secondary Organic Aerosol Reactivity. Environmental Science & Technology, 2005, 39, 1724-1730.	4.6	16
63	Development and initial evaluation of a dynamic species-resolved model for gas phase chemistry and size-resolved gas/particle partitioning associated with secondary organic aerosol formation. Journal of Geophysical Research, 2005, 110, .	3.3	74
64	Comment on â€œInstantaneous secondary organic aerosol yields and their comparison with overall aerosol yields for aromatic and biogenic hydrocarbonsâ€•by Weimin Jiang. Atmospheric Environment, 2004, 38, 2759-2761.	1.9	6
65	The roles of individual oxidants in secondary organic aerosol formation from Î”3-carene: 2. soa formation and oxidant contribution. Atmospheric Environment, 2004, 38, 4013-4023.	1.9	17
66	The roles of individual oxidants in secondary organic aerosol formation from Î”3-carene: 1. gas-phase chemical mechanism. Atmospheric Environment, 2004, 38, 4001-4012.	1.9	16
67	Modeling the Oxidative Capacity of the Atmosphere of the South Coast Air Basin of California. 2. HOxRadical Production. Environmental Science & Technology, 2004, 38, 753-757.	4.6	9
68	Modeling the Oxidative Capacity of the Atmosphere of the South Coast Air Basin of California. 1. Ozone Formation Metrics. Environmental Science & Technology, 2004, 38, 746-752.	4.6	16
69	Quantification of ozone formation metrics at Thompson Farm during the New England Air Quality Study (NEAQS) 2002. Journal of Geophysical Research, 2004, 109, .	3.3	37
70	A Coupled Hydrophobic-Hydrophilic Model for Predicting Secondary Organic Aerosol Formation. Journal of Atmospheric Chemistry, 2003, 44, 171-190.	1.4	118
71	Modeling the formation of secondary organic aerosol in coastal areas: Role of the sea-salt aerosol organic layer. Journal of Geophysical Research, 2003, 108, .	3.3	6
72	Uncertainties in Modeling Secondary Organic Aerosols:Â Three-Dimensional Modeling Studies in Nashville/Western Tennessee. Environmental Science & Technology, 2003, 37, 3647-3661.	4.6	116

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73	Secondary organic aerosol 1. Atmospheric chemical mechanism for production of molecular constituents. Journal of Geophysical Research, 2002, 107, AAC 3-1-AAC 3-26.	3.3	183
74	Secondary organic aerosol 2. Thermodynamic model for gas/particle partitioning of molecular constituents. Journal of Geophysical Research, 2002, 107, AAC 4-1-AAC 4-15.	3.3	152
75	Secondary organic aerosol 3. Urban/regional scale model of size- and composition-resolved aerosols. Journal of Geophysical Research, 2002, 107, AAC 5-1-AAC 5-14.	3.3	71
76	Gas-Phase Ozone Oxidation of Monoterpenes: Gaseous and Particulate Products. Journal of Atmospheric Chemistry, 1999, 34, 207-258.	1.4	495
77	Organic aerosol formation from the oxidation of biogenic hydrocarbons. Journal of Geophysical Research, 1999, 104, 3555-3567.	3.3	666
78	Observation of gaseous and particulate products of monoterpene oxidation in forest atmospheres. Geophysical Research Letters, 1999, 26, 1145-1148.	1.5	164
79	Estimate of global atmospheric organic aerosol from oxidation of biogenic hydrocarbons. Geophysical Research Letters, 1999, 26, 2721-2724.	1.5	325
80	Incremental Aerosol Reactivity:Â Application to Aromatic and Biogenic Hydrocarbons. Environmental Science & Technology, 1999, 33, 2403-2408.	4.6	25