Rahul A Zaveri

List of Publications by Year
in descending order

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99 papers	10,490 citations	41258 49 h-index	38300 95 g-index
149 all docs	149 docs citations	149 times ranked	6654 citing authors

#	Article	IF	Citations
1	Tight Coupling of Surface and In-Plant Biochemistry and Convection Governs Key Fine Particulate Components over the Amazon Rainforest. ACS Earth and Space Chemistry, 2022, 6, 380-390.	1.2	11
2	Rapid growth of anthropogenic organic nanoparticles greatly alters cloud life cycle in the Amazon rainforest. Science Advances, 2022, 8, eabj0329.	4.7	19
3	Exploring dimethyl sulfide (DMS) oxidation and implications for global aerosol radiative forcing. Atmospheric Chemistry and Physics, 2022, 22, 1549-1573.	1.9	33
4	Future changes in isoprene-epoxydiol-derived secondary organic aerosol (IEPOX SOA) under the Shared Socioeconomic Pathways: the importance of physicochemical dependency. Atmospheric Chemistry and Physics, 2021, 21, 3395-3425.	1.9	16
5	Impact of Urban Pollution on Organic-Mediated New-Particle Formation and Particle Number Concentration in the Amazon Rainforest. Environmental Science & Technology, 2021, 55, 4357-4367.	4.6	12
6	Development and Evaluation of Chemistryâ€Aerosolâ€Climate Model CAM5â€Chemâ€MAM7â€MOSAIC: Global Atmospheric Distribution and Radiative Effects of Nitrate Aerosol. Journal of Advances in Modeling Earth Systems, 2021, 13, e2020MS002346.	1.3	17
7	Aircraft measurements of aerosol and trace gas chemistry in the eastern North Atlantic. Atmospheric Chemistry and Physics, 2021, 21, 7983-8002.	1.9	19
8	Radiative Forcing of Nitrate Aerosols From 1975 to 2010 as Simulated by MOSAIC Module in CESM2â€MAM4. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2021JD034809.	1.2	14
9	Humidity Dependence of the Condensational Growth of Î±-Pinene Secondary Organic Aerosol Particles. Environmental Science & Technology, 2021, 55, 14360-14369.	4.6	15
10	Particle Size Distribution Dynamics Can Help Constrain the Phase State of Secondary Organic Aerosol. Environmental Science & Technology, 2021, 55, 1466-1476.	4.6	22
11	A computationally efficient model to represent the chemistry, thermodynamics, and microphysics of secondary organic aerosols (simpleSOM): model development and application to Î±-pinene SOA. Environmental Science Atmospheres, 2021, 1, 372-394.	0.9	3
12	Modeling the Size Distribution and Chemical Composition of Secondary Organic Aerosols during the Reactive Uptake of Isoprene-Derived Epoxydiols under Low-Humidity Condition. ACS Earth and Space Chemistry, 2021, 5, 3247-3257.	1.2	7
13	The acidity of atmospheric particles and clouds. Atmospheric Chemistry and Physics, 2020, 20, 4809-4888.	1.9	327
14	Photolysis Controls Atmospheric Budgets of Biogenic Secondary Organic Aerosol. Environmental Science & Technology, 2020, 54, 3861-3870.	4.6	36
15	Efficient Nighttime Biogenic SOA Formation in a Polluted Residual Layer. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD031583.	1.2	14
16	Particle-Phase Diffusion Modulates Partitioning of Semivolatile Organic Compounds to Aged Secondary Organic Aerosol. Environmental Science & Technology, 2020, 54, 2595-2605.	4.6	37
17	High concentration of ultrafine particles in the Amazon free troposphere produced by organic new particle formation. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 25344-25351.	3.3	49
18	Extensive Soot Compaction by Cloud Processing from Laboratory and Field Observations. Scientific Reports, 2019, 9, 11824.	1.6	47

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19	Photochemical Aging Alters Secondary Organic Aerosol Partitioning Behavior. ACS Earth and Space Chemistry, 2019, 3, 2704-2716.	1.2	18
20	Urban pollution greatly enhances formation of natural aerosols over the Amazon rainforest. Nature Communications, 2019, 10, 1046.	5.8	131
21	Cloud droplet activation of secondary organic aerosol is mainly controlled by molecular weight, not water solubility. Atmospheric Chemistry and Physics, 2019, 19, 941-954.	1.9	35
22	Growth Kinetics and Size Distribution Dynamics of Viscous Secondary Organic Aerosol. Environmental Science & Technology, 2018, 52, 1191-1199.	4.6	85
23	Physical Properties of Aerosol Internally Mixed With Soot Particles in a Biogenically Dominated Environment in California. Geophysical Research Letters, 2018, 45, 11,473.	1.5	15
24	Isothermal Evaporation of Î±-Pinene Ozonolysis SOA: Volatility, Phase State, and Oligomeric Composition. ACS Earth and Space Chemistry, 2018, 2, 1058-1067.	1.2	49
25	Molecular composition and volatility of isoprene photochemicalÂoxidationÂsecondaryÂorganic aerosolÂunderÂlow-ÂandÂhigh-NO_{<i>x</i>}-ÂconditionsÂ. Atmospheric Chemistry and Physics, 2017, 17, 159-174.	1.9	70
26	Anthropogenic influences on the physical state of submicron particulate matter over a tropical forest. Atmospheric Chemistry and Physics, 2017, 17, 1759-1773.	1.9	52
27	Nitrate radicals and biogenic volatile organic compounds: oxidation, mechanisms, and organic aerosol. Atmospheric Chemistry and Physics, 2017, 17, 2103-2162.	1.9	307
28	An efficient approach for treating composition-dependent diffusion within organic particles. Atmospheric Chemistry and Physics, 2017, 17, 10477-10494.	1.9	6
29	Semivolatile POA and parameterized total combustion SOA in CMAQv5.2: impacts on source strength and partitioning. Atmospheric Chemistry and Physics, 2017, 17, 11107-11133.	1.9	109
30	Evolution of Multispectral Aerosol Absorption Properties in a Biogenically-Influenced Urban Environment during the CARES Campaign. Atmosphere, 2017, 8, 217.	1.0	8
31	Recent advances in understanding secondary organic aerosol: Implications for global climate forcing. Reviews of Geophysics, 2017, 55, 509-559.	9.0	548
32	Ice nucleation activity of diesel soot particles at cirrus relevant temperature conditions: Effects of hydration, secondary organics coating, soot morphology, and coagulation. Geophysical Research Letters, 2016, 43, 3580-3588.	1.5	47
33	Model representations of aerosol layers transported from North America over the Atlantic Ocean during the Twoâ€Column Aerosol Project. Journal of Geophysical Research D: Atmospheres, 2016, 121, 9814-9848.	1.2	15
34	Efficient Isoprene Secondary Organic Aerosol Formation from a Non-IEPOX Pathway. Environmental Science & Technology, 2016, 50, 9872-9880.	4.6	100
35	A threeâ€dimensional sectional representation of aerosol mixing state for simulating optical properties and cloud condensation nuclei. Journal of Geophysical Research D: Atmospheres, 2016, 121, 5912-5929.	1.2	21
36	Lability of secondary organic particulate matter. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 12643-12648.	3.3	93

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37	Understanding the optical properties of ambient sub- and supermicron particulate matter: results from the CARESÂ2010 field study in northern California. Atmospheric Chemistry and Physics, 2016, 16, 6511-6535.	1.9	70
38	Relative humidity-dependent viscosity of secondary organic material from toluene photo-oxidation and possible implications for organic particulate matter over megacities. Atmospheric Chemistry and Physics, 2016, 16, 8817-8830.	1.9	95
39	Sub-micrometre particulate matter is primarily in liquid form over Amazon rainforest. Nature Geoscience, 2016, 9, 34-37.	5.4	99
40	WRF-Chem model predictions of the regional impacts of N₂O₅ heterogeneous processes on night-time chemistry over north-western Europe. Atmospheric Chemistry and Physics, 2015, 15, 1385-1409.	1.9	38
41	Modeling particle nucleation and growth over northern California during the 2010 CARES campaign. Atmospheric Chemistry and Physics, 2015, 15, 12283-12313.	1.9	25
42	Morphology of diesel soot residuals from supercooled water droplets and ice crystals: implications for optical properties. Environmental Research Letters, 2015, 10, 114010.	2.2	35
43	The MESSy aerosol submodel MADE3 (v2.0b): description and a box model test. Geoscientific Model Development, 2014, 7, 1137-1157.	1.3	31
44	Gaseous chemistry and aerosol mechanism developments for version 3.5.1 of the online regional model, WRF-Chem. Geoscientific Model Development, 2014, 7, 2557-2579.	1.3	51
45	Modeling kinetic partitioning of secondary organic aerosol and size distribution dynamics: representing effects of volatility, phase state, and particle-phase reaction. Atmospheric Chemistry and Physics, 2014, 14, 5153-5181.	1.9	137
46	Analytical solution for transient partitioning and reaction of a condensing vapor species in a droplet. Atmospheric Environment, 2014, 89, 651-654.	1.9	7
47	The AeroCom evaluation and intercomparison of organic aerosol in global models. Atmospheric Chemistry and Physics, 2014, 14, 10845-10895.	1.9	363
48	Modeling regional aerosol and aerosol precursor variability over California and its sensitivity to emissions and long-range transport during the 2010 CalNex and CARES campaigns. Atmospheric Chemistry and Physics, 2014, 14, 10013-10060.	1.9	62
49	Climatological simulations of ozone and atmospheric aerosols in the Greater Cairo region. Climate Research, 2014, 59, 207-228.	0.4	14
50	Enhanced SOA formation from mixed anthropogenic and biogenic emissions during the CARES campaign. Atmospheric Chemistry and Physics, 2013, 13, 2091-2113.	1.9	146
51	Spectro-microscopic measurements of carbonaceous aerosol aging in Central California. Atmospheric Chemistry and Physics, 2013, 13, 10445-10459.	1.9	56
52	Uncertainty in modeling dust mass balance and radiative forcing from size parameterization. Atmospheric Chemistry and Physics, 2013, 13, 10733-10753.	1.9	128
53	Implications of low volatility SOA and gasâ€phase fragmentation reactions on SOA loadings and their spatial and temporal evolution in the atmosphere. Journal of Geophysical Research D: Atmospheres, 2013, 118, 3328-3342.	1.2	66
54	Light absorption by secondary organic aerosol from Î±â€pinene: Effects of oxidants, seed aerosol acidity, and relative humidity. Journal of Geophysical Research D: Atmospheres, 2013, 118, 11,741.	1.2	54

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55	Development and validation of a black carbon mixing state resolved threeâ€dimensional model: Aging processes and radiative impact. Journal of Geophysical Research D: Atmospheres, 2013, 118, 2304-2326.	1.2	106
56	Hydrolysis of Organonitrate Functional Groups in Aerosol Particles. Aerosol Science and Technology, 2012, 46, 1359-1369.	1.5	153
57	Implementation and evaluation of online gas-phase chemistry within a regional climate model (RegCM-CHEM4). Geoscientific Model Development, 2012, 5, 741-760.	1.3	57
58	The mixing state of carbonaceous aerosol particles in northern and southern California measured during CARES and CalNex 2010. Atmospheric Chemistry and Physics, 2012, 12, 10989-11002.	1.9	57
59	Transport and mixing patterns over Central California during the carbonaceous aerosol and radiative effects study (CARES). Atmospheric Chemistry and Physics, 2012, 12, 1759-1783.	1.9	67
60	Characterization of submicron particles influenced by mixed biogenic and anthropogenic emissions using high-resolution aerosol mass spectrometry: results from CARES. Atmospheric Chemistry and Physics, 2012, 12, 8131-8156.	1.9	146
61	Photoacoustic optical properties at UV, VIS, and near IR wavelengths for laboratory generated and winter time ambient urban aerosols. Atmospheric Chemistry and Physics, 2012, 12, 2587-2601.	1.9	74
62	Overview of the 2010 Carbonaceous Aerosols and Radiative Effects Study (CARES). Atmospheric Chemistry and Physics, 2012, 12, 7647-7687.	1.9	94
63	Radiative Absorption Enhancements Due to the Mixing State of Atmospheric Black Carbon. Science, 2012, 337, 1078-1081.	6.0	618
64	Tropospheric chemistry of internally mixed sea salt and organic particles: Surprising reactivity of NaCl with weak organic acids. Journal of Geophysical Research, 2012, 117, .	3.3	224
65	Effect of Hydrophilic Organic Seed Aerosols on Secondary Organic Aerosol Formation from Ozonolysis of Î±-Pinene. Environmental Science & Technology, 2011, 45, 7323-7329.	4.6	21
66	Modeling the Multiday Evolution and Aging of Secondary Organic Aerosol During MILAGRO 2006. Environmental Science & Technology, 2011, 45, 3496-3503.	4.6	90
67	Impact of new particle formation on the concentrations of aerosols and cloud condensation nuclei around Beijing. Journal of Geophysical Research, 2011, 116, .	3.3	62
68	Explicit modeling of organic chemistry and secondary organic aerosol partitioning for Mexico City and its outflow plume. Atmospheric Chemistry and Physics, 2011, 11, 13219-13241.	1.9	65
69	Modeling organic aerosols in a megacity: comparison of simple and complex representations of the volatility basis set approach. Atmospheric Chemistry and Physics, 2011, 11, 6639-6662.	1.9	230
70	The influence of fog and airmass history on aerosol optical, physical and chemical properties at Pt. Reyes National Seashore. Atmospheric Environment, 2011, 45, 2559-2568.	1.9	19
71	The Aerosol Modeling Testbed: A Community Tool to Objectively Evaluate Aerosol Process Modules. Bulletin of the American Meteorological Society, 2011, 92, 343-360.	1.7	31
72	Black carbon over Mexico: the effect of atmospheric transport on mixing state, mass absorption cross-section, and BC/CO ratios. Atmospheric Chemistry and Physics, 2010, 10, 219-237.	1.9	140

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73	Long-range pollution transport during the MILAGRO-2006 campaign: a case study of a major Mexico City outflow event using free-floating altitude-controlled balloons. Atmospheric Chemistry and Physics, 2010, 10, 7137-7159.	1.9	25
74	Morphology of mixed primary and secondary organic particles and the adsorption of spectator organic gases during aerosol formation. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 6658-6663.	3.3	102
75	Nighttime chemical evolution of aerosol and trace gases in a power plant plume: Implications for secondary organic nitrate and organosulfate aerosol formation, NO₃ radical chemistry, and N₂O₅ heterogeneous hydrolysis. Journal of Geophysical Research, 2010, 115, .	3.3	67
76	Overnight atmospheric transport and chemical processing of photochemically aged Houston urban and petrochemical industrial plume. Journal of Geophysical Research, 2010, 115, .	3.3	14
77	Particleâ€resolved simulation of aerosol size, composition, mixing state, and the associated optical and cloud condensation nuclei activation properties in an evolving urban plume. Journal of Geophysical Research, 2010, 115, .	3.3	107
78	Estimating black carbon aging time-scales with a particle-resolved aerosol model. Journal of Aerosol Science, 2010, 41, 143-158.	1.8	112
79	Spatial and temporal variations of aerosols around Beijing in summer 2006: Model evaluation and source apportionment. Journal of Geophysical Research, 2009, 114, .	3.3	86
80	Simulating the evolution of soot mixing state with a particleâ€resolved aerosol model. Journal of Geophysical Research, 2009, 114, .	3.3	162
81	The time evolution of aerosol size distribution over the Mexico City plateau. Atmospheric Chemistry and Physics, 2009, 9, 4261-4278.	1.9	60
82	Model for Simulating Aerosol Interactions and Chemistry (MOSAIC). Journal of Geophysical Research, 2008, 113, .	3.3	824
83	Chemical speciation of sulfur in marine cloud droplets and particles: Analysis of individual particles from the marine boundary layer over the California current. Journal of Geophysical Research, 2008, 113, .	3.3	89
84	A New Real-Time Method for Determining Particlesâ€™ Sphericity and Density: Application to Secondary Organic Aerosol Formed by Ozonolysis of Î±-Pinene. Environmental Science & Technology, 2008, 42, 8033-8038.	4.6	56
85	â€œDepth-Profilingâ€•and Quantitative Characterization of the Size, Composition, Shape, Density, and Morphology of Fine Particles with SPLAT, a Single-Particle Mass Spectrometer. Journal of Physical Chemistry A, 2008, 112, 669-677.	1.1	43
86	Aircraft observations of aerosol composition and ageing in New England and Mid-Atlantic States during the summer 2002 New England Air Quality Study field campaign. Journal of Geophysical Research, 2007, 112, .	3.3	87
87	Parameterization of optical properties for hydrated internally mixed aerosol. Journal of Geophysical Research, 2007, 112, .	3.3	124
88	Effect of hydrophobic primary organic aerosols on secondary organic aerosol formation from ozonolysis of Î±â€pinene. Geophysical Research Letters, 2007, 34, .	1.5	104
89	Evolution of ozone, particulates, and aerosol direct radiative forcing in the vicinity of Houston using a fully coupled meteorology-chemistry-aerosol model. Journal of Geophysical Research, 2006, 111, .	3.3	843
90	A new method for multicomponent activity coefficients of electrolytes in aqueous atmospheric aerosols. Journal of Geophysical Research, 2005, 110, .	3.3	99

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91	A computationally efficient Multicomponent Equilibrium Solver for Aerosols (MESA). Journal of Geophysical Research, 2005, 110, .	3.3	107
92	MIRAGE: Model description and evaluation of aerosols and trace gases. Journal of Geophysical Research, 2004, 109, .	3.3	251
93	Ozone production efficiency and NOxdepletion in an urban plume: Interpretation of field observations and implications for evaluating O3-NOx-VOC sensitivity. Journal of Geophysical Research, 2003, 108, .	3.3	81
94	Effect of regional-scale transport on oxidants in the vicinity of Philadelphia during the 1999 NE-OPS field campaign. Journal of Geophysical Research, 2002, 107, ACH 13-1.	3.3	31
95	Aircraft observations of aerosols, O3 and NOy in a nighttime urban plume. Atmospheric Environment, 2001, 35, 2395-2404.	1.9	15
96	Ozone loss in soot aerosols. Journal of Geophysical Research, 2000, 105, 9767-9771.	3.3	47
97	A new lumped structure photochemical mechanism for large-scale applications. Journal of Geophysical Research, 1999, 104, 30387-30415.	3.3	690
98	On the parallelization of a global climate-chemistry modeling system. Atmospheric Environment, 1999, 33, 675-681.	1.9	5
99	A model investigation of summertime diurnal ozone behavior in rural mountainous locations. Atmospheric Environment, 1995, 29, 1043-1065.	1.9	49