Paul J Ziemann

List of Publications by Year
in descending order

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98 papers	9,970 citations	47 h-index	93 g-index
		47006	40979
112 all docs	112 docs citations	112 times ranked	4918 citing authors

#	Article	IF	Citations
1	O/C and OM/OC Ratios of Primary, Secondary, and Ambient Organic Aerosols with High-Resolution Time-of-Flight Aerosol Mass Spectrometry. Environmental Science & Technology, 2008, 42, 4478-4485.	10.0	1,524
2	Kinetics, products, and mechanisms of secondary organic aerosol formation. Chemical Society Reviews, 2012, 41, 6582.	38.1	544
3	Generating Particle Beams of Controlled Dimensions and Divergence: I. Theory of Particle Motion in Aerodynamic Lenses and Nozzle Expansions. Aerosol Science and Technology, 1995, 22, 293-313.	3.1	459
4	Response of an aerosol mass spectrometer to organonitrates and organosulfates and implications for atmospheric chemistry. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 6670-6675.	7.1	437
5	Contributions of Organic Peroxides to Secondary Aerosol Formed from Reactions of Monoterpenes with O3. Environmental Science & Technology, 2005, 39, 4049-4059.	10.0	396
6	Generating Particle Beams of Controlled Dimensions and Divergence: II. Experimental Evaluation of Particle Motion in Aerodynamic Lenses and Nozzle Expansions. Aerosol Science and Technology, 1995, 22, 314-324.	3.1	393
7	Chemical Analysis of Diesel Engine Nanoparticles Using a Nano-DMA/Thermal Desorption Particle Beam Mass Spectrometer. Environmental Science & Technology, 2001, 35, 2233-2243.	10.0	300
8	Gas-Wall Partitioning of Organic Compounds in a Teflon Film Chamber and Potential Effects on Reaction Product and Aerosol Yield Measurements. Aerosol Science and Technology, 2010, 44, 881-892.	3.1	294
9	Products and Mechanism of Secondary Organic Aerosol Formation from Reactions ofn-Alkanes with OH Radicals in the Presence of NOx. Environmental Science & Technology, 2005, 39, 9229-9236.	10.0	248
10	Effects of Molecular Structure on Aerosol Yields from OH Radical-Initiated Reactions of Linear, Branched, and Cyclic Alkanes in the Presence of NO_x. Environmental Science & Technology, 2009, 43, 2328-2334.	10.0	231
11	Cloud droplet activation of secondary organic aerosol. Journal of Geophysical Research, 2007, 112, .	3.3	196
12	Saturation Vapor Pressures and Transition Enthalpies of Low-Volatility Organic Molecules of Atmospheric Relevance: From Dicarboxylic Acids to Complex Mixtures. Chemical Reviews, 2015, 115, 4115-4156.	47.7	196
13	Identifying organic aerosol sources by comparing functional group composition in chamber and atmospheric particles. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 3516-3521.	7.1	195
14	Aerosol products, mechanisms, and kinetics of heterogeneous reactions of ozone with oleic acid in pure and mixed particles. Faraday Discussions, 2005, 130, 469.	3.2	187
15	Quantification of Gas-Wall Partitioning in Teflon Environmental Chambers Using Rapid Bursts of Low-Volatility Oxidized Species Generated in Situ. Environmental Science & Technology, 2016, 50, 5757-5765.	10.0	178
16	Kinetics of the Gas-Phase Reactions of Alcohols, Aldehydes, Carboxylic Acids, and Water with the C13 Stabilized Criegee Intermediate Formed from Ozonolysis of 1-Tetradecene. Journal of Physical Chemistry A, 2001, 105, 6129-6135.	2.5	159
17	Thermal Desorption Mass Spectrometric Analysis of Organic Aerosol Formed from Reactions of 1-Tetradecene and O3in the Presence of Alcohols and Carboxylic Acids. Environmental Science & Technology, 2000, 34, 2105-2115.	10.0	154
18	Size distribution dynamics reveal particle-phase chemistry in organic aerosol formation. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 11746-11750.	7.1	147

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19	Chemistry of Secondary Organic Aerosol Formation from OH Radical-Initiated Reactions of Linear, Branched, and Cyclic Alkanes in the Presence of NO_x. Aerosol Science and Technology, 2009, 43, 604-619.	3.1	137
20	Organonitrate group concentrations in submicron particles with high nitrate and organic fractions in coastal southern California. Atmospheric Environment, 2010, 44, 1970-1979.	4.1	137
21	Real-Time Chemical Analysis of Organic Aerosols Using a Thermal Desorption Particle Beam Mass Spectrometer. Aerosol Science and Technology, 2000, 33, 170-190.	3.1	126
22	Evidence for Low-Volatility Diacyl Peroxides as a Nucleating Agent and Major Component of Aerosol Formed from Reactions of O3 with Cyclohexene and Homologous Compounds. Journal of Physical Chemistry A, 2002, 106, 4390-4402.	2.5	121
23	Identification and Quantification of 4-Nitrocatechol Formed from OH and NO₃ Radical-Initiated Reactions of Catechol in Air in the Presence of NO_x: Implications for Secondary Organic Aerosol Formation from Biomass Burning. Environmental Science & Technology, 2018, 52, 1981-1989.	10.0	116
24	Vapor Pressures of Substituted and Unsubstituted Monocarboxylic and Dicarboxylic Acids Measured Using an Improved Thermal Desorption Particle Beam Mass Spectrometry Method. Aerosol Science and Technology, 2005, 39, 1085-1100.	3.1	105
25	Secondary organic aerosol yields of 12-carbon alkanes. Atmospheric Chemistry and Physics, 2014, 14, 1423-1439.	4.9	100
26	Effects of gasâ€“wall partitioning in Teflon tubing and instrumentation on time-resolved measurements of gas-phase organic compounds. Atmospheric Measurement Techniques, 2017, 10, 4687-4696.	3.1	100
27	Influence of Functional Groups on Organic Aerosol Cloud Condensation Nucleus Activity. Environmental Science & Technology, 2014, 48, 10182-10190.	10.0	99
28	Effects of Stabilized Criegee Intermediate and OH Radical Scavengers on Aerosol Formation from Reactions of Î²-Pinene with O 3. Aerosol Science and Technology, 2003, 37, 877-891.	3.1	96
29	Compound Identification in Organic Aerosols Using Temperature-Programmed Thermal Desorption Particle Beam Mass Spectrometry. Analytical Chemistry, 1999, 71, 3428-3435.	6.5	94
30	Reaction of Oleic Acid Particles with NO3Radicals:Â Products, Mechanism, and Implications for Radical-Initiated Organic Aerosol Oxidation. Journal of Physical Chemistry A, 2006, 110, 3567-3577.	2.5	93
31	Contribution of human-related sources to indoor volatile organic compounds in a university classroom. Indoor Air, 2016, 26, 925-938.	4.3	91
32	Time-Resolved Measurements of Indoor Chemical Emissions, Deposition, and Reactions in a University Art Museum. Environmental Science & Technology, 2019, 53, 4794-4802.	10.0	89
33	Impact of chamber wall loss of gaseous organic compounds on secondary organic aerosol formation: explicit modeling of SOA formation from alkane and alkene oxidation. Atmospheric Chemistry and Physics, 2016, 16, 1417-1431.	4.9	87
34	Secondary Organic Aerosol Formation from Low-NO_x Photooxidation of Dodecane: Evolution of Multigeneration Gas-Phase Chemistry and Aerosol Composition. Journal of Physical Chemistry A, 2012, 116, 6211-6230.	2.5	79
35	Effect of Relative Humidity on the Chemical Composition of Secondary Organic Aerosol Formed from Reactions of 1-Tetradecene and O3. Environmental Science & Technology, 2000, 34, 2116-2125.	10.0	78
36	Formation of Alkoxyhydroperoxy Aldehydes and Cyclic Peroxyhemiacetals from Reactions of Cyclic Alkenes with O3 in the Presence of Alcohols. Journal of Physical Chemistry A, 2003, 107, 2048-2060.	2.5	78

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37	Alkyl Nitrate Formation from the Reactions of C₈â€“C₁₄ n-Alkanes with OH Radicals in the Presence of NO_x: Measured Yields with Essential Corrections for Gasâ€“Wall Partitioning. Journal of Physical Chemistry A, 2014, 118, 8147-8157.	2.5	78
38	The Essential Role for Laboratory Studies in Atmospheric Chemistry. Environmental Science & Technology, 2017, 51, 2519-2528.	10.0	75
39	Yields of Î²-Hydroxynitrates and Dihydroxynitrates in Aerosol Formed from OH Radical-Initiated Reactions of Linear Alkenes in the Presence of NO_x. Journal of Physical Chemistry A, 2009, 113, 599-606.	2.5	69
40	Role of molecular size in cloud droplet activation. Geophysical Research Letters, 2009, 36, .	4.0	69
41	Glyoxal and Methylglyoxal Setschenow Salting Constants in Sulfate, Nitrate, and Chloride Solutions: Measurements and Gibbs Energies. Environmental Science & Technology, 2015, 49, 11500-11508.	10.0	64
42	Measurements of delays of gas-phase compounds in a wide variety of tubing materials due to gasâ€“wall interactions. Atmospheric Measurement Techniques, 2019, 12, 3453-3461.	3.1	64
43	Gas-Phase Carboxylic Acids in a University Classroom: Abundance, Variability, and Sources. Environmental Science & Technology, 2017, 51, 5454-5463.	10.0	59
44	Functional Group Composition of Secondary Organic Aerosol Formed from Ozonolysis of Î±-Pinene Under High VOC and Autoxidation Conditions. ACS Earth and Space Chemistry, 2018, 2, 1196-1210.	2.7	58
45	Kinetics of the heterogeneous conversion of 1,4-hydroxycarbonyls to cyclic hemiacetals and dihydrofurans on organic aerosol particles. Physical Chemistry Chemical Physics, 2009, 11, 8029.	2.8	57
46	Yields ofÎ²-hydroxynitrates, dihydroxynitrates, and trihydroxynitrates formed from OH radical-initiated reactions of 2-methyl-1-alkenes. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 6664-6669.	7.1	55
47	Temperatureâ€•and Humidityâ€Dependent Phase States of Secondary Organic Aerosols. Geophysical Research Letters, 2019, 46, 1005-1013.	4.0	53
48	Products and Mechanism of Secondary Organic Aerosol Formation from Reactions of Linear Alkenes with NO3Radicals. Journal of Physical Chemistry A, 2005, 109, 4312-4324.	2.5	52
49	Effects of molecular structure on the chemistry of aerosol formation from the OH-radical-initiated oxidation of alkanes and alkenes. International Reviews in Physical Chemistry, 2011, 30, 161-195.	2.3	52
50	Gas-Wall Partitioning of Oxygenated Organic Compounds: Measurements, Structureâ€“Activity Relationships, and Correlation with Gas Chromatographic Retention Factor. Aerosol Science and Technology, 2015, 49, 727-738.	3.1	52
51	Composition and yields of secondary organic aerosol formed from OH radical-initiated reactions of linear alkenes in the presence of NOx: Modeling and measurements. Atmospheric Environment, 2009, 43, 1349-1357.	4.1	50
52	Effect of chemical structure on secondary organic aerosol formation from C₁₂ alkanes. Atmospheric Chemistry and Physics, 2013, 13, 11121-11140.	4.9	48
53	Identification and Quantitation of Aerosol Products of the Reaction of Î²-Pinene with NO3 Radicals and Implications for Gas- and Particle-Phase Reaction Mechanisms. Journal of Physical Chemistry A, 2018, 122, 3640-3652.	2.5	46
54	Effects of gasâ€“wall interactions on measurements of semivolatile compounds and small polar molecules. Atmospheric Measurement Techniques, 2019, 12, 3137-3149.	3.1	45

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55	Hygroscopicity frequency distributions of secondary organic aerosols. Journal of Geophysical Research, 2012, 117, .	3.3	44
56	Direct Measurements of Gas/Particle Partitioning and Mass Accommodation Coefficients in Environmental Chambers. Environmental Science & Technology, 2017, 51, 11867-11875.	10.0	44
57	Analysis of secondary organic aerosol formation and aging using positive matrix factorization of high-resolution aerosol mass spectra: application to the dodecane low-NO_x system. Atmospheric Chemistry and Physics, 2012, 12, 11795-11817.	4.9	42
58	Direct measurements of semi-volatile organic compound dynamics show near-unity mass accommodation coefficients for diverse aerosols. Communications Chemistry, 2019, 2, .	4.5	42
59	Prediction of cloud condensation nuclei activity for organic compounds using functional group contribution methods. Geoscientific Model Development, 2016, 9, 111-124.	3.6	40
60	Products and mechanism of secondary organic aerosol formation from the reaction of 3-methylfuran with OH radicals in the presence of NOx. Atmospheric Environment, 2013, 77, 534-543.	4.1	38
61	Budgets of Organic Carbon Composition and Oxidation in Indoor Air. Environmental Science & Technology, 2019, 53, 13053-13063.	10.0	37
62	Chemical Mechanisms of Aging of Aerosol Formed from the Reaction of<i>n</i>-Pentadecane with OH Radicals in the Presence of NO_x. Aerosol Science and Technology, 2013, 47, 979-990.	3.1	35
63	Development of Spectrophotometric Methods for the Analysis of Functional Groups in Oxidized Organic Aerosol. Aerosol Science and Technology, 2013, 47, 581-591.	3.1	34
64	Chemistry of hydroperoxycarbonyls in secondary organic aerosol. Aerosol Science and Technology, 2018, 52, 1178-1193.	3.1	34
65	Quantification and source characterization of volatile organic compounds from exercising and application of chlorineâ€based cleaning products in a university athletic center. Indoor Air, 2021, 31, 1323-1339.	4.3	32
66	An in situ gas chromatograph with automatic detector switching between PTR- and EI-TOF-MS: isomer-resolved measurements of indoor air. Atmospheric Measurement Techniques, 2021, 14, 133-152.	3.1	31
67	Measurements and modeling of absorptive partitioning of volatile organic compounds to painted surfaces. Indoor Air, 2020, 30, 745-756.	4.3	27
68	Quantification of alkenes on indoor surfaces and implications for chemical sources and sinks. Indoor Air, 2020, 30, 914-924.	4.3	23
69	Hygroscopicity of Organic Compounds as a Function of Carbon Chain Length and Carboxyl, Hydroperoxy, and Carbonyl Functional Groups. Journal of Physical Chemistry A, 2017, 121, 5164-5174.	2.5	21
70	Autoxidation of Limonene Emitted in a University Art Museum. Environmental Science and Technology Letters, 2019, 6, 520-524.	8.7	21
71	Identification and Yields of 1,4-Hydroxynitrates Formed from the Reactions of C₈â€“C₁₆ <i>n</i>-Alkanes with OH Radicals in the Presence of NO_{<i>x</i>}. Journal of Physical Chemistry A, 2014, 118, 8797-8806.	2.5	20
72	Products and Secondary Organic Aerosol Yields from the OH and NO₃ Radical-Initiated Oxidation of Resorcinol. ACS Earth and Space Chemistry, 2019, 3, 1248-1259.	2.7	20

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73	Products and Mechanism of the Reaction of 1-Pentadecene with NO₃ Radicals and the Effect of a â"ONO₂ Group on Alkoxy Radical Decomposition. Journal of Physical Chemistry A, 2015, 119, 10684-10696.	2.5	19
74	Kinetics of Acid-Catalyzed Dehydration of Cyclic Hemiacetals in Organic Aerosol Particles in Equilibrium with Nitric Acid Vapor. Journal of Physical Chemistry A, 2016, 120, 2561-2568.	2.5	18
75	Measurements of Kinetics and Equilibria for the Condensed Phase Reactions of Hydroperoxides with Carbonyls to Form Peroxyhemiacetals. ACS Earth and Space Chemistry, 2020, 4, 467-475.	2.7	18
76	Thermal desorption behavior of hemiacetal, acetal, ether, and ester oligomers. Aerosol Science and Technology, 2019, 53, 473-484.	3.1	17
77	Secondary Electron Yield Measurements as a Means for Probing Organic Films on Aerosol Particles. Aerosol Science and Technology, 1998, 28, 77-90.	3.1	16
78	Effect of the Keto Group on Yields and Composition of Organic Aerosol Formed from OH Radical-Initiated Reactions of Ketones in the Presence of NO_x. Journal of Physical Chemistry A, 2016, 120, 6978-6989.	2.5	16
79	Observational evidence for pollutionâ€influenced selective uptake contributing to biogenic secondary organic aerosols in the southeastern U.S.. Geophysical Research Letters, 2017, 44, 8056-8064.	4.0	16
80	Microscale spectrophotometric methods for quantification of functional groups in oxidized organic aerosol. Aerosol Science and Technology, 2016, 50, 881-892.	3.1	15
81	Identification and quantification of oxidized organic aerosol compounds using derivatization, liquid chromatography, and chemical ionization mass spectrometry. Aerosol Science and Technology, 2017, 51, 342-353.	3.1	15
82	Regional Similarities and NO x â€Related Increases in Biogenic Secondary Organic Aerosol in Summertime Southeastern United States. Journal of Geophysical Research D: Atmospheres, 2018, 123, 10620-10636.	3.3	14
83	Gas- and Particle-Phase Products and Their Mechanisms of Formation from the Reaction of Î"-3-Carene with NO₃ Radicals. Journal of Physical Chemistry A, 2021, 125, 10207-10222.	2.5	12
84	Effect of the Hydroxyl Group on Yields and Composition of Organic Aerosol Formed from OH Radical-Initiated Reactions of Alcohols in the Presence of NO_x. ACS Earth and Space Chemistry, 2019, 3, 413-423.	2.7	11
85	How should we define an indoor surface?. Indoor Air, 2022, 32, e12955.	4.3	11
86	Investigation of the formation of benzoyl peroxide, benzoic anhydride, and other potential aerosol products from gasâ€"phase reactions of benzoylperoxy radicals. Atmospheric Environment, 2016, 130, 202-210.	4.1	9
87	Nature's plasticized aerosols. Nature Geoscience, 2016, 9, 7-8.	12.9	7
88	Sources of Gas-Phase Species in an Art Museum from Comprehensive Real-Time Measurements. ACS Earth and Space Chemistry, 2021, 5, 2252-2267.	2.7	7
89	Determining Activity Coefficients of SOA from Isothermal Evaporation in a Laboratory Chamber. Environmental Science and Technology Letters, 2021, 8, 212-217.	8.7	7
90	Comparison of methods of functional group analysis using results from laboratory and field aerosol measurements. Aerosol Science and Technology, 2021, 55, 1042-1058.	3.1	6

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91	Minimizing Errors in Measured Yields of Particle-Phase Products Formed in Environmental Chamber Reactions: Revisiting the Yields of Î²-Hydroxynitrates Formed from 1-Alkene + OH/NO_x Reactions. ACS Earth and Space Chemistry, 2021, 5, 690-702.	2.7	5
92	Kinetics of oligomer-forming reactions involving the major functional groups present in atmospheric secondary organic aerosol particles. Environmental Sciences: Processes and Impacts, 2023, 25, 214-228.	3.5	5
93	Branching Ratios and Rate Constants for Decomposition and Isomerization of Î²-Hydroxyalkoxy Radicals Formed from OH Radical-Initiated Reactions of C₆â€“C₁₃ 2-Methyl-1-Alkenes in the Presence of NO_x. Journal of Physical Chemistry A, 2019, 123, 7839-7846.	2.5	4
94	Development and application of a low-cost vaporizer for rapid, quantitative, in situ addition of organic gases and particles to an environmental chamber. Aerosol Science and Technology, 2020, 54, 1567-1578.	3.1	4
95	Effect of the nitrate group on yields and composition of secondary organic aerosol formed from reactions of alkyl nitrates with OH radicals in the presence of NO_x. Aerosol Science and Technology, 2020, 54, 1070-1082.	3.1	4
96	Measurements of the partitioning of nitric acid and sulfuric acid in aqueous/organic phase-separated systems. Environmental Science Atmospheres, 2021, 1, 93-103.	2.4	4
97	Comprehensive Analysis of Products and the Development of a Quantitative Mechanism for the OH Radical-Initiated Oxidation of 1-Alkenes in the Presence of NOx. Journal of Physical Chemistry A, 2021, 125, 5829-5840.	2.5	4
98	A Tribute to Peter McMurry. Aerosol Science and Technology, 2018, 52, 1083-1084.	3.1	0