

Peter F Decarlo

List of Publications by Year in descending order

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113
papers

27,273
citations

16451

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20961

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177
all docs

177
docs citations

177
times ranked

10015
citing authors

#	ARTICLE	IF	CITATIONS
1	Contrasting Chemical Complexity and the Reactive Organic Carbon Budget of Indoor and Outdoor Air. <i>Environmental Science & Technology</i> , 2022, 56, 109-118.	10.0	13
2	CFC-11 measurements in China, Nepal, Pakistan, Saudi Arabia and South Korea (1998–2018): Urban, landfill fire and garbage burning sources. <i>Environmental Chemistry</i> , 2022, 18, 370-392.	1.5	0
3	Source and Chemistry of Hydroxymethanesulfonate (HMS) in Fairbanks, Alaska. <i>Environmental Science & Technology</i> , 2022, 56, 7657-7667.	10.0	14
4	Pre-monsoon submicron aerosol composition and source contribution in the Kathmandu Valley, Nepal. <i>Environmental Science Atmospheres</i> , 2022, 2, 978-999.	2.4	4
5	Real-time organic aerosol chemical speciation in the indoor environment using extractive electrospray ionization mass spectrometry. <i>Indoor Air</i> , 2021, 31, 141-155.	4.3	29
6	Wintertime Air Quality in Lumbini, Nepal: Sources of Fine Particle Organic Carbon. <i>ACS Earth and Space Chemistry</i> , 2021, 5, 226-238.	2.7	11
7	Emerging investigator series: chemical and physical properties of organic mixtures on indoor surfaces during HOMEChem. <i>Environmental Sciences: Processes and Impacts</i> , 2021, 23, 559-568.	3.5	12
8	Indoor black carbon and brown carbon concentrations from cooking and outdoor penetration: insights from the HOMEChem study. <i>Environmental Sciences: Processes and Impacts</i> , 2021, 23, 1476-1487.	3.5	10
9	Urban Emissions of Nitrogen Oxides, Carbon Monoxide, and Methane Determined from Ground-Based Measurements in Philadelphia. <i>Environmental Science & Technology</i> , 2021, 55, 4532-4541.	10.0	7
10	Chemical transport models often underestimate inorganic aerosol acidity in remote regions of the atmosphere. <i>Communications Earth & Environment</i> , 2021, 2, .	6.8	32
11	Improving Predictions of Indoor Aerosol Concentrations of Outdoor Origin by Considering the Phase Change of Semivolatile Material Driven by Temperature and Mass-Loading Gradients. <i>Environmental Science & Technology</i> , 2021, 55, 9000-9011.	10.0	10
12	Quantification of cooking organic aerosol in the indoor environment using aerodyne aerosol mass spectrometers. <i>Aerosol Science and Technology</i> , 2021, 55, 1099-1114.	3.1	20
13	Large Emissions of Low-Volatility Siloxanes during Residential Oven Use. <i>Environmental Science and Technology Letters</i> , 2021, 8, 519-524.	8.7	16
14	Secondary organic aerosols from anthropogenic volatile organic compounds contribute substantially to air pollution mortality. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 11201-11224.	4.9	60
15	Spatial and temporal scales of variability for indoor air constituents. <i>Communications Chemistry</i> , 2021, 4, .	4.5	26
16	Modeling the Removal of Water-Soluble Trace Gases from Indoor Air via Air Conditioner Condensate. <i>Environmental Science & Technology</i> , 2021, 55, 10987-10993.	10.0	8
17	Chemical and Physical Characterization of 3D Printer Aerosol Emissions with and without a Filter Attachment. <i>Environmental Science & Technology</i> , 2020, 54, 947-954.	10.0	21
18	Indoor aerosol water content and phase state in U.S. residences: impacts of relative humidity, aerosol mass and composition, and mechanical system operation. <i>Environmental Sciences: Processes and Impacts</i> , 2020, 22, 2031-2057.	3.5	20

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19	Dark Chemistry during Bleach Cleaning Enhances Oxidation of Organics and Secondary Organic Aerosol Production Indoors. <i>Environmental Science and Technology Letters</i> , 2020, 7, 795-801.	8.7	35
20	Surface Emissions Modulate Indoor SVOC Concentrations through Volatility-Dependent Partitioning. <i>Environmental Science & Technology</i> , 2020, 54, 6751-6760.	10.0	43
21	Indoor Particulate Matter during HOMEChem: Concentrations, Size Distributions, and Exposures. <i>Environmental Science & Technology</i> , 2020, 54, 7107-7116.	10.0	127
22	Ambient air quality in the Kathmandu Valley, Nepal, during the pre-monsoon: concentrations and sources of particulate matter and trace gases. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 2927-2951.	4.9	40
23	Surface reservoirs dominate dynamic gas-surface partitioning of many indoor air constituents. <i>Science Advances</i> , 2020, 6, eaay8973.	10.3	105
24	Multiphase Chemistry Controls Inorganic Chlorinated and Nitrogenated Compounds in Indoor Air during Bleach Cleaning. <i>Environmental Science & Technology</i> , 2020, 54, 1730-1739.	10.0	87
25	Overview of HOMEChem: House Observations of Microbial and Environmental Chemistry. <i>Environmental Sciences: Processes and Impacts</i> , 2019, 21, 1280-1300.	3.5	140
26	Seasonal variation in aerosol composition and concentration upon transport from the outdoor to indoor environment. <i>Environmental Sciences: Processes and Impacts</i> , 2019, 21, 528-547.	3.5	36
27	Observations and Contributions of Real-Time Indoor Ammonia Concentrations during HOMEChem. <i>Environmental Science & Technology</i> , 2019, 53, 8591-8598.	10.0	59
28	Human occupant contribution to secondary aerosol mass in the indoor environment. <i>Environmental Sciences: Processes and Impacts</i> , 2019, 21, 1301-1312.	3.5	32
29	Nepal Ambient Monitoring and Source Testing Experiment (NAMaSTE): emissions of particulate matter from wood- and dung-fueled cooking fires, garbage and crop residue burning, brick kilns, and other sources. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 2259-2286.	4.9	106
30	The importance of blowing snow to halogen-containing aerosol in coastal Antarctica: influence of source region versus wind speed. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 16689-16711.	4.9	19
31	Speciated online PM ₁ from South Asian combustion sources – Part 1: Fuel-based emission factors and size distributions. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 14653-14679.	4.9	38
32	Thirdhand smoke uptake to aerosol particles in the indoor environment. <i>Science Advances</i> , 2018, 4, eaap8368.	10.3	69
33	Real-time transformation of outdoor aerosol components upon transport indoors measured with aerosol mass spectrometry. <i>Indoor Air</i> , 2017, 27, 230-240.	4.3	60
34	A missing source of aerosols in Antarctica – beyond long-range transport, phytoplankton, and photochemistry. <i>Atmospheric Chemistry and Physics</i> , 2017, 17, 1-20.	4.9	173
35	Analysis of local-scale background concentrations of methane and other gas-phase species in the Marcellus Shale. <i>Elementa</i> , 2017, 5, .	3.2	25
36	Contribution of methane to aerosol carbon mass. <i>Atmospheric Environment</i> , 2016, 141, 41-47.	4.1	12

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37	Ubiquity of organic nitrates from nighttime chemistry in the European submicron aerosol. <i>Geophysical Research Letters</i> , 2016, 43, 7735-7744.	4.0	182
38	Nepal Ambient Monitoring and Source Testing Experiment (NAMaSTE): emissions of trace gases and light-absorbing carbon from wood and dung cooking fires, garbage and crop residue burning, brick kilns, and other sources. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 11043-11081.	4.9	131
39	Atmospheric Emission Characterization of Marcellus Shale Natural Gas Development Sites. <i>Environmental Science & Technology</i> , 2015, 49, 7012-7020.	10.0	57
40	Spatial Variation of Aerosol Chemical Composition and Organic Components Identified by Positive Matrix Factorization in the Barcelona Region. <i>Environmental Science & Technology</i> , 2015, 49, 10421-10430.	10.0	24
41	Organic aerosol components derived from 25 AMS data sets across Europe using a consistent ME-2 based source apportionment approach. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 6159-6176.	4.9	308
42	Black carbon physical properties and mixing state in the European megacity Paris. <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 5831-5856.	4.9	174
43	Primary and secondary organic aerosol origin by combined gas-particle phase source apportionment. <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 8411-8426.	4.9	96
44	Wintertime aerosol chemical composition and source apportionment of the organic fraction in the metropolitan area of Paris. <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 961-981.	4.9	391
45	Identification of marine and continental aerosol sources in Paris using high resolution aerosol mass spectrometry. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013, 118, 1950-1963.	3.3	142
46	OH clock determination by proton transfer reaction mass spectrometry at an environmental chamber. <i>Atmospheric Measurement Techniques</i> , 2012, 5, 647-656.	3.1	114
47	Aging of biogenic secondary organic aerosol via gas-phase OH radical reactions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 13503-13508.	7.1	251
48	Identification and quantification of organic aerosol from cooking and other sources in Barcelona using aerosol mass spectrometer data. <i>Atmospheric Chemistry and Physics</i> , 2012, 12, 1649-1665.	4.9	449
49	Aqueous phase processing of secondary organic aerosol from isoprene photooxidation. <i>Atmospheric Chemistry and Physics</i> , 2012, 12, 5879-5895.	4.9	59
50	A new method to discriminate secondary organic aerosols from different sources using high-resolution aerosol mass spectra. <i>Atmospheric Chemistry and Physics</i> , 2012, 12, 2189-2203.	4.9	32
51	Organic molecular markers and signature from wood combustion particles in winter ambient aerosols: aerosol mass spectrometer (AMS) and high time-resolved GC-MS measurements in Augsburg, Germany. <i>Atmospheric Chemistry and Physics</i> , 2012, 12, 6113-6128.	4.9	52
52	Time-Resolved Characterization of Primary Emissions from Residential Wood Combustion Appliances. <i>Environmental Science & Technology</i> , 2012, 46, 11418-11425.	10.0	57
53	Online characterization of regulated and unregulated gaseous and particulate exhaust emissions from two-stroke mopeds: A chemometric approach. <i>Analytica Chimica Acta</i> , 2012, 717, 28-38.	5.4	39
54	Pollutant Emissions and Energy Efficiency under Controlled Conditions for Household Biomass Cookstoves and Implications for Metrics Useful in Setting International Test Standards. <i>Environmental Science & Technology</i> , 2012, 46, 10827-10834.	10.0	404

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55	Application of Modern Online Instrumentation for Chemical Analysis of Gas and Particulate Phases of Exhaust at the European Commission Heavy-Duty Vehicle Emission Laboratory. <i>Analytical Chemistry</i> , 2011, 83, 67-76.	6.5	21
56	Modeling the Multiday Evolution and Aging of Secondary Organic Aerosol During MILAGRO 2006. <i>Environmental Science & Technology</i> , 2011, 45, 3496-3503.	10.0	90
57	Airborne cloud condensation nuclei measurements during the 2006 Texas Air Quality Study. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	91
58	Relating hygroscopicity and composition of organic aerosol particulate matter. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 1155-1165.	4.9	326
59	Volatility and hygroscopicity of aging secondary organic aerosol in a smog chamber. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 11477-11496.	4.9	119
60	The 2005 Study of Organic Aerosols at Riverside (SOAR-1): instrumental intercomparisons and fine particle composition. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 12387-12420.	4.9	129
61	Exploring the vertical profile of atmospheric organic aerosol: comparing 17 aircraft field campaigns with a global model. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 12673-12696.	4.9	240
62	Spatial variation of chemical composition and sources of submicron aerosol in Zurich during wintertime using mobile aerosol mass spectrometer data. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 7465-7482.	4.9	58
63	Importance of secondary sources in the atmospheric budgets of formic and acetic acids. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 1989-2013.	4.9	266
64	Source apportionment of size and time resolved trace elements and organic aerosols from an urban courtyard site in Switzerland. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 8945-8963.	4.9	90
65	Aerosol and trace gas vehicle emission factors measured in a tunnel using an Aerosol Mass Spectrometer and other on-line instrumentation. <i>Atmospheric Environment</i> , 2011, 45, 2182-2192.	4.1	73
66	Relating cloud condensation nuclei activity and oxidation level of α -pinene secondary organic aerosols. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a.	3.3	57
67	Changes of hygroscopicity and morphology during ageing of diesel soot. <i>Environmental Research Letters</i> , 2011, 6, 034026.	5.2	138
68	Investigations of primary and secondary particulate matter of different wood combustion appliances with a high-resolution time-of-flight aerosol mass spectrometer. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 5945-5957.	4.9	215
69	Recent Developments in the Mass Spectrometry of Atmospheric Aerosols. <i>European Journal of Mass Spectrometry</i> , 2010, 16, 389-395.	1.0	10
70	Impact of aftertreatment devices on primary emissions and secondary organic aerosol formation potential from in-use diesel vehicles: results from smog chamber experiments. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 11545-11563.	4.9	178
71	Absorption Angstrom Exponent in AERONET and related data as an indicator of aerosol composition. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 1155-1169.	4.9	554
72	Investigation of the correlation between odd oxygen and secondary organic aerosol in Mexico City and Houston. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 8947-8968.	4.9	107

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73	Measurement of the ambient organic aerosol volatility distribution: application during the Finokalia Aerosol Measurement Experiment (FAME-2008). <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 12149-12160.	4.9	81
74	Measured and predicted aerosol light scattering enhancement factors at the high alpine site Jungfrauoch. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 2319-2333.	4.9	92
75	Aged organic aerosol in the Eastern Mediterranean: the Finokalia Aerosol Measurement Experiment "2008. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 4167-4186.	4.9	132
76	Investigation of the sources and processing of organic aerosol over the Central Mexican Plateau from aircraft measurements during MILAGRO. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 5257-5280.	4.9	325
77	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. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 5315-5341.	4.9	182
78	Impact of Mexico City emissions on regional air quality from MOZART-4 simulations. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 6195-6212.	4.9	82
79	Measured and modelled cloud condensation nuclei number concentration at the high alpine site Jungfrauoch. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 7891-7906.	4.9	104
80	Modeling organic aerosols in a megacity: potential contribution of semi-volatile and intermediate volatility primary organic compounds to secondary organic aerosol formation. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 5491-5514.	4.9	340
81	Evaluation of the particle measurement programme (PMP) protocol to remove the vehicles' exhaust aerosol volatile phase. <i>Science of the Total Environment</i> , 2010, 408, 5106-5116.	8.0	65
82	Organic aerosol components observed in Northern Hemispheric datasets from Aerosol Mass Spectrometry. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 4625-4641.	4.9	908
83	Characterization of aerosol chemical composition with aerosol mass spectrometry in Central Europe: an overview. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 10453-10471.	4.9	261
84	A simplified description of the evolution of organic aerosol composition in the atmosphere. <i>Geophysical Research Letters</i> , 2010, 37, .	4.0	412
85	Oxidative Potential of Logwood and Pellet Burning Particles Assessed by a Novel Profluorescent Nitroxide Probe. <i>Environmental Science & Technology</i> , 2010, 44, 6601-6607.	10.0	63
86	Evolution of Organic Aerosols in the Atmosphere. <i>Science</i> , 2009, 326, 1525-1529.	12.6	3,374
87	Organic aerosol formation in urban and industrial plumes near Houston and Dallas, Texas. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	230
88	Evaluating simulated primary anthropogenic and biomass burning organic aerosols during MILAGRO: implications for assessing treatments of secondary organic aerosols. <i>Atmospheric Chemistry and Physics</i> , 2009, 9, 6191-6215.	4.9	138
89	Biomass burning and urban air pollution over the Central Mexican Plateau. <i>Atmospheric Chemistry and Physics</i> , 2009, 9, 4929-4944.	4.9	138
90	Emissions from biomass burning in the Yucatan. <i>Atmospheric Chemistry and Physics</i> , 2009, 9, 5785-5812.	4.9	433

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91	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.	4.9	525
92	Aerosol optical properties relevant to regional remote sensing of CCN activity and links to their organic mass fraction: airborne observations over Central Mexico and the US West Coast during MILAGRO/INTEX-B. Atmospheric Chemistry and Physics, 2009, 9, 6727-6742.	4.9	76
93	Chemically-resolved aerosol volatility measurements from two megacity field studies. Atmospheric Chemistry and Physics, 2009, 9, 7161-7182.	4.9	289
94	Evolution of Asian aerosols during transpacific transport in INTEX-B. Atmospheric Chemistry and Physics, 2009, 9, 7257-7287.	4.9	170
95	Loading-dependent elemental composition of α -pinene SOA particles. Atmospheric Chemistry and Physics, 2009, 9, 771-782.	4.9	272
96	Observations of heterogeneous reactions between Asian pollution and mineral dust over the Eastern North Pacific during INTEX-B. Atmospheric Chemistry and Physics, 2009, 9, 8283-8308.	4.9	99
97	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
98	Apportionment of Primary and Secondary Organic Aerosols in Southern California during the 2005 Study of Organic Aerosols in Riverside (SOAR-1). Environmental Science & Technology, 2008, 42, 7655-7662.	10.0	273
99	Design and Operation of a Pressure-Controlled Inlet for Airborne Sampling with an Aerodynamic Aerosol Lens. Aerosol Science and Technology, 2008, 42, 465-471.	3.1	122
100	Total observed organic carbon (TOOC) in the atmosphere: a synthesis of North American observations. Atmospheric Chemistry and Physics, 2008, 8, 2007-2025.	4.9	94
101	Fast airborne aerosol size and chemistry measurements above Mexico City and Central Mexico during the MILAGRO campaign. Atmospheric Chemistry and Physics, 2008, 8, 4027-4048.	4.9	411
102	Cloud Activating Properties of Aerosol Observed during CELTIC. Journals of the Atmospheric Sciences, 2007, 64, 441-459.	1.7	81
103	Demonstration of a VUV Lamp Photoionization Source for Improved Organic Speciation in an Aerosol Mass Spectrometer. Aerosol Science and Technology, 2007, 41, 828-839.	3.1	50
104	Ubiquity and dominance of oxygenated species in organic aerosols in anthropogenically-influenced Northern Hemisphere midlatitudes. Geophysical Research Letters, 2007, 34, .	4.0	1,773
105	Prediction of cloud condensation nucleus number concentration using measurements of aerosol size distributions and composition and light scattering enhancement due to humidity. Journal of Geophysical Research, 2007, 112, .	3.3	119
106	Elemental Analysis of Organic Species with Electron Ionization High-Resolution Mass Spectrometry. Analytical Chemistry, 2007, 79, 8350-8358.	6.5	490
107	Chemical and microphysical characterization of ambient aerosols with the aerodyne aerosol mass spectrometer. Mass Spectrometry Reviews, 2007, 26, 185-222.	5.4	1,708
108	Field-Deployable, High-Resolution, Time-of-Flight Aerosol Mass Spectrometer. Analytical Chemistry, 2006, 78, 8281-8289.	6.5	1,968

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109	Characterization of ambient aerosols in Mexico City during the MCMA-2003 campaign with Aerosol Mass Spectrometry: results from the CENICA Supersite. <i>Atmospheric Chemistry and Physics</i> , 2006, 6, 925-946.	4.9	341
110	A New Time-of-Flight Aerosol Mass Spectrometer (TOF-AMS)â€™Instrument Description and First Field Deployment. <i>Aerosol Science and Technology</i> , 2005, 39, 637-658.	3.1	719
111	Particle Morphology and Density Characterization by Combined Mobility and Aerodynamic Diameter Measurements. Part 2: Application to Combustion-Generated Soot Aerosols as a Function of Fuel Equivalence Ratio. <i>Aerosol Science and Technology</i> , 2004, 38, 1206-1222.	3.1	212
112	Particle Morphology and Density Characterization by Combined Mobility and Aerodynamic Diameter Measurements. Part 1: Theory. <i>Aerosol Science and Technology</i> , 2004, 38, 1185-1205.	3.1	811
113	Particle Morphology and Density Characterization by Combined Mobility and Aerodynamic Diameter Measurements. Part 1: Theory. <i>Aerosol Science and Technology</i> , 2004, 38, 1185-1205.	3.1	254