David C Beddows

List of Publications by Year
in descending order

112 papers	6,950 citations	61945 43 h-index	71651 76 g-index
113 all docs	113 docs citations	113 times ranked	6695 citing authors

#	Article	IF	Citations
1	Mobility particle size spectrometers: harmonization of technical standards and data structure to facilitate high quality long-term observations of atmospheric particle number size distributions. Atmospheric Measurement Techniques, 2012, 5, 657-685.	1.2	689
2	General overview: European Integrated project on Aerosol Cloud Climate and Air Quality interactions (EUCAARI) â€“ integrating aerosol research from nano to global scales. Atmospheric Chemistry and Physics, 2011, 11, 13061-13143.	1.9	278
3	Number size distributions and seasonality of submicron particles in Europe 2008â€“2009. Atmospheric Chemistry and Physics, 2011, 11, 5505-5538.	1.9	214
4	Ozone levels in European and USA cities are increasing more than at rural sites, while peak values are decreasing. Environmental Pollution, 2014, 192, 295-299.	3.7	207
5	Application of laser-induced breakdown spectroscopy to <italic>in situ</italic> analysis of liquid samples. Optical Engineering, 2000, 39, 2248.	0.5	202
6	PMF Analysis of Wide-Range Particle Size Spectra Collected on a Major Highway. Environmental Science & Technology, 2011, 45, 5522-5528.	4.6	178
7	Size distribution, mixing state and source apportionment of black carbon aerosol in London during wintertime. Atmospheric Chemistry and Physics, 2014, 14, 10061-10084.	1.9	171
8	Traffic and nucleation events as main sources of ultrafine particles in high-insolation developed world cities. Atmospheric Chemistry and Physics, 2015, 15, 5929-5945.	1.9	161
9	Intercomparison and evaluation of global aerosol microphysical properties among AeroCom models of a range of complexity. Atmospheric Chemistry and Physics, 2014, 14, 4679-4713.	1.9	148
10	A European aerosol phenomenology-5: Climatology of black carbon optical properties at 9 regional background sites across Europe. Atmospheric Environment, 2016, 145, 346-364.	1.9	132
11	Source apportionment of fine and coarse particles at a roadside and urban background site in London during the 2012 summer ClearfLo campaign. Environmental Pollution, 2017, 220, 766-778.	3.7	125
12	Atmospheric chemistry and physics in the atmosphere of a developed megacity (London): an overview of the REPARTEE experiment and its conclusions. Atmospheric Chemistry and Physics, 2012, 12, 3065-3114.	1.9	124
13	Cluster Analysis of Rural, Urban, and Curbside Atmospheric Particle Size Data. Environmental Science & Technology, 2009, 43, 4694-4700.	4.6	118
14	Global analysis of continental boundary layer new particle formation based on long-term measurements. Atmospheric Chemistry and Physics, 2018, 18, 14737-14756.	1.9	113
15	Ultrafine particles and PM2.5 in the air of cities around the world: Are they representative of each other?. Environment International, 2019, 129, 118-135.	4.8	110
16	Quantitative laser-induced breakdown spectroscopy analysis of calcified tissue samples. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2001, 56, 865-875.	1.5	108
17	Source apportionment of particle number size distribution in urban background and traffic stations in four European cities. Environment International, 2020, 135, 105345.	4.8	106
18	Meteorology, Air Quality, and Health in London: The ClearfLo Project. Bulletin of the American Meteorological Society, 2015, 96, 779-804.	1.7	105

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19	PM10 and PM2.5 emission factors for non-exhaust particles from road vehicles: Dependence upon vehicle mass and implications for battery electric vehicles. Atmospheric Environment, 2021, 244, 117886.	1.9	102
20	Arctic sea ice melt leads to atmospheric new particle formation. Scientific Reports, 2017, 7, 3318.	1.6	101
21	Remarkable dynamics of nanoparticles in the urban atmosphere. Atmospheric Chemistry and Physics, 2011, 11, 6623-6637.	1.9	100
22	Comparison of methods for evaluation of wood smoke and estimation of UK ambient concentrations. Atmospheric Chemistry and Physics, 2012, 12, 8271-8283.	1.9	96
23	Particulate Oxidative Burden Associated with Firework Activity. Environmental Science & Technology, 2010, 44, 8295-8301.	4.6	95
24	Introduction to the special issue â€œIn-depth study of air pollution sources and processes within Beijing and its surrounding region (APHH-Beijing)â€. Atmospheric Chemistry and Physics, 2019, 19, 7519-7546.	1.9	95
25	Mass and number size distributions of particulate matter components: Comparison of an industrial site and an urban background site. Science of the Total Environment, 2014, 475, 29-38.	3.9	92
26	Single-pollen analysis by laser-induced breakdown spectroscopy and Raman microscopy. Applied Optics, 2003, 42, 6119.	2.1	90
27	Receptor modelling of both particle composition and size distribution from a background site in London, UK. Atmospheric Chemistry and Physics, 2015, 15, 10107-10125.	1.9	87
28	Laser-induced breakdown spectroscopy: a tool for real-time, in vitro and in vivo identification of carious teeth. BMC Oral Health, 2001, 1, 1.	0.8	84
29	Sensitive and selective spectrochemical analysis of metallic samples: the combination of laser-induced breakdown spectroscopy and laser-induced fluorescence spectroscopy. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2001, 56, 947-960.	1.5	83
30	An evaluation of some issues regarding the use of aethalometers to measure woodsmoke concentrations. Atmospheric Environment, 2013, 80, 540-548.	1.9	79
31	Sources and contributions of wood smoke during winter in London: assessing local and regional influences. Atmospheric Chemistry and Physics, 2015, 15, 3149-3171.	1.9	76
32	Receptor modelling of airborne particulate matter in the vicinity of a major steelworks site. Science of the Total Environment, 2014, 490, 488-500.	3.9	72
33	Urban aerosol size distributions over the Mediterranean city of Barcelona, NE Spain. Atmospheric Chemistry and Physics, 2012, 12, 10693-10707.	1.9	67
34	Characteristics of tyre dust in polluted air: Studies by single particle mass spectrometry (ATOFMS). Atmospheric Environment, 2014, 94, 224-230.	1.9	67
35	The North Atlantic Marine Boundary Layer Experiment(NAMBLEX). Overview of the campaign held at Mace Head, Ireland, in summer 2002. Atmospheric Chemistry and Physics, 2006, 6, 2241-2272.	1.9	65
36	A new methodology to assess the performance and uncertainty of source apportionment models II: The results of two European intercomparison exercises. Atmospheric Environment, 2015, 123, 240-250.	1.9	63

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37	Antarctic sea ice region as a source of biogenic organic nitrogen in aerosols. Scientific Reports, 2017, 7, 6047.	1.6	63
38	Single-Particle Detection Efficiencies of Aerosol Time-of-Flight Mass Spectrometry during the North Atlantic Marine Boundary Layer Experiment. Environmental Science & Technology, 2006, 40, 5029-5035.	4.6	59
39	Single-pulse laser-induced breakdown spectroscopy of samples submerged in water using a single-fibre light delivery system. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2002, 57, 1461-1471.	1.5	58
40	Correlations in the chemical composition of rural background atmospheric aerosol in the UK determined in real time using time-of-flight mass spectrometry. Journal of Environmental Monitoring, 2004, 6, 124.	2.1	58
41	Characterization of individual airborne particles by using aerosol time-of-flight mass spectrometry at Mace Head, Ireland. Journal of Geophysical Research, 2004, 109, n/a-n/a.	3.3	57
42	Comparison of average particle number emission factors for heavy and light duty vehicles derived from rolling chassis dynamometer and field studies. Atmospheric Environment, 2008, 42, 7954-7966.	1.9	54
43	Open ocean and coastal new particle formation from sulfuric acid and amines around the Antarctic Peninsula. Nature Geoscience, 2021, 14, 383-388.	5.4	54
44	Light-absorbing carbon in Europe â€“ measurement and modelling, with a focus on residential wood combustion emissions. Atmospheric Chemistry and Physics, 2013, 13, 8719-8738.	1.9	51
45	Chemical and physical characteristics of aerosol particles at a remote coastal location, Mace Head, Ireland, during NAMBLEX. Atmospheric Chemistry and Physics, 2006, 6, 3289-3301.	1.9	47
46	Phenomenology of high-ozone episodes in NE Spain. Atmospheric Chemistry and Physics, 2017, 17, 2817-2838.	1.9	45
47	Determinants of aerosol lung-deposited surface area variation in an urban environment. Science of the Total Environment, 2015, 517, 38-47.	3.9	44
48	Sources of sub-micrometre particles near aÂmajor international airport. Atmospheric Chemistry and Physics, 2017, 17, 12379-12403.	1.9	43
49	Prospects of real-time single-particle biological aerosol analysis: A comparison between laser-induced breakdown spectroscopy and aerosol time-of-flight mass spectrometry. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2005, 60, 1040-1059.	1.5	42
50	Size distribution of airborne particles controls outcome of epidemiological studies. Science of the Total Environment, 2010, 409, 289-293.	3.9	41
51	Variations in tropospheric submicron particle size distributions across the European continent 2008â€“2009. Atmospheric Chemistry and Physics, 2014, 14, 4327-4348.	1.9	41
52	Local and Regional Components of Aerosol in a Heavily Trafficked Street Canyon in Central London Derived from PMF and Cluster Analysis of Single-Particle ATOFMS Spectra. Environmental Science & Technology, 2015, 49, 3330-3340.	4.6	41
53	Real-world assessment of vehicle air pollutant emissions subset by vehicle type, fuel and EURO class: New findings from the recent UK EDAR field campaigns, and implications for emissions restricted zones. Science of the Total Environment, 2020, 734, 139416.	3.9	41
54	Clinical Application of Laser-Induced Breakdown Spectroscopy to the Analysis of Teeth and Dental Materials. Photomedicine and Laser Surgery, 2000, 18, 281-289.	1.1	39

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55	Novel insights on new particle formation derived from a pan-european observing system. Scientific Reports, 2018, 8, 1482.	1.6	39
56	Design and operation of a two-stage positron accumulator. Review of Scientific Instruments, 2006, 77, 063302.	0.6	38
57	Differential health effects of short-term exposure to source-specific particles in London, U.K.. Environment International, 2016, 97, 246-253.	4.8	38
58	Long-term trends in PM2.5 mass and particle number concentrations in urban air: The impacts of mitigation measures and extreme events due to changing climates. Environmental Pollution, 2020, 263, 114500.	3.7	38
59	Characterization of distinct Arctic aerosol accumulation modes and their sources. Atmospheric Environment, 2018, 183, 1-10.	1.9	36
60	Regions of open water and melting sea ice drive new particle formation in North East Greenland. Scientific Reports, 2018, 8, 6109.	1.6	36
61	Biogenic Sources of Ice Nucleating Particles at the High Arctic Site Villum Research Station. Environmental Science & Technology, 2019, 53, 10580-10590.	4.6	36
62	A statistical analysis of North East Atlantic (submicron) aerosol size distributions. Atmospheric Chemistry and Physics, 2011, 11, 12567-12578.	1.9	35
63	Source apportionment of single particles sampled at the industrially polluted town of Port Talbot, United Kingdom by ATOFMS. Atmospheric Environment, 2014, 97, 155-165.	1.9	35
64	Simplifying aerosol size distributions modes simultaneously detected at four monitoring sites during SAPUSS. Atmospheric Chemistry and Physics, 2014, 14, 2973-2986.	1.9	35
65	Source apportionment of wide range particle size spectra and black carbon collected at the airport of Venice (Italy). Atmospheric Environment, 2016, 139, 56-74.	1.9	35
66	Comparison of three techniques for analysis of data from an Aerosol Time-of-Flight Mass Spectrometer. Atmospheric Environment, 2012, 61, 316-326.	1.9	34
67	Simultaneous Detection of Alkylamines in the Surface Ocean and Atmosphere of the Antarctic Sympagic Environment. ACS Earth and Space Chemistry, 2019, 3, 854-862.	1.2	34
68	Efficacy of Recent Emissions Controls on Road Vehicles in Europe and Implications for Public Health. Scientific Reports, 2017, 7, 1152.	1.6	33
69	Interpretation of particle number size distributions measured across an urban area during the FASTER campaign. Atmospheric Chemistry and Physics, 2019, 19, 39-55.	1.9	32
70	Surface ozone climatology of South Eastern Brazil and the impact of biomass burning events. Journal of Environmental Management, 2019, 252, 109645.	3.8	31
71	An Enhanced Procedure for the Merging of Atmospheric Particle Size Distribution Data Measured Using Electrical Mobility and Time-of-Flight Analysers. Aerosol Science and Technology, 2010, 44, 930-938.	1.5	30
72	Vertical and horizontal distribution of regional new particle formation events in Madrid. Atmospheric Chemistry and Physics, 2018, 18, 16601-16618.	1.9	30

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73	Abiotic and biotic sources influencing spring new particle formation in North East Greenland. Atmospheric Environment, 2018, 190, 126-134.	1.9	30
74	Analysis of new particle formation (NPF) events at nearby rural, urban background and urban roadside sites. Atmospheric Chemistry and Physics, 2019, 19, 5679-5694.	1.9	30
75	Evaporation of traffic-generated nanoparticles during advection from source. Atmospheric Environment, 2016, 125, 1-7.	1.9	29
76	In situ ozone production is highly sensitive to volatile organic compounds in Delhi, India. Atmospheric Chemistry and Physics, 2021, 21, 13609-13630.	1.9	28
77	Presenting SAPUSS: Solving Aerosol Problem by Using Synergistic Strategies in Barcelona, Spain. Atmospheric Chemistry and Physics, 2013, 13, 8991-9019.	1.9	27
78	On the simultaneous deployment of two single-particle mass spectrometers at an urban background and a roadside site during SAPUSS. Atmospheric Chemistry and Physics, 2016, 16, 9693-9710.	1.9	27
79	Molecular insights into new particle formation in Barcelona, Spain. Atmospheric Chemistry and Physics, 2020, 20, 10029-10045.	1.9	27
80	Simultaneous measurements of aerosol size distributions at three sites in the European high Arctic. Atmospheric Chemistry and Physics, 2019, 19, 7377-7395.	1.9	26
81	Observations of highly oxidized molecules and particle nucleation in the atmosphere of Beijing. Atmospheric Chemistry and Physics, 2019, 19, 14933-14947.	1.9	26
82	Diesel exhaust nanoparticles and their behaviour in the atmosphere. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2018, 474, 20180492.	1.0	24
83	Cluster analysis of urban ultrafine particles size distributions. Atmospheric Pollution Research, 2019, 10, 45-52.	1.8	24
84	Bulk deposition close to a Municipal Solid Waste incinerator: One source among many. Science of the Total Environment, 2013, 456-457, 392-403.	3.9	23
85	Detection of brake wear aerosols by aerosol time-of-flight mass spectrometry. Atmospheric Environment, 2016, 129, 167-175.	1.9	23
86	Fine Iron Aerosols Are Internally Mixed with Nitrate in the Urban European Atmosphere. Environmental Science & Technology, 2016, 50, 4212-4220.	4.6	22
87	On the annual variability of Antarctic aerosol size distributions at Halley Research Station. Atmospheric Chemistry and Physics, 2020, 20, 4461-4476.	1.9	21
88	Variability in gaseous elemental mercury at Villum Research Station, Station Nord, in North Greenland from 1999 to 2017. Atmospheric Chemistry and Physics, 2020, 20, 13253-13265.	1.9	20
89	Quantitative analysis of trace metal accumulation in teeth using laser-induced breakdown spectroscopy. Applied Physics A: Materials Science and Processing, 1999, 69, S179-S182.	1.1	19
90	The effect of varying primary emissions on the concentrations of inorganic aerosols predicted by the enhanced UK Photochemical Trajectory Model. Atmospheric Environment, 2013, 69, 211-218.	1.9	19

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91	Size-resolved physico-chemical characterization of diesel exhaust particles and efficiency of exhaust aftertreatment. Atmospheric Environment, 2020, 222, 117021.	1.9	16
92	On the contribution of organics to the North East Atlantic aerosol number concentration. Environmental Research Letters, 2012, 7, 044013.	2.2	15
93	Size-dependent chemical ageing of oleic acid aerosol under dry and humidified conditions. Atmospheric Chemistry and Physics, 2016, 16, 15561-15579.	1.9	15
94	Long-term trends in nitrogen oxides concentrations and on-road vehicle emission factors in Copenhagen, London and Stockholm. Environmental Pollution, 2021, 290, 118105.	3.7	15
95	Laser ablation for mineral analysis in the human body: integration of LIFS with LIBS. , 1999, 3570, 263.		14
96	Identification of specific sources of airborne particles emitted from within a complex industrial (steelworks) site. Atmospheric Environment, 2018, 183, 122-134.	1.9	14
97	Assessing the sources of particles at an urban background site using both regulatory instruments and low-cost sensors â€" a comparative study. Atmospheric Measurement Techniques, 2021, 14, 4139-4155.	1.2	14
98	Source Apportionment of the Lung Dose of Ambient Submicrometre Particulate Matter. Aerosol and Air Quality Research, 2016, 16, 1548-1557.	0.9	13
99	Contribution of Water-Soluble Organic Matter from Multiple Marine Geographic Eco-Regions to Aerosols around Antarctica. Environmental Science & Technology, 2020, 54, 7807-7817.	4.6	13
100	A phenomenology of new particle formation (NPF) at 13 European sites. Atmospheric Chemistry and Physics, 2021, 21, 11905-11925.	1.9	13
101	Receptor modelling of both particle composition and size distribution from a background site in London, UK â€" a two-step approach. Atmospheric Chemistry and Physics, 2019, 19, 4863-4876.	1.9	12
102	An opticalâ€"optical double resonance study of the perturbed O2 d3sÏƒg(1Îg) Rydberg state excited via single rotational levels of the b(1Î£g+) valence state. Journal of Chemical Physics, 2000, 113, 2182-2187.	1.2	9
103	Differentiation of coarse-mode anthropogenic, marine and dust particles in the High Arctic islands of Svalbard. Atmospheric Chemistry and Physics, 2021, 21, 11317-11335.	1.9	7
104	Weakly bound positronâ€"electron pairs in a strong magnetic field. Journal of Physics B: Atomic, Molecular and Optical Physics, 2008, 41, 245003.	0.6	5
105	Application of frustrated total internal reflection devices to analytical laser spectroscopy. Applied Optics, 2003, 42, 6006.	2.1	4
106	Magnetised positronium. Journal of Physics: Conference Series, 2010, 199, 012005.	0.3	3
107	Distinct high molecular weight organic compound (HMW-OC) types in aerosol particles collected at a coastal urban site. Atmospheric Environment, 2017, 171, 118-125.	1.9	3
108	Leaching material from Antarctic seaweeds and penguin guano affects cloud-relevant aerosol production. Science of the Total Environment, 2022, 831, 154772.	3.9	3

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109	Addendum to â€œSingle-pulse laser-induced breakdown spectroscopy of samples submerged in water using a single-fibre light delivery systemâ€• Spectrochimica Acta, Part B: Atomic Spectroscopy, 2003, 58, 583-584.	1.5	2
110	Enhancements to the UK Photochemical Trajectory Model for simulation of secondary inorganic aerosol. Atmospheric Environment, 2012, 57, 278-288.	1.9	2
111	Arctic ship-based evidence of new particle formation events in the Chukchi and East Siberian Seas. Atmospheric Environment, 2020, 223, 117232.	1.9	2
112	Analysis of liquid samples using laser-induced breakdown spectroscopy. , 1998, 3504, 299.		0