

# David C Beddows

## List of Publications by Citations

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112  
papers

5,221  
citations

42  
h-index

69  
g-index

113  
ext. papers

6,129  
ext. citations

6.5  
avg, IF

5.64  
L-index

#	Paper	IF	Citations
112	Mobility particle size spectrometers: harmonization of technical standards and data structure to facilitate high quality long-term observations of atmospheric particle number size distributions. <i>Atmospheric Measurement Techniques</i> , <b>2012</b> , 5, 657-685	4	531
111	General overview: European Integrated project on Aerosol Cloud Climate and Air Quality interactions (EUCAARI) Integrating aerosol research from nano to global scales. <i>Atmospheric Chemistry and Physics</i> , <b>2011</b> , 11, 13061-13143	6.8	231
110	Application of laser-induced breakdown spectroscopy to in situ analysis of liquid samples. <i>Optical Engineering</i> , <b>2000</b> , 39, 2248	1.1	176
109	Number size distributions and seasonality of submicron particles in Europe 2008-2009. <i>Atmospheric Chemistry and Physics</i> , <b>2011</b> , 11, 5505-5538	6.8	172
108	Ozone levels in European and USA cities are increasing more than at rural sites, while peak values are decreasing. <i>Environmental Pollution</i> , <b>2014</b> , 192, 295-9	9.3	163
107	PMF analysis of wide-range particle size spectra collected on a major highway. <i>Environmental Science &amp; Technology</i> , <b>2011</b> , 45, 5522-8	10.3	146
106	Size distribution, mixing state and source apportionment of black carbon aerosol in London during wintertime. <i>Atmospheric Chemistry and Physics</i> , <b>2014</b> , 14, 10061-10084	6.8	127
105	Traffic and nucleation events as main sources of ultrafine particles in high-insolation developed world cities. <i>Atmospheric Chemistry and Physics</i> , <b>2015</b> , 15, 5929-5945	6.8	118
104	Intercomparison and evaluation of global aerosol microphysical properties among AeroCom models of a range of complexity. <i>Atmospheric Chemistry and Physics</i> , <b>2014</b> , 14, 4679-4713	6.8	114
103	Atmospheric chemistry and physics in the atmosphere of a developed megacity (London): an overview of the REPARTEE experiment and its conclusions. <i>Atmospheric Chemistry and Physics</i> , <b>2012</b> , 12, 3065-3114	6.8	102
102	Source apportionment of fine and coarse particles at a roadside and urban background site in London during the 2012 summer ClearLo campaign. <i>Environmental Pollution</i> , <b>2017</b> , 220, 766-778	9.3	94
101	A European aerosol phenomenology-5: Climatology of black carbon optical properties at 9 regional background sites across Europe. <i>Atmospheric Environment</i> , <b>2016</b> , 145, 346-364	5.3	94
100	Cluster analysis of rural, urban, and curbside atmospheric particle size data. <i>Environmental Science &amp; Technology</i> , <b>2009</b> , 43, 4694-700	10.3	90
99	Quantitative laser-induced breakdown spectroscopy analysis of calcified tissue samples. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , <b>2001</b> , 56, 865-875	3.1	88
98	Meteorology, Air Quality, and Health in London: The ClearLo Project. <i>Bulletin of the American Meteorological Society</i> , <b>2015</b> , 96, 779-804	6.1	84
97	Remarkable dynamics of nanoparticles in the urban atmosphere. <i>Atmospheric Chemistry and Physics</i> , <b>2011</b> , 11, 6623-6637	6.8	84
96	Single-pollen analysis by laser-induced breakdown spectroscopy and Raman microscopy. <i>Applied Optics</i> , <b>2003</b> , 42, 6119-32	1.7	79

95	Comparison of methods for evaluation of wood smoke and estimation of UK ambient concentrations. <i>Atmospheric Chemistry and Physics</i> , <b>2012</b> , 12, 8271-8283	6.8	77
94	Introduction to the special issue In-depth study of air pollution sources and processes within Beijing and its surrounding region (APHH-Beijing) <i>Atmospheric Chemistry and Physics</i> , <b>2019</b> , 19, 7519-7546	6.8	73
93	Mass and number size distributions of particulate matter components: comparison of an industrial site and an urban background site. <i>Science of the Total Environment</i> , <b>2014</b> , 475, 29-38	10.2	73
92	Sensitive and selective spectrochemical analysis of metallic samples: the combination of laser-induced breakdown spectroscopy and laser-induced fluorescence spectroscopy. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , <b>2001</b> , 56, 947-960	3.1	73
91	Global analysis of continental boundary layer new particle formation based on long-term measurements. <i>Atmospheric Chemistry and Physics</i> , <b>2018</b> , 18, 14737-14756	6.8	73
90	Particulate oxidative burden associated with firework activity. <i>Environmental Science &amp; Technology</i> , <b>2010</b> , 44, 8295-301	10.3	72
89	An evaluation of some issues regarding the use of aethalometers to measure woodsmoke concentrations. <i>Atmospheric Environment</i> , <b>2013</b> , 80, 540-548	5.3	68
88	Laser-induced breakdown spectroscopy: a tool for real-time, in vitro and in vivo identification of carious teeth. <i>BMC Oral Health</i> , <b>2001</b> , 1, 1	3.7	68
87	Arctic sea ice melt leads to atmospheric new particle formation. <i>Scientific Reports</i> , <b>2017</b> , 7, 3318	4.9	67
86	Receptor modelling of both particle composition and size distribution from a background site in London, UK. <i>Atmospheric Chemistry and Physics</i> , <b>2015</b> , 15, 10107-10125	6.8	63
85	Sources and contributions of wood smoke during winter in London: assessing local and regional influences. <i>Atmospheric Chemistry and Physics</i> , <b>2015</b> , 15, 3149-3171	6.8	61
84	Receptor modelling of airborne particulate matter in the vicinity of a major steelworks site. <i>Science of the Total Environment</i> , <b>2014</b> , 490, 488-500	10.2	60
83	Urban aerosol size distributions over the Mediterranean city of Barcelona, NE Spain. <i>Atmospheric Chemistry and Physics</i> , <b>2012</b> , 12, 10693-10707	6.8	58
82	Ultrafine particles and PM in the air of cities around the world: Are they representative of each other?. <i>Environment International</i> , <b>2019</b> , 129, 118-135	12.9	57
81	A new methodology to assess the performance and uncertainty of source apportionment models II: The results of two European intercomparison exercises. <i>Atmospheric Environment</i> , <b>2015</b> , 123, 240-250	5.3	54
80	Single-particle detection efficiencies of aerosol time-of-flight mass spectrometry during the North Atlantic marine boundary layer experiment. <i>Environmental Science &amp; Technology</i> , <b>2006</b> , 40, 5029-35	10.3	54
79	The North Atlantic Marine Boundary Layer Experiment(NAMBLEX). Overview of the campaign held at Mace Head, Ireland, in summer 2002. <i>Atmospheric Chemistry and Physics</i> , <b>2006</b> , 6, 2241-2272	6.8	54
78	Source apportionment of particle number size distribution in urban background and traffic stations in four European cities. <i>Environment International</i> , <b>2020</b> , 135, 105345	12.9	54

77	Single-pulse laser-induced breakdown spectroscopy of samples submerged in water using a single-fibre light delivery system. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , <b>2002</b> , 57, 1461-1471	3.1	53
76	Characteristics of tyre dust in polluted air: Studies by single particle mass spectrometry (ATOFMS). <i>Atmospheric Environment</i> , <b>2014</b> , 94, 224-230	5.3	49
75	Correlations in the chemical composition of rural background atmospheric aerosol in the UK determined in real time using time-of-flight mass spectrometry. <i>Journal of Environmental Monitoring</i> , <b>2004</b> , 6, 124-33		49
74	Comparison of average particle number emission factors for heavy and light duty vehicles derived from rolling chassis dynamometer and field studies. <i>Atmospheric Environment</i> , <b>2008</b> , 42, 7954-7966	5.3	48
73	Characterization of individual airborne particles by using aerosol time-of-flight mass spectrometry at Mace Head, Ireland. <i>Journal of Geophysical Research</i> , <b>2004</b> , 109, n/a-n/a		45
72	Antarctic sea ice region as a source of biogenic organic nitrogen in aerosols. <i>Scientific Reports</i> , <b>2017</b> , 7, 6047	4.9	43
71	Light-absorbing carbon in Europe [measurement and modelling, with a focus on residential wood combustion emissions. <i>Atmospheric Chemistry and Physics</i> , <b>2013</b> , 13, 8719-8738	6.8	43
70	Chemical and physical characteristics of aerosol particles at a remote coastal location, Mace Head, Ireland, during NAMBLEX. <i>Atmospheric Chemistry and Physics</i> , <b>2006</b> , 6, 3289-3301	6.8	40
69	Prospects of real-time single-particle biological aerosol analysis: A comparison between laser-induced breakdown spectroscopy and aerosol time-of-flight mass spectrometry. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , <b>2005</b> , 60, 1040-1059	3.1	39
68	Determinants of aerosol lung-deposited surface area variation in an urban environment. <i>Science of the Total Environment</i> , <b>2015</b> , 517, 38-47	10.2	35
67	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. <i>Environmental Science &amp; Technology</i> , <b>2015</b> , 49, 3330-40	10.3	35
66	Design and operation of a two-stage positron accumulator. <i>Review of Scientific Instruments</i> , <b>2006</b> , 77, 063302	1.7	35
65	Novel insights on new particle formation derived from a pan-european observing system. <i>Scientific Reports</i> , <b>2018</b> , 8, 1482	4.9	34
64	Size distribution of airborne particles controls outcome of epidemiological studies. <i>Science of the Total Environment</i> , <b>2010</b> , 409, 289-93	10.2	34
63	PM10 and PM2.5 emission factors for non-exhaust particles from road vehicles: Dependence upon vehicle mass and implications for battery electric vehicles. <i>Atmospheric Environment</i> , <b>2021</b> , 244, 117886	5.3	34
62	Phenomenology of high-ozone episodes in NE Spain. <i>Atmospheric Chemistry and Physics</i> , <b>2017</b> , 17, 2817-2838	3.8	33
61	Variations in tropospheric submicron particle size distributions across the European continent 2008-2009. <i>Atmospheric Chemistry and Physics</i> , <b>2014</b> , 14, 4327-4348	6.8	31
60	Sources of sub-micrometre particles near a major international airport. <i>Atmospheric Chemistry and Physics</i> , <b>2017</b> , 17, 12379-12403	6.8	31

59	Source apportionment of single particles sampled at the industrially polluted town of Port Talbot, United Kingdom by ATOFMS. <i>Atmospheric Environment</i> , <b>2014</b> , 97, 155-165	5.3	30
58	Differential health effects of short-term exposure to source-specific particles in London, U.K. <i>Environment International</i> , <b>2016</b> , 97, 246-253	12.9	30
57	Comparison of three techniques for analysis of data from an Aerosol Time-of-Flight Mass Spectrometer. <i>Atmospheric Environment</i> , <b>2012</b> , 61, 316-326	5.3	29
56	A statistical analysis of North East Atlantic (submicron) aerosol size distributions. <i>Atmospheric Chemistry and Physics</i> , <b>2011</b> , 11, 12567-12578	6.8	28
55	Clinical application of laser-induced breakdown spectroscopy to the analysis of teeth and dental materials. <i>Photomedicine and Laser Surgery</i> , <b>2000</b> , 18, 281-9		28
54	Simplifying aerosol size distributions modes simultaneously detected at four monitoring sites during SAPUSS. <i>Atmospheric Chemistry and Physics</i> , <b>2014</b> , 14, 2973-2986	6.8	26
53	An Enhanced Procedure for the Merging of Atmospheric Particle Size Distribution Data Measured Using Electrical Mobility and Time-of-Flight Analysers. <i>Aerosol Science and Technology</i> , <b>2010</b> , 44, 930-938 <sup>3,4</sup>		26
52	Source apportionment of wide range particle size spectra and black carbon collected at the airport of Venice (Italy). <i>Atmospheric Environment</i> , <b>2016</b> , 139, 56-74	5.3	25
51	Simultaneous Detection of Alkylamines in the Surface Ocean and Atmosphere of the Antarctic Sympagic Environment. <i>ACS Earth and Space Chemistry</i> , <b>2019</b> , 3, 854-862	3.2	23
50	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. <i>Science of the Total Environment</i> , <b>2020</b> , 734, 139416	10.2	23
49	Efficacy of Recent Emissions Controls on Road Vehicles in Europe and Implications for Public Health. <i>Scientific Reports</i> , <b>2017</b> , 7, 1152	4.9	23
48	Evaporation of traffic-generated nanoparticles during advection from source. <i>Atmospheric Environment</i> , <b>2016</b> , 125, 1-7	5.3	22
47	Presenting SAPUSS: Solving Aerosol Problem by Using Synergistic Strategies in Barcelona, Spain. <i>Atmospheric Chemistry and Physics</i> , <b>2013</b> , 13, 8991-9019	6.8	22
46	Interpretation of particle number size distributions measured across an urban area during the FASTER campaign. <i>Atmospheric Chemistry and Physics</i> , <b>2019</b> , 19, 39-55	6.8	21
45	Regions of open water and melting sea ice drive new particle formation in North East Greenland. <i>Scientific Reports</i> , <b>2018</b> , 8, 6109	4.9	21
44	Abiotic and biotic sources influencing spring new particle formation in North East Greenland. <i>Atmospheric Environment</i> , <b>2018</b> , 190, 126-134	5.3	21
43	Vertical and horizontal distribution of regional new particle formation events in Madrid. <i>Atmospheric Chemistry and Physics</i> , <b>2018</b> , 18, 16601-16618	6.8	21
42	Analysis of new particle formation (NPF) events at nearby rural, urban background and urban roadside sites. <i>Atmospheric Chemistry and Physics</i> , <b>2019</b> , 19, 5679-5694	6.8	20

41	Open ocean and coastal new particle formation from sulfuric acid and amines around the Antarctic Peninsula. <i>Nature Geoscience</i> , <b>2021</b> , 14, 383-388	18.3	20
40	Long-term trends in PM mass and particle number concentrations in urban air: The impacts of mitigation measures and extreme events due to changing climates. <i>Environmental Pollution</i> , <b>2020</b> , 263, 114500	9.3	19
39	On the simultaneous deployment of two single-particle mass spectrometers at an urban background and a roadside site during SAPUSS. <i>Atmospheric Chemistry and Physics</i> , <b>2016</b> , 16, 9693-9710	6.8	19
38	Cluster analysis of urban ultrafine particles size distributions. <i>Atmospheric Pollution Research</i> , <b>2019</b> , 10, 45-52	4.5	19
37	Biogenic Sources of Ice Nucleating Particles at the High Arctic Site Villum Research Station. <i>Environmental Science &amp; Technology</i> , <b>2019</b> , 53, 10580-10590	10.3	18
36	Bulk deposition close to a Municipal Solid Waste incinerator: one source among many. <i>Science of the Total Environment</i> , <b>2013</b> , 456-457, 392-403	10.2	18
35	Quantitative analysis of trace metal accumulation in teeth using laser-induced breakdown spectroscopy. <i>Applied Physics A: Materials Science and Processing</i> , <b>1999</b> , 69, S179-S182	2.6	18
34	Characterization of distinct Arctic aerosol accumulation modes and their sources. <i>Atmospheric Environment</i> , <b>2018</b> , 183, 1-10	5.3	17
33	Fine Iron Aerosols Are Internally Mixed with Nitrate in the Urban European Atmosphere. <i>Environmental Science &amp; Technology</i> , <b>2016</b> , 50, 4212-20	10.3	17
32	Surface ozone climatology of South Eastern Brazil and the impact of biomass burning events. <i>Journal of Environmental Management</i> , <b>2019</b> , 252, 109645	7.9	17
31	The effect of varying primary emissions on the concentrations of inorganic aerosols predicted by the enhanced UK Photochemical Trajectory Model. <i>Atmospheric Environment</i> , <b>2013</b> , 69, 211-218	5.3	17
30	Observations of highly oxidized molecules and particle nucleation in the atmosphere of Beijing. <i>Atmospheric Chemistry and Physics</i> , <b>2019</b> , 19, 14933-14947	6.8	17
29	Diesel exhaust nanoparticles and their behaviour in the atmosphere. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , <b>2018</b> , 474, 20180492	2.4	16
28	Detection of brake wear aerosols by aerosol time-of-flight mass spectrometry. <i>Atmospheric Environment</i> , <b>2016</b> , 129, 167-175	5.3	15
27	On the contribution of organics to the North East Atlantic aerosol number concentration. <i>Environmental Research Letters</i> , <b>2012</b> , 7, 044013	6.2	14
26	Molecular insights into new particle formation in Barcelona, Spain. <i>Atmospheric Chemistry and Physics</i> , <b>2020</b> , 20, 10029-10045	6.8	14
25	On the annual variability of Antarctic aerosol size distributions at Halley Research Station. <i>Atmospheric Chemistry and Physics</i> , <b>2020</b> , 20, 4461-4476	6.8	13
24	Laser ablation for mineral analysis in the human body: integration of LIFS with LIBS <b>1999</b> , 3570, 263		13

23	Simultaneous measurements of aerosol size distributions at three sites in the European high Arctic. <i>Atmospheric Chemistry and Physics</i> , <b>2019</b> , 19, 7377-7395	6.8	12
22	Variability in gaseous elemental mercury at Villum Research Station, Station Nord, in North Greenland from 1999 to 2017. <i>Atmospheric Chemistry and Physics</i> , <b>2020</b> , 20, 13253-13265	6.8	12
21	Size-resolved physico-chemical characterization of diesel exhaust particles and efficiency of exhaust aftertreatment. <i>Atmospheric Environment</i> , <b>2020</b> , 222, 117021	5.3	12
20	Source Apportionment of the Lung Dose of Ambient Submicrometre Particulate Matter. <i>Aerosol and Air Quality Research</i> , <b>2016</b> , 16, 1548-1557	4.6	11
19	Size-dependent chemical ageing of oleic acid aerosol under dry and humidified conditions. <i>Atmospheric Chemistry and Physics</i> , <b>2016</b> , 16, 15561-15579	6.8	10
18	An optical double resonance study of the perturbed $O_2\ d_3s\ \sigma(1g)$ Rydberg state excited via single rotational levels of the $b(1g^+)$ valence state. <i>Journal of Chemical Physics</i> , <b>2000</b> , 113, 2182-2187 <sup>3.9</sup>	3.9	9
17	Contribution of Water-Soluble Organic Matter from Multiple Marine Geographic Eco-Regions to Aerosols around Antarctica. <i>Environmental Science &amp; Technology</i> , <b>2020</b> , 54, 7807-7817	10.3	8
16	Receptor modelling of both particle composition and size distribution from a background site in London, UK – a two-step approach. <i>Atmospheric Chemistry and Physics</i> , <b>2019</b> , 19, 4863-4876	6.8	6
15	Identification of specific sources of airborne particles emitted from within a complex industrial (steelworks) site. <i>Atmospheric Environment</i> , <b>2018</b> , 183, 122-134	5.3	6
14	Weakly bound positron-electron pairs in a strong magnetic field. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , <b>2008</b> , 41, 245003	1.3	5
13	A phenomenology of new particle formation (NPF) at 13 European sites. <i>Atmospheric Chemistry and Physics</i> , <b>2021</b> , 21, 11905-11925	6.8	4
12	Application of frustrated total internal reflection devices to analytical laser spectroscopy. <i>Applied Optics</i> , <b>2003</b> , 42, 6006-15	1.7	3
11	Distinct high molecular weight organic compound (HMW-OC) types in aerosol particles collected at a coastal urban site. <i>Atmospheric Environment</i> , <b>2017</b> , 171, 118-125	5.3	2
10	Enhancements to the UK Photochemical Trajectory Model for simulation of secondary inorganic aerosol. <i>Atmospheric Environment</i> , <b>2012</b> , 57, 278-288	5.3	2
9	Magnetised positronium. <i>Journal of Physics: Conference Series</i> , <b>2010</b> , 199, 012005	0.3	2
8	Addendum to Single-pulse laser-induced breakdown spectroscopy of samples submerged in water using a single-fibre light delivery system. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , <b>2003</b> , 58, 583-584	3.1	2
7	Arctic ship-based evidence of new particle formation events in the Chukchi and East Siberian Seas. <i>Atmospheric Environment</i> , <b>2020</b> , 223, 117232	5.3	2
6	Assessing the sources of particles at an urban background site using both regulatory instruments and low-cost sensors – a comparative study. <i>Atmospheric Measurement Techniques</i> , <b>2021</b> , 14, 4139-4155	4	2

5	In situ ozone production is highly sensitive to volatile organic compounds in Delhi, India. <i>Atmospheric Chemistry and Physics</i> , <b>2021</b> , 21, 13609-13630	6.8	2
4	Long-term trends in nitrogen oxides concentrations and on-road vehicle emission factors in Copenhagen, London and Stockholm. <i>Environmental Pollution</i> , <b>2021</b> , 290, 118105	9.3	2
3	Differentiation of coarse-mode anthropogenic, marine and dust particles in the High Arctic islands of Svalbard. <i>Atmospheric Chemistry and Physics</i> , <b>2021</b> , 21, 11317-11335	6.8	1
2	Analysis of liquid samples using laser-induced breakdown spectroscopy <b>1998</b> , 3504, 299		
1	Leaching material from Antarctic seaweeds and penguin guano affects cloud-relevant aerosol production.. <i>Science of the Total Environment</i> , <b>2022</b> , 154772	10.2	