Laurent Poulain

List of Publications by Year
in descending order

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Version: 2024-02-01

71 papers	4,780 citations	87843 38 h-index	114418 63 g-index

137 all docs	137 docs citations	137 times ranked	4303 citing authors

#	Article	IF	Citations
1	The Effect of Land Use Classification on the Gasâ€Phase and Particle Composition of the Troposphere: Tree Species Versus Forest Type Information. Journal of Geophysical Research D: Atmospheres, 2022, 127, .	1.2	3
2	European aerosol phenomenology â˜’ 8: Harmonised source apportionment of organic aerosol using 22 Year-long ACSM/AMS datasets. Environment International, 2022, 166, 107325.	4.8	41
3	Aerosol Hygroscopicity and its Link to Chemical Composition in a Remote Marine Environment Based on Three Transatlantic Measurements. Environmental Science & Technology, 2022, 56, 9613-9622.	4.6	3
4	Strong Deviations from Thermodynamically Expected Phase Partitioning of Low-Molecular-Weight Organic Acids during One Year of Rural Measurements. ACS Earth and Space Chemistry, 2021, 5, 500-515.	1.2	9
5	Source apportionment and impact of long-range transport on carbonaceous aerosol particles in central Germany during HCCT-2010. Atmospheric Chemistry and Physics, 2021, 21, 3667-3684.	1.9	8
6	A European aerosol phenomenology - 7: High-time resolution chemical characteristics of submicron particulate matter across Europe. Atmospheric Environment: X, 2021, 10, 100108.	0.8	23
7	Particle-Phase Photoreactions of HULIS and TMIs Establish a Strong Source of H₂O₂ and Particulate Sulfate in the Winter North China Plain. Environmental Science & Technology, 2021, 55, 7818-7830.	4.6	24
8	Variability in the mass absorption cross section of black carbon (BC) aerosols is driven by BC internal mixing state at a central European background site (Melpitz, Germany) in winter. Atmospheric Chemistry and Physics, 2021, 21, 635-655.	1.9	20
9	Measurement report: Comparison of airborne, in situ measured, lidar-based, and modeled aerosol optical properties in the central European background â€“ identifying sources of deviations. Atmospheric Chemistry and Physics, 2021, 21, 16745-16773.	1.9	7
10	First insights into northern Africa high-altitude background aerosol chemical composition and source influences. Atmospheric Chemistry and Physics, 2021, 21, 18147-18174.	1.9	4
11	The impact of biomass burning and aqueous-phase processing on air quality: a multi-year source apportionment study in the Po Valley, Italy. Atmospheric Chemistry and Physics, 2020, 20, 1233-1254.	1.9	45
12	Organosulfates in Ambient Aerosol: State of Knowledge and Future Research Directions on Formation, Abundance, Fate, and Importance. Environmental Science & Technology, 2020, 54, 3767-3782.	4.6	109
13	Multi-year ACSM measurements at the central European research station Melpitz (Germany) â€“ PartÂ1: Instrument robustness, quality assurance, and impact of upper size cutoff diameter. Atmospheric Measurement Techniques, 2020, 13, 4973-4994.	1.2	20
14	Development of a protocol for the auto-generation of explicit aqueous-phase oxidation schemes of organic compounds. Atmospheric Chemistry and Physics, 2019, 19, 9209-9239.	1.9	28
15	The second ACTRIS inter-comparison (2016) for Aerosol Chemical Speciation Monitors (ACSM): Calibration protocols and instrument performance evaluations. Aerosol Science and Technology, 2019, 53, 830-842.	1.5	35
16	EURODELTA III exercise: An evaluation of air quality modelsâ€™ capacity to reproduce the carbonaceous aerosol. Atmospheric Environment: X, 2019, 2, 100018.	0.8	11
17	Helicopter-borne observations of the continental background aerosol in combination with remote sensing and ground-based measurements. Atmospheric Chemistry and Physics, 2018, 18, 1263-1290.	1.9	23
18	Long-term cloud condensation nuclei number concentration, particle number size distribution and chemical composition measurements at regionally representative observatories. Atmospheric Chemistry and Physics, 2018, 18, 2853-2881.	1.9	108

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19	Novel insights on new particle formation derived from a pan-european observing system. Scientific Reports, 2018, 8, 1482.	1.6	39
20	Measurements of PM10 ions and trace gases with the online system MARGA at the research station Melpitz in Germany â€“ A five-year study. Journal of Atmospheric Chemistry, 2018, 75, 33-70.	1.4	37
21	Simulation of atmospheric organic aerosol using its volatilityâ€“oxygen-content distribution during the PEGASOS 2012 campaign. Atmospheric Chemistry and Physics, 2018, 18, 10759-10772.	1.9	3
22	Source apportionment of the organic aerosol over the Atlantic Ocean from 53Â°â€‰N to 53Â°â€‰S: significant contributions from marine emissions and long-range transport. Atmospheric Chemistry and Physics, 2018, 18, 18043-18062.	1.9	32
23	Kinetic Modeling of SOA Formation for $$alpha $$ Î± - and $$eta $$ Î² -Pinene. Springer Proceedings in Complexity, 2018, , 559-564.	0.2	0
24	Collocated observations of cloud condensation nuclei, particle size distributions, and chemical composition. Scientific Data, 2017, 4, 170003.	2.4	44
25	Latitudinal and Seasonal Distribution of Particulate MSA over the Atlantic using a Validated Quantification Method with HR-ToF-AMS. Environmental Science & Technology, 2017, 51, 418-426.	4.6	43
26	Real-time detection of highly oxidized organosulfates and BSOA marker compounds during the F-BEAChÂ2014 field study. Atmospheric Chemistry and Physics, 2017, 17, 1453-1469.	1.9	36
27	Modelling winter organic aerosol at the European scale with CAMx: evaluation and source apportionment with a VBS parameterization based on novel wood burning smog chamber experiments. Atmospheric Chemistry and Physics, 2017, 17, 7653-7669.	1.9	58
28	Organic aerosol source apportionment by offline-AMS over a full year in Marseille. Atmospheric Chemistry and Physics, 2017, 17, 8247-8268.	1.9	75
29	Characterization and source apportionment of organic aerosol using offline aerosol mass spectrometry. Atmospheric Measurement Techniques, 2016, 9, 23-39.	1.2	110
30	Ubiquity of organic nitrates from nighttime chemistry in the European submicron aerosol. Geophysical Research Letters, 2016, 43, 7735-7744.	1.5	182
31	Vertical profiling of aerosol hygroscopic properties in the planetary boundary layer during the PEGASOS campaigns. Atmospheric Chemistry and Physics, 2016, 16, 7295-7315.	1.9	17
32	Evidence for ambient dark aqueous SOA formation in the Po Valley, Italy. Atmospheric Chemistry and Physics, 2016, 16, 8095-8108.	1.9	39
33	Evaluation of European air quality modelled by CAMx including the volatility basis set scheme. Atmospheric Chemistry and Physics, 2016, 16, 10313-10332.	1.9	47
34	Size-resolved aerosol composition at an urban and a rural site in the Po Valley in summertime: implications for secondary aerosol formation. Atmospheric Chemistry and Physics, 2016, 16, 10879-10897.	1.9	34
35	Regional air quality in Leipzig, Germany: detailed source apportionment of size-resolved aerosol particles and comparison with the year 2000. Faraday Discussions, 2016, 189, 291-315.	1.6	26
36	Marine and urban influences on summertime PM2.5 aerosol in the Po basin using mobile measurements. Atmospheric Environment, 2015, 120, 447-454.	1.9	9

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37	In situ, satellite measurement and model evidence on the dominant regional contribution to fine particulate matter levels in the Paris megacity. Atmospheric Chemistry and Physics, 2015, 15, 9577-9591.	1.9	92
38	Some insights into the condensing vapors driving new particle growth to CCN sizes on the basis of hygroscopicity measurements. Atmospheric Chemistry and Physics, 2015, 15, 13071-13083.	1.9	28
39	Elemental composition of organic aerosol: The gap between ambient and laboratory measurements. Geophysical Research Letters, 2015, 42, 4182-4189.	1.5	84
40	ACTRIS ACSM intercomparison â€“ Part 1: Reproducibility of concentration and fragment results from 13 individual Quadrupole Aerosol Chemical Speciation Monitors (Q-ACSM) and consistency with co-located instruments. Atmospheric Measurement Techniques, 2015, 8, 5063-5087.	1.2	104
41	ACTRIS ACSM intercomparison â€“ Part 2: Intercomparison of ME-2 organic source apportionment results from 15 individual, co-located aerosol mass spectrometers. Atmospheric Measurement Techniques, 2015, 8, 2555-2576.	1.2	118
42	Highly Oxidized Multifunctional Organic Compounds Observed in Tropospheric Particles: A Field and Laboratory Study. Environmental Science & Technology, 2015, 49, 7754-7761.	4.6	143
43	Influence of water uptake on the aerosol particle light scattering coefficients of the Central European aerosol. Tellus, Series B: Chemical and Physical Meteorology, 2014, 66, 22716.	0.8	61
44	Predicting hygroscopic growth using single particle chemical composition estimates. Journal of Geophysical Research D: Atmospheres, 2014, 119, 9567-9577.	1.2	16
45	Hygroscopic properties of the Paris urban aerosol in relation to its chemical composition. Atmospheric Chemistry and Physics, 2014, 14, 737-749.	1.9	21
46	Chemical mass balance of 300 Â°C non-volatile particles at the tropospheric research site Melpitz, Germany. Atmospheric Chemistry and Physics, 2014, 14, 10145-10162.	1.9	55
47	Long-term chemical characterization of tropical and marine aerosols at the Cape Verde Atmospheric Observatory (CVAO) from 2007 to 2011. Atmospheric Chemistry and Physics, 2014, 14, 8883-8904.	1.9	69
48	Organic aerosol concentration and composition over Europe: insights from comparison of regional model predictions with aerosol mass spectrometer factor analysis. Atmospheric Chemistry and Physics, 2014, 14, 9061-9076.	1.9	68
49	In-cloud sulfate addition to single particles resolved with sulfur isotope analysis during HCCT-2010. Atmospheric Chemistry and Physics, 2014, 14, 4219-4235.	1.9	31
50	Organic aerosol components derived from 25 AMS data sets across Europe using a consistent ME-2 based source apportionment approach. Atmospheric Chemistry and Physics, 2014, 14, 6159-6176.	1.9	308
51	Single particle diversity and mixing state measurements. Atmospheric Chemistry and Physics, 2014, 14, 6289-6299.	1.9	49
52	Quantitative determination of carbonaceous particle mixing state in Paris using single-particle mass spectrometer and aerosol mass spectrometer measurements. Atmospheric Chemistry and Physics, 2013, 13, 9479-9496.	1.9	108
53	Aerosol particle measurements at three stationary sites in the megacity of Paris during summer 2009: meteorology and air mass origin dominate aerosol particle composition and size distribution. Atmospheric Chemistry and Physics, 2013, 13, 933-959.	1.9	101
54	Formation of organic aerosol in the Paris region during the MEGAPOLI summer campaign: evaluation of the volatility-basis-set approach within the CHIMERE model. Atmospheric Chemistry and Physics, 2013, 13, 5767-5790.	1.9	105

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55	Particle hygroscopicity during atmospheric new particle formation events: implications for the chemical species contributing to particle growth. Atmospheric Chemistry and Physics, 2013, 13, 6637-6646.	1.9	29
56	Relating particle hygroscopicity and CCN activity to chemical composition during the HCCT-2010 field campaign. Atmospheric Chemistry and Physics, 2013, 13, 7983-7996.	1.9	108
57	Primary and secondary organic aerosol origin by combined gas-particle phase source apportionment. Atmospheric Chemistry and Physics, 2013, 13, 8411-8426.	1.9	96
58	Wintertime aerosol chemical composition and source apportionment of the organic fraction in the metropolitan area of Paris. Atmospheric Chemistry and Physics, 2013, 13, 961-981.	1.9	391
59	Sources and mixing state of size-resolved elemental carbon particles in a European megacity: Paris. Atmospheric Chemistry and Physics, 2012, 12, 1681-1700.	1.9	128
60	Seasonal and diurnal variations of particulate nitrate and organic matter at the IfT research station Melpitz. Atmospheric Chemistry and Physics, 2011, 11, 12579-12599.	1.9	81
61	Diurnal variations of ambient particulate wood burning emissions and their contribution to the concentration of Polycyclic Aromatic Hydrocarbons (PAHs) in Seiffen, Germany. Atmospheric Chemistry and Physics, 2011, 11, 12697-12713.	1.9	45
62	Surface modification of mineral dust particles by sulphuric acid processing: implications for ice nucleation abilities. Atmospheric Chemistry and Physics, 2011, 11, 7839-7858.	1.9	60
63	Hygroscopic behavior of atmospherically relevant water-soluble carboxylic salts and their influence on the water uptake of ammonium sulfate. Atmospheric Chemistry and Physics, 2011, 11, 12617-12626.	1.9	86
64	Towards an online-coupled chemistry-climate model: evaluation of trace gases and aerosols in COSMO-ART. Geoscientific Model Development, 2011, 4, 1077-1102.	1.3	78
65	Towards closing the gap between hygroscopic growth and CCN activation for secondary organic aerosols â€“ Part 3: Influence of the chemical composition on the hygroscopic properties and volatile fractions of aerosols. Atmospheric Chemistry and Physics, 2010, 10, 3775-3785.	1.9	58
66	Characterization of the volatile fraction of laboratory-generated aerosol particles by thermodenuder-aerosol mass spectrometer coupling experiments. Journal of Aerosol Science, 2009, 40, 603-612.	1.8	21
67	Towards closing the gap between hygroscopic growth and activation for secondary organic aerosol â€“ Part 2: Theoretical approaches. Atmospheric Chemistry and Physics, 2009, 9, 3999-4009.	1.9	130
68	Towards closing the gap between hygroscopic growth and activation for secondary organic aerosol: Part 1 â€“ Evidence from measurements. Atmospheric Chemistry and Physics, 2009, 9, 3987-3997.	1.9	191
69	Development of a new on-line mass spectrometer to study the reactivity of soluble organic compounds in the aqueous phase under tropospheric conditions: Application to OH-oxidation of N-methylpyrrolidone. Journal of Photochemistry and Photobiology A: Chemistry, 2007, 187, 10-23.	2.0	28
70	Towards a more detailed description of tropospheric aqueous phase organic chemistry: CAPRAM 3.0. Atmospheric Environment, 2005, 39, 4351-4363.	1.9	165
71	Kinetics of OH-initiated oxidation of oxygenated organic compounds in the aqueous phase: new rate constants, structureâ€“activity relationships and atmospheric implications. Atmospheric Environment, 2005, 39, 7667-7688.	1.9	94