Laurent Deguillaume

List of Publications by Year
in descending order

47 papers	1,921 citations	304602 22 h-index	265120 42 g-index
57 all docs	57 docs citations	57 times ranked	2064 citing authors

#	Article	IF	Citations
1	Transition Metals in Atmospheric Liquid Phases:Â Sources, Reactivity, and Sensitive Parameters. Chemical Reviews, 2005, 105, 3388-3431.	23.0	267
2	A short overview of the microbial population in clouds: Potential roles in atmospheric chemistry and nucleation processes. Atmospheric Research, 2010, 98, 249-260.	1.8	165
3	Potential impact of microbial activity on the oxidant capacity and organic carbon budget in clouds. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 559-564.	3.3	153
4	Long-term features of cloud microbiology at the puy de DÃ´me (France). Atmospheric Environment, 2012, 56, 88-100.	1.9	138
5	Ice nucleation activity of bacteria isolated from cloud water. Atmospheric Environment, 2013, 70, 392-400.	1.9	115
6	Active microorganisms thrive among extremely diverse communities in cloud water. PLoS ONE, 2017, 12, e0182869.	1.1	103
7	Molecular Characterization of Cloud Water Samples Collected at the Puy de DÃ´me (France) by Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. Environmental Science & Technology, 2018, 52, 10275-10285.	4.6	100
8	Mechanism of carboxylic acid photooxidation in atmospheric aqueous phase: Formation, fate and reactivity. Atmospheric Environment, 2012, 56, 1-8.	1.9	76
9	Impact of radical versus non-radical pathway in the Fenton chemistry on the iron redox cycle in clouds. Chemosphere, 2005, 60, 718-724.	4.2	70
10	Metatranscriptomic exploration of microbial functioning in clouds. Scientific Reports, 2019, 9, 4383.	1.6	68
11	Survival of microbial isolates from clouds toward simulated atmospheric stress factors. Atmospheric Environment, 2015, 117, 92-98.	1.9	55
12	Hydrogen peroxide in natural cloud water: Sources and photoreactivity. Atmospheric Research, 2011, 101, 256-263.	1.8	40
13	Biotransformation of methanol and formaldehyde by bacteria isolated from clouds. Comparison with radical chemistry. Atmospheric Environment, 2011, 45, 6093-6102.	1.9	38
14	Screening of cloud microorganisms isolated at the Puy de DÃ´me (France) station for the production of biosurfactants. Atmospheric Chemistry and Physics, 2016, 16, 12347-12358.	1.9	35
15	Improving the characterization of dissolved organic carbon in cloud water: Amino acids and their impact on the oxidant capacity. Scientific Reports, 2016, 6, 37420.	1.6	34
16	Effect of iron dissolution on cloud chemistry: from laboratory measurements to model results. Atmospheric Pollution Research, 2010, 1, 220-228.	1.8	32
17	CLEPS 1.0: A new protocol for cloud aqueous phase oxidation of VOC mechanisms. Geoscientific Model Development, 2017, 10, 1339-1362.	1.3	30
18	Evaluation of modeled cloud chemistry mechanism against laboratory irradiation experiments: The HxOy/iron/carboxylic acid chemical system. Atmospheric Environment, 2013, 77, 686-695.	1.9	26

#	ARTICLE	IF	CITATIONS
19	H₂O₂ modulates the energetic metabolism of the cloud microbiome. Atmospheric Chemistry and Physics, 2017, 17, 14841-14851.	1.9	26
20	CÃ©zeaux-Aulnat-Opme-Puy De DÃ´me: a multi-site for the long-term survey of the tropospheric composition and climate change. Atmospheric Measurement Techniques, 2020, 13, 3413-3445.	1.2	26
21	Towards an operational aqueous phase chemistry mechanism for regional chemistry-transport models: CAPRAM-RED and its application to the COSMO-MUSCAT model. Journal of Atmospheric Chemistry, 2009, 64, 1-35.	1.4	25
22	Sensitive determination of glyoxal, methylglyoxal and hydroxyacetaldehyde in environmental water samples by using dansylacetamidooxyamine derivatization and liquid chromatography/fluorescence. Analytica Chimica Acta, 2011, 704, 162-173.	2.6	25
23	Tryptophan and tryptophan-like substances in cloud water: Occurrence and photochemical fate. Atmospheric Environment, 2016, 137, 53-61.	1.9	25
24	Siderophores in Cloud Waters and Potential Impact on Atmospheric Chemistry: Production by Microorganisms Isolated at the Puy de DÃ´me Station. Environmental Science & Technology, 2016, 50, 9315-9323.	4.6	25
25	Modeling study of strong acids formation and partitioning in a polluted cloud during wintertime. Journal of Geophysical Research, 2003, 108, .	3.3	23
26	Chemical Characterization of Cloudwater Collected at Puy de DÃ´me by FT-ICR MS Reveals the Presence of SOA Components. ACS Earth and Space Chemistry, 2019, 3, 2076-2087.	1.2	21
27	Numerical quantification of sources and phase partitioning of chemical species in cloud: application to wintertime anthropogenic air masses at the Puy de DÃ´me station. Journal of Atmospheric Chemistry, 2007, 57, 281-297.	1.4	18
28	Effect of endogenous microbiota on the molecular composition of cloud water: a study by Fourier-transform ion cyclotron resonance mass spectrometry (FT-ICR MS). Scientific Reports, 2019, 9, 7663.	1.6	18
29	Preliminary results from the FARCE 2015 campaign: multidisciplinary study of the forestâ€“gasâ€“aerosolâ€“cloud system on the tropical island of La RÃ©union. Atmospheric Chemistry and Physics, 2019, 19, 10591-10618.	1.9	16
30	Classification of Clouds Sampled at the Puy de DÃ´me Station (France) Based on Chemical Measurements and Air Mass History Matrices. Atmosphere, 2020, 11, 732.	1.0	16
31	Modeling the partitioning of organic chemical species in cloud phases with CLEPS (1.1). Atmospheric Chemistry and Physics, 2018, 18, 2225-2242.	1.9	12
32	Anthropogenic and biogenic hydrophobic VOCs detected in clouds at the puy de DÃ´me station using Stir Bar Sorptive Extraction: Deviation from the Henry's law prediction. Atmospheric Research, 2020, 237, 104844.	1.8	12
33	Clouds: A Transient and Stressing Habitat for Microorganisms. , 2017, , 215-245.		11
34	Potential for phenol biodegradation in cloud waters. Biogeosciences, 2018, 15, 5733-5744.	1.3	11
35	Trace Metals in Cloud Water Sampled at the Puy De DÃ´me Station. Atmosphere, 2017, 8, 225.	1.0	10
36	Rainfalls sprinkle cloud bacterial diversity while scavenging biomass. FEMS Microbiology Ecology, 2021, 97, .	1.3	9

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37	Cloud Occurrence Frequency at Puy de DÃ´me (France) Deduced from an Automatic Camera Image Analysis: Method, Validation, and Comparisons with Larger Scale Parameters. Atmosphere, 2019, 10, 808.	1.0	8
38	Box Model Intercomparison of Cloud Chemistry. Journal of Geophysical Research D: Atmospheres, 2021, 126, .	1.2	7
39	Insights into tropical cloud chemistry in RÃ©union (Indian Ocean): results from the BIO-MAÃDO campaign. Atmospheric Chemistry and Physics, 2022, 22, 505-533.	1.9	6
40	Transition Metals in Atmospheric Liquid Phases. Sources, Reactivity, and Sensitive Parameters. ChemInform, 2005, 36, no.	0.1	5
41	Atmospheric Aqueousâ€Phase Photoreactivity: Correlation Between the Hydroxyl Radical Photoformation and Pesticide Degradation Rate in Atmospherically Relevant Waters. Photochemistry and Photobiology, 2012, 88, 32-37.	1.3	5
42	Free amino acid quantification in cloud water at the Puy de DÃ´me station (France). Atmospheric Chemistry and Physics, 2022, 22, 2467-2486.	1.9	4
43	Influence of strong iron-binding ligands on cloud water oxidant capacity. Science of the Total Environment, 2022, 829, 154642.	3.9	4
44	Evaluation of Aerosol Chemical Composition Simulations by the WRF-Chem Model at the Puy de DÃ´me Station (France). Aerosol and Air Quality Research, 2016, 16, 909-917.	0.9	3
45	Impact of Aerosol Properties on Cloud and Precipitation Formation. NATO Science for Peace and Security Series C: Environmental Security, 2014, , 153-158.	0.1	0
46	Evaluation of Cloud Chemistry Mechanism Towards Laboratory Experiments. Springer Proceedings in Complexity, 2014, , 137-141.	0.2	0
47	Regional Modeling of Aerosol Chemical Composition at the Puy de DÃ´me (France). Springer Proceedings in Complexity, 2016, , 49-53.	0.2	0