Christophe O Laux

List of Publications by Citations

117 papers	3,760 citations	28 h-index	59 g-index
139 ext. papers	4,616 ext. citations	2.5 avg, IF	5.28 L-index

#	Paper	IF	Citations
117	Optical diagnostics of atmospheric pressure air plasmas. *Plasma Sources Science and Technology*, **2003**, 12, 125-138	3.5	710
116	Stabilization of a Turbulent Premixed Flame Using a Nanosecond Repetitively Pulsed Plasma. *IEEE Transactions on Plasma Science*, **2006**, 34, 2471-2477	1.3	215
115	Ignition of Propane/Air Mixtures by a Repetitively Pulsed Nanosecond Discharge. *IEEE Transactions on Plasma Science*, **2006**, 34, 2478-2487	1.3	207
114	Arrays of radiative transition probabilities for the N2 first and second positive, no beta and gamma, N+2 first negative, and O2 Schumann-Runge band systems. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **1992**, 48, 9-24	2.1	182
113	Transitions between corona, glow, and spark regimes of nanosecond repetitively pulsed discharges in air at atmospheric pressure. *Journal of Applied Physics*, **2010**, 107, 093303	2.5	176
112	Atmospheric pressure plasma diagnostics by OES, CRDS and TALIF. *Journal Physics D: Applied Physics*, **2010**, 43, 124002	3	157
111	Ultrafast heating and oxygen dissociation in atmospheric pressure air by nanosecond repetitively pulsed discharges. *Journal Physics D: Applied Physics*, **2013**, 46, 464010	3	155
110	Nanosecond repetitively pulsed discharges in air at atmospheric pressure: the spark regime. *Plasma Sources Science and Technology*, **2010**, 19, 065015	3.5	124
109	Nanosecond repetitively pulsed discharges in air at atmospheric pressure: the glow regime. *Plasma Sources Science and Technology*, **2009**, 18, 045030	3.5	99
108	Ionic wind generation by a wire-cylinder-plate corona discharge in air at atmospheric pressure. *Journal of Applied Physics*, **2010**, 108, 103306	2.5	74
107	Direct-current glow discharges in atmospheric pressure air plasmas. *Journal of Applied Physics*, **2002**, 91, 2678-2686	2.5	67
106	Rotational temperature measurements in air and nitrogen plasmas using the first negative system of N2+. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2001**, 68, 473-482	2.1	60
105	Nonequilibrium discharges in air and nitrogen plasmas at atmospheric pressure. *Pure and Applied Chemistry*, **2002**, 74, 337-347	2.1	58
104	DC and pulsed glow discharges in atmospheric pressure air and nitrogen. *IEEE Transactions on Plasma Science*, **2002**, 30, 178-179	1.3	58
103	Physics and applications of atmospheric non-thermal air plasma with reference to environment. *Plasma Physics and Controlled Fusion*, **2009**, 51, 124002	2	57
102	Energy efficiency in nanoscale synthesis using nanosecond plasmas. *Scientific Reports*, **2013**, 3, 1221	4.9	56
101	Experimental study of the hydrodynamic expansion following a nanosecond repetitively pulsed discharge in air. *Applied Physics Letters*, **2011**, 99, 121502	3.4	56

100	Thermal and hydrodynamic effects of nanosecond discharges in atmospheric pressure air. *Journal Physics D: Applied Physics*, **2014**, 47, 235202	3	45
99	Time-resolved CRDS measurements of the N2(A3Sigma(u)+) density produced by nanosecond discharges in atmospheric pressure nitrogen and air. *Journal of Physical Chemistry A*, **2010**, 114, 201-8	2.8	45
98	Stabilization of a Swirled Propane–Air Flame Using a Nanosecond Repetitively Pulsed Plasma. *IEEE Transactions on Plasma Science*, **2008**, 36, 940-941	1.3	42
97	Transverse dc glow discharges in atmospheric pressure air. *IEEE Transactions on Plasma Science*, **2005**, 33, 320-321	1.3	33
96	State-to-state modeling of a recombining nitrogen plasma experiment. *Chemical Physics*, **2012**, 398, 46-55	2.3	32
95	Effects of Vibrational Nonequilibrium on the Chemistry of Two-Temperature Nitrogen Plasmas. *Plasma Chemistry and Plasma Processing*, **2001**, 21, 483-503	3.6	32
94	A 3-D DNS and experimental study of the effect of the recirculating flow pattern inside a reactive kernel produced by nanosecond plasma discharges in a methane-air mixture. *Proceedings of the Combustion Institute*, **2017**, 36, 4095-4103	5.9	31
93	Images of Nanosecond Repetitively Pulsed Plasmas in Preheated Air at Atmospheric Pressure. *IEEE Transactions on Plasma Science*, **2008**, 36, 974-975	1.3	31
92	Modelling the impact of non-equilibrium discharges on reactive mixtures for simulations of plasma-assisted ignition in turbulent flows. *Combustion and Flame*, **2016**, 166, 133-147	5.3	29
91	The mass and speed dependence of meteor air plasma temperatures. *Astrobiology*, **2004**, 4, 81-94	3.7	29
90	Plasma-Enhanced Combustion of a Lean Premixed Air-Propane Turbulent Flame using a Nanosecond Repetitively Pulsed Plasma **2005**,		28
89	Meteors do not break exogenous organic molecules into high yields of diatomics. *Astrobiology*, **2004**, 4, 67-79	3.7	27
88	A GENERAL MODEL FOR THE SPECTRAL CALCULATION OF OH RADIATION IN THE ULTRAVIOLET. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **1999**, 61, 377-392	2.1	27
87	Effects of pulsation frequency and energy deposition on ignition using nanosecond repetitively pulsed discharges. *Proceedings of the Combustion Institute*, **2017**, 36, 4079-4086	5.9	26
86	Meteors: A Delivery Mechanism of Organic Matter to the Early Earth. *Earth, Moon and Planets*, **1998** , 82/83, 57-70	0.6	26
85	Temporally resolved cavity ring-down spectroscopy in a pulsed nitrogen plasma. *Applied Physics Letters*, **2002**, 81, 1408-1410	3.4	26
84	High-Resolution Fourier Spectrometry of the (14)N(+)(2) Ion. *Journal of Molecular Spectroscopy*, **2000**, 203, 1-8	1.3	26
83	Ignition of Quiescent Lean Propane–Air Mixtures at High Pressure by Nanosecond Repetitively Pulsed Discharges. *Plasma Chemistry and Plasma Processing*, **2016**, 36, 309-327	3.6	25

82	Spaceborne ultraviolet 251–384 nm spectroscopy of a meteor during the 1997 Leonid shower. *Meteoritics and Planetary Science*, **2002**, 37, 1071-1078	2.8	25
81	Overview of the coordinated ground-based observations of Titan during the Huygens mission. *Journal of Geophysical Research*, **2006**, 111,		24
80	Stabilization of a Premixed Methane–Air Flame Using Nanosecond Repetitively Pulsed Discharges. *IEEE Transactions on Plasma Science*, **2011**, 39, 2264-2265	1.3	22
79	DC Glow Discharges in Atmospheric Pressure Air. *Journal of Advanced Oxidation Technologies*, **2004**, 7,		21
78	Spatial profiles of N2+ concentration in an atmospheric pressure nitrogen glow discharge. *Plasma Sources Science and Technology*, **2002**, 11, 248-253	3.5	21
77	Ionization mechanisms in two-temperature air plasmas **1999**,		21
76	Collisional-radiative modelling of quasi-thermal air plasmas with electronic temperatures between 2000 and 13,000 K□ E > 4000 K. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **1995**, 53, 125-141	2.1	20
75	Prediction of Nonequilibrium Air Plasma Radiation Behind a Shock Wave. *Journal of Thermophysics and Heat Transfer*, **2016**, 30, 197-210	1.3	18
74	Images of a Nanosecond Repetitively Pulsed Glow Discharge Between Two Point Electrodes in Air at 300 K and at Atmospheric Pressure. *IEEE Transactions on Plasma Science*, **2011**, 39, 2254-2255	1.3	18
73	Modeling the UV and VUV radiative emission of high-temperature air **1993**,		18
72	Large-volume excitation of air, argon, nitrogen and combustible mixtures by thermal jets produced by nanosecond spark discharges. *Plasma Sources Science and Technology*, **2017**, 26, 04LT01	3.5	17
71	Measurements of Air Plasma/Ablator Interactions in an Inductively Coupled Plasma Torch. *Journal of Thermophysics and Heat Transfer*, **2015**, 29, 12-23	1.3	17
70	Search for the OH (X(2)Pi) Meinel band emission in meteors as a tracer of mineral water in comets: detection of N(2)(+) (A-X). *Astrobiology*, **2004**, 4, 109-21	3.7	17
69	Self-pulsing discharges in pre-heated air at atmospheric pressure. *Journal Physics D: Applied Physics*, **2015**, 48, 035201	3	16
68	Control of combustion dynamics in a swirl-stabilized combustor with nanosecond repetitively pulsed discharges **2013**,		16
67	The Structure of Nanosecond Repetitively Pulsed Spark Discharges in Air. *IEEE Transactions on Plasma Science*, **2011**, 39, 2258-2259	1.3	16
66	Vibrationally-specific collisional-radiative model for nonequilibrium nitrogen plasmas **1998**,		16
65	Effect of Plasma Discharges on Nitric Oxide Emissions in a Premixed Flame. *Journal of Propulsion and Power*, **2013**, 29, 748-751	1.8	15

64	Hydrodynamic regimes induced by nanosecond pulsed discharges in air: mechanism of vorticity generation. *Journal Physics D: Applied Physics*, **2019**, 52, 364001	3	14
63	Experimental investigation of atmospheric pressure nonequilibrium plasma chemistry. *IEEE Transactions on Plasma Science*, **1997**, 25, 1042-1051	1.3	14
62	RADIS: A nonequilibrium line-by-line radiative code for CO2 and HITRAN-like database species. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2019**, 222-223, 12-25	2.1	14
61	Ionization nonequilibrium induced by neutral chemistry in air plasmas. *AIAA Journal*, **1996**, 34, 1745-1747	2.1	13
60	Resolved CN Band Profile of Stardust Capsule Radiation at Peak Heating. *Journal of Spacecraft and Rockets*, **2010**, 47, 873-877	1.5	12
59	Convective and Radiative Heat Flux Prediction of Huygens Entry on Titan. *Journal of Thermophysics and Heat Transfer*, **2006**, 20, 663-671	1.3	12
58	Measurement and Modeling of OH, NO, and CO Infrared Radiation at 3400 K. *Journal of Thermophysics and Heat Transfer*, **2003**, 17, 450-456	1.3	12
57	Low Temperature Plasma for Biology, Hygiene, and Medicine: Perspective and Roadmap. *IEEE Transactions on Radiation and Plasma Medical Sciences*, **2022**, 1-1	4.2	12
56	Air Collisional-Radiative Modeling with Heavy-Particle Impact Excitation Processes. *Journal of Thermophysics and Heat Transfer*, **2016**, 30, 226-239	1.3	11
55	Cumulative effect of successive nanosecond repetitively pulsed discharges on the ignition of lean mixtures. *Proceedings of the Combustion Institute*, **2019**, 37, 5553-5560	5.9	11
54	Ultrafast Heating in Nanosecond Discharges in Atmospheric Pressure Air **2012**,		11
53	Collisional-radiative modeling of nonequilibrium effects in nitrogen plasmas **1999**,		11
52	Spectroscopic anatomy of a meteor trail cross section with the European Southern Observatory Very Large Telescope. *Meteoritics and Planetary Science*, **2004**, 39, 609-616	2.8	10
51	Fully ionized nanosecond discharges in air: the thermal spark. *Plasma Sources Science and Technology*, **2020**, 29, 085003	3.5	9
50	Stabilization of a Methane-Air Swirl Flame by Rotating Nanosecond Spark Discharges. *IEEE Transactions on Plasma Science*, **2014**, 42, 2412-2413	1.3	9
49	Comparison of Titan Entry Radiation Shock-Tube Data with Collisional-Radiative Models. *Journal of Thermophysics and Heat Transfer*, **2014**, 28, 32-38	1.3	9
48	Schlieren Imaging of Shock-Wave Formation Induced by Ultrafast Heating of a Nanosecond Repetitively Pulsed Discharge in Air. *IEEE Transactions on Plasma Science*, **2014**, 42, 2350-2351	1.3	9
47	Corona Discharges in Atmospheric Air Between a Wire and Two Plates. *IEEE Transactions on Plasma Science*, **2011**, 39, 2248-2249	1.3	9

46	Search for Organic Matter in Leonid Meteoroids. *Earth, Moon and Planets*, **1998**, 82/83, 71-80	0.6	9
45	Atmospheric pressure argon surface discharges propagated in long tubes: physical characterization and application to bio-decontamination. *Journal Physics D: Applied Physics*, **2015**, 48, 464003	3	8
44	Nonequilibrium effects in thermal plasmas. *Pure and Applied Chemistry*, **1992**, 64, 607-613	2.1	8
43	Mach 3 Shock Wave Unsteadiness Alleviation Using a Negative Corona Discharge. *AIAA Journal*, **2008**, 46, 2042-2049	2.1	7
42	Quenching rate of N(2P) atoms in a nitrogen afterglow at atmospheric pressure. *Journal Physics D: Applied Physics*, **2018**, 51, 314001	3	6
41	Investigation of water dissociation by Nanosecond Repetitively Pulsed Discharges in superheated steam at atmospheric pressure **2013**,		6
40	Atmospheric-Pressure Discharges for the Fabrication of Surface-Based Metal Nanostructures. *IEEE Transactions on Plasma Science*, **2011**, 39, 2814-2815	1.3	6
39	On the arc transition mechanism in nanosecond air discharges **2019**,		6
38	Radiative Heat Transfer Measurements in Low-Density Titan Atmospheres. *Journal of Thermophysics and Heat Transfer*, **2015**, 29, 835-844	1.3	5
37	Nanosecond Repetitively Pulsed Plasmas in Preheated Air at Atmospheric Pressure - The Diffuse Regime **2008**,		5
36	Ion Wind Effects in A Positive DC Corona Discharge in Atmospheric Pressure Air **2004**,		5
35	Electron number density measurements in nanosecond repetitively pulsed discharges in water vapor at atmospheric pressure. *Plasma Sources Science and Technology*, **2020**, 29, 025017	3.5	5
34	Validation cases for recombining nitrogen and air plasmas. *Plasma Sources Science and Technology*, **2018**, 27, 115010	3.5	4
33	Interaction of Air Plasma With Ablating Heat Shield Material. *IEEE Transactions on Plasma Science*, **2014**, 42, 2658-2659	1.3	4
32	Temporal Evolution of the Glow and Spark Regimes of Nanosecond Repetitively Pulsed Discharges in Water Vapor. *IEEE Transactions on Plasma Science*, **2014**, 42, 2620-2621	1.3	4
31	Numerical simulation of nonequilibrium nitrogen and air plasma experiments **1998**,		4
30	Role of the excited electronic states in the ionization of ambient air by a nanosecond discharge **2020**,		4
29	Infrared spectroscopic measurements of carbon monoxide within a high temperature ablative boundary layer. *Journal Physics D: Applied Physics*, **2016**, 49, 485502	3	4

28	Improvement of lean blow out performance of spray and premixed swirled flames using nanosecond repetitively pulsed discharges. *Proceedings of the Combustion Institute*, **2021**, 38, 6559-6566	5.9	4
27	Ultraviolet Raman spectroscopy of N2in a recombining atmospheric pressure plasma. *Plasma Sources Science and Technology*, **2017**, 26, 115005	3.5	3
26	Experimental Characterization of Ablation Species in an Air Plasma Ablating Boundary Layer **2014**,		3
25	Two Photon Absorption Laser Induced Fluorescence Study of Repetitively Pulsed Nanosecond Discharges in Atmospheric Pressure Air **2008**,		3
24	Hydrodynamic effects induced by nanosecond sparks in air and air/fuel mixtures **2017**,		2
23	Analysis of the JAXA Nonequilibrium Infrared Emission Spectra for Mars Entry Conditions. *Journal of Thermophysics and Heat Transfer*, **2019**, 33, 1127-1131	1.3	2
22	Effect of Nanosecond Glow Discharges on a Lean Premixed V-Flame. *IEEE Transactions on Plasma Science*, **2014**, 42, 2562-2563	1.3	2
21	Vacuum ultraviolet radiation studies in a plasma torch facility **2013**,		2
20	Measurements of Air Plasma/Ablator Interactions in a 50 kW Inductively Coupled Plasma Torch **2013**,		2
19	Spectroscopic anatomy of a meteor with the very large telescope (ESO). *Advances in Space Research* , **2007**, 39, 550-554	2.4	2
18	Spectroscopic Challenges in the Modelling and Diagnostics of High Temperature Air Plasma Radiation for Aerospace Applications. *AIP Conference Proceedings*, **2007**,	0	2
17	Measurement and modeling of OH, NO, and CO2 infrared radiation in a low temperature air plasma **1999**,		2
16	The role of excited electronic states in ambient air ionization by a nanosecond discharge. *Plasma Sources Science and Technology*, **2021**, 30, 035008	3.5	2
15	Femtosecond Two-Photon Absorption Laser Induced Fluorescence (fs-TALIF) Imaging of Atomic Nitrogen in Nanosecond Repetitive Discharges **2019**,		2
14	Passive Method to Measure Reentry Radiation in the Presence of Ablative Products. *Journal of Spacecraft and Rockets*, **2021**, 58, 1477-1486	1.5	2
13	Ground-State Atomic Nitrogen Measurements using fs-TALIF in High-Pressure NRP Discharges **2020** ,		1
12	Measurements and modeling of CO 4th positive (A$^1\Pi$–X$^1\Sigma^+$) radiation. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2020**, 245, 106855	2.1	1
11	Hydrodynamic effects induced by nanosecond repetitive pulsed discharges **2018**,		1

10	Temporal and Spatial Evolution of OH Concentration in a Lean Premixed Propane-Air Flame Assisted by Nanosecond Repetitively Pulsed Discharges **2013**,		1
9	Reduced atomic collisional-radiative model for VUV radiation prediction in Earth's reentry **2012**,		1
8	Investigation of the Hydrodynamic Expansion Following a Nanosecond Repetitively Pulsed Discharge in Air **2012**,		1
7	Scaled-Up Nonequilibrium Air Plasmas **2003**,		1
6	VUV radiation of high temperature CO2/Ar plasmas **2020**,		1
5	Carbon monoxide radiation in an equilibrium plasma torch facility **2019**,		1
4	Ionization Mechanism in a Thermal Spark Discharge **2021**,		1
3	Dynamics of a Lean Flame Stabilized by Nanosecond Discharges **2021**,		1
2	High-spatial resolution measurements of NO density and temperature by Mid-IR QCLAS in open-air confined plasmas. *Journal Physics D: Applied Physics*, **2017**, 50, 274004	3	0
1	Experimental study of recombining nitrogen plasmas: I. Vibronic population distributions and nonequilibrium molecular radiation. *Plasma Sources Science and Technology*, **2019**, 28, 075018	3.5	0