Pascale Desgroux

List of Publications by Year
in descending order

80 papers	2,812 citations	159585 30 h-index	189892 50 g-index
84 all docs	84 docs citations	84 times ranked	1558 citing authors

#	Article	IF	Citations
1	Hydrogen as a fuel additive in laminar premixed methane flames: Impact on the nucleation and growth of soot particles. Fuel, 2022, 315, 123125.	6.4	8
2	Experimental and numerical investigation of the transition from non sooting to sooting premixed n-butane flames, encompassing the nucleation flame conditions. Combustion and Flame, 2022, , 112172.	5.2	3
3	Experimental and modeling study of the high-temperature combustion chemistry of tetrahydrofurfuryl alcohol. Proceedings of the Combustion Institute, 2021, 38, 631-640.	3.9	6
4	Hydrophilic properties of soot particles exposed to OH radicals: A possible new mechanism involved in the contrail formation. Proceedings of the Combustion Institute, 2021, 38, 6441-6450.	3.9	3
5	<i>In Situ</i> Laser-Induced Fluorescence and <i>Ex Situ</i> Cavity Ring-Down Spectroscopy Applied to NO Measurement in Flames: Microprobe Perturbation and Absolute Quantification. Energy & Fuels, 2021, 35, 7107-7120.	5.1	10
6	Quantitative measurement of atomic hydrogen in low-pressure methane flames using two-photon LIF calibrated by krypton. Combustion and Flame, 2021, 224, 248-259.	5.2	6
7	The story of NCN as a key species in prompt-NO formation. Progress in Energy and Combustion Science, 2021, 87, 100940.	31.2	14
8	Direct quantification of O-atom in low-pressure methane flames by using two-photon LIF. Proceedings of the Combustion Institute, 2021, 38, 1753-1760.	3.9	5
9	Exploring the Flame Chemistry of C₅ Tetrahydrofuranic Biofuels: Tetrahydrofurfuryl Alcohol and 2-Methyltetrahydrofuran. Energy & Fuels, 2021, 35, 18699-18715.	5.1	5
10	NO formation in high pressure premixed flames: Experimental results and validation of a new revised reaction mechanism. Fuel, 2020, 260, 116331.	6.4	18
11	A Review of Terminology Used to Describe Soot Formation and Evolution under Combustion and Pyrolytic Conditions. ACS Nano, 2020, 14, 12470-12490.	14.6	122
12	The accuracy and precision of multi-line NO-LIF thermometry in a wide range of pressures and temperatures. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 255, 107257.	2.3	13
13	Evidence on the formation of dimers of polycyclic aromatic hydrocarbons in a laminar diffusion flame. Communications Chemistry, 2020, 3, .	4.5	33
14	Influence of the dry aerosol particle size distribution and morphology on the cloud condensation nuclei activation. An experimental and theoretical investigation. Atmospheric Chemistry and Physics, 2020, 20, 4209-4225.	4.9	8
15	Quantitative measurement of volume fraction profiles of soot of different maturities in premixed flames by extinction-calibrated laser-induced incandescence. Applied Physics B: Lasers and Optics, 2019, 125, 1.	2.2	20
16	Unveiling trends in soot nucleation and growth: When secondary ion mass spectrometry meets statistical analysis. Carbon, 2019, 144, 815-830.	10.3	33
17	Quantitative NH measurements by using laser-based diagnostics in low-pressure flames. Proceedings of the Combustion Institute, 2019, 37, 1313-1320.	3.9	6
18	A comprehensive protocol for chemical analysis of flame combustion emissions by secondary ion mass spectrometry. Rapid Communications in Mass Spectrometry, 2018, 32, 1015-1025.	1.5	17

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19	Soot particles inception and PAH condensation modelling applied in a soot model utilizing a sectional method. Combustion and Flame, 2018, 189, 190-206.	5.2	55
20	Experimental and numerical investigation of atmospheric laminar premixed n-butane flames in sooting conditions. Fuel, 2018, 211, 548-565.	6.4	12
21	Cloud condensation nuclei from the activation with ozone of soot particles sampled from a kerosene diffusion flame. Aerosol Science and Technology, 2018, 52, 814-827.	3.1	17
22	Investigation of the size of the incandescent incipient soot particles in premixed sooting and nucleation flames of <i>n</i>-butane using LII, HIM, and 1 nm-SMPS. Aerosol Science and Technology, 2017, 51, 916-935.	3.1	56
23	Comparative study of the soot formation process in a â€œnucleationâ€•and a â€œsootingâ€•low pressure premixed methane flame. Combustion and Flame, 2017, 184, 153-166.	5.2	75
24	Measurements and modelling of nitrogen species in CH4/O2/N2 flames doped with NO, NH3, or NH3+NO. Combustion and Flame, 2017, 176, 48-59.	5.2	15
25	Experimental and numerical study on rich methane/hydrogen/air laminar premixed flames at atmospheric pressure: Effect of hydrogen addition to fuel on soot gaseous precursors. International Journal of Hydrogen Energy, 2016, 41, 6929-6942.	7.1	31
26	Isomer discrimination of PAHs formed in sooting flames by jet-cooled laser-induced fluorescence: application to the measurement of pyrene and fluoranthene. Applied Physics B: Lasers and Optics, 2016, 122, 1.	2.2	17
27	Modeling of NO formation in low pressure premixed flames. Combustion and Flame, 2016, 163, 557-575.	5.2	87
28	Measurements and modelling of HCN and CN species profiles in laminar CH 4 /O 2 /N 2 low pressure flames using LIF/CRDS techniques. Proceedings of the Combustion Institute, 2015, 35, 745-752.	3.9	20
29	Ignition of methane- and n-butane-containing mixtures at high pressures by pulsed nanosecond discharge. Combustion and Flame, 2015, 162, 1336-1349.	5.2	56
30	Energy balance in surface nanosecond dielectric barrier discharge. Plasma-assisted ignition of heavy hydrocarbons at high pressures. , 2015, , .		2
31	Measurements and modeling of laser-induced incandescence of soot at different heights in a flat premixed flame. Applied Physics B: Lasers and Optics, 2015, 118, 449-469.	2.2	31
32	Progress toward the Quantitative Analysis of PAHs Adsorbed on Soot by Laser Desorption/Laser Ionization/Time-of-Flight Mass Spectrometry. Environmental Science & Technology, 2015, 49, 10510-10520.	10.0	41
33	Probing the smallest soot particles in low-sooting premixed flames using laser-induced incandescence. Proceedings of the Combustion Institute, 2015, 35, 1843-1850.	3.9	70
34	Experimental study of the E(m,Âλ)/E(m,Â1064) ratio as a function of wavelength, fuel type, height above the burner and temperature. Applied Physics B: Lasers and Optics, 2014, 116, 313-323.	2.2	33
35	Laser induced fluorescence spectroscopy of aromatic species produced in atmospheric sooting flames using UV and visible excitation wavelengths. Combustion and Flame, 2014, 161, 2479-2491.	5.2	113
36	Laser-induced incandescence technique to identify soot nucleation and very small particles in low-pressure methane flames. Applied Physics B: Lasers and Optics, 2013, 112, 369-379.	2.2	27

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37	Study of the formation of soot and its precursors in flames using optical diagnostics. Proceedings of the Combustion Institute, 2013, 34, 1713-1738.	3.9	183
38	Reinvestigation of the spectroscopy of the transition of the NCN radical at high temperature: Application to quantitative NCN measurement in flames. Combustion and Flame, 2013, 160, 755-765.	5.2	18
39	Time-resolved electric field measurements in nanosecond surface dielectric discharge. Comparison of different polarities. Ignition of combustible mixtures by surface discharge in a rapid compression machine.. , 2013, , .		13
40	Laser Diagnostics for Selective and Quantitative Measurement of PAHs and Soot. Green Energy and Technology, 2013, , 303-331.	0.6	2
41	Modeling of PAHs in low pressure sooting premixed methane flame. Energy, 2012, 43, 73-84.	8.8	28
42	Pyrene Measurements in Sooting Low Pressure Methane Flames by Jet-Cooled Laser-Induced Fluorescence. Journal of Physical Chemistry A, 2011, 115, 14153-14162.	2.5	22
43	NCO Quantitative Measurement in Premixed Low Pressure Flames by Combining LIF and CRDS Techniques. Journal of Physical Chemistry A, 2011, 115, 5346-5353.	2.5	10
44	Laser induced incandescence determination ofÂtheÂratio ofÂtheÂsoot absorption functions at 532Ânm and 1064Ânm inÂtheÂnucleation zone of a low pressure premixed sooting flame. Applied Physics B: Lasers and Optics, 2011, 104, 297-305.	2.2	56
45	Examination of wavelength dependent soot optical properties ofÂdiesel and diesel/rapeseed methyl ester mixture by extinction spectra analysis and LII measurements. Applied Physics B: Lasers and Optics, 2011, 104, 253-271.	2.2	100
46	High-sensitivity detection of polycyclic aromatic hydrocarbons adsorbed onto soot particles using laser desorption/laser ionization/time-of-flight mass spectrometry: An approach to studying the soot inception process in low-pressure flames. Combustion and Flame, 2011, 158, 227-239.	5.2	86
47	Quantitative measurement of naphthalene in low-pressure flames by jet-cooled laser-induced fluorescence. Applied Physics B: Lasers and Optics, 2010, 100, 933-943.	2.2	26
48	Experimental and numerical study of the role of NCN in prompt-NO formation in low-pressure CH4â€“O2â€“N2 and C2H2â€“O2â€“N2 flames. Combustion and Flame, 2010, 157, 1929-1941.	5.2	92
49	Effect of ethanol addition in gasoline and gasolineâ€“surrogate on soot formation in turbulent spray flames. Fuel, 2010, 89, 3952-3959.	6.4	101
50	Soot volume fraction measurements in aero-engine exhausts using extinction-calibrated backward laser-induced incandescence. Applied Physics B: Lasers and Optics, 2009, 95, 825-838.	2.2	23
51	Implementation of a new spectroscopic method to quantify aromatic species involved in the formation of soot particles in flames. Applied Physics B: Lasers and Optics, 2008, 91, 387-395.	2.2	22
52	Diode laser atomic fluorescence temperature measurements inÂlow-pressure flames. Applied Physics B: Lasers and Optics, 2008, 93, 907-914.	2.2	14
53	Prompt-NO formation in methane/oxygen/nitrogen flames seeded with oxygenated volatile organic compounds: Methyl ethyl ketone or ethyl acetate. Combustion and Flame, 2008, 153, 186-201.	5.2	21
54	Soot volume fraction measurement in low-pressure methane flames by combining laser-induced incandescence and cavity ring-down spectroscopy: Effect of pressure on soot formation. Combustion and Flame, 2008, 155, 289-301.	5.2	54

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55	The response of buoyant laminar diffusion flames to low-frequency forcing. Combustion and Flame, 2007, 151, 676-684.	5.2	23
56	Determination of the ratio of soot refractive index function E(m) at the two wavelengths 532 and 1064Ânm by laser induced incandescence. Applied Physics B: Lasers and Optics, 2007, 89, 417-427.	2.2	63
57	Influence of the photoionization process on the fragmentation of laser desorbed polycyclic aromatic hydrocarbons. Applied Surface Science, 2007, 253, 6435-6441.	6.1	18
58	IR laser resonant desorption of polycyclic aromatic hydrocarbons. Chemical Physics Letters, 2006, 423, 407-412.	2.6	26
59	NO prediction in natural gas flames using GDF-KinÂ®3.0 mechanism NCN and HCN contribution to prompt-NO formation. Fuel, 2006, 85, 896-909.	6.4	107
60	IR wavelength-selective laser desorption via OH and CH stretching modes. Applied Surface Science, 2006, 253, 1090-1094.	6.1	14
61	Experimental and theoretical comparison of spatially resolved laser-induced incandescence (LII) signals of soot in backward and right-angle configuration. Applied Physics B: Lasers and Optics, 2006, 83, 423-433.	2.2	30
62	Wavelength-selective vibrationally excited photodesorption with tunable IR sources. Journal of Physics Condensed Matter, 2006, 18, S1357-S1387.	1.8	28
63	2D imaging of laser wing effects and of soot sublimation in laser-induced incandescence measurements. Applied Physics B: Lasers and Optics, 2005, 81, 181-186.	2.2	18
64	Wavelength-selective laser desorption of doped ice surfaces. Surface Science, 2005, 593, 221-228.	1.9	8
65	Two-color laser-induced incandescence and cavity ring-down spectroscopy for sensitive and quantitative imaging of soot and PAHs in flames. Applied Physics B: Lasers and Optics, 2004, 78, 485-492.	2.2	79
66	Experimental and modeling study of the oxidation of natural gas in a premixed flame, shock tube, and jet-stirred reactor. Combustion and Flame, 2004, 137, 109-128.	5.2	69
67	Quantitative measurements of the CH radical in sooting diffusion flames at atmospheric pressure. Applied Physics B: Lasers and Optics, 2003, 76, 597-602.	2.2	15
68	Quantification of stable minor species in confined flames by cavity ring-down spectroscopy: application to NO. Applied Physics B: Lasers and Optics, 2002, 74, 427-434.	2.2	16
69	NO reburning study based on species quantification obtained by coupling LIF and cavity ring-down spectroscopy. Faraday Discussions, 2001, 119, 305-319.	3.2	20
70	Quantitative measurement of CN radical inÂaÂlow-pressure methane/air flame by cavity ring-downÂspectroscopy. Comptes Rendus Physique, 2001, 2, 965-972.	0.1	2
71	Quantitative features and sensitivity of cavity ring-down measurements of species concentrations in flames. Combustion and Flame, 2001, 124, 656-667.	5.2	27
72	Coupling of gas chromatography and molecular beam/mass spectrometry analytical techniques: Application to flame structure study. Review of Scientific Instruments, 1999, 70, 2828-2835.	1.3	6

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73	Absolute CH concentration measurements by cavity ring-down spectroscopy in an atmospheric diffusion flame. Chemical Physics Letters, 1999, 305, 334-342.	2.6	51
74	Detailed analysis of low-pressure premixed flames of CH4 + O2 + N2: a study of prompt-NO. Combustion and Flame, 1999, 117, 291-306.	5.2	39
75	Disturbance of laser-induced-fluorescence measurements of NO in methaneâ€“air flames containing chlorinated species by photochemical effects induced by 225-nm-laser excitation. Applied Optics, 1998, 37, 4951.	2.1	5
76	Improvement of two-photon laser induced fluorescence measurements of H- and O-atoms in premixed methane/air flames. Applied Physics B: Lasers and Optics, 1997, 65, 639-646.	2.2	35
77	Correction of LIF temperature measurements for laser absorption and fluorescence trapping in a flame. Applied Physics B: Lasers and Optics, 1995, 61, 401-407.	2.2	45
78	Instantaneous temperature measurement in a rapid-compression machine using laser Rayleigh scattering. Applied Physics B: Lasers and Optics, 1995, 61, 69-72.	2.2	70
79	Measurements of OH concentration in flames at high pressure by two-optical path laser-induced fluorescence. Applied Optics, 1992, 31, 2831.	2.1	11
80	Cavity Ring-Down Spectroscopy for Combustion Studies. , 0, , 273-311.		5