Jean-Paul Booth

List of Publications by Year
in descending order

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103	4,218	94433	118850
papers	citations	37 h-index	62 g-index

104	104	104	1641
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Foundations of plasma surface functionalization of polymers for industrial and biological applications. Plasma Sources Science and Technology, 2022, 31, 103001.	3.1	38
2	Quenching of O₂(b¹Î£_g ⁺) by O(³P) atoms. Effect of gas temperature. Plasma Sources Science and Technology, 2022, 31, 065012.	3.1	8
3	Chemical kinetics and density measurements of OH in an atmospheric pressure He + O2 + H2O radiofrequency plasma. Journal Physics D: Applied Physics, 2021, 54, 285201.	2.8	17
4	Determination of absolute O(³P) and O₂(a¹ Î” _g) densities and kinetics in fully modulated O₂ dc glow discharges from the O₂(X³ Î£ _g ^{â^'}) afterglow recovery dynamics. Plasma Sources Science and Technology, 2020, 29, 115009.	3.1	15
5	Fast quenching of metastable O₂(a ¹Î”_g) and O₂(b) Tj ETQq1 1 0.784314 rgBT O Plasma Sources Science and Technology, 2020, 29, 115020.	3.1	7
6	Oxygen atom kinetics in CO₂ plasmas ignited in a DC glow discharge. Plasma Sources Science and Technology, 2019, 28, 075010.	3.1	29
7	Oxygen (³P) atom recombination on a Pyrex surface in an O₂ plasma. Plasma Sources Science and Technology, 2019, 28, 055005.	3.1	38
8	Experimental demonstration of multifrequency impedance matching for tailored voltage waveform plasmas. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2019, 37, .	2.1	19
9	Effect of frequency on the uniformity of symmetrical RF CCP discharges. Plasma Sources Science and Technology, 2018, 27, 055012.	3.1	7
10	Kinetics of highly vibrationally excited O₂(X) molecules in inductively-coupled oxygen plasmas. Plasma Sources Science and Technology, 2018, 27, 045006.	3.1	56
11	Plasma non-uniformity in a symmetric radiofrequency capacitively-coupled reactor with dielectric side-wall: a two dimensional particle-in-cell/Monte Carlo collision simulation. Plasma Sources Science and Technology, 2018, 27, 025006.	3.1	24
12	Experimental benchmark of kinetic simulations of capacitively coupled plasmas in molecular gases. Plasma Physics and Controlled Fusion, 2018, 60, 014010.	2.1	13
13	Chemical kinetics in an atmospheric pressure helium plasma containing humidity. Physical Chemistry Chemical Physics, 2018, 20, 24263-24286.	2.8	62
14	Multi frequency matching for voltage waveform tailoring. Plasma Sources Science and Technology, 2018, 27, 095012.	3.1	26
15	Calculated electron impact dissociation cross sections for molecular chlorine (Cl₂). Plasma Sources Science and Technology, 2018, 27, 095008.	3.1	9
16	Measurement of the isotope shift of the $2{{m{p}}}^{4}{}^{3}{{P}}_{2} ightarrow 2{{m{p}}}^{3}3{m{p}}{}^{3}{{P}}_{2}$ two-photon transition of O I and a revision of the triplet energy levels of atomic oxygen. Journal of Physics B: Atomic, Molecular and Optical Physics, 2017, 50, 065003.	1.5	11
17	Power coupling mode transitions induced by tailored voltage waveforms in capacitive oxygen discharges. Plasma Sources Science and Technology, 2017, 26, 034002.	3.1	41
18	The role of thermal energy accommodation and atomic recombination probabilities in low pressure oxygen plasmas. Plasma Physics and Controlled Fusion, 2017, 59, 024004.	2.1	19

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19	Capacitively coupled hydrogen plasmas sustained by tailored voltage waveforms: vibrational kinetics and negative ions control. Plasma Sources Science and Technology, 2017, 26, 075007.	3.1	8
20	QDB: a new database of plasma chemistries and reactions. Plasma Sources Science and Technology, 2017, 26, 055014.	3.1	42
21	Controlled production of atomic oxygen and nitrogen in a pulsed radio-frequency atmospheric-pressure plasma. Journal Physics D: Applied Physics, 2017, 50, 455204.	2.8	27
22	Single-mode nanosecond Ti:Sapphire laser for high resolution Two-Photon Absorption Laser induced-Fluorescence (TALIF). , 2017, , .		0
23	High sensitivity ultra-broad-band absorption spectroscopy of inductively coupled chlorine plasma. Plasma Sources Science and Technology, 2016, 25, 035019.	3.1	14
24	Electron power absorption dynamics and ion energy distributions in capacitive discharges driven by customized voltage waveforms in argon and CF4. , 2016, , .		0
25	Pressure broadening of atomic oxygen two-photon absorption laser induced fluorescence. Plasma Sources Science and Technology, 2016, 25, 06LT03.	3.1	13
26	Experimental and simulation study of a capacitively coupled oxygen discharge driven by tailored voltage waveforms. Plasma Sources Science and Technology, 2016, 25, 015004.	3.1	51
27	Controlling the shape of the ion energy distribution at constant ion flux and constant mean ion energy with tailored voltage waveforms. Plasma Sources Science and Technology, 2016, 25, 025006.	3.1	19
28	A computational analysis of the vibrational levels of molecular oxygen in low-pressure stationary and transient radio-frequency oxygen plasma. Plasma Sources Science and Technology, 2016, 25, 025025.	3.1	24
29	TALIF measurements of oxygen atom density in the afterglow of a capillary nanosecond discharge. Plasma Sources Science and Technology, 2015, 24, 025010.	3.1	33
30	Control and optimization of the slope asymmetry effect in tailored voltage waveforms for capacitively coupled plasmas. Plasma Sources Science and Technology, 2015, 24, 015021.	3.1	28
31	Highly vibrationally excited O₂molecules in low-pressure inductively-coupled plasmas detected by high sensitivity ultra-broad-band optical absorption spectroscopy. Plasma Sources Science and Technology, 2015, 24, 042001.	3.1	22
32	Strong Ionization Asymmetry in a Geometrically Symmetric Radio Frequency Capacitively Coupled Plasma Induced by Sawtooth Voltage Waveforms. Physical Review Letters, 2015, 114, 125002.	7.8	101
33	Experimental and numerical study of fast gas heating and O atom production in a capillary nanosecond discharge. , 2014, , .		5
34	Equivalence of the hard-wall and kinetic-fluid models of collisionless electron heating in capacitively coupled discharges. Plasma Sources Science and Technology, 2014, 23, 015016.	3.1	14
35	Ion flux asymmetry in radiofrequency capacitively-coupled plasmas excited by sawtooth-like waveforms. Plasma Sources Science and Technology, 2014, 23, 065010.	3.1	54
36	Electron heating in capacitively coupled plasmas revisited. Plasma Sources Science and Technology, 2014, 23, 035010.	3.1	66

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37	Global (volume-averaged) model of inductively coupled chlorine plasma: Influence of Cl wall recombination and external heating on continuous and pulse-modulated plasmas. Plasma Sources Science and Technology, 2014, 23, 045002.	3.1	24
38	Chlorine atom densities in the $(3{m p}^{5})^{2} {m P}_{1/2}^{m o}$ excited spinâ€“orbit state measured by two-photon absorption laser-induced fluorescence in a chlorine inductively coupled plasma. Journal Physics D: Applied Physics, 2013, 46, 295203.	2.8	12
39	Absolute atomic oxygen and nitrogen densities in radio-frequency driven atmospheric pressure cold plasmas: Synchrotron vacuum ultra-violet high-resolution Fourier-transform absorption measurements. Applied Physics Letters, 2013, 103, .	3.3	60
40	Radio-frequency capacitively coupled plasmas excited by tailored voltage waveforms: comparison of experiment and particle-in-cell simulations. Journal Physics D: Applied Physics, 2013, 46, 235201.	2.8	62
41	Normal regime of the weak-current mode of an rf capacitive discharge. Plasma Sources Science and Technology, 2013, 22, 015018.	3.1	6
42	Radio frequency current-voltage probe for impedance and power measurements in multi-frequency unmatched loads. Review of Scientific Instruments, 2013, 84, 015001.	1.3	18
43	Fine-structure-resolved electron collisions from chlorine atoms in the(3p5)2P3/2oand(3p5)2P1/2ostates. Physical Review A, 2013, 87, .	2.5	8
44	Direct observation of ozone formation on SiO₂ surfaces in O₂ discharges. Journal Physics D: Applied Physics, 2013, 46, 032001.	2.8	19
45	Frequency dependence of the electrical asymmetry effect in dual-frequency capacitively coupled discharges. Applied Physics Letters, 2013, 102, .	3.3	28
46	Secondary electron induced asymmetry in capacitively coupled plasmas. Journal Physics D: Applied Physics, 2013, 46, 135201.	2.8	71
47	Ozone kinetics in low-pressure discharges: vibrationally excited ozone and molecule formation on surfaces. Plasma Sources Science and Technology, 2013, 22, 055018.	3.1	30
48	Capacitively coupled radio-frequency plasmas excited by tailored voltage waveforms. Plasma Physics and Controlled Fusion, 2013, 55, 124002.	2.1	25
49	â€œAnomalousâ€•collisionality in low-pressure plasmas. Physics of Plasmas, 2013, 20, 124503.	1.9	16
50	Global model of inductively coupled radio-frequency Cl<inf>2</inf> plasma: Dissociation, excitation and power modulation. , 2013, , .		0
51	Theory for the self-bias formation in capacitively coupled plasmas excited by arbitrary waveforms. Plasma Sources Science and Technology, 2013, 22, 065013.	3.1	16
52	Tailored Voltage Waveform Deposition of Microcrystalline Silicon Thin Films from Hydrogen-Diluted Silane and Silicon Tetrafluoride: Optoelectronic Properties of Films. Japanese Journal of Applied Physics, 2012, 51, 08HF01.	1.5	6
53	Gas temperature measurement in Ar and Ar-Cl<inf>2</inf> based ICP discharge: Comparison between experiments and simulations. , 2012, , .		1
54	Microcrystalline silicon solar cells deposited using a plasma process excited by tailored voltage waveforms. Applied Physics Letters, 2012, 100, .	3.3	47

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55	Gas molecule dissociation effect on rf discharge burning in low pressure ammonia. Physics Letters, Section A: General, Atomic and Solid State Physics, 2012, 376, 2238-2243.	2.1	3
56	Absolute atomic chlorine densities in a Cl2inductively coupled plasma determined by two-photon laser-induced fluorescence with a new calibration method. Journal Physics D: Applied Physics, 2012, 45, 195201.	2.8	21
57	Separate control of the ion flux and ion energy in capacitively coupled radio-frequency discharges using voltage waveform tailoring. Applied Physics Letters, 2012, 101, 124104.	3.3	85
58	A dc-pulsed capacitively coupled planar Langmuir probe for plasma process diagnostics and monitoring. Plasma Sources Science and Technology, 2012, 21, 065004.	3.1	9
59	Hydrogenated microcrystalline silicon thin films deposited by RF-PECVD under low ion bombardment energy using voltage waveform tailoring. Journal of Non-Crystalline Solids, 2012, 358, 1974-1977.	3.1	39
60	Control of the ion flux and ion energy in CCP discharges using non-sinusoidal voltage waveforms. Journal Physics D: Applied Physics, 2012, 45, 395203.	2.8	62
61	Enhanced sheath heating in capacitively coupled discharges due to non-sinusoidal voltage waveforms. Applied Physics Letters, 2012, 100, .	3.3	79
62	Tailored Voltage Waveform Deposition of Microcrystalline Silicon Thin Films from Hydrogen-Diluted Silane and Silicon Tetrafluoride: Optoelectronic Properties of Films. Japanese Journal of Applied Physics, 2012, 51, 08HF01.	1.5	3
63	Control of Nanocrystalline Silicon Growth Phase and Deposition Rate through Voltage Waveform Tailoring during PECVD. Materials Research Society Symposia Proceedings, 2011, 1339, 1.	0.1	2
64	Nanocrystalline silicon film growth morphology control through RF waveform tailoring. Journal Physics D: Applied Physics, 2010, 43, 412001.	2.8	73
65	Surface loss rates of H and Cl radicals in an inductively coupled plasma etcher derived from time-resolved electron density and optical emission measurements. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2010, 28, 360-372.	2.1	36
66	Dual-frequency capacitive radiofrequency discharges: effect of low-frequency power on electron density and ion flux. Plasma Sources Science and Technology, 2010, 19, 015005.	3.1	101
67	Electron transport coefficients in mixtures of CF4and CF2radicals. Plasma Sources Science and Technology, 2009, 18, 035008.	3.1	19
68	Similarity law for rf breakdown. Europhysics Letters, 2008, 82, 15001.	2.0	31
69	The Effect of Discharge Chamber Geometry on the Characteristics of Low-Pressure RF Capacitive Discharges. IEEE Transactions on Plasma Science, 2007, 35, 416-424.	1.3	5
70	Metastable CF and CF2molecules in CF4inductively-coupled plasmas. Plasma Sources Science and Technology, 2006, 15, 112-116.	3.1	4
71	Fluorine negative ion density measurement in a dual frequency capacitive plasma etch reactor by cavity ring-down spectroscopy. Applied Physics Letters, 2006, 88, 151502.	3.3	33
72	CF and CF2radical kinetics and transport in a pulsed CF4ICP. Plasma Sources Science and Technology, 2005, 14, 273-282.	3.1	42

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73	A novel technique for plasma density measurement using surface-wave transmission spectra. Plasma Sources Science and Technology, 2005, 14, 777-786.	3.1	68
74	Use of the ultraviolet absorption spectrum of CF2 to determine the spatially resolved absolute CF2 density, rotational temperature, and vibrational distribution in a plasma etching reactor. Journal of Chemical Physics, 2004, 120, 9499-9508.	3.0	35
75	Ion flux nonuniformities in large-area high-frequency capacitive discharges. Applied Physics Letters, 2003, 83, 243-245.	3.3	135
76	CF Aâ€Š2Î£+â€“Xâ€Š2Î and Bâ€Š2Î”â€“Xâ€Š2Î study by broadband absorption spectroscopy in a plasma etch reactor: Determination of transition probabilities, CF Xâ€Š2Î concentrations, and gas temperatures. Journal of Chemical Physics, 2003, 118, 622-632.	3.0	27
77	Broadband absorption and ab initio results on the CF Câ€Š2Î£+â€“Xâ€Š2Î system. Journal of Chemical Physics, 2003, 118, 1206-1213.	3.0	10
78	Chlorine dissociation fraction in an inductively coupled plasma measured by ultraviolet absorption spectroscopy. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2002, 20, 225-229.	2.1	29
79	Diagnostics of etching plasmas. Pure and Applied Chemistry, 2002, 74, 397-400.	1.9	6
80	Standing wave and skin effects in large-area, high-frequency capacitive discharges. Plasma Sources Science and Technology, 2002, 11, 283-293.	3.1	324
81	Measurements of characteristic transients of planar electrostatic probes in cold plasmas. Review of Scientific Instruments, 2000, 71, 2722-2727.	1.3	33
82	CFx radical production and loss in a CF4 reactive ion etching plasma: Fluorine rich conditions. Journal of Applied Physics, 1999, 85, 3097-3107.	2.5	149
83	CF2 production and loss mechanisms in fluorocarbon discharges: Fluorine-poor conditions and polymerization. Journal of Applied Physics, 1999, 85, 3952-3959.	2.5	173
84	High mass positive ions and molecules in capacitively-coupled radio-frequency CF4 plasmas. Journal of Applied Physics, 1999, 85, 7562-7568.	2.5	43
85	Optical and electrical diagnostics of fluorocarbon plasma etching processes. Plasma Sources Science and Technology, 1999, 8, 249-257.	3.1	85
86	Developments of Basic Researches on Fluorocarbon Plasmas for Material Processing. 7. CFx Radical Creation and Destruction at Surfaces in Fluorocarbon Plasmas.. Journal of Plasma and Fusion Research, 1999, 75, 821-829.	0.4	5
87	Absolute radical densities in etching plasmas determined by broad-band UV absorption spectroscopy. Plasma Sources Science and Technology, 1998, 7, 423-430.	3.1	91
88	Laser-induced fluorescence detection of as a primary product of Si and reactive ion etching with gas. Plasma Sources Science and Technology, 1997, 6, 349-360.	3.1	49
89	The transition from symmetric to asymmetric discharges in pulsed 13.56 MHz capacitively coupled plasmas. Journal of Applied Physics, 1997, 82, 552-560.	2.5	50
90	CF2kinetics and related mechanisms in the presence of polymers in fluorocarbon plasmas. Journal of Applied Physics, 1997, 81, 2124-2130.	2.5	39

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91	Kinetics of Radicals in Fluorocarbon Plasmas for Treatment of Polymers. , 1997, , 129-146.		0
92	Optical Diagnostics of Plasmas: A Tool for Process Control. , 1997, , 339-358.		0
93	A novel electrostatic probe method for ion flux measurements. Plasma Sources Science and Technology, 1996, 5, 677-684.	3.1	152
94	Quantitative Laser-Induced Fluorescence Spectroscopy of the CF A2Î£+â^'X2Î Transition:Â Electronic Transition Dipole Moment Function and Predissociation. The Journal of Physical Chemistry, 1996, 100, 47-53.	2.9	28
95	On the formation and loss of S2molecules in a reactive ion etching reactor operating with SF6. Journal of Applied Physics, 1995, 78, 6957-6966.	2.5	13
96	Electron beam pulses produced by heliconâ€wave excitation. Physics of Plasmas, 1995, 2, 1807-1809.	1.9	88
97	Electric field measurements in discharges by 2+1 photon laser Stark spectroscopy of atomic hydrogen. Applied Physics Letters, 1994, 65, 819-821.	3.3	41
98	Oxygen atom actinometry reinvestigated: Comparison with absolute measurements by resonance absorption at 130 nm. Journal of Applied Physics, 1991, 69, 618-626.	2.5	108
99	Oxygen and fluorine atom kinetics in electron cyclotron resonance plasmas by timeâ€resolved actinometry. Journal of Applied Physics, 1991, 70, 611-620.	2.5	148
100	Spatially and temporally resolved laserâ€induced fluorescence measurements of CF2and CF radicals in a CF4rf plasma. Journal of Applied Physics, 1989, 66, 5251-5257.	2.5	143
101	Plasma Diagnostics by Laser-Induced Fluorescence. Materials Research Society Symposia Proceedings, 1988, 117, 47.	0.1	8
102	Laser induced fluorescence detection of CF and CF2radicals in a CF4/O2plasma. Applied Physics Letters, 1987, 50, 318-319.	3.3	61
103	Laser Induced Fluorescence and Optical Emission Studies of Fluorocarbon Plasmas. Materials Research Society Symposia Proceedings, 1987, 98, 135.	0.1	19