Vaclav Prukner

List of Publications by Year
in descending order

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67	709	567281 15	610901 24
papers	citations	h-index	g-index

67	67	67	684
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Influence of Power Modulation on Ozone Production Using an AC Surface Dielectric Barrier Discharge in Oxygen. Plasma Chemistry and Plasma Processing, 2010, 30, 607-617.	2.4	58
2	Ozone Production Using a Power Modulated Surface Dielectric Barrier Discharge in Dry Synthetic Air. Plasma Chemistry and Plasma Processing, 2012, 32, 743-754.	2.4	56
3	Reduction of microbial contamination and improvement of germination of sweet basil (Ocimum) Tj ETQq1 1 0.784314 rgBT /Overlo 50, 305401.	2.8	40
4	Multi-hollow surface dielectric barrier discharge: an ozone generator with flexible performance and supreme efficiency. Plasma Sources Science and Technology, 2020, 29, 095014.	3.1	36
5	Etching of polymers, proteins and bacterial spores by atmospheric pressure DBD plasma in air. Journal Physics D: Applied Physics, 2017, 50, 135201.	2.8	35
6	Radially and temporally resolved electric field of positive streamers in air and modelling of the induced plasma chemistry. Plasma Sources Science and Technology, 2016, 25, 045021.	3.1	28
7	Soft X-ray emission of a fast-capillary-discharge device. Plasma Devices and Operations, 2005, 13, 105-109.	0.6	24
8	LIF study of N₂(A³$mathbf{Sigma}_{ext{u}}^{+}$,v= 0â€“10) vibrational kinetics under nitrogen streamer conditions. Journal Physics D: Applied Physics, 2015, 48, 265202.	2.8	24
9	On the air atmospheric pressure plasma treatment effect on the physiology, germination and seedlings of basil seeds. Journal Physics D: Applied Physics, 2020, 53, 104001.	2.8	23
10	{m N}_2 left({A,^3Sigma_{m u}^+} ight) behaviour in a N₂â€“NO surface dielectric barrier discharge in the modulated ac regime at atmospheric pressure. Journal Physics D: Applied Physics, 2010, 43, 124003.	2.8	22
11	PEOâ€like Plasma Polymers Prepared by Atmospheric Pressure Surface Dielectric Barrier Discharge. Plasma Processes and Polymers, 2012, 9, 782-791.	3.0	21
12	Nano-structuring of solid surface by extreme ultraviolet Ar8+ laser. Laser and Particle Beams, 2012, 30, 57-63.	1.0	19
13	Evolution of N₂(A³ $Sigma _{{m u}}^{+}$) in streamer discharges: influence of oxygen admixtures on formation of low vibrational levels. Journal Physics D: Applied Physics, 2017, 50, 504002.	2.8	19
14	Influence of Duty Cycle on Ozone Generation and Discharge Using Volume Dielectric Barrier Discharge. Plasma Chemistry and Plasma Processing, 2018, 38, 355-364.	2.4	17
15	Ways to discharge-based soft X-ray lasers with the wavelength Î»<15Ânm. Laser and Particle Beams, 2008, 26, 167-178.	1.0	16
16	Investigation of the initial phases of nanosecond discharges in liquid water. Plasma Sources Science and Technology, 2020, 29, 064001.	3.1	16
17	Amplification of spontaneous emission of neon-like argon in a fast gas-filled capillary discharge. Plasma Physics Reports, 2008, 34, 162-168.	0.9	15
18	Optical and electrical characteristics of a single surface DBD micro-discharge produced in atmospheric-pressure nitrogen and synthetic air. Plasma Sources Science and Technology, 2011, 20, 025009.	3.1	14

#	Article	IF	Citations
19	ICCD microscopic imaging of a single micro-discharge in surface coplanar DBD geometry: determination of the luminous diameter of N₂and Ar streamers. Plasma Sources Science and Technology, 2011, 20, 025010.	3.1	14
20	A potential environment for lasing below 15Ânm initiated by exploding wire in water. Laser and Particle Beams, 2010, 28, 61-67.	1.0	13
21	Surface DBD for Deposition of PEOâ€Like Plasma Polymers. Plasma Processes and Polymers, 2012, 9, 83-89.	3.0	13
22	Stress response ofEscherichia coliinduced by surface streamer discharge in humid air. Journal Physics D: Applied Physics, 2016, 49, 075401.	2.8	11
23	Direct treatment of pepper (Capsicum annuum L.) and melon (Cucumis melo) seeds by amplitude-modulated dielectric barrier discharge in air. Journal of Applied Physics, 2021, 129, .	2.5	11
24	Comparing of calculated and experimental results of CAPEX-U device. European Physical Journal D, 2006, 56, B371-B376.	0.4	10
25	Formation of ${m N}_{2}(A,^{3}Sigma_{{m u}}^{+}$,v= 0â€“3) metastable species in decaying nitrogen streamer. Journal Physics D: Applied Physics, 2013, 46, 485205.	2.8	10
26	Evolution of N(⁴S) atoms produced under nitrogen streamer conditions: time-resolved TALIF study at reduced pressures. Plasma Sources Science and Technology, 2019, 28, 125004.	3.1	10
27	Nanosecond imaging and emission spectroscopy of argon streamer micro-discharge developing in coplanar surface DBD. Plasma Sources Science and Technology, 2018, 27, 055019.	3.1	9
28	On the inactivation of Bacillus subtilis spores by surface streamer discharge in humid air caused by reactive species. Journal Physics D: Applied Physics, 2020, 53, 245203.	2.8	9
29	Picosecond interferometry and analysis of pressure fields around nanosecond microdischarge filaments that develop in deionized water. Japanese Journal of Applied Physics, 2020, 59, SHHA08.	1.5	9
30	Emerging and expanding streamer head in low-pressure air. Plasma Sources Science and Technology, 2020, 29, 03LT01.	3.1	9
31	Demonstration of Dynamics of Nanosecond Discharge in Liquid Water Using Four-Channel Time-Resolved ICCD Microscopy. Plasma, 2021, 4, 183-200.	1.8	8
32	Disentangling dark and luminous phases of nanosecond discharges developing in liquid water. Plasma Sources Science and Technology, 2020, 29, 095001.	3.1	8
33	Gas-filled laser-triggered spark gap. European Physical Journal D, 2004, 54, C309-C313.	0.4	7
34	Design of a laser-triggered driver for fast capillary discharge. European Physical Journal D, 2004, 54, C321-C325.	0.4	7
35	Research on high current pulse discharges at IPP ASci CR. European Physical Journal D, 2006, 56, B259-B266.	0.4	7
36	Deposition of Poly(Ethylene Oxide)â€Like Plasma Polymers on Inner Surfaces of Cavities by Means of Atmosphericâ€Pressure SDBDâ€Based Jet. Plasma Processes and Polymers, 2016, 13, 823-833.	3.0	7

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37	Dynamics of macro- and micro-bubbles induced by nanosecond discharge in liquid water. Plasma Sources Science and Technology, 2022, 31, 015005.	3.1	6
38	A new method of determination of ablation threshold contour in the spot of focused XUV laser beam of nanosecond duration. , 2013, , .		5
39	Strong Amplification of Ne-like AR line in the Source Based on Capillary Discharge. , 2005, , .		4
40	Recent progress in discharge-based soft x-ray lasers at IPP ASci CR. Proceedings of SPIE, 2007, , .	0.8	4
41	Repetitive XUV laser based on the fast capillary discharge. , 2011, , .		4
42	Generation and application of the soft X-ray laser beam based on capillary discharge. Journal of Physics: Conference Series, 2014, 511, 012035.	0.4	4
43	Shockwaves evolving on nanosecond timescales around individual micro-discharge filaments in deionised water. Journal Physics D: Applied Physics, 2021, 54, 285202.	2.8	4
44	Interactive system for the interpretation of atomic spectra. European Physical Journal D, 2004, 54, C314-C320.	0.4	3
45	Application of EUV optics to surface modification of materials. , 2013, , .		3
46	Optical diagnostics of streamers: from laboratory micro-scale to upper-atmospheric large-scale discharges. Journal of Physics: Conference Series, 2014, 550, 012037.	0.4	3
47	Spontaneous and artificial direct nanostructuring of solid surface by extreme ultraviolet laser with nanosecond pulses. Laser and Particle Beams, 2016, 34, 11-22.	1.0	3
48	Role of pre-pulse in gas-filled-capillary soft X-ray source. European Physical Journal D, 2004, 54, C334-C343.	0.4	2
49	Four-channel laser-triggered spark gap. European Physical Journal D, 2006, 56, B218-B222.	0.4	2
50	Corona-like multistreamer discharge in water for cylindrical shock wave generation. European Physical Journal D, 2006, 56, B342-B348.	0.4	2
51	Influence of initial conditions on capillary discharge device Capex 2. , 0, , .		1
52	Application of the Interactive system for the Atomic Spectra Interpretation to the Argon-Filled-Capillary Discharge. AIP Conference Proceedings, 2006, , .	0.4	1
53	Modification of alumina-capillary inner-surface by pulse high-current discharge. European Physical Journal D, 2006, 56, B564-B570.	0.4	1
54	High Resolved Spectra of Pulse High Current Capillary Discharge Plasma. , 2008, , .		1

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55	Beam characteristics of CAPEX XUV argon laser. , 2013, , .		1
56	Rules for Identification of Amplified Spontaneous Emission at 46.9 NM in Argon Filled Capillaries. IEEE International Conference on Plasma Science, 2005, , .	0.0	0
57	Experiment CAPEX-U: Present and Future. AIP Conference Proceedings, 2006, , .	0.4	0
58	Pulsed High-Current Experiments at IPP ASci CR Prague. AIP Conference Proceedings, 2006, , .	0.4	0
59	Electrical Parameters of High Current Capillary Discharge Device. International Power Modulator Symposium and High-Voltage Workshop, 2006, , .	0.0	0
60	CAPEX-U Device - Driver for Discharge-Based Soft X-ray Lasers with Â¿ ≪ 15 nm. , 2007, , .		0
61	CAPEX-U device - driver for discharge-based soft x-ray lasers with λ ≪ 15 nm. , 2007, , .		0
62	Ag wire explosion in water - a potential source of coherent soft X-ray radiation. , 2008, , .		0
63	Particle emission of discharge-based soft S-ray lasers. , 2008, , .		0
64	Exploding Wire in Water as a Potential Source of Amplified EUV-radiation. , 2009, , .		0
65	Gas-filled-capillary discharge experiment. , 2009, , .		0
66	Repetitive XUV Discharge-Pumped Laser at 46.9 nm. Springer Proceedings in Physics, 2014, , 231-234.	0.2	0
67	An extreme ultraviolet interferometer suitable to generate dense interference pattern. Proceedings of SPIE, 2014, , .	0.8	0