

David Staack

List of Publications by Year in descending order

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Version: 2024-02-01

60
papers

1,582
citations

394421

19
h-index

302126

39
g-index

61
all docs

61
docs citations

61
times ranked

1302
citing authors

#	ARTICLE	IF	CITATIONS
1	Characterization of a dc atmospheric pressure normal glow discharge. Plasma Sources Science and Technology, 2005, 14, 700-711.	3.1	244
2	DC normal glow discharges in atmospheric pressure atomic and molecular gases. Plasma Sources Science and Technology, 2008, 17, 025013.	3.1	172
3	Spectroscopic studies and rotational and vibrational temperature measurements of atmospheric pressure normal glow plasma discharges in air. Plasma Sources Science and Technology, 2006, 15, 818-827.	3.1	149
4	Application of nanosecond-pulsed dielectric barrier discharge for biomedical treatment of topographically non-uniform surfaces. Journal Physics D: Applied Physics, 2009, 42, 125202.	2.8	117
5	Simulation of dc atmospheric pressure argon micro glow-discharge. Plasma Sources Science and Technology, 2006, 15, 676-688.	3.1	99
6	Nanoscale Corona Discharge in Liquids, Enabling Nanosecond Optical Emission Spectroscopy. Angewandte Chemie - International Edition, 2008, 47, 8020-8024.	13.8	63
7	Decontamination of Surfaces From Extremophile Organisms Using Nonthermal Atmospheric-Pressure Plasmas. IEEE Transactions on Plasma Science, 2009, 37, 866-871.	1.3	61
8	Effects of segmented electrode in Hall current plasma thrusters. Journal of Applied Physics, 2002, 92, 4906-4911.	2.5	60
9	Heating Effect of Dielectric Barrier Discharges for Direct Medical Treatment. IEEE Transactions on Plasma Science, 2009, 37, 113-120.	1.3	48
10	Temperature gradient in Hall thrusters. Applied Physics Letters, 2004, 84, 3028-3030.	3.3	41
11	Stabilization of the ionization overheating thermal instability in atmospheric pressure microplasmas. Journal of Applied Physics, 2009, 106, .	2.5	37
12	Shielded electrostatic probe for nonperturbing plasma measurements in Hall thrusters. Review of Scientific Instruments, 2004, 75, 393-399.	1.3	35
13	Spatially Resolved Temperature Measurements of Atmospheric-Pressure Normal Glow Microplasmas in Air. IEEE Transactions on Plasma Science, 2007, 35, 1448-1455.	1.3	35
14	A Non-thermal Plasma Seed Treatment Method for Management of a Seedborne Fungal Pathogen on Rice Seed. Crop Science, 2014, 54, 796-803.	1.8	35
15	Modeling of direct current micro-plasma discharges in atmospheric pressure hydrogen. Plasma Sources Science and Technology, 2007, 16, 619-634.	3.1	31
16	Low-temperature Polymer Deposition in Ambient Air Using a Floating-electrode Dielectric Barrier Discharge Jet. Plasma Processes and Polymers, 2011, 8, 523-534.	3.0	31
17	Localized Synthesis of Metal Nanoparticles Using Nanoscale Corona Discharge in Aqueous Solutions. Advanced Materials, 2009, 21, 4039-4044.	21.0	29
18	Atmospheric-pressure dielectric barrier discharge with capillary injection for gas-phase nanoparticle synthesis. Journal Physics D: Applied Physics, 2015, 48, 314003.	2.8	28

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19	Effects of cold plasma treatment on interlayer bonding strength in FFF process. Additive Manufacturing, 2019, 25, 104-111.	3.0	22
20	Degradation of PFOS and PFOA in soil and groundwater samples by high dose Electron Beam Technology. Radiation Physics and Chemistry, 2021, 189, 109705.	2.8	22
21	Bioinspired mechanical device generates plasma in water via cavitation. Science Advances, 2019, 5, eaau7765.	10.3	18
22	Microbubble generation by microplasma in water. Journal Physics D: Applied Physics, 2014, 47, 355203.	2.8	17
23	Dielectric Barrier Discharge Applicator for Heating Carbon Nanotube-Loaded Interfaces and Enhancing 3D-Printed Bond Strength. Nano Letters, 2020, 20, 2310-2315.	9.1	15
24	Analysis of solid products formed in atmospheric non-thermal carbon monoxide plasma. Journal Physics D: Applied Physics, 2011, 44, 274005.	2.8	14
25	Controlling the Plasma Potential Distribution in Segmented-Electrode Hall Thruster. IEEE Transactions on Plasma Science, 2008, 36, 1202-1203.	1.3	11
26	Polymer film deposition on agar using a dielectric barrier discharge jet and its bacterial growth inhibition. Applied Physics Letters, 2012, 101, 074107.	3.3	11
27	A Battery Powered, Portable, and Self-Contained Non-Thermal Helium Plasma Jet Device for Point-of-Injury Burn Wound Treatment. Plasma Processes and Polymers, 2015, 12, 1244-1255.	3.0	11
28	Microplasma ball reactor for JP-8 liquid hydrocarbon conversion to lighter fuels. Fuel, 2021, 285, 118943.	6.4	11
29	High dose rate electron beam irradiation of heavy alkanes in a multi-phase flow system. Fuel, 2020, 274, 117695.	6.4	9
30	Degradation of perfluoroheptanoic acid in water by electron beam irradiation. Environmental Chemistry Letters, 2021, 19, 2689-2694.	16.2	8
31	Relative breakdown voltage and energy deposition in the liquid and gas phase of multiphase hydrocarbon plasmas. Journal of Applied Physics, 2021, 129, .	2.5	8
32	CO2-free conversion of fossil fuels by multiphase plasma at ambient conditions. Fuel, 2021, 304, 121469.	6.4	8
33	Specific cutting energy reduction of granite using plasma treatment: A feasibility study for future geothermal drilling. Procedia Manufacturing, 2020, 48, 514-519.	1.9	7
34	Role of bubble and impurity dynamics in electrical breakdown of dielectric liquids. Plasma Sources Science and Technology, 2021, 30, 055013.	3.1	7
35	Underwater plasma breakdown characteristics with respect to highly pressurized drilling applications. Journal of Applied Physics, 2021, 129, .	2.5	7
36	Thin Film Deposition using Atmospheric Pressure Microplasmas. , 2007, , .		6

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37	Characteristics of Precursor-Dependent Breakdown in Helium Dielectric Barrier Discharge Jet. IEEE Transactions on Plasma Science, 2012, 40, 2931-2945.	1.3	6
38	Electrical Oligomerization of Small Hydrocarbons Activated by Collision with High Energy Electrons at Ambient Conditions. ACS Sustainable Chemistry and Engineering, 2020, 8, 16731-16736.	6.7	6
39	High-speed imaging of transition from fluid breakup to phase explosion in electric explosion of tungsten wires in air. Applied Physics Letters, 2020, 117, .	3.3	6
40	Glow discharge characteristics of non-thermal microplasmas at above atmospheric pressure. Plasma Sources Science and Technology, 2020, 29, 055011.	3.1	6
41	Electric fuel conversion with hydrogen production by multiphase plasma at ambient pressure. Chemical Engineering Journal, 2022, 433, 133660.	12.7	6
42	Striations in High-Pressure Hydrogen Microplasma. IEEE Transactions on Plasma Science, 2014, 42, 2650-2651.	1.3	5
43	Copper film deposition using a helium dielectric barrier discharge jet. Plasma Processes and Polymers, 2020, 17, 1900251.	3.0	5
44	Ultrafast x-ray imaging of pulsed plasmas in water. Physical Review Research, 2021, 3, .	3.6	4
45	Plasma generated ozone and reactive oxygen species for point of use PPE decontamination system. PLoS ONE, 2022, 17, e0262818.	2.5	4
46	Optical emission spectral analysis of microplasma discharges in atomic and molecular gases at pressures up to 1.65 MPa. , 2013, , .		1
47	Use of fluorescent techniques for understanding the effect of non thermal plasma discharge on the E. coli cell. , 2009, , .		0
48	Scaling of normal glow discharge towards 1m: Microplasma discharges in high pressure gases. , 2010, , .		0
49	Effective plasma discharge reforming of methane using warm non-equilibrium discharges. , 2010, , .		0
50	Plasma-enhanced polymer deposition in ambient environment conditions using dielectric barrier discharge plasma jet. , 2010, , .		0
51	Thermodynamics of microplasma initiation in liquids. , 2011, , .		0
52	Dynamics of a microscale dense plasma focus. , 2011, , .		0
53	Characteristics of impurity-dependent breakdown in helium dielectric barrier discharge jets. , 2011, , .		0
54	PPPS-2013: Abstract submission: Optical emission spectral analysis of microplasma discharges in atomic and molecular gases at pressures up to 10 atm. , 2013, , .		0

#	ARTICLE	IF	CITATIONS
55	Thresholds for microbubble and microplasma generation in liquid. , 2014, , .		0
56	Thresholds for microbubble and microplasma generation in liquid. , 2014, , .		0
57	Influences of microplasma generated microbubble by moderate environmental pressure. , 2015, , .		0
58	Nutritional Element Detection In Human Nails Using Microplasma Induced Breakdown Spectroscopy. , 2017, , .		0
59	10.1063/5.0028999.1. , 2021, , .		0
60	Electric production of high-quality fuels via electron beam irradiation under ambient conditions. Green Chemistry, 2022, 24, 1177-1189.	9.0	0