

Alexander Fridman

List of Publications by Year in descending order

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81
papers

10,643
citations

94433

37
h-index

98798

67
g-index

90
all docs

90
docs citations

90
times ranked

6127
citing authors

#	ARTICLE	IF	CITATIONS
1	Applied Plasma Medicine. Plasma Processes and Polymers, 2008, 5, 503-533.	3.0	1,790
2	Physical and biological mechanisms of direct plasma interaction with living tissue. New Journal of Physics, 2009, 11, 115020.	2.9	641
3	Blood Coagulation and Living Tissue Sterilization by Floating-Electrode Dielectric Barrier Discharge in Air. Plasma Chemistry and Plasma Processing, 2006, 26, 425-442.	2.4	589
4	Floating Electrode Dielectric Barrier Discharge Plasma in Air Promoting Apoptotic Behavior in Melanoma Skin Cancer Cell Lines. Plasma Chemistry and Plasma Processing, 2007, 27, 163-176.	2.4	533
5	Comparison of Direct and Indirect Effects of Non-Thermal Atmospheric-Pressure Plasma on Bacteria. Plasma Processes and Polymers, 2007, 4, 370-375.	3.0	487
6	Effects of Non-Thermal Plasma on Mammalian Cells. PLoS ONE, 2011, 6, e16270.	2.5	443
7	Gliding arc gas discharge. Progress in Energy and Combustion Science, 1999, 25, 211-231.	31.2	406
8	Nonthermal Dielectric-Barrier Discharge Plasma-Induced Inactivation Involves Oxidative DNA Damage and Membrane Lipid Peroxidation in <i>Escherichia coli</i> . Antimicrobial Agents and Chemotherapy, 2011, 55, 1053-1062.	3.2	395
9	Generation mechanism of hydroxyl radical species and its lifetime prediction during the plasma-initiated ultraviolet (UV) photolysis. Scientific Reports, 2015, 5, 9332.	3.3	367
10	Endothelial Cell Proliferation is Enhanced by Low Dose Non-Thermal Plasma Through Fibroblast Growth Factor-2 Release. Annals of Biomedical Engineering, 2010, 38, 748-757.	2.5	275
11	Mechanism of Blood Coagulation by Nonthermal Atmospheric Pressure Dielectric Barrier Discharge Plasma. IEEE Transactions on Plasma Science, 2007, 35, 1559-1566.	1.3	270
12	Characterization of a dc atmospheric pressure normal glow discharge. Plasma Sources Science and Technology, 2005, 14, 700-711.	3.1	244
13	Non-thermal dielectric barrier discharge plasma induces angiogenesis through reactive oxygen species. Journal of the Royal Society Interface, 2012, 9, 147-157.	3.4	164
14	The future for plasma science and technology. Plasma Processes and Polymers, 2019, 16, 1800118.	3.0	160
15	Nanosecond-Pulsed DBD Plasma-Generated Reactive Oxygen Species Trigger Immunogenic Cell Death in A549 Lung Carcinoma Cells through Intracellular Oxidative Stress. International Journal of Molecular Sciences, 2017, 18, 966.	4.1	159
16	Control of methicillin-resistant <i>Staphylococcus aureus</i> in planktonic form and biofilms: A biocidal efficacy study of nonthermal dielectric-barrier discharge plasma. American Journal of Infection Control, 2010, 38, 293-301.	2.3	154
17	Inactivation of bacteria using dc corona discharge: role of ions and humidity. New Journal of Physics, 2011, 13, 103033.	2.9	114
18	Non-thermal plasma induces immunogenic cell death <i>in vivo</i> in murine CT26 colorectal tumors. OncoImmunology, 2018, 7, e1484978.	4.6	111

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19	Gliding arc in tornado using a reverse vortex flow. <i>Review of Scientific Instruments</i> , 2005, 76, 025110.	1.3	102
20	Why Target Immune Cells for Plasma Treatment of Cancer. <i>Plasma Chemistry and Plasma Processing</i> , 2016, 36, 259-268.	2.4	102
21	On-board plasma-assisted conversion of heavy hydrocarbons into synthesis gas. <i>Fuel</i> , 2010, 89, 1187-1192.	6.4	101
22	Uniform Nanosecond Pulsed Dielectric Barrier Discharge Plasma Enhances Anti-Tumor Effects by Induction of Immunogenic Cell Death in Tumors and Stimulation of Macrophages. <i>Plasma Processes and Polymers</i> , 2015, 12, 1392-1399.	3.0	97
23	Effect of Dielectric Barrier Discharge Plasma on the Attachment and Proliferation of Osteoblasts Cultured over Poly(ϵ -caprolactone) Scaffolds. <i>Plasma Processes and Polymers</i> , 2008, 5, 58-66.	3.0	86
24	Treatment of Raw Poultry with Nonthermal Dielectric Barrier Discharge Plasma To Reduce <i>Campylobacter jejuni</i> and <i>Salmonella enterica</i> . <i>Journal of Food Protection</i> , 2012, 75, 22-28.	1.7	84
25	Characteristics of Gliding Arc and Its Application in Combustion Enhancement. <i>Journal of Propulsion and Power</i> , 2008, 24, 1216-1228.	2.2	82
26	Cytotoxic macrophage-released tumour necrosis factor-alpha (TNF- α) as a killing mechanism for cancer cell death after cold plasma activation. <i>Journal Physics D: Applied Physics</i> , 2016, 49, 084001.	2.8	71
27	Porcine intact and wounded skin responses to atmospheric nonthermal plasma. <i>Journal of Surgical Research</i> , 2013, 179, e1-e12.	1.6	67
28	Plasma Stimulation of Migration of Macrophages. <i>Plasma Processes and Polymers</i> , 2014, 11, 1193-1197.	3.0	65
29	Low-Temperature Plasma for Biology, Hygiene, and Medicine: Perspective and Roadmap. <i>IEEE Transactions on Radiation and Plasma Medical Sciences</i> , 2022, 6, 127-157.	3.7	64
30	Skeletal Cell Differentiation Is Enhanced by Atmospheric Dielectric Barrier Discharge Plasma Treatment. <i>PLoS ONE</i> , 2013, 8, e82143.	2.5	54
31	Successful treatment of actinic keratoses using nonthermal atmospheric pressure plasma: A case series. <i>Journal of the American Academy of Dermatology</i> , 2017, 76, 349-350.	1.2	53
32	DNA Damage in Mammalian Cells by Nonthermal Atmospheric Pressure Microsecond Pulsed Dielectric Barrier Discharge Plasma is not Mediated by Ozone. <i>Plasma Processes and Polymers</i> , 2012, 9, 726-732.	3.0	52
33	Cold Plasma Inactivation of <i>Bacillus cereus</i> and <i>Bacillus anthracis</i> (Anthrax) Spores. <i>IEEE Transactions on Plasma Science</i> , 2010, 38, 1878-1884.	1.3	48
34	A Comparison of Floating-Electrode DBD and kINPen Jet: Plasma Parameters to Achieve Similar Growth Reduction in Colon Cancer Cells Under Standardized Conditions. <i>Plasma Chemistry and Plasma Processing</i> , 2018, 38, 1-12.	2.4	46
35	Non-equilibrium Dielectric Barrier Discharge Treatment of Mesenchymal Stem Cells: Charges and Reactive Oxygen Species Play the Major Role in Cell Death. <i>Plasma Processes and Polymers</i> , 2015, 12, 1117-1127.	3.0	36
36	Spatially Resolved Temperature Measurements of Atmospheric-Pressure Normal Glow Microplasmas in Air. <i>IEEE Transactions on Plasma Science</i> , 2007, 35, 1448-1455.	1.3	35

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37	Concentration of hydrogen peroxide generated by gliding arc discharge and inactivation of E. coli in water. International Communications in Heat and Mass Transfer, 2013, 42, 5-10.	5.6	35
38	Use of plasma gliding arc discharges on the inactivation of E. Coli in water. Separation and Purification Technology, 2013, 120, 423-428.	7.9	35
39	Reactive Oxygen and Nitrogen Species Production and Delivery Into Liquid Media by Microsecond Thermal Spark-Discharge Plasma Jet. IEEE Transactions on Plasma Science, 2012, 40, 2163-2171.	1.3	34
40	Involvement of multiple stressors induced by non-thermal plasma-charged aerosols during inactivation of airborne bacteria. PLoS ONE, 2017, 12, e0171434.	2.5	30
41	Non-thermal dielectric barrier discharge plasma treatment of endothelial cells. , 2008, 2008, 3578-81.		25
42	Use of Non-Thermal Atmospheric Pressure Plasma Discharge for Coagulation and Sterilization of Surface Wounds. IEEE International Conference on Plasma Science, 2005, , .	0.0	23
43	A Study of Two-Dimensional Microdischarge Pattern Formation in Dielectric Barrier Discharges. Plasma Chemistry and Plasma Processing, 2006, 26, 127-135.	2.4	23
44	Plasma Biology and Plasma Medicine. , 2008, , 848-914.		23
45	CO2-Free Energy and Hydrogen Production from Hydrocarbons. Energy & Fuels, 2006, 20, 1242-1249.	5.1	19
46	Plasma Bullets Propagation Inside of Agarose Tissue Model. IEEE Transactions on Plasma Science, 2013, 41, 1725-1730.	1.3	14
47	Guest Editorial The Second Special Issue on Atmospheric Pressure Plasma Jets and Their Applications. IEEE Transactions on Plasma Science, 2015, 43, 701-702.	1.3	14
48	Non-Thermal Plasma Accelerates Astrocyte Regrowth and Neurite Regeneration Following Physical Trauma In Vitro. Applied Sciences (Switzerland), 2019, 9, 3747.	2.5	14
49	Computational Studies of Atmospheric-Pressure Methane-Hydrogen DC Micro Glow Discharges. IEEE Transactions on Plasma Science, 2010, 38, 73-85.	1.3	13
50	Residual effects and energy cost of gliding arc discharge treatment on the inactivation of Escherichia coli in water. International Journal of Heat and Mass Transfer, 2014, 77, 1075-1083.	4.8	13
51	Microsecond-Pulsed Dielectric Barrier Discharge Plasma-Treated Mist for Inactivation of Escherichia coli <i>In Vitro</i>. IEEE Transactions on Plasma Science, 2019, 47, 395-402.	1.3	13
52	Gliding Arc Plasma-Stimulated Conversion of Pyrogas into Synthesis Gas. IEEE Transactions on Plasma Science, 2012, 40, 1124-1130.	1.3	12
53	Effect of Dielectric Barrier Discharge Treatment of Blood Plasma to Improve Rheological Properties of Blood. Plasma Chemistry and Plasma Processing, 2012, 32, 165-176.	2.4	11
54	Using cold plasma to treat warts in children: A case series. Pediatric Dermatology, 2020, 37, 706-709.	0.9	11

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55	Mechanism of Calcium Ion Precipitation from Hard Water Using Pulsed Spark Discharges. Plasma Chemistry and Plasma Processing, 2011, 31, 51-66.	2.4	10
56	Ignition Enhancement Using Magnetic Gliding Arc. , 2007, , .		9
57	Dielectric Barrier Discharge Plasma in Coagulation and Sterilization.. Blood, 2006, 108, 4043-4043.	1.4	8
58	Non-Equilibrium Plasma Discharge: Characterization and Effect on Ignition. , 2006, , .		7
59	Self-Organization and Migration of Dielectric Barrier Discharge Filaments in Argon Gas Flow. IEEE Transactions on Plasma Science, 2011, 39, 2060-2061.	1.3	7
60	Mechanism of Blood Coagulation by Non-Thermal Atmospheric Pressure Dielectric Barrier Discharge. , 2007, , .		6
61	Physical and biological mechanisms of plasma interaction with living tissue. , 2009, , .		5
62	Nonequilibrium Liquid Plasma Generation. IEEE Transactions on Plasma Science, 2011, 39, 2668-2669.	1.3	5
63	Plasma Reforming for H2-Rich Synthesis Gas. , 2011, , 223-259.		4
64	Mineral Fouling Control by Underwater Plasma Discharge in a Heat Exchanger. Journal of Heat Transfer, 2011, 133, .	2.1	4
65	Heating Effect of Dielectric Barrier Discharges in Sterilization. , 2007, , .		3
66	Mechanism of Blood Coagulation by Non-Thermal Atmospheric Pressure Dielectric Barrier Discharge Plasma.. Blood, 2007, 110, 3162-3162.	1.4	3
67	Non-Equilibrium Dielectric Barrier Discharge Plasma Promoting Apoptotic Behavior in Melanoma Skin Cancer Cells. , 2007, , .		2
68	Time-Resolved PLIF Imaging of OH Radicals in the Afterglow of Nanosecond Pulsed Discharge in Combustible Mixtures. IEEE Transactions on Plasma Science, 2011, 39, 2604-2605.	1.3	2
69	Nanosecond Pulsed Uniform Dielectric Barrier Discharge for Living Tissue Sterilization and Blood Coagulation. , 2007, , .		1
70	Sterilization efficacy of dielectric barrier discharge on non-uniform surfaces. , 2008, , .		1
71	Direct exposure to a single filament of DBD plasma leads to the inactivation of airborne bacteria. , 2010, , .		1
72	Temporally resolved imaging on quenching and re-ignition of nanosecond underwater discharge. AIP Advances, 2012, 2, .	1.3	1

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73	Reduction of low-density lipoprotein cholesterol, plasma viscosity, and whole blood viscosity by the application of pulsed corona discharges and filtration. Review of Scientific Instruments, 2013, 84, 034301.	1.3	1
74	Functionalization of Polymers using N ₂ Pulsed Dielectric Barrier Discharge. , 2007, , .		0
75	Simulation of Atmospheric Pressure Methane-Hydrogen Microdischarge for Diamond Like Carbon (DLC) Film Deposition. , 2007, , .		0
76	Initialization and Development of Electric Breakdown in Water. , 2007, , .		0
77	Model for initiation and development of electric break down in liquids and stability analysis. , 2008, , .		0
78	Phemenological estimation of sterilization kinetics using dielectric barrier discharge. , 2008, , .		0
79	Non-Thermal Atmospheric Pressure Dielectric Barrier Discharge Plasma Enhances Endothelial Cell Proliferation via Fibroblast Growth Factor-2 Release. , 2009, , .		0
80	Investigation on atmospheric air dielectric barrier discharge uniformity. , 2014, , .		0
81	Cancer Applications Overview. Springer Series on Atomic, Optical, and Plasma Physics, 2020, , 75-89.	0.2	0