Andrei G Pakhomov

List of Publications by Year
in descending order

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105	5,192	81900	91884
papers	citations	39 h-index	69 g-index

107	107	107	1856
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Bioelectric Effects of Intense Nanosecond Pulses. IEEE Transactions on Dielectrics and Electrical Insulation, 2007, 14, 1088-1109.	2.9	277
2	Longâ€lasting plasma membrane permeabilization in mammalian cells by nanosecond pulsed electric field (nsPEF). Bioelectromagnetics, 2007, 28, 655-663.	1.6	273
3	Lipid nanopores can form a stable, ion channel-like conduction pathway in cell membrane. Biochemical and Biophysical Research Communications, 2009, 385, 181-186.	2.1	261
4	Current state and implications of research on biological effects of millimeter waves: A review of the literature. Bioelectromagnetics, 1998, 19, 393-413.	1.6	236
5	A new pulsed electric field therapy for melanoma disrupts the tumor's blood supply and causes complete remission without recurrence. International Journal of Cancer, 2009, 125, 438-445.	5.1	207
6	Analysis of Plasma Membrane Integrity by Fluorescent Detection of Tl+ Uptake. Journal of Membrane Biology, 2010, 236, 15-26.	2.1	176
7	Membrane permeabilization and cell damage by ultrashort electric field shocks. Archives of Biochemistry and Biophysics, 2007, 465, 109-118.	3.0	173
8	Oxidative effects of nanosecond pulsed electric field exposure in cells and cell-free media. Archives of Biochemistry and Biophysics, 2012, 527, 55-64.	3.0	156
9	Manipulation of cell volume and membrane pore comparison following single cell permeabilization with 60- and 600-ns electric pulses. Biochimica Et Biophysica Acta - Biomembranes, 2011, 1808, 792-801.	2.6	150
10	Primary pathways of intracellular Ca2+ mobilization by nanosecond pulsed electric field. Biochimica Et Biophysica Acta - Biomembranes, 2013, 1828, 981-989.	2.6	118
11	Plasma membrane permeabilization by 60â€•and 600â€ns electric pulses is determined by the absorbed dose. Bioelectromagnetics, 2009, 30, 92-99.	1.6	112
12	Cancellation of cellular responses to nanoelectroporation by reversing the stimulus polarity. Cellular and Molecular Life Sciences, 2014, 71, 4431-4441.	5.4	108
13	Advanced Electroporation Techniques in Biology and Medicine. , 0, , .		104
14	Multiple nanosecond electric pulses increase the number but not the size of long-lived nanopores in the cell membrane. Biochimica Et Biophysica Acta - Biomembranes, 2015, 1848, 958-966.	2.6	103
15	Two Modes of Cell Death Caused by Exposure to Nanosecond Pulsed Electric Field. PLoS ONE, 2013, 8, e70278.	2.5	102
16	Bipolar nanosecond electric pulses are less efficient at electropermeabilization and killing cells than monopolar pulses. Biochemical and Biophysical Research Communications, 2014, 443, 568-573.	2.1	101
17	Recruitment of the intracellular Ca2+ by ultrashort electric stimuli: The impact of pulse duration. Cell Calcium, 2013, 54, 145-150.	2.4	97
18	Electroporation-Induced Electrosensitization. PLoS ONE, 2011, 6, e17100.	2.5	91

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19	Selective cytotoxicity of intense nanosecond-duration electric pulses in mammalian cells. Biochimica Et Biophysica Acta - General Subjects, 2010, 1800, 1210-1219.	2.4	87
20	Calcium-mediated pore expansion and cell death following nanoelectroporation. Biochimica Et Biophysica Acta - Biomembranes, 2014, 1838, 2547-2554.	2.6	82
21	Plasma membrane permeabilization by trains of ultrashort electric pulses. Bioelectrochemistry, 2010, 79, 114-121.	4.6	74
22	Cell stimulation and calcium mobilization by picosecond electric pulses. Bioelectrochemistry, 2015, 105, 65-71.	4.6	73
23	Dose-Dependent Thresholds of 10-ns Electric Pulse Induced Plasma Membrane Disruption and Cytotoxicity in Multiple Cell Lines. PLoS ONE, 2011, 6, e15642.	2.5	71
24	Characterization of the Cytotoxic Effect of High-Intensity, 10-ns Duration Electrical Pulses. IEEE Transactions on Plasma Science, 2004, 32, 1579-1586.	1.3	69
25	Disassembly of actin structures by nanosecond pulsed electric field is a downstream effect of cell swelling. Bioelectrochemistry, 2014, 100, 88-95.	4.6	69
26	Electroporation of mammalian cells by nanosecond electric field oscillations and its inhibition by the electric field reversal. Scientific Reports, 2015, 5, 13818.	3.3	61
27	Cell permeabilization and inhibition of voltageâ€gated Ca²⁺ and Na⁺ channel currents by nanosecond pulsed electric field. Bioelectromagnetics, 2012, 33, 394-404.	1.6	59
28	Low-intensity millimeter waves as a novel therapeutic modality. IEEE Transactions on Plasma Science, 2000, 28, 34-40.	1.3	56
29	Neuronal excitation and permeabilization by 200-ns pulsed electric field: An optical membrane potential study with FluoVolt dye. Biochimica Et Biophysica Acta - Biomembranes, 2017, 1859, 1273-1281.	2.6	51
30	Selective susceptibility to nanosecond pulsed electric field (nsPEF) across different human cell types. Cellular and Molecular Life Sciences, 2017, 74, 1741-1754.	5.4	50
31	Gadolinium blocks membrane permeabilization induced by nanosecond electric pulses and reduces cell death. Bioelectrochemistry, 2010, 79, 95-100.	4.6	48
32	Simulation Studies of Ultrashort, High-Intensity Electric Pulse Induced Action Potential Block in Whole-Animal Nerves. IEEE Transactions on Biomedical Engineering, 2008, 55, 1391-1398.	4.2	47
33	Ion transport into cells exposed to monopolar and bipolar nanosecond pulses. Bioelectrochemistry, 2015, 103, 44-51.	4.6	47
34	Inhibition of voltageâ€gated Na⁺ current by nanosecond pulsed electric field (nsPEF) is not mediated by Na⁺ influx or Ca²⁺ signaling. Bioelectromagnetics, 2012, 33, 443-451.	1.6	44
35	The second phase of bipolar, nanosecond-range electric pulses determines the electroporation efficiency. Bioelectrochemistry, 2018, 122, 123-133.	4.6	44
36	Excitation and electroporation by MHz bursts of nanosecond stimuli. Biochemical and Biophysical Research Communications, 2019, 518, 759-764.	2.1	44

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37	Damage-free peripheral nerve stimulation by 12-ns pulsed electric field. Scientific Reports, 2017, 7, 10453.	3.3	43
38	Electropermeabilization by uni- or bipolar nanosecond electric pulses: The impact of extracellular conductivity. Bioelectrochemistry, 2018, 119, 10-19.	4.6	43
39	Cell Electrosensitization Exists Only in Certain Electroporation Buffers. PLoS ONE, 2016, 11, e0159434.	2.5	43
40	Electrosensitization assists cell ablation by nanosecond pulsed electric field in 3D cultures. Scientific Reports, 2016, 6, 23225.	3.3	41
41	Excitation and injury of adult ventricular cardiomyocytes by nano- to millisecond electric shocks. Scientific Reports, 2018, 8, 8233.	3.3	41
42	Facilitation of electroporative drug uptake and cell killing by electrosensitization. Journal of Cellular and Molecular Medicine, 2013, 17, 154-159.	3.6	40
43	Expression of voltage-gated calcium channels augments cell susceptibility to membrane disruption by nanosecond pulsed electric field. Biochimica Et Biophysica Acta - Biomembranes, 2018, 1860, 2175-2183.	2.6	40
44	Effects of high power microwave pulses on synaptic transmission and long term potentiation in hippocampus. Bioelectromagnetics, 2003, 24, 174-181.	1.6	39
45	Picosecond and Terahertz Perturbation of Interfacial Water and Electropermeabilization of Biological Membranes. Journal of Membrane Biology, 2015, 248, 837-847.	2.1	39
46	Electric Field Exposure Triggers and Guides Formation of Pseudopod-Like Blebs in U937 Monocytes. Journal of Membrane Biology, 2012, 245, 521-529.	2.1	38
47	Ablation of Myocardial Tissue With Nanosecond Pulsed Electric Fields. PLoS ONE, 2015, 10, e0144833.	2.5	38
48	Gadolinium modifies the cell membrane to inhibit permeabilization by nanosecond electric pulses. Archives of Biochemistry and Biophysics, 2015, 570, 1-7.	3.0	37
49	Nanosecond Pulsed Electric Fields Induce Endoplasmic Reticulum Stress Accompanied by Immunogenic Cell Death in Murine Models of Lymphoma and Colorectal Cancer. Cancers, 2019, 11, 2034.	3.7	35
50	Diffuse, non-polar electropermeabilization and reduced propidium uptake distinguish the effect of nanosecond electric pulses. Biochimica Et Biophysica Acta - Biomembranes, 2015, 1848, 2118-2125.	2.6	34
51	Mechanisms and immunogenicity of nsPEF-induced cell death in B16F10 melanoma tumors. Scientific Reports, 2019, 9, 431.	3.3	34
52	Cancellation of nerve excitation by the reversal of nanosecond stimulus polarity and its relevance to the gating time of sodium channels. Cellular and Molecular Life Sciences, 2019, 76, 4539-4550.	5.4	34
53	Excitation of murine cardiac myocytes by nanosecond pulsed electric field. Journal of Cardiovascular Electrophysiology, 2019, 30, 392-401.	1.7	31
54	The interplay of excitation and electroporation in nanosecond pulse stimulation. Bioelectrochemistry, 2020, 136, 107598.	4.6	31

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55	Activation of the phospholipid scramblase TMEM16F by nanosecond pulsed electric fields (nsPEF) facilitates its diverse cytophysiological effects. Journal of Biological Chemistry, 2017, 292, 19381-19391.	3.4	29
56	Electroporation and cell killing by milli- to nanosecond pulses and avoiding neuromuscular stimulation in cancer ablation. Scientific Reports, 2022, 12, 1763.	3.3	27
57	Frequency spectrum of induced transmembrane potential and permeabilization efficacy of bipolar electric pulses. Biochimica Et Biophysica Acta - Biomembranes, 2017, 1859, 1282-1290.	2.6	26
58	Electropermeabilization of cells by closely spaced paired nanosecond-range pulses. Bioelectrochemistry, 2018, 121, 135-141.	4.6	26
59	Low-energy defibrillation with nanosecond electric shocks. Cardiovascular Research, 2017, 113, 1789-1797.	3.8	25
60	Oxygen enhances lethal effect of high-intensity, ultrashort electrical pulses. Bioelectromagnetics, 2006, 27, 221-225.	1.6	24
61	Electroporation by subnanosecond pulses. Biochemistry and Biophysics Reports, 2016, 6, 253-259.	1.3	24
62	A Comprehensive Review of the Research on Biological Effects of Pulsed Radiofrequency Radiation in Russia and the Former Soviet Union. Advances in Electromagnetic Fields in Living Systems, 2000, , 265-290.	0.1	23
63	Electropermeabilization does not correlate with plasma membrane lipid oxidation. Bioelectrochemistry, 2020, 132, 107433.	4.6	23
64	Probing Nanoelectroporation and Resealing of the Cell Membrane by the Entry of Ca2+ and Ba2+ Ions. International Journal of Molecular Sciences, 2020, 21, 3386.	4.1	23
65	Comparative effects of extremely high power microwave pulses and a brief CW irradiation on pacemaker function in isolated frog heart slices. Bioelectromagnetics, 2000, 21, 245-254.	1.6	22
66	A subnanosecond electric pulse exposure system for biological cells. Medical and Biological Engineering and Computing, 2017, 55, 1063-1072.	2.8	22
67	Interference targeting of bipolar nanosecond electric pulses for spatially focused electroporation, electrostimulation, and tissue ablation. Bioelectrochemistry, 2021, 141, 107876.	4.6	22
68	Selective distant electrostimulation by synchronized bipolar nanosecond pulses. Scientific Reports, 2019, 9, 13116.	3.3	20
69	Delayed hypersensitivity to nanosecond pulsed electric field in electroporated cells. Scientific Reports, 2017, 7, 10992.	3.3	18
70	Comparison of dose dependences for bioeffects of continuous-wave and high-peak power microwave emissions using gel-suspended cell cultures. Bioelectromagnetics, 2002, 23, 158-167.	1.6	15
71	Cellular Regulation of Extension and Retraction of Pseudopod-Like Blebs Produced by Nanosecond Pulsed Electric Field (nsPEF). Cell Biochemistry and Biophysics, 2014, 69, 555-566.	1.8	15
72	Using Nanosecond Shocks for Cardiac Defibrillation. Bioelectricity, 2019, 1, 240-246.	1.1	15

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73	ELECTROMAGNETIC FIELD STANDARDS IN CENTRAL AND EASTERN EUROPEAN COUNTRIES: CURRENT STATE AND STIPULATIONS FOR INTERNATIONAL HARMONIZATION. Health Physics, 2002, 82, 473-483.	0.5	14
74	Peculiarities of Neurostimulation by Intense Nanosecond Pulsed Electric Fields: How to Avoid Firing in Peripheral Nerve Fibers. International Journal of Molecular Sciences, 2021, 22, 7051.	4.1	14
75	Microwave influence on the isolated heart function: I. Effect of modulation. Bioelectromagnetics, 1995, 16, 241-249.	1.6	13
76	Electrosensitization Increases Antitumor Effectiveness of Nanosecond Pulsed Electric FieldsIn Vivo. Technology in Cancer Research and Treatment, 2017, 16, 987-996.	1.9	13
77	Four Channel 6.5 kV, 65 A, 100 nsâ€“100 Âµs Generator with Advanced Control of Pulse and Burst Protocols for Biomedical and Biotechnological Applications. Applied Sciences (Switzerland), 2021, 11, 11782.	2.5	12
78	Role of field intensity in the biological effectiveness of millimeter waves at a resonance frequency. Bioelectrochemistry, 1997, 43, 27-33.	1.0	11
79	The cytotoxic synergy of nanosecond electric pulses and low temperature leads to apoptosis. Scientific Reports, 2016, 6, 36835.	3.3	11
80	Absence of Non-Thermal Microwave Effects on the Function of Giant Nerve Fibers. Journal of Bioelectricity, 1991, 10, 185-203.	0.7	10
81	Neurostimulation using subnanosecond electric pulses. , 2013, , .		10
82	Analysis of electrostimulation and electroporation by high repetition rate bursts of nanosecond stimuli. Bioelectrochemistry, 2021, 140, 107811.	4.6	10
83	Ca2+ dependence and kinetics of cell membrane repair after electropermeabilization. Biochimica Et Biophysica Acta - Biomembranes, 2022, 1864, 183823.	2.6	10
84	Frequency-Specific Effects of Millimeter-Wavelength Electromagnetic Radiation in Isolated Nerve. Electromagnetic Biology and Medicine, 1997, 16, 43-57.	0.4	8
85	Effect of millimeter waves on UV-induced recombination and mutagenesis in yeast. Bioelectrochemistry, 1997, 43, 227-232.	1.0	8
86	Hydraulically coupled microejection technique for precise local solution delivery in tissues. Journal of Neuroscience Methods, 2006, 155, 231-240.	2.5	7
87	Microwave influence on the isolated heart function: II. Combined effect of radiation and some drugs. Bioelectromagnetics, 1995, 16, 250-254.	1.6	6
88	Effect of Cooling On Cell Volume and Viability After Nanoelectroporation. Journal of Membrane Biology, 2017, 250, 217-224.	2.1	6
89	Neuromuscular disruption with ultrashort electrical pulses. , 2006, 6219, 19.		5
90	The role of ESCRT-III and Annexin V in the repair of cell membrane permeabilization by the nanosecond pulsed electric field. Bioelectrochemistry, 2021, 140, 107837.	4.6	5

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91	Strobe photography mapping of cell membrane potential with nanosecond resolution. Bioelectrochemistry, 2021, 142, 107929.	4.6	4
92	Biological Responses. , 2017, , 155-274.		3
93	A Pilot Study of the Millimeter-Wavelength Radiation Effect on Synaptic Transmission. Electromagnetic Biology and Medicine, 1998, 17, 115-125.	1.4	3
94	Effects of microwave irradiation and temperature on spontaneous ventral root discharges in prog spinal cord. Neurophysiology, 1988, 20, 521-525.	0.3	2
95	Different Cell Sensitivity to Pulsed Electric Field. , 2016, , 1-17.		2
96	Determination of cellular injury and death thresholds following exposure to high voltage 10ns electrical pulses. , 2011, , .		1
97	Different Cell Sensitivity to Pulsed Electric Field. , 2017, , 337-352.		1
98	Frequency spectra of induced transmembrane potential correlate with nanosecond bipolar pulse cancellation of electropermeabilization. , 2017, , .		1
99	Electroporation safety factor of 300 nanosecond and 10 millisecond defibrillation in Langendorff-perfused rabbit hearts. PLoS ONE, 2021, 16, e0257287.	2.5	1
100	Special Issue on â€œNonthermal Medical/Biological Treatments Using Ionized Gases and Electromagnetic Fieldsâ€• IEEE Transactions on Plasma Science, 2004, 32, 1522-1525.	1.3	0
101	Quantification of cell sensitivity to nanosecond duration electrical pulses. , 2009, , .		0
102	Response to â€œSodium current inhibition by nanosecond pulsed electric field (nsPEF)â€”fact or artifact?â€•by Verkerk et al.. Bioelectromagnetics, 2013, 34, 165-166.	1.6	0
103	Experimental Determination of Lipid Electropore Size. , 2017, , 187-200.		0
104	SUPPRESSION OF SYNAPTIC TRANSMISSION IN HIPPOCAMPUS BY EXTREMELY-HIGH POWER MICROWAVE PULSES SYNCHRONIZED WITH NEURONAL EXCITATION. , 2006, , 123-133.		0
105	Experimental Determination of Lipid Electropore Size. , 2016, , 1-14.		0