

Andrei G Pakhomov

List of Publications by Year in descending order

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Version: 2024-02-01

105
papers

5,192
citations

81900

39
h-index

91884

69
g-index

107
all docs

107
docs citations

107
times ranked

1856
citing authors

#	ARTICLE	IF	CITATIONS
1	Ca ²⁺ dependence and kinetics of cell membrane repair after electropermeabilization. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2022, 1864, 183823.	2.6	10
2	Electroporation and cell killing by milli- to nanosecond pulses and avoiding neuromuscular stimulation in cancer ablation. <i>Scientific Reports</i> , 2022, 12, 1763.	3.3	27
3	Peculiarities of Neurostimulation by Intense Nanosecond Pulsed Electric Fields: How to Avoid Firing in Peripheral Nerve Fibers. <i>International Journal of Molecular Sciences</i> , 2021, 22, 7051.	4.1	14
4	Analysis of electrostimulation and electroporation by high repetition rate bursts of nanosecond stimuli. <i>Bioelectrochemistry</i> , 2021, 140, 107811.	4.6	10
5	The role of ESCRT-III and Annexin V in the repair of cell membrane permeabilization by the nanosecond pulsed electric field. <i>Bioelectrochemistry</i> , 2021, 140, 107837.	4.6	5
6	Electroporation safety factor of 300 nanosecond and 10 millisecond defibrillation in Langendorff-perfused rabbit hearts. <i>PLoS ONE</i> , 2021, 16, e0257287.	2.5	1
7	Interference targeting of bipolar nanosecond electric pulses for spatially focused electroporation, electrostimulation, and tissue ablation. <i>Bioelectrochemistry</i> , 2021, 141, 107876.	4.6	22
8	Strobe photography mapping of cell membrane potential with nanosecond resolution. <i>Bioelectrochemistry</i> , 2021, 142, 107929.	4.6	4
9	Four Channel 6.5 kV, 65 A, 100 ns–100 µs Generator with Advanced Control of Pulse and Burst Protocols for Biomedical and Biotechnological Applications. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 11782.	2.5	12
10	Electropermeabilization does not correlate with plasma membrane lipid oxidation. <i>Bioelectrochemistry</i> , 2020, 132, 107433.	4.6	23
11	The interplay of excitation and electroporation in nanosecond pulse stimulation. <i>Bioelectrochemistry</i> , 2020, 136, 107598.	4.6	31
12	Probing Nanoelectroporation and Resealing of the Cell Membrane by the Entry of Ca ²⁺ and Ba ²⁺ Ions. <i>International Journal of Molecular Sciences</i> , 2020, 21, 3386.	4.1	23
13	Excitation and electroporation by MHz bursts of nanosecond stimuli. <i>Biochemical and Biophysical Research Communications</i> , 2019, 518, 759-764.	2.1	44
14	Selective distant electrostimulation by synchronized bipolar nanosecond pulses. <i>Scientific Reports</i> , 2019, 9, 13116.	3.3	20
15	Mechanisms and immunogenicity of nsPEF-induced cell death in B16F10 melanoma tumors. <i>Scientific Reports</i> , 2019, 9, 431.	3.3	34
16	Cancellation of nerve excitation by the reversal of nanosecond stimulus polarity and its relevance to the gating time of sodium channels. <i>Cellular and Molecular Life Sciences</i> , 2019, 76, 4539-4550.	5.4	34
17	Using Nanosecond Shocks for Cardiac Defibrillation. <i>Bioelectricity</i> , 2019, 1, 240-246.	1.1	15
18	Nanosecond Pulsed Electric Fields Induce Endoplasmic Reticulum Stress Accompanied by Immunogenic Cell Death in Murine Models of Lymphoma and Colorectal Cancer. <i>Cancers</i> , 2019, 11, 2034.	3.7	35

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19	Excitation of murine cardiac myocytes by nanosecond pulsed electric field. <i>Journal of Cardiovascular Electrophysiology</i> , 2019, 30, 392-401.	1.7	31
20	The second phase of bipolar, nanosecond-range electric pulses determines the electroporation efficiency. <i>Bioelectrochemistry</i> , 2018, 122, 123-133.	4.6	44
21	Electropermeabilization of cells by closely spaced paired nanosecond-range pulses. <i>Bioelectrochemistry</i> , 2018, 121, 135-141.	4.6	26
22	Electropermeabilization by uni- or bipolar nanosecond electric pulses: The impact of extracellular conductivity. <i>Bioelectrochemistry</i> , 2018, 119, 10-19.	4.6	43
23	Expression of voltage-gated calcium channels augments cell susceptibility to membrane disruption by nanosecond pulsed electric field. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2018, 1860, 2175-2183.	2.6	40
24	Excitation and injury of adult ventricular cardiomyocytes by nano- to millisecond electric shocks. <i>Scientific Reports</i> , 2018, 8, 8233.	3.3	41
25	Effect of Cooling On Cell Volume and Viability After Nanoelectroporation. <i>Journal of Membrane Biology</i> , 2017, 250, 217-224.	2.1	6
26	Frequency spectrum of induced transmembrane potential and permeabilization efficacy of bipolar electric pulses. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2017, 1859, 1282-1290.	2.6	26
27	Neuronal excitation and permeabilization by 200-ns pulsed electric field: An optical membrane potential study with FluoVolt dye. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2017, 1859, 1273-1281.	2.6	51
28	Electrosensitization Increases Antitumor Effectiveness of Nanosecond Pulsed Electric Fields In Vivo. <i>Technology in Cancer Research and Treatment</i> , 2017, 16, 987-996.	1.9	13
29	Selective susceptibility to nanosecond pulsed electric field (nsPEF) across different human cell types. <i>Cellular and Molecular Life Sciences</i> , 2017, 74, 1741-1754.	5.4	50
30	Activation of the phospholipid scramblase TMEM16F by nanosecond pulsed electric fields (nsPEF) facilitates its diverse cytophysiological effects. <i>Journal of Biological Chemistry</i> , 2017, 292, 19381-19391.	3.4	29
31	Delayed hypersensitivity to nanosecond pulsed electric field in electroporated cells. <i>Scientific Reports</i> , 2017, 7, 10992.	3.3	18
32	Experimental Determination of Lipid Electropore Size. , 2017, , 187-200.		0
33	Different Cell Sensitivity to Pulsed Electric Field. , 2017, , 337-352.		1
34	Damage-free peripheral nerve stimulation by 12-ns pulsed electric field. <i>Scientific Reports</i> , 2017, 7, 10453.	3.3	43
35	Frequency spectra of induced transmembrane potential correlate with nanosecond bipolar pulse cancellation of electropermeabilization. , 2017, , .		1
36	Biological Responses. , 2017, , 155-274.		3

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37	A subnanosecond electric pulse exposure system for biological cells. <i>Medical and Biological Engineering and Computing</i> , 2017, 55, 1063-1072.	2.8	22
38	Low-energy defibrillation with nanosecond electric shocks. <i>Cardiovascular Research</i> , 2017, 113, 1789-1797.	3.8	25
39	The cytotoxic synergy of nanosecond electric pulses and low temperature leads to apoptosis. <i>Scientific Reports</i> , 2016, 6, 36835.	3.3	11
40	Electrosensitization assists cell ablation by nanosecond pulsed electric field in 3D cultures. <i>Scientific Reports</i> , 2016, 6, 23225.	3.3	41
41	Electroporation by subnanosecond pulses. <i>Biochemistry and Biophysics Reports</i> , 2016, 6, 253-259.	1.3	24
42	Different Cell Sensitivity to Pulsed Electric Field. , 2016, , 1-17.		2
43	Cell Electrosensitization Exists Only in Certain Electroporation Buffers. <i>PLoS ONE</i> , 2016, 11, e0159434.	2.5	43
44	Experimental Determination of Lipid Electropore Size. , 2016, , 1-14.		0
45	Electroporation of mammalian cells by nanosecond electric field oscillations and its inhibition by the electric field reversal. <i>Scientific Reports</i> , 2015, 5, 13818.	3.3	61
46	Cell stimulation and calcium mobilization by picosecond electric pulses. <i>Bioelectrochemistry</i> , 2015, 105, 65-71.	4.6	73
47	Multiple nanosecond electric pulses increase the number but not the size of long-lived nanopores in the cell membrane. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2015, 1848, 958-966.	2.6	103
48	Diffuse, non-polar electropermeabilization and reduced propidium uptake distinguish the effect of nanosecond electric pulses. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2015, 1848, 2118-2125.	2.6	34
49	Gadolinium modifies the cell membrane to inhibit permeabilization by nanosecond electric pulses. <i>Archives of Biochemistry and Biophysics</i> , 2015, 570, 1-7.	3.0	37
50	Picosecond and Terahertz Perturbation of Interfacial Water and Electropermeabilization of Biological Membranes. <i>Journal of Membrane Biology</i> , 2015, 248, 837-847.	2.1	39
51	Ion transport into cells exposed to monopolar and bipolar nanosecond pulses. <i>Bioelectrochemistry</i> , 2015, 103, 44-51.	4.6	47
52	Ablation of Myocardial Tissue With Nanosecond Pulsed Electric Fields. <i>PLoS ONE</i> , 2015, 10, e0144833.	2.5	38
53	Bipolar nanosecond electric pulses are less efficient at electropermeabilization and killing cells than monopolar pulses. <i>Biochemical and Biophysical Research Communications</i> , 2014, 443, 568-573.	2.1	101
54	Disassembly of actin structures by nanosecond pulsed electric field is a downstream effect of cell swelling. <i>Bioelectrochemistry</i> , 2014, 100, 88-95.	4.6	69

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55	Cellular Regulation of Extension and Retraction of Pseudopod-Like Blebs Produced by Nanosecond Pulsed Electric Field (nsPEF). <i>Cell Biochemistry and Biophysics</i> , 2014, 69, 555-566.	1.8	15
56	Calcium-mediated pore expansion and cell death following nanoelectroporation. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2014, 1838, 2547-2554.	2.6	82
57	Cancellation of cellular responses to nanoelectroporation by reversing the stimulus polarity. <i>Cellular and Molecular Life Sciences</i> , 2014, 71, 4431-4441.	5.4	108
58	Primary pathways of intracellular Ca ²⁺ mobilization by nanosecond pulsed electric field. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2013, 1828, 981-989.	2.6	118
59	Recruitment of the intracellular Ca ²⁺ by ultrashort electric stimuli: The impact of pulse duration. <i>Cell Calcium</i> , 2013, 54, 145-150.	2.4	97
60	Facilitation of electroporative drug uptake and cell killing by electrosensitization. <i>Journal of Cellular and Molecular Medicine</i> , 2013, 17, 154-159.	3.6	40
61	Response to "Sodium current inhibition by nanosecond pulsed electric field (nsPEF)" fact or artifact? by Verkerk et al. <i>Bioelectromagnetics</i> , 2013, 34, 165-166.	1.6	0
62	Neurostimulation using subnanosecond electric pulses. , 2013, , .		10
63	Two Modes of Cell Death Caused by Exposure to Nanosecond Pulsed Electric Field. <i>PLoS ONE</i> , 2013, 8, e70278.	2.5	102
64	Oxidative effects of nanosecond pulsed electric field exposure in cells and cell-free media. <i>Archives of Biochemistry and Biophysics</i> , 2012, 527, 55-64.	3.0	156
65	Electric Field Exposure Triggers and Guides Formation of Pseudopod-Like Blebs in U937 Monocytes. <i>Journal of Membrane Biology</i> , 2012, 245, 521-529.	2.1	38
66	Cell permeabilization and inhibition of voltage-gated Ca ²⁺ and Na ⁺ channel currents by nanosecond pulsed electric field. <i>Bioelectromagnetics</i> , 2012, 33, 394-404.	1.6	59
67	Inhibition of voltage-gated Na ⁺ current by nanosecond pulsed electric field (nsPEF) is not mediated by Na ⁺ influx or Ca ²⁺ signaling. <i>Bioelectromagnetics</i> , 2012, 33, 443-451.	1.6	44
68	Determination of cellular injury and death thresholds following exposure to high voltage 10ns electrical pulses. , 2011, , .		1
69	Manipulation of cell volume and membrane pore comparison following single cell permeabilization with 60- and 600-ns electric pulses. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2011, 1808, 792-801.	2.6	150
70	Dose-Dependent Thresholds of 10-ns Electric Pulse Induced Plasma Membrane Disruption and Cytotoxicity in Multiple Cell Lines. <i>PLoS ONE</i> , 2011, 6, e15642.	2.5	71
71	Electroporation-Induced Electrosensitization. <i>PLoS ONE</i> , 2011, 6, e17100.	2.5	91
72	Analysis of Plasma Membrane Integrity by Fluorescent Detection of Tl ⁺ Uptake. <i>Journal of Membrane Biology</i> , 2010, 236, 15-26.	2.1	176

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73	Gadolinium blocks membrane permeabilization induced by nanosecond electric pulses and reduces cell death. <i>Bioelectrochemistry</i> , 2010, 79, 95-100.	4.6	48
74	Plasma membrane permeabilization by trains of ultrashort electric pulses. <i>Bioelectrochemistry</i> , 2010, 79, 114-121.	4.6	74
75	Selective cytotoxicity of intense nanosecond-duration electric pulses in mammalian cells. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2010, 1800, 1210-1219.	2.4	87
76	A new pulsed electric field therapy for melanoma disrupts the tumor's blood supply and causes complete remission without recurrence. <i>International Journal of Cancer</i> , 2009, 125, 438-445.	5.1	207
77	Plasma membrane permeabilization by 60µs and 600µs electric pulses is determined by the absorbed dose. <i>Bioelectromagnetics</i> , 2009, 30, 92-99.	1.6	112
78	Lipid nanopores can form a stable, ion channel-like conduction pathway in cell membrane. <i>Biochemical and Biophysical Research Communications</i> , 2009, 385, 181-186.	2.1	261
79	Quantification of cell sensitivity to nanosecond duration electrical pulses. , 2009, , .		0
80	Simulation Studies of Ultrashort, High-Intensity Electric Pulse Induced Action Potential Block in Whole-Animal Nerves. <i>IEEE Transactions on Biomedical Engineering</i> , 2008, 55, 1391-1398.	4.2	47
81	Membrane permeabilization and cell damage by ultrashort electric field shocks. <i>Archives of Biochemistry and Biophysics</i> , 2007, 465, 109-118.	3.0	173
82	Bioelectric Effects of Intense Nanosecond Pulses. <i>IEEE Transactions on Dielectrics and Electrical Insulation</i> , 2007, 14, 1088-1109.	2.9	277
83	Long-lasting plasma membrane permeabilization in mammalian cells by nanosecond pulsed electric field (nsPEF). <i>Bioelectromagnetics</i> , 2007, 28, 655-663.	1.6	273
84	Neuromuscular disruption with ultrashort electrical pulses. , 2006, 6219, 19.		5
85	Hydraulically coupled microejection technique for precise local solution delivery in tissues. <i>Journal of Neuroscience Methods</i> , 2006, 155, 231-240.	2.5	7
86	Oxygen enhances lethal effect of high-intensity, ultrashort electrical pulses. <i>Bioelectromagnetics</i> , 2006, 27, 221-225.	1.6	24
87	SUPPRESSION OF SYNAPTIC TRANSMISSION IN HIPPOCAMPUS BY EXTREMELY-HIGH POWER MICROWAVE PULSES SYNCHRONIZED WITH NEURONAL EXCITATION. , 2006, , 123-133.		0
88	Special Issue on "Nonthermal Medical/Biological Treatments Using Ionized Gases and Electromagnetic Fields". <i>IEEE Transactions on Plasma Science</i> , 2004, 32, 1522-1525.	1.3	0
89	Characterization of the Cytotoxic Effect of High-Intensity, 10-ns Duration Electrical Pulses. <i>IEEE Transactions on Plasma Science</i> , 2004, 32, 1579-1586.	1.3	69
90	Effects of high power microwave pulses on synaptic transmission and long term potentiation in hippocampus. <i>Bioelectromagnetics</i> , 2003, 24, 174-181.	1.6	39

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91	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
92	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
93	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
94	Low-intensity millimeter waves as a novel therapeutic modality. IEEE Transactions on Plasma Science, 2000, 28, 34-40.	1.3	56
95	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
96	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
97	A Pilot Study of the Millimeter-Wavelength Radiation Effect on Synaptic Transmission. Electromagnetic Biology and Medicine, 1998, 17, 115-125.	1.4	3
98	Frequency-Specific Effects of Millimeter-Wavelength Electromagnetic Radiation in Isolated Nerve. Electromagnetic Biology and Medicine, 1997, 16, 43-57.	0.4	8
99	Effect of millimeter waves on UV-induced recombination and mutagenesis in yeast. Bioelectrochemistry, 1997, 43, 227-232.	1.0	8
100	Role of field intensity in the biological effectiveness of millimeter waves at a resonance frequency. Bioelectrochemistry, 1997, 43, 27-33.	1.0	11
101	Microwave influence on the isolated heart function: I. Effect of modulation. Bioelectromagnetics, 1995, 16, 241-249.	1.6	13
102	Microwave influence on the isolated heart function: II. Combined effect of radiation and some drugs. Bioelectromagnetics, 1995, 16, 250-254.	1.6	6
103	Absence of Non-Thermal Microwave Effects on the Function of Giant Nerve Fibers. Journal of Bioelectricity, 1991, 10, 185-203.	0.7	10
104	Effects of microwave irradiation and temperature on spontaneous ventral root discharges in prog spinal cord. Neurophysiology, 1988, 20, 521-525.	0.3	2
105	Advanced Electroporation Techniques in Biology and Medicine. , 0, , .		104