Antoni Ivorra

List of Publications by Year in descending order

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81 papers	2,426 citations	257101 24 h-index	214527 47 g-index
88 all docs	88 docs citations	88 times ranked	1988 citing authors

#	Article	IF	Citations
1	The Effect of Irreversible Electroporation on Blood Vessels. Technology in Cancer Research and Treatment, 2007, 6, 307-312.	0.8	300
2	Electrical impedance characterization of normal and cancerous human hepatic tissue. Physiological Measurement, 2010, 31, 995-1009.	1.2	166
3	In vivoelectrical conductivity measurements during and after tumor electroporation: conductivity changes reflect the treatment outcome. Physics in Medicine and Biology, 2009, 54, 5949-5963.	1.6	158
4	In vivo electrical impedance measurements during and after electroporation of rat liver. Bioelectrochemistry, 2007, 70, 287-295.	2.4	151
5	Non Thermal Irreversible Electroporation: Novel Technology for Vascular Smooth Muscle Cells Ablation. PLoS ONE, 2009, 4, e4757.	1.1	127
6	Comparison of the effects of the repetition rate between microsecond and nanosecond pulses: Electropermeabilization-induced electro-desensitization?. Biochimica Et Biophysica Acta - General Subjects, 2014, 1840, 2139-2151.	1.1	84
7	Electrical modeling of the influence of medium conductivity on electroporation. Physical Chemistry Chemical Physics, 2010, 12, 10055.	1.3	71
8	A New Concept for Medical Imaging Centered on Cellular Phone Technology. PLoS ONE, 2008, 3, e2075.	1.1	67
9	Irreversible electroporation shows efficacy against pancreatic carcinoma without systemic toxicity in mouse models. Cancer Letters, 2012, 317, 16-23.	3.2	66
10	In vivoimaging of irreversible electroporation by means of electrical impedance tomography. Physics in Medicine and Biology, 2009, 54, 4927-4943.	1.6	65
11	Minimally invasive silicon probe for electrical impedance measurements in small animals. Biosensors and Bioelectronics, 2003, 19, 391-399.	5.3	60
12	New technology for multi-sensor silicon needles for biomedical applications. Sensors and Actuators B: Chemical, 2001, 78, 279-284.	4.0	57
13	Avoiding nerve stimulation in irreversible electroporation: a numerical modeling study. Physics in Medicine and Biology, 2017, 62, 8060-8079.	1.6	54
14	Dynamics of Cell Death After Conventional IRE and H-FIRE Treatments. Annals of Biomedical Engineering, 2020, 48, 1451-1462.	1.3	54
15	Bioimpedance dispersion width as a parameter to monitor living tissues. Physiological Measurement, 2005, 26, S165-S173.	1.2	53
16	Vascular Smooth Muscle Cells Ablation with Endovascular Nonthermal Irreversible Electroporation. Journal of Vascular and Interventional Radiology, 2010, 21, 1708-1715.	0.2	52
17	Use of conductive gels for electric field homogenization increases the antitumor efficacy of electroporation therapies. Physics in Medicine and Biology, 2008, 53, 6605-6618.	1.6	43
18	Irreversible electroporation for the treatment of cardiac arrhythmias. Expert Review of Cardiovascular Therapy, 2018, 16, 349-360.	0.6	42

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19	Electric Field Redistribution due to Conductivity Changes during Tissue Electroporation: Experiments with a Simple Vegetal Model. IFMBE Proceedings, 2009, , 59-62.	0.2	41
20	Irreversible Electroporation Attenuates Neointimal Formation After Angioplasty. IEEE Transactions on Biomedical Engineering, 2008, 55, 2268-2274.	2.5	39
21	Tissue Electroporation as a Bioelectric Phenomenon: Basic Concepts. Series in Biomedical Engineering, 2010, , 23-61.	0.5	37
22	Development of a CMOS-compatible PCR chip: comparison of design and system strategies. Journal of Micromechanics and Microengineering, 2004, 14, 1558-1568.	1.5	34
23	A Versatile Multilevel Converter Platform for Cancer Treatment Using Irreversible Electroporation. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2016, 4, 236-242.	3.7	32
24	Dependence of Electroporation Detection Threshold on Cell Radius: An Explanation to Observations Non Compatible with Schwanâ€™s Equation Model. Journal of Membrane Biology, 2016, 249, 663-676.	1.0	26
25	A SiC microdevice for the minimally invasive monitoring of ischemia in living tissues. Biomedical Microdevices, 2006, 8, 43-49.	1.4	23
26	Irreversible electroporation of the liver: is there a safe limit to the ablation volume?. Scientific Reports, 2016, 6, 23781.	1.6	22
27	Frequency-Division Multiplexing for Electrical Impedance Tomography in Biomedical Applications. International Journal of Biomedical Imaging, 2007, 2007, 1-9.	3.0	21
28	Anatomically Realistic Simulations of Liver Ablation by Irreversible Electroporation: Impact of Blood Vessels on Ablation Volumes and Undertreatment. Technology in Cancer Research and Treatment, 2017, 16, 783-792.	0.8	21
29	Demonstration of 2 mm Thick Microcontrolled Injectable Stimulators Based on Rectification of High Frequency Current Bursts. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2017, 25, 1343-1352.	2.7	20
30	Remote Electrical Stimulation by Means of Implanted Rectifiers. PLoS ONE, 2011, 6, e23456.	1.1	20
31	In vivodetection of liver steatosis in rats based on impedance spectroscopy. Physiological Measurement, 2007, 28, 813-828.	1.2	19
32	Effect of applied voltage, duration and repetition frequency of RF pulses for pain relief on temperature spikes and electrical field: a computer modelling study. International Journal of Hyperthermia, 2018, 34, 112-121.	1.1	19
33	Electric field modulation in tissue electroporation with electrolytic and non-electrolytic additives. Bioelectrochemistry, 2007, 70, 551-560.	2.4	18
34	Historical Review of Irreversible Electroporation in Medicine. Series in Biomedical Engineering, 2010, , 1-21.	0.5	18
35	Electrical bioimpedance measurement during hypothermic rat kidney preservation for assessing ischemic injury. Biosensors and Bioelectronics, 2005, 20, 1866-1871.	5.3	17
36	In vivodemonstration of injectable microstimulators based on charge-balanced rectification of epidermically applied currents. Journal of Neural Engineering, 2015, 12, 066010.	1.8	17

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37	Non-invasive assessment of corneal endothelial permeability by means of electrical impedance measurements. Medical Engineering and Physics, 2010, 32, 1107-1115.	0.8	16
38	Imaging cryosurgery with EIT: tracking the ice front and post-thaw tissue viability. Physiological Measurement, 2008, 29, 899-912.	1.2	15
39	Design, Construction and Validation of an Electrical Impedance Probe with Contact Force and Temperature Sensors Suitable for in-vivo Measurements. Scientific Reports, 2018, 8, 14818.	1.6	15
40	A portable bioimpedance measurement system based on Red Pitaya for monitoring and detecting abnormalities in the gastrointestinal tract. , 2016, , .		14
41	High-voltage pulsed electric field laboratory device with asymmetric voltage multiplier for marine macroalgae electroporation. Innovative Food Science and Emerging Technologies, 2020, 60, 102288.	2.7	14
42	Power Transfer by Volume Conduction: In Vitro Validated Analytical Models Predict DC Powers Above 1 mW in Injectable Implants. IEEE Access, 2020, 8, 37808-37820.	2.6	14
43	Injectable Sensors Based on Passive Rectification of Volume-Conducted Currents. IEEE Transactions on Biomedical Circuits and Systems, 2020, 14, 867-878.	2.7	13
44	Avoiding neuromuscular stimulation in liver irreversible electroporation using radiofrequency electric fields. Physics in Medicine and Biology, 2018, 63, 035027.	1.6	12
45	Fast flow-through non-thermal pasteurization using constant radiofrequency electric fields. Innovative Food Science and Emerging Technologies, 2014, 22, 116-123.	2.7	11
46	Minimally obtrusive wearable device for continuous interactive cognitive and neurological assessment. Physiological Measurement, 2008, 29, 543-554.	1.2	10
47	In Vivo Demonstration of Addressable Microstimulators Powered by Rectification of Epidermically Applied Currents for Miniaturized Neuroprostheses. PLoS ONE, 2015, 10, e0131666.	1.1	10
48	The combination of electroporation and electrolysis (E2) employing different electrode arrays for ablation of large tissue volumes. PLoS ONE, 2019, 14, e0221393.	1.1	10
49	EView: An electric field visualization web platform for electroporation-based therapies. Computer Methods and Programs in Biomedicine, 2020, 197, 105682.	2.6	10
50	Comparing High-Frequency With Monophasic Electroporation Protocols in an InÂVivo Beating Heart Model. JACC: Clinical Electrophysiology, 2021, 7, 959-964.	1.3	10
51	Tumor growth delay by adjuvant alternating electric fields which appears non-thermally mediated. Bioelectrochemistry, 2015, 105, 16-24.	2.4	9
52	Long-term effectiveness of irreversible electroporation in a murine model of colorectal liver metastasis. Scientific Reports, 2017, 7, 44821.	1.6	9
53	Volume Conduction for Powering Deeply Implanted Networks of Wireless Injectable Medical Devices: A Numerical Parametric Analysis. IEEE Access, 2021, 9, 100594-100605.	2.6	9
54	Intravascular irreversible electroporation: Theoretical and experimental feasibility study. , 2008, 2008, 2051-4.		8

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55	Two-Port Networks to Model Galvanic Coupling for Intrabody Communications and Power Transfer to Implants. , 2018, , .		8
56	Impedance Analyzer for in vivo Electroporation Studies. , 2006, 2006, 5056-9.		7
57	Linear Superposition Electrical Impedance Tomography Imaging With Multiple Electrical/Biopsy Probes. IEEE Transactions on Biomedical Engineering, 2009, 56, 1465-1472.	2.5	6
58	Modeling Methods for Treatment Planning in Overlapping Electroporation Treatments. IEEE Transactions on Biomedical Engineering, 2022, 69, 1318-1327.	2.5	6
59	Floating EMG sensors and stimulators wirelessly powered and operated by volume conduction for networked neuroprosthetics. Journal of NeuroEngineering and Rehabilitation, 2022, 19, .	2.4	6
60	Can electroporation previous to radiofrequency hepatic ablation enlarge thermal lesion size? A feasibility study based on theoretical modelling andin vivoexperiments. International Journal of Hyperthermia, 2013, 29, 211-218.	1.1	5
61	Assessment of Electroporation by Electrical Impedance Methods. , 2017, , 671-690.		5
62	Electrochemical Prevention of Needle-Tract Seeding. Annals of Biomedical Engineering, 2011, 39, 2080-2089.	1.3	4
63	Monitoring the Effect of Contact Pressure on Bioimpedance Measurements. , 2018, 2018, 4949-4952.		4
64	Selective Electroporation of Liver Tumor Nodules by Means of Hypersaline Infusion: A Feasibility Study. IFMBE Proceedings, 2015, , 821-824.	0.2	4
65	Towards addressable wireless microstimulators based on electronic rectification of epidermically applied currents. , 2014, 2014, 3973-6.		3
66	A review of pulse generation topologies for clinical electroporation. , 2015, , .		3
67	Focused transhepatic electroporation mediated by hypersaline infusion through the portal vein in rat model. Preliminary results on differential conductivity. Radiology and Oncology, 2017, 51, 415-421.	0.6	3
68	Optimum Conductivity of Gels for Electric Field Homogenization in Tissue Electroporation Therapies. IFMBE Proceedings, 2007, , 619-622.	0.2	3
69	Assessment of Electroporation by Electrical Impedance Methods. , 2016, , 1-20.		3
70	Powering Implants by Galvanic Coupling: A Validated Analytical Model Predicts Powers Above 1 mW in Injectable Implants. IFMBE Proceedings, 2019, , 23-26.	0.2	3
71	Interleaved intramuscular stimulation with minimally overlapping electrodes evokes smooth and fatigue resistant forces. Journal of Neural Engineering, 2020, 17, 046037.	1.8	3
72	Flexible Thread-like Electrical Stimulation Implants Based on Rectification of Epidermically Applied Currents Which Perform Charge Balance. Biosystems and Biorobotics, 2014, , 447-455.	0.2	2

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73	Bidirectional communications in wireless microstimulators based on electronic rectification of epidermically applied currents. , 2015, , .		2
74	Pulsed Radiofrequency for Chronic Pain: An Electroporation Mediated Calcium Signaling Process?. Biophysical Journal, 2018, 114, 287a.	0.2	2
75	Modeling liver electrical conductivity during hypertonic injection. International Journal for Numerical Methods in Biomedical Engineering, 2018, 34, e2904.	1.0	2
76	Impedance spectroscopy measurements as a tool for distinguishing different luminal content during bolus transit studies. Neurogastroenterology and Motility, 2018, 30, e13274.	1.6	1
77	Total Analysis Systems on a Cartridge. , 2001, , 405-406.		1
78	In vivo assessment of corneal barrier function through non-invasive impedance measurements using a flexible probe. Journal of Physics: Conference Series, 2013, 434, 012072.	0.3	0
79	In Vitro Evaluation of a Protocol and an Architecture for Bidirectional Communications in Networks of Wireless Implants Powered by Volume Conduction. Biosystems and Biorobotics, 2022, , 103-107.	0.2	0
80	Electroporation. , 2014, , 1486-1489.		0
81	Injectable Temperature Sensors Based on Passive Rectification of Volume-Conducted Currents. , 2021, , .		0