

Pavel Novak

List of Publications by Year in descending order

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54
papers

3,640
citations

201674

27
h-index

254184

43
g-index

60
all docs

60
docs citations

60
times ranked

3945
citing authors

#	ARTICLE	IF	CITATIONS
1	β_2 -Adrenergic Receptor Redistribution in Heart Failure Changes cAMP Compartmentation. Science, 2010, 327, 1653-1657.	12.6	505
2	Nanoscale live-cell imaging using hopping probe ion conductance microscopy. Nature Methods, 2009, 6, 279-281.	19.0	462
3	Simultaneous Noncontact Topography and Electrochemical Imaging by SECM/SICM Featuring Ion Current Feedback Regulation. Journal of the American Chemical Society, 2010, 132, 10118-10126.	13.7	272
4	Multifunctional Nanoprobes for Nanoscale Chemical Imaging and Localized Chemical Delivery at Surfaces and Interfaces. Angewandte Chemie - International Edition, 2011, 50, 9638-9642.	13.8	256
5	Topographical and electrochemical nanoscale imaging of living cells using voltage-switching mode scanning electrochemical microscopy. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 11540-11545.	7.1	198
6	Electrochemical Nanoprobes for Single-Cell Analysis. ACS Nano, 2014, 8, 875-884.	14.6	195
7	Modulation of human embryonic stem cell-derived cardiomyocyte growth: A testbed for studying human cardiac hypertrophy?. Journal of Molecular and Cellular Cardiology, 2011, 50, 367-376.	1.9	130
8	Plasma membrane topography and interpretation of single-particle tracks. Nature Methods, 2010, 7, 170-171.	19.0	113
9	Noncontact Measurement of the Local Mechanical Properties of Living Cells Using Pressure Applied via a Pipette. Biophysical Journal, 2008, 95, 3017-3027.	0.5	112
10	Respiratory epithelial cytotoxicity and membrane damage (holes) caused by amine-modified nanoparticles. Nanotoxicology, 2012, 6, 94-108.	3.0	112
11	Nanoscale-Targeted Patch-Clamp Recordings of Functional Presynaptic Ion Channels. Neuron, 2013, 79, 1067-1077.	8.1	103
12	Spearhead Nanometric Field-Effect Transistor Sensors for Single-Cell Analysis. ACS Nano, 2016, 10, 3214-3221.	14.6	95
13	Super-resolution Scanning Patch Clamp Reveals Clustering of Functional Ion Channels in Adult Ventricular Myocyte. Circulation Research, 2013, 112, 1112-1120.	4.5	89
14	Comparison of Atomic Force Microscopy and Scanning Ion Conductance Microscopy for Live Cell Imaging. Langmuir, 2015, 31, 6807-6813.	3.5	84
15	Imaging Single Nanoparticle Interactions with Human Lung Cells Using Fast Ion Conductance Microscopy. Nano Letters, 2014, 14, 1202-1207.	9.1	80
16	An alternative mechanism of clathrin-coated pit closure revealed by ion conductance microscopy. Journal of Cell Biology, 2012, 197, 499-508.	5.2	77
17	Local Delivery of Molecules from a Nanopipette for Quantitative Receptor Mapping on Live Cells. Analytical Chemistry, 2013, 85, 9333-9342.	6.5	69
18	High-resolution label-free 3D mapping of extracellular pH of single living cells. Nature Communications, 2019, 10, 5610.	12.8	62

#	ARTICLE	IF	CITATIONS
19	Scanning ion conductance microscopy: a convergent high-resolution technology for multi-parametric analysis of living cardiovascular cells. <i>Journal of the Royal Society Interface</i> , 2011, 8, 913-925.	3.4	61
20	In Vitro and In Vivo Electrochemical Measurement of Reactive Oxygen Species After Treatment with Anticancer Drugs. <i>Analytical Chemistry</i> , 2020, 92, 8010-8014.	6.5	58
21	Microtubule-Dependent Mitochondria Alignment Regulates Calcium Release in Response to Nanomechanical Stimulus in Heart Myocytes. <i>Cell Reports</i> , 2016, 14, 140-151.	6.4	55
22	Functional interaction between charged nanoparticles and cardiac tissue: a new paradigm for cardiac arrhythmia?. <i>Nanomedicine</i> , 2013, 8, 725-737.	3.3	47
23	Stem Cell Expansion and Fate Decision on Liquid Substrates Are Regulated by Self-Assembled Nanosheets. <i>ACS Nano</i> , 2018, 12, 9206-9213.	14.6	44
24	Low Stress Ion Conductance Microscopy of Sub-Cellular Stiffness. <i>Soft Matter</i> , 2016, 12, 7953-7958.	2.7	41
25	Microtubules regulate cardiomyocyte transversal Young's modulus. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 2764-2766.	7.1	33
26	Mapping mechanical properties of living cells at nanoscale using intrinsic nanopipette-sample force interactions. <i>Nanoscale</i> , 2021, 13, 6558-6568.	5.6	33
27	Nanoscale Imaging of Primary Cilia with Scanning Ion Conductance Microscopy. <i>Analytical Chemistry</i> , 2018, 90, 2891-2895.	6.5	32
28	Kv1.1 channelopathy abolishes presynaptic spike width modulation by subthreshold somatic depolarization. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 2395-2400.	7.1	31
29	Chondrocyte expansion is associated with loss of primary cilia and disrupted hedgehog signalling. , 2017, 34, 128-141.		29
30	Rapid formation of human immunodeficiency virus-like particles. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 21637-21646.	7.1	28
31	Imaging the cell surface and its organization down to the level of single molecules. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2013, 368, 20120027.	4.0	19
32	Realizing the biological and biomedical potential of nanoscale imaging using a pipette probe. <i>Nanomedicine</i> , 2011, 6, 565-575.	3.3	16
33	Short-term angiotensin II treatment regulates cardiac nanomechanics via microtubule modifications. <i>Nanoscale</i> , 2020, 12, 16315-16329.	5.6	15
34	Q-Method for High-Resolution, Whole-Cell Patch-Clamp Impedance Measurements Using Square Wave Stimulation. <i>Annals of Biomedical Engineering</i> , 2006, 34, 1201-1212.	2.5	14
35	Visualising nanoscale restructuring of a cellular membrane triggered by polyelectrolyte microcapsules. <i>Nanoscale</i> , 2018, 10, 16902-16910.	5.6	12
36	Release of insulin granules by simultaneous, high-speed correlative SICM-FCM. <i>Journal of Microscopy</i> , 2021, 282, 21-29.	1.8	8

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37	Combined ion conductance and fluorescence confocal microscopy for biological cell membrane transport studies. <i>Journal of Optics (United Kingdom)</i> , 2013, 15, 094005.	2.2	5
38	Nanoscale Mapping Reveals Functional Differences in Ion Channels Populating the Membrane of Primary Cilia. <i>Cellular Physiology and Biochemistry</i> , 2019, 54, 15-26.	1.6	5
39	BLM Analyzer: a software tool for experiments on planar lipid bilayers. <i>BioTechniques</i> , 2007, 42, 335-341.	1.8	4
40	Scanning Ion Conductance Microscopy (SICM) for Low-stress Directly Examining of Cellular Mechanics. <i>Microscopy and Microanalysis</i> , 2020, 26, 1968-1970.	0.4	2
41	Noncontact Nanoscale Imaging of Cells. <i>Annual Review of Analytical Chemistry</i> , 2021, 14, 347-361.	5.4	2
42	Quantitative Characterization of Local Chemical Delivery through Nanopipette. <i>Biophysical Journal</i> , 2012, 102, 313a.	0.5	1
43	Estimation of passive electrical parameters of living cells using a voltage step stimulus. <i>Neurophysiology</i> , 2000, 32, 244-245.	0.3	0
44	Next Generation SICM Allows Nanoscale Imaging Of Biological Processes In Real-time. <i>Biophysical Journal</i> , 2009, 96, 374a.	0.5	0
45	Development of Voltage Switching Mode Scanning Electrochemical Microscopy for Topographical and Electrochemical Nanoscale Imaging of Living Cells. <i>ECS Meeting Abstracts</i> , 2012, , .	0.0	0
46	Nanopipet Based Nanoprobes for Single-Cell Analysis. <i>Biophysical Journal</i> , 2014, 106, 798a-799a.	0.5	0
47	High-Speed Hopping Probe Scanning Ion Conductance Microscopy. <i>Biophysical Journal</i> , 2014, 106, 797a-798a.	0.5	0
48	Adaptive Hopping Probe Ion Conductance Microscopy of Live Cells at ~ 45 -10 NM Resolution. <i>Biophysical Journal</i> , 2016, 110, 517a.	0.5	0
49	Modulation of axonal signalling in type 1 episodic ataxia. <i>Lancet, The</i> , 2016, 387, S104.	13.7	0
50	Scanning Ion Conductance Microscopy for Single Cell Analysis. <i>Microscopy and Microanalysis</i> , 2020, 26, 2496-2497.	0.4	0
51	Electrochemical detection and imaging of reactive oxygen species in single living cells. <i>Microscopy and Microanalysis</i> , 2021, 27, 1720-1721.	0.4	0
52	SCANNING ION-CONDUCTANCE MICROSCOPY METHODS FOR STUDYING LOCAL MECHANICAL PROPERTIES OF LIVING CELLS. <i>Microscopy and Microanalysis</i> , 2021, 27, 496-498.	0.4	0
53	CORRELATIVE QUANTITATIVE NANOMECHANICAL MAPPING AND CONFOCAL IMAGING OF LIVING CELLS BY SCANNING ION-CONDUCTANCE MICROSCOPY. <i>Microscopy and Microanalysis</i> , 2021, 27, 570-571.	0.4	0
54	Nanoscale Electrophysiology Using Scanning Ion Conductance Microscopy. <i>Bioanalytical Reviews</i> , 2021, , 1.	0.2	0