Craig R Forest

List of Publications by Year
in descending order

56 papers	3,300 citations	331670 21 h-index	175258 52 g-index
61 all docs	61 docs citations	61 times ranked	4780 citing authors

#	Article	IF	Citations
1	Compensation of physiological motion enables high-yield whole-cell recording in vivo. Journal of Neuroscience Methods, 2021, 348, 109008.	2.5	5
2	Deep learning-based real-time detection of neurons in brain slices for in vitro physiology. Scientific Reports, 2021, 11, 6065.	3.3	5
3	CREATE-X: Toward student entrepreneurial confidence. IEEE Potentials, 2021, 40, 14-22.	0.3	0
4	Automated Intracellular Pharmacological Electrophysiology for Ligand-Gated Ionotropic Receptor and Pharmacology Screening. Molecular Pharmacology, 2021, 100, 73-82.	2.3	4
5	Rapid Cortical Adaptation and the Role of Thalamic Synchrony during Wakefulness. Journal of Neuroscience, 2021, 41, 5421-5439.	3.6	20
6	Inferring thalamocortical monosynaptic connectivity in vivo. Journal of Neurophysiology, 2021, 125, 2408-2431.	1.8	16
7	Machine Learning-Based Pipette Positional Correction for Automatic Patch Clamp In Vitro. ENeuro, 2021, 8, ENEURO.0051-21.2021.	1.9	1
8	Method for Rapid Enzymatic Cleaning for Reuse of Patch Clamp Pipettes: Increasing Throughput by Eliminating Manual Pipette Replacement between Patch Clamp Attempts. Bio-protocol, 2021, 11, e4085.	0.4	5
9	Capillary-Based and Stokes-Based Trapping of Serial Sections for Scalable 3D-EM Connectomics. ENeuro, 2020, 7, ENEURO.0328-19.2019.	1.9	1
10	High-yield, automated intracellular electrophysiology in retinal pigment epithelia. Journal of Neuroscience Methods, 2019, 328, 108442.	2.5	2
11	Amelioration of Huntingtonâ€™s disease phenotype in astrocytes derived from iPSC-derived neural progenitor cells of Huntingtonâ€™s disease monkeys. PLoS ONE, 2019, 14, e0214156.	2.5	23
12	Autonomous patch-clamp robot for functional characterization of neurons in vivo: development and application to mouse visual cortex. Journal of Neurophysiology, 2019, 121, 2341-2357.	1.8	26
13	PatcherBot: a single-cell electrophysiology robot for adherent cells and brain slices. Journal of Neural Engineering, 2019, 16, 046003.	3.5	32
14	Cell Membrane Tracking in Living Brain Tissue Using Differential Interference Contrast Microscopy. IEEE Transactions on Image Processing, 2018, 27, 1847-1861.	9.8	16
15	Evidence for Long-Timescale Patterns of Synaptic Inputs in CA1 of Awake Behaving Mice. Journal of Neuroscience, 2018, 38, 1821-1834.	3.6	6
16	Automated Assessment of Loss of Consciousness Using Whisker And Paw Movements During Anesthetic Dosing in Head-Fixed Rodents. , 2018, 2018, 730-733.		2
17	Large-scale neuroanatomy using LASSO: Loop-based Automated Serial Sectioning Operation. PLoS ONE, 2018, 13, e0206172.	2.5	12
18	Transport and trapping of nanosheets via hydrodynamic forces and curvature-induced capillary quadrupolar interactions. Journal of Colloid and Interface Science, 2018, 531, 352-359.	9.4	3

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19	Multi-neuron intracellular recording in vivo via interacting autopatching robots. ELife, 2018, 7, .	6.0	40
20	Stabilization of Aliphatic Phosphines by Auxiliary Phosphine Sulfides Offers Zeptomolar Affinity and Unprecedented Selectivity for Probing Biological Cu I. Angewandte Chemie - International Edition, 2018, 57, 9711-9715.	13.8	16
21	nanoNS3: A network simulator for bacterial nanonetworks based on molecular communication. Nano Communication Networks, 2017, 12, 1-11.	2.9	13
22	Genetically expressed voltage sensor ArcLight for imaging large scale cortical activity in the anesthetized and awake mouse. Neurophotonics, 2017, 4, 031212.	3.3	29
23	Closed-Loop Real-Time Imaging Enables Fully Automated Cell-Targeted Patch-Clamp Neural Recording InÂVivo. Neuron, 2017, 95, 1037-1047.e11.	8.1	45
24	ADMA: Amplitude-Division Multiple Access for Bacterial Communication Networks. IEEE Transactions on Molecular, Biological, and Multi-Scale Communications, 2017, 3, 134-149.	2.1	7
25	Mesoscale-duration activated states gate spiking in response to fast rises in membrane voltage in the awake brain. Journal of Neurophysiology, 2017, 118, 1270-1291.	1.8	6
26	Assembly and operation of the autopatcher for automated intracellular neural recording in vivo. Nature Protocols, 2016, 11, 634-654.	12.0	53
27	Optical method for automated measurement of glass micropipette tip geometry. Precision Engineering, 2016, 46, 88-95.	3.4	6
28	Integration of autopatching with automated pipette and cell detection in vitro. Journal of Neurophysiology, 2016, 116, 1564-1578.	1.8	39
29	Cleaning Patch Clamp Pipettes Enables their Reuse. Biophysical Journal, 2016, 110, 149a.	0.5	0
30	Multilevel fluidic flow control in a rotationally-driven polyester film microdevice created using laser print, cut and laminate. Lab on A Chip, 2016, 16, 377-387.	6.0	22
31	Stress Enables Reinforcement-Elicited Serotonergic Consolidation of Fear Memory. Biological Psychiatry, 2016, 79, 814-822.	1.3	50
32	System for Rapid, Precise Modulation of Intraocular Pressure, toward Minimally-Invasive In Vivo Measurement of Intracranial Pressure. PLoS ONE, 2016, 11, e0147020.	2.5	23
33	Thermally multiplexed polymerase chain reaction. Biomicrofluidics, 2015, 9, 044117.	2.4	12
34	Efficient Sampling of Bacterial Signal Transduction for Detection of Pulse-Amplitude Modulated Molecular Signals. IEEE Transactions on Biomedical Circuits and Systems, 2015, 9, 505-517.	4.0	27
35	Microchip amplifier for in vitro, in vivo, and automated whole cell patch-clamp recording. Journal of Neurophysiology, 2015, 113, 1275-1282.	1.8	16
36	Modeling and validation of autoinducer-mediated bacterial gene expression in microfluidic environments. Biomicrofluidics, 2014, 8, 034116.	2.4	21

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37	Microfluidic Thrombosis under Multiple Shear Rates and Antiplatelet Therapy Doses. PLoS ONE, 2014, 9, e82493.	2.5	65
38	Noninvasive optical inhibition with a red-shifted microbial rhodopsin. Nature Neuroscience, 2014, 17, 1123-1129.	14.8	480
39	Disposable platform provides visual and color-based point-of-care anemia self-testing. Journal of Clinical Investigation, 2014, 124, 4387-4394.	8.2	48
40	Rapid, quantitative, reverse transcription PCR in a polymer microfluidicchip. Biosensors and Bioelectronics, 2013, 44, 222-228.	10.1	26
41	Sensitive, microliter PCR with consensus degenerate primers for Epstein Barr virus amplification. Biomedical Microdevices, 2013, 15, 221-231.	2.8	13
42	In vivo robotics: the automation of neuroscience and other intactâ€system biological fields. Annals of the New York Academy of Sciences, 2013, 1305, 63-71.	3.8	8
43	Time-Elapse Communication: Bacterial Communication on a Microfluidic Chip. IEEE Transactions on Communications, 2013, 61, 5139-5151.	7.8	90
44	When bacteria talk: Time elapse communication for super-slow networks. , 2013, , .		7
45	A Quantitative Analysis of the Effects of a Multidisciplinary Engineering Capstone Design Course. Journal of Engineering Education, 2012, 101, 630-656.	3.0	96
46	Monaco: fundamentals of molecular nano-communication networks. IEEE Wireless Communications, 2012, 19, 12-18.	9.0	101
47	Microfluidic system for simultaneous optical measurement of platelet aggregation at multiple shear rates in whole blood. Lab on A Chip, 2012, 12, 1355.	6.0	88
48	Automated whole-cell patch-clamp electrophysiology of neurons in vivo. Nature Methods, 2012, 9, 585-587.	19.0	214
49	Plug-and-play, infrared, laser-mediated PCR in a microfluidic chip. Biomedical Microdevices, 2012, 14, 427-433.	2.8	23
50	An Instrument for Controlled, Automated Production of Micrometer Scale Fused Silica Pipettes. Journal of Mechanical Design, Transactions of the ASME, 2011, 133, .	2.9	11
51	Modeling radiative heating of liquids in microchip reaction chambers. Sensors and Actuators A: Physical, 2011, 167, 531-536.	4.1	5
52	Programming cells by multiplex genome engineering and accelerated evolution. Nature, 2009, 460, 894-898.	27.8	1,346
53	Assembly and constraint technology for large arrays of capillaries. Precision Engineering, 2009, 33, 275-283.	3.4	1
54	Thin optic constraint. Precision Engineering, 2007, 31, 130-138.	3.4	13

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55	Repeatable and accurate assembly of X-ray foil optics. Precision Engineering, 2006, 30, 63-70.	3.4	0
56	Metrology of thin transparent optics using Shack-Hartmann wavefront sensing. Optical Engineering, 2004, 43, 742.	1.0	53