

Adam E Cohen

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

85
papers

5,227
citations

34
h-index

72
g-index

96
ext. papers

6,557
ext. citations

11.3
avg, IF

6.14
L-index

#	Paper	IF	Citations
85	Optical chirality and its interaction with matter. <i>Physical Review Letters</i> , 2010 , 104, 163901	7.4	597
84	All-optical electrophysiology in mammalian neurons using engineered microbial rhodopsins. <i>Nature Methods</i> , 2014 , 11, 825-33	21.6	487
83	Enhanced enantioselectivity in excitation of chiral molecules by superchiral light. <i>Science</i> , 2011 , 332, 333-6	33.3	433
82	Optical recording of action potentials in mammalian neurons using a microbial rhodopsin. <i>Nature Methods</i> , 2011 , 9, 90-5	21.6	339
81	Electrical spiking in Escherichia coli probed with a fluorescent voltage-indicating protein. <i>Science</i> , 2011 , 333, 345-8	33.3	250
80	All-Optical Interrogation of Neural Circuits. <i>Journal of Neuroscience</i> , 2015 , 35, 13917-26	6.6	217
79	Suppressing Brownian motion of individual biomolecules in solution. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006 , 103, 4362-5	11.5	192
78	Bright and fast multicoloured voltage reporters via electrochromic FRET. <i>Nature Communications</i> , 2014 , 5, 4625	17.4	142
77	Cell Membranes Resist Flow. <i>Cell</i> , 2018 , 175, 1769-1779.e13	56.2	140
76	Voltage imaging and optogenetics reveal behaviour-dependent changes in hippocampal dynamics. <i>Nature</i> , 2019 , 569, 413-417	50.4	130
75	Control of nanoparticles with arbitrary two-dimensional force fields. <i>Physical Review Letters</i> , 2005 , 94, 118102	7.4	116
74	A Bright and Fast Red Fluorescent Protein Voltage Indicator That Reports Neuronal Activity in Organotypic Brain Slices. <i>Journal of Neuroscience</i> , 2016 , 36, 2458-72	6.6	115
73	Voltage imaging with genetically encoded indicators. <i>Current Opinion in Chemical Biology</i> , 2017 , 39, 1-10	9.7	111
72	Controlling Brownian motion of single protein molecules and single fluorophores in aqueous buffer. <i>Optics Express</i> , 2008 , 16, 6941-56	3.3	103
71	Spectroscopy in sculpted fields. <i>Nano Today</i> , 2009 , 4, 269-279	17.9	101
70	Mechanism of voltage-sensitive fluorescence in a microbial rhodopsin. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 5939-44	11.5	97
69	Electrokinetic trapping at the one nanometer limit. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011 , 108, 8937-42	11.5	97

68	Cardiotoxicity screening with simultaneous optogenetic pacing, voltage imaging and calcium imaging. <i>Journal of Pharmacological and Toxicological Methods</i> , 2016 , 81, 240-50	1.7	87
67	Limits on fluorescence detected circular dichroism of single helicene molecules. <i>Journal of Physical Chemistry A</i> , 2009 , 113, 6213-6	2.8	81
66	Molecular Mechanism of Disease-Associated Mutations in the Pre-M1 Helix of NMDA Receptors and Potential Rescue Pharmacology. <i>PLoS Genetics</i> , 2017 , 13, e1006536	6	80
65	Convex lens-induced confinement for imaging single molecules. <i>Analytical Chemistry</i> , 2010 , 82, 6224-9	7.8	67
64	Principal-components analysis of shape fluctuations of single DNA molecules. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007 , 104, 12622-7	11.5	66
63	Genetically Targeted All-Optical Electrophysiology with a Transgenic Cre-Dependent Optopatch Mouse. <i>Journal of Neuroscience</i> , 2016 , 36, 11059-11073	6.6	61
62	Simultaneous mapping of membrane voltage and calcium in zebrafish heart in vivo reveals chamber-specific developmental transitions in ionic currents. <i>Frontiers in Physiology</i> , 2014 , 5, 344	4.6	61
61	Two-Photon Lifetime Imaging of Voltage Indicating Proteins as a Probe of Absolute Membrane Voltage. <i>Biophysical Journal</i> , 2015 , 109, 914-21	2.9	57
60	All-Optical Electrophysiology Reveals the Role of Lateral Inhibition in Sensory Processing in Cortical Layer 1. <i>Cell</i> , 2020 , 180, 521-535.e18	56.2	54
59	Screening fluorescent voltage indicators with spontaneously spiking HEK cells. <i>PLoS ONE</i> , 2013 , 8, e85223	3.7	48
58	Local geometry of electromagnetic fields and its role in molecular multipole transitions. <i>Journal of Physical Chemistry B</i> , 2011 , 115, 5304-11	3.4	47
57	Nanomagnetic control of intersystem crossing. <i>Journal of Physical Chemistry A</i> , 2009 , 113, 11084-92	2.8	47
56	Optical electrophysiology for probing function and pharmacology of voltage-gated ion channels. <i>ELife</i> , 2016 , 5,	8.9	43
55	Resonant enhancement and dissipation in nonequilibrium van der Waals forces. <i>Physical Review Letters</i> , 2003 , 91, 233202	7.4	42
54	A Low Affinity GCaMP3 Variant (GCaMPer) for Imaging the Endoplasmic Reticulum Calcium Store. <i>PLoS ONE</i> , 2015 , 10, e0139273	3.7	40
53	Temporal dynamics of microbial rhodopsin fluorescence reports absolute membrane voltage. <i>Biophysical Journal</i> , 2014 , 106, 639-48	2.9	39
52	Bringing bioelectricity to light. <i>Annual Review of Biophysics</i> , 2014 , 43, 211-32	21.1	34
51	All-Optical Electrophysiology for High-Throughput Functional Characterization of a Human iPSC-Derived Motor Neuron Model of ALS. <i>Stem Cell Reports</i> , 2018 , 10, 1991-2004	8	34

50	Ultrawidefield microscope for high-speed fluorescence imaging and targeted optogenetic stimulation. <i>Biomedical Optics Express</i> , 2017 , 8, 5794-5813	3.5	32
49	Flash memory: photochemical imprinting of neuronal action potentials onto a microbial rhodopsin. <i>Journal of the American Chemical Society</i> , 2014 , 136, 2529-37	16.4	29
48	Internal mechanical response of a polymer in solution. <i>Physical Review Letters</i> , 2007 , 98, 116001	7.4	29
47	Imaging GFP-based reporters in neurons with multiwavelength optogenetic control. <i>Biophysical Journal</i> , 2014 , 107, 1554-63	2.9	27
46	Euler buckling and nonlinear kinking of double-stranded DNA. <i>Nucleic Acids Research</i> , 2013 , 41, 9881-90	20.1	27
45	Chiroptical hot spots in twisted nanowire plasmonic oscillators. <i>Applied Physics Letters</i> , 2013 , 102, 043103	3.4	24
44	Ultrasensitive measurements of microbial rhodopsin photocycles using photochromic FRET. <i>Photochemistry and Photobiology</i> , 2012 , 88, 90-7	3.6	23
43	Optogenetic Approaches to Drug Discovery in Neuroscience and Beyond. <i>Trends in Biotechnology</i> , 2017 , 35, 625-639	15.1	22
42	Bioelectrical domain walls in homogeneous tissues. <i>Nature Physics</i> , 2020 , 16, 357-364	16.2	22
41	Force-extension curve of a polymer in a high-frequency electric field. <i>Physical Review Letters</i> , 2003 , 91, 235506	7.4	22
40	All-optical synaptic electrophysiology probes mechanism of ketamine-induced disinhibition. <i>Nature Methods</i> , 2018 , 15, 823-831	21.6	22
39	Geometry-Dependent Arrhythmias in Electrically Excitable Tissues. <i>Cell Systems</i> , 2018 , 7, 359-370.e6	10.6	20
38	Optically Controlled Oscillators in an Engineered Bioelectric Tissue. <i>Physical Review X</i> , 2016 , 6,	9.1	19
37	Do Cell Membranes Flow Like Honey or Jiggle Like Jello?. <i>BioEssays</i> , 2020 , 42, e1900142	4.1	18
36	Photostick: a method for selective isolation of target cells from culture. <i>Chemical Science</i> , 2015 , 6, 1701-1705	17.0	17
35	Anti-Brownian traps for studies on single molecules. <i>Methods in Enzymology</i> , 2010 , 475, 149-74	1.7	16
34	Roadmap on neuromerics. <i>Journal of Optics (United Kingdom)</i> , 2016 , 18,	1.7	16
33	Geometry-dependent functional changes in iPSC-derived cardiomyocytes probed by functional imaging and RNA sequencing. <i>PLoS ONE</i> , 2017 , 12, e0172671	3.7	14

32	All-optical electrophysiology reveals brain-state dependent changes in hippocampal subthreshold dynamics and excitability		14
31	Optogenetics: Turning the Microscope on Its Head. <i>Biophysical Journal</i> , 2016 , 110, 997-1003	2.9	13
30	The cat that caught the canary: what to do with single-molecule trapping. <i>ACS Nano</i> , 2011 , 5, 5296-9	16.7	13
29	Hardware-based anti-Brownian electrokinetic trap (ABEL trap) for single molecules: Control loop simulations and application to ATP binding stoichiometry in multi-subunit enzymes. <i>Proceedings of SPIE</i> , 2008 , 7038, 1-12	1.7	13
28	Photoactivated voltage imaging in tissue with an archaerhodopsin-derived reporter. <i>Science Advances</i> , 2021 , 7,	14.3	13
27	Multiplexed Optical Sensors in Arrayed Islands of Cells for multimodal recordings of cellular physiology. <i>Nature Communications</i> , 2020 , 11, 3881	17.4	12
26	Wide-Area All-Optical Neurophysiology in Acute Brain Slices. <i>Journal of Neuroscience</i> , 2019 , 39, 4889-4906	18.6	11
25	High-fidelity estimates of spikes and subthreshold waveforms from 1-photon voltage imaging in vivo. <i>Cell Reports</i> , 2021 , 35, 108954	10.6	10
24	Painting with Rainbows: Patterning Light in Space, Time, and Wavelength for Multiphoton Optogenetic Sensing and Control. <i>Accounts of Chemical Research</i> , 2016 , 49, 2518-2526	24.3	9
23	Nano-mechanical measurements of protein-DNA interactions with a silicon nitride pulley. <i>Nucleic Acids Research</i> , 2016 , 44, e7	20.1	9
22	Prednisolone rescues Duchenne muscular dystrophy phenotypes in human pluripotent stem cell-derived skeletal muscle in vitro. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021 , 118,	11.5	8
21	Compressed Hadamard microscopy for high-speed optically sectioned neuronal activity recordings. <i>Journal Physics D: Applied Physics</i> , 2019 , 52, 144001	3	6
20	Two-photon imaging of a magneto-fluorescent indicator for 3D optical magnetometry. <i>Optics Express</i> , 2015 , 23, 28022-30	3.3	6
19	Two-photon photoactivated voltage imaging in tissue with an Archaerhodopsin-derived reporter		4
18	Bioelectrical signaling via domain wall migration		4
17	Measuring membrane voltage with microbial rhodopsins. <i>Methods in Molecular Biology</i> , 2014 , 1071, 97-108	10.8	3
16	Motion induced by asymmetric enzymatic degradation of hydrogels. <i>Soft Matter</i> , 2012 , 8, 4616	3.6	3
15	Voltage imaging identifies spinal circuits that modulate locomotor adaptation in zebrafish.. <i>Neuron</i> , 2022 ,	13.9	3

14	Cell membranes resist flow		3
13	Sculpting light to reveal brain function. <i>Nature Neuroscience</i> , 2018 , 21, 776-778	25.5	3
12	All-optical electrophysiology with improved genetically encoded voltage indicators reveals interneuron network dynamics in vivo		2
11	Microsecond Timescale Selective Access Two-photon Targeting for Functional Measurements in Tissue 2020 ,		1
10	High fidelity estimates of spikes and subthreshold waveforms from 1-photon voltage imaging in vivo		1
9	Time-tagged ticker tapes for intracellular recordings		1
8	Linearly polarized excitation enhances signals from fluorescent voltage indicators. <i>Biophysical Journal</i> , 2021 , 120, 5333-5342	2.9	1
7	All-optical electrophysiology reveals excitation, inhibition, and neuromodulation in cortical layer 1		1
6	Neuronal activity drives pathway-specific depolarization of astrocyte distal processes		1
5	Voltage imaging identifies spinal circuits that modulate locomotor adaptation in zebrafish		1
4	Dendritic branch structure compartmentalizes voltage-dependent calcium influx in cortical layer 2/3 pyramidal cells.. <i>ELife</i> , 2022 , 11,	8.9	1
3	Neuronal activity drives pathway-specific depolarization of peripheral astrocyte processes.. <i>Nature Neuroscience</i> , 2022 , 25, 607-616	25.5	1
2	Adam Cohen: visualizing cellular voltage. <i>Journal of Cell Biology</i> , 2014 , 205, 610-1	7.3	
1	Optical electrophysiology in neuroscience, disease modeling, and drug discovery. <i>Proceedings for Annual Meeting of the Japanese Pharmacological Society</i> , 2018 , WCP2018, SY2-2	0	