

# Darcy Peterka

## List of Publications by Year in descending order

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66  
papers

5,986  
citations

101543

36  
h-index

128289

60  
g-index

72  
all docs

72  
docs citations

72  
times ranked

6566  
citing authors

#	ARTICLE	IF	CITATIONS
1	Simultaneous Denoising, Deconvolution, and Demixing of Calcium Imaging Data. <i>Neuron</i> , 2016, 89, 285-299.	8.1	843
2	Imaging Voltage in Neurons. <i>Neuron</i> , 2011, 69, 9-21.	8.1	339
3	Nanotools for Neuroscience and Brain Activity Mapping. <i>ACS Nano</i> , 2013, 7, 1850-1866.	14.6	323
4	Two-photon optogenetic toolbox for fast inhibition, excitation and bistable modulation. <i>Nature Methods</i> , 2012, 9, 1171-1179.	19.0	299
5	SLM microscopy: scanless two-photon imaging and photostimulation using spatial light modulators. <i>Frontiers in Neural Circuits</i> , 2008, 2, 5.	2.8	297
6	Selective detection of isomers with photoionization mass spectrometry for studies of hydrocarbon flame chemistry. <i>Journal of Chemical Physics</i> , 2003, 119, 8356-8365.	3.0	266
7	Imprinting and recalling cortical ensembles. <i>Science</i> , 2016, 353, 691-694.	12.6	263
8	Two-photon optogenetics of dendritic spines and neural circuits. <i>Nature Methods</i> , 2012, 9, 1202-1205.	19.0	255
9	Simultaneous Multi-plane Imaging of Neural Circuits. <i>Neuron</i> , 2016, 89, 269-284.	8.1	209
10	Photoionization mass spectrometer for studies of flame chemistry with a synchrotron light source. <i>Review of Scientific Instruments</i> , 2005, 76, 094102.	1.3	208
11	The multiplexed chemical kinetic photoionization mass spectrometer: A new approach to isomer-resolved chemical kinetics. <i>Review of Scientific Instruments</i> , 2008, 79, 104103.	1.3	190
12	RuBi-Glutamate: Two-photon and visible-light photoactivation of neurons and dendritic spines. <i>Frontiers in Neural Circuits</i> , 2009, 3, 2.	2.8	172
13	Simultaneous two-photon imaging and two-photon optogenetics of cortical circuits in three dimensions. <i>ELife</i> , 2018, 7, .	6.0	167
14	Altered Cortical Ensembles in Mouse Models of Schizophrenia. <i>Neuron</i> , 2017, 94, 153-167.e8.	8.1	152
15	Targeted intracellular voltage recordings from dendritic spines using quantum-dot-coated nanopipettes. <i>Nature Nanotechnology</i> , 2017, 12, 335-342.	31.5	107
16	A fast ruthenium polypyridine cage complex photoreleases glutamate with visible or IR light in one and two photon regimes. <i>Journal of Inorganic Biochemistry</i> , 2010, 104, 418-422.	3.5	104
17	Reliable and Elastic Propagation of Cortical Seizures In Vivo. <i>Cell Reports</i> , 2017, 19, 2681-2693.	6.4	100
18	Instantaneous three-dimensional sensing using spatial light modulator illumination with extended depth of field imaging. <i>Optics Express</i> , 2013, 21, 16007.	3.4	90

#	ARTICLE	IF	CITATIONS
19	Imaging and Optically Manipulating Neuronal Ensembles. Annual Review of Biophysics, 2017, 46, 271-293.	10.0	90
20	Simultaneous imaging of neural activity in three dimensions. Frontiers in Neural Circuits, 2014, 8, 29.	2.8	79
21	Modulation of nitrogen vacancy charge state and fluorescence in nanodiamonds using electrochemical potential. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 3938-3943.	7.1	77
22	Calcium imaging of neural circuits with extended depth-of-field light-sheet microscopy. Optics Letters, 2016, 41, 855.	3.3	71
23	Photoelectron Imaging of Helium Droplets. Physical Review Letters, 2003, 91, 043401.	7.8	68
24	Crossed-beam reaction of O(1D)+D2 <sup>+</sup> OD+D by velocity map imaging. Chemical Physics Letters, 1999, 301, 372-378.	2.6	67
25	Attenuation of Synaptic Potentials in Dendritic Spines. Cell Reports, 2017, 20, 1100-1110.	6.4	66
26	Acute Focal Seizures Start As Local Synchronizations of Neuronal Ensembles. Journal of Neuroscience, 2019, 39, 8562-8575.	3.6	63
27	Coherence in polyatomic photodissociation: Aligned O(3P) from photodissociation of NO2 at 212.8 nm. Journal of Chemical Physics, 1999, 110, 4115-4118.	3.0	60
28	Imaging H abstraction dynamics in crossed molecular beams: Cl+ROH reactions. Physical Chemistry Chemical Physics, 2000, 2, 861-868.	2.8	58
29	Vacuum Ultraviolet Photoionization of C3. Journal of the American Chemical Society, 2006, 128, 220-226.	13.7	55
30	Photoionization Dynamics in Pure Helium Droplets. Journal of Physical Chemistry A, 2007, 111, 7449-7459.	2.5	55
31	Photoelectron Imaging of Helium Droplets Doped with Xe and Kr Atoms. Journal of Physical Chemistry A, 2008, 112, 9356-9365.	2.5	48
32	The photodissociation of the vinyl radical (C2H3) at 243 nm studied by velocity map imaging. Journal of Chemical Physics, 1999, 110, 4248-4253.	3.0	46
33	Photoionization of helium nanodroplets doped with rare gas atoms. Journal of Chemical Physics, 2006, 124, 214301.	3.0	43
34	Atomic orbital alignment and coherence in N2O photodissociation at 193.3 nm. Faraday Discussions, 1999, 113, 425-436.	3.2	41
35	H abstraction dynamics by crossed-beam velocity map imaging: Cl+CH3OH → CH2OH+HCl. Chemical Physics Letters, 2000, 317, 264-268.	2.6	41
36	VUV photoelectron imaging of biological nanoparticles: Ionization energy determination of nanophase glycine and phenylalanine-glycine-glycine. Physical Chemistry Chemical Physics, 2006, 8, 1884.	2.8	37

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37	Photoionization and Photofragmentation of SF <sub>6</sub> in Helium Nanodroplets. <i>Journal of Physical Chemistry B</i> , 2006, 110, 19945-19955.	2.6	36
38	Direct identification of propargyl radical in combustion flames by vacuum ultraviolet photoionization mass spectrometry. <i>Journal of Chemical Physics</i> , 2006, 124, 074302.	3.0	36
39	Local feedback inhibition tightly controls rapid formation of hippocampal place fields. <i>Neuron</i> , 2022, 110, 783-794.e6.	8.1	36
40	Multi-scale approaches for high-speed imaging and analysis of large neural populations. <i>PLoS Computational Biology</i> , 2017, 13, e1005685.	3.2	35
41	An Amygdala Circuit Mediates Experience-Dependent Momentary Arrests during Exploration. <i>Cell</i> , 2020, 183, 605-619.e22.	28.9	34
42	Unraveling the mysteries of metastable O <sub>4</sub> *. <i>Journal of Chemical Physics</i> , 1999, 110, 6095-6098.	3.0	33
43	Dissociative photoionization dynamics of SF <sub>6</sub> by ion imaging with synchrotron undulator radiation. <i>Chemical Physics Letters</i> , 1999, 312, 108-114.	2.6	31
44	Optical control of focal epilepsy in vivo with caged <sup>13</sup> C-aminobutyric acid. <i>Annals of Neurology</i> , 2012, 71, 68-75.	5.3	26
45	High-resolution state-selected ion-molecule reaction studies using pulsed field ionization photoelectron-secondary ion coincidence method. <i>Review of Scientific Instruments</i> , 2003, 74, 4096-4109.	1.3	24
46	Crossed beams study of the reaction CH <sub>2</sub> +C <sub>2</sub> H <sub>2</sub> →C <sub>3</sub> H <sub>3</sub> +H. <i>Journal of Chemical Physics</i> , 2004, 121, 6254-6257.	3.0	24
47	Two-photon microscopy with diffractive optical elements and spatial light modulators. <i>Frontiers in Neuroscience</i> , 2010, 4, .	2.8	24
48	A Trimethoprim-Based Chemical Tag for Live Cell Two-Photon Imaging. <i>ChemBioChem</i> , 2010, 11, 782-784.	2.6	23
49	Velocity map imaging studies of the Lyman $\hat{\pm}$ photodissociation mechanism for H atom production from hydrocarbons. <i>Journal of Chemical Physics</i> , 1998, 109, 4703-4706.	3.0	21
50	Ion pair imaging spectroscopy: CH <sub>3</sub> Cl <sup>+</sup> +CH <sub>3</sub> <sup>++</sup> +Cl <sup>-</sup> . <i>Chemical Physics Letters</i> , 2001, 339, 203-208.	2.6	21
51	A portable laser photostimulation and imaging microscope. <i>Journal of Neural Engineering</i> , 2010, 7, 045001.	3.5	17
52	Neurophotonic Tools for Microscopic Measurements and Manipulation: Status Report. <i>Neurophotonics</i> , 2022, 9, 013001.	3.3	17
53	Direct detection and spectroscopy of O <sub>4</sub> *. <i>Faraday Discussions</i> , 1997, 108, 131-138.	3.2	14
54	Spatial Light Modulator Microscopy. <i>Cold Spring Harbor Protocols</i> , 2013, 2013, pdb.top079517.	0.3	11

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55	Prolonged anesthesia alters brain synaptic architecture. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	11
56	Exclusive production of excited-state sulfur (1D) atoms from 193 nm photolysis of thietane. Chemical Physics Letters, 2002, 357, 204-208.	2.6	10
57	Dissociative photoionization dynamics in ethane studied by velocity map imaging. Chemical Physics Letters, 2003, 374, 334-340.	2.6	9
58	Tunable Synchrotron Vacuum Ultraviolet Ionization, Time-of-Flight Investigation of the Photodissociation of trans-Crotonaldehyde at 193 nm. Journal of Physical Chemistry A, 2004, 108, 7895-7902.	2.5	8
59	Photodissociation of NO <sub>2</sub> near 225 nm by Velocity Map Imaging. , 2001, , 343-352.		6
60	Local Feedback Inhibition Tightly Controls Rapid Formation of Hippocampal Place Fields. SSRN Electronic Journal, 0, , .	0.4	3
61	Technical Reports: Atoms to Aerosols – The Chemical Dynamics Beamline. Synchrotron Radiation News, 2005, 18, 35-37.	0.8	1
62	Fast two-photon neuronal imaging and control using a spatial light modulator and ruthenium compounds. Proceedings of SPIE, 2010, , .	0.8	1
63	The Pocketscope: a spatial light modulator based epi-fluorescence microscope for optogenetics. , 2014, , .		1
64	Dual-region in vivo Functional Imaging with a Spatial Light Modulator. , 2015, , .		1
65	Electrochemical potential control of charge state and fluorescence of nitrogen vacancy centers in nanodiamonds. , 2015, , .		1
66	Evaluation of at-home methods for N95 filtering facepiece respirator decontamination. Scientific Reports, 2021, 11, 19750.	3.3	0