

Darcy Peterka

List of Publications by Year in descending order

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Version: 2024-02-01

66
papers

5,986
citations

101384

36
h-index

128067

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. | 3.8 | 843 |
| 2 | Imaging Voltage in Neurons. <i>Neuron</i> , 2011, 69, 9-21. | 3.8 | 339 |
| 3 | Nanotools for Neuroscience and Brain Activity Mapping. <i>ACS Nano</i> , 2013, 7, 1850-1866. | 7.3 | 323 |
| 4 | Two-photon optogenetic toolbox for fast inhibition, excitation and bistable modulation. <i>Nature Methods</i> , 2012, 9, 1171-1179. | 9.0 | 299 |
| 5 | SLM microscopy: scanless two-photon imaging and photostimulation using spatial light modulators. <i>Frontiers in Neural Circuits</i> , 2008, 2, 5. | 1.4 | 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. | 1.2 | 266 |
| 7 | Imprinting and recalling cortical ensembles. <i>Science</i> , 2016, 353, 691-694. | 6.0 | 263 |
| 8 | Two-photon optogenetics of dendritic spines and neural circuits. <i>Nature Methods</i> , 2012, 9, 1202-1205. | 9.0 | 255 |
| 9 | Simultaneous Multi-plane Imaging of Neural Circuits. <i>Neuron</i> , 2016, 89, 269-284. | 3.8 | 209 |
| 10 | Photoionization mass spectrometer for studies of flame chemistry with a synchrotron light source. <i>Review of Scientific Instruments</i> , 2005, 76, 094102. | 0.6 | 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. | 0.6 | 190 |
| 12 | RuBi-Glutamate: Two-photon and visible-light photoactivation of neurons and dendritic spines. <i>Frontiers in Neural Circuits</i> , 2009, 3, 2. | 1.4 | 172 |
| 13 | Simultaneous two-photon imaging and two-photon optogenetics of cortical circuits in three dimensions. <i>ELife</i> , 2018, 7, . | 2.8 | 167 |
| 14 | Altered Cortical Ensembles in Mouse Models of Schizophrenia. <i>Neuron</i> , 2017, 94, 153-167.e8. | 3.8 | 152 |
| 15 | Targeted intracellular voltage recordings from dendritic spines using quantum-dot-coated nanopipettes. <i>Nature Nanotechnology</i> , 2017, 12, 335-342. | 15.6 | 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. | 1.5 | 104 |
| 17 | Reliable and Elastic Propagation of Cortical Seizures In Vivo. <i>Cell Reports</i> , 2017, 19, 2681-2693. | 2.9 | 100 |
| 18 | Instantaneous three-dimensional sensing using spatial light modulator illumination with extended depth of field imaging. <i>Optics Express</i> , 2013, 21, 16007. | 1.7 | 90 |

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|----|--|-----|-----------|
| 19 | Imaging and Optically Manipulating Neuronal Ensembles. Annual Review of Biophysics, 2017, 46, 271-293. | 4.5 | 90 |
| 20 | Simultaneous imaging of neural activity in three dimensions. Frontiers in Neural Circuits, 2014, 8, 29. | 1.4 | 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. | 3.3 | 77 |
| 22 | Calcium imaging of neural circuits with extended depth-of-field light-sheet microscopy. Optics Letters, 2016, 41, 855. | 1.7 | 71 |
| 23 | Photoelectron Imaging of Helium Droplets. Physical Review Letters, 2003, 91, 043401. | 2.9 | 68 |
| 24 | Crossed-beam reaction of O(1D)+D2 ⁺ OD+D by velocity map imaging. Chemical Physics Letters, 1999, 301, 372-378. | 1.2 | 67 |
| 25 | Attenuation of Synaptic Potentials in Dendritic Spines. Cell Reports, 2017, 20, 1100-1110. | 2.9 | 66 |
| 26 | Acute Focal Seizures Start As Local Synchronizations of Neuronal Ensembles. Journal of Neuroscience, 2019, 39, 8562-8575. | 1.7 | 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. | 1.2 | 60 |
| 28 | Imaging H abstraction dynamics in crossed molecular beams: Cl+ROH reactions. Physical Chemistry Chemical Physics, 2000, 2, 861-868. | 1.3 | 58 |
| 29 | Vacuum Ultraviolet Photoionization of C3. Journal of the American Chemical Society, 2006, 128, 220-226. | 6.6 | 55 |
| 30 | Photoionization Dynamics in Pure Helium Droplets. Journal of Physical Chemistry A, 2007, 111, 7449-7459. | 1.1 | 55 |
| 31 | Photoelectron Imaging of Helium Droplets Doped with Xe and Kr Atoms. Journal of Physical Chemistry A, 2008, 112, 9356-9365. | 1.1 | 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. | 1.2 | 46 |
| 33 | Photoionization of helium nanodroplets doped with rare gas atoms. Journal of Chemical Physics, 2006, 124, 214301. | 1.2 | 43 |
| 34 | Atomic orbital alignment and coherence in N2O photodissociation at 193.3 nm. Faraday Discussions, 1999, 113, 425-436. | 1.6 | 41 |
| 35 | H abstraction dynamics by crossed-beam velocity map imaging: Cl+CH3OH → CH2OH+HCl. Chemical Physics Letters, 2000, 317, 264-268. | 1.2 | 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. | 1.3 | 37 |

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|----|---|------|-----------|
| 37 | Photoionization and Photofragmentation of SF ₆ in Helium Nanodroplets. <i>Journal of Physical Chemistry B</i> , 2006, 110, 19945-19955. | 1.2 | 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. | 1.2 | 36 |
| 39 | Local feedback inhibition tightly controls rapid formation of hippocampal place fields. <i>Neuron</i> , 2022, 110, 783-794.e6. | 3.8 | 36 |
| 40 | Multi-scale approaches for high-speed imaging and analysis of large neural populations. <i>PLoS Computational Biology</i> , 2017, 13, e1005685. | 1.5 | 35 |
| 41 | An Amygdala Circuit Mediates Experience-Dependent Momentary Arrests during Exploration. <i>Cell</i> , 2020, 183, 605-619.e22. | 13.5 | 34 |
| 42 | Unraveling the mysteries of metastable O ₄ *. <i>Journal of Chemical Physics</i> , 1999, 110, 6095-6098. | 1.2 | 33 |
| 43 | Dissociative photoionization dynamics of SF ₆ by ion imaging with synchrotron undulator radiation. <i>Chemical Physics Letters</i> , 1999, 312, 108-114. | 1.2 | 31 |
| 44 | Optical control of focal epilepsy in vivo with caged ¹³ C-aminobutyric acid. <i>Annals of Neurology</i> , 2012, 71, 68-75. | 2.8 | 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. | 0.6 | 24 |
| 46 | Crossed beams study of the reaction CH ₂ +C ₂ H ₂ →C ₃ H ₃ +H. <i>Journal of Chemical Physics</i> , 2004, 121, 6254-6257. | 1.2 | 24 |
| 47 | Two-photon microscopy with diffractive optical elements and spatial light modulators. <i>Frontiers in Neuroscience</i> , 2010, 4, . | 1.4 | 24 |
| 48 | A Trimethoprim-Based Chemical Tag for Live Cell Two-Photon Imaging. <i>ChemBioChem</i> , 2010, 11, 782-784. | 1.3 | 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. | 1.2 | 21 |
| 50 | Ion pair imaging spectroscopy: CH ₃ Cl ⁺ +CH ₃ ⁺⁺ +Cl ⁻ . <i>Chemical Physics Letters</i> , 2001, 339, 203-208. | 1.2 | 21 |
| 51 | A portable laser photostimulation and imaging microscope. <i>Journal of Neural Engineering</i> , 2010, 7, 045001. | 1.8 | 17 |
| 52 | Neurophotonic Tools for Microscopic Measurements and Manipulation: Status Report. <i>Neurophotonics</i> , 2022, 9, 013001. | 1.7 | 17 |
| 53 | Direct detection and spectroscopy of O ₄ *. <i>Faraday Discussions</i> , 1997, 108, 131-138. | 1.6 | 14 |
| 54 | Spatial Light Modulator Microscopy. <i>Cold Spring Harbor Protocols</i> , 2013, 2013, pdb.top079517. | 0.2 | 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, . | 3.3 | 11 |
| 56 | Exclusive production of excited-state sulfur (1D) atoms from 193 nm photolysis of thietane. Chemical Physics Letters, 2002, 357, 204-208. | 1.2 | 10 |
| 57 | Dissociative photoionization dynamics in ethane studied by velocity map imaging. Chemical Physics Letters, 2003, 374, 334-340. | 1.2 | 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. | 1.1 | 8 |
| 59 | Photodissociation of NO ₂ 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. | 0.2 | 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. | 1.6 | 0 |