Michael L Heien

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/78906/publications.pdf

Version: 2024-02-01

80 papers	5,619 citations	117453 34 h-index	79541 73 g-index
81 all docs	81 docs citations	81 times ranked	5332 citing authors

#	Article	IF	Citations
1	Detecting Subsecond Dopamine Release with Fast-Scan Cyclic Voltammetry in Vivo. Clinical Chemistry, 2003, 49, 1763-1773.	1.5	499
2	Real-time measurement of dopamine fluctuations after cocaine in the brain of behaving rats. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 10023-10028.	3.3	427
3	Overoxidation of carbon-fiber microelectrodes enhances dopamine adsorption and increases sensitivityElectronic supplementary information (ESI) available: National Instruments Data Acquisition System. See http://www.rsc.org/suppdata/an/b3/b307024g/. Analyst, The, 2003, 128, 1413.	1.7	335
4	Phasic Dopamine Release Evoked by Abused Substances Requires Cannabinoid Receptor Activation. Journal of Neuroscience, 2007, 27, 791-795.	1.7	334
5	Resolving Neurotransmitters Detected by Fast-Scan Cyclic Voltammetry. Analytical Chemistry, 2004, 76, 5697-5704.	3.2	316
6	Cannabinoids Enhance Subsecond Dopamine Release in the Nucleus Accumbens of Awake Rats. Journal of Neuroscience, 2004, 24, 4393-4400.	1.7	303
7	Frequency of Dopamine Concentration Transients Increases in Dorsal and Ventral Striatum of Male Rats during Introduction of Conspecifics. Journal of Neuroscience, 2002, 22, 10477-10486.	1.7	258
8	Coordinated Accumbal Dopamine Release and Neural Activity Drive Goal-Directed Behavior. Neuron, 2007, 54, 237-244.	3.8	184
9	Biocompatible PEDOT:Nafion Composite Electrode Coatings for Selective Detection of Neurotransmitters in Vivo. Analytical Chemistry, 2015, 87, 2600-2607.	3.2	180
10	Dopamine release is heterogeneous within microenvironments of the rat nucleus accumbens. European Journal of Neuroscience, 2007, 26, 2046-2054.	1.2	155
11	Multivariate concentration determination using principal component regression with residual analysis. TrAC - Trends in Analytical Chemistry, 2009, 28, 1127-1136.	5.8	152
12	Only a Fraction of Quantal Content is Released During Exocytosis as Revealed by Electrochemical Cytometry of Secretory Vesicles. ACS Chemical Neuroscience, 2010, 1, 234-245.	1.7	138
13	Spatially and Temporally Resolved Single-Cell Exocytosis Utilizing Individually Addressable Carbon Microelectrode Arrays. Analytical Chemistry, 2008, 80, 1394-1400.	3.2	125
14	Simultaneous dopamine and single-unit recordings reveal accumbens GABAergic responses: Implications for intracranial self-stimulation. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 19150-19155.	3.3	124
15	Fast-Scan Controlled-Adsorption Voltammetry for the Quantification of Absolute Concentrations and Adsorption Dynamics. Langmuir, 2013, 29, 14885-14892.	1.6	87
16	In Vivo Ambient Serotonin Measurements at Carbon-Fiber Microelectrodes. Analytical Chemistry, 2017, 89, 9703-9711.	3.2	87
17	Neurochemistry and electroanalytical probes. Current Opinion in Chemical Biology, 2002, 6, 696-703.	2.8	78
18	Mass spectrometry imaging of mating Tetrahymena show that changes in cell morphology regulate lipid domain formation. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 2751-2756.	3.3	77

#	Article	IF	Citations
19	Textural guidance cues for controlling process outgrowth of mammalian neurons. Lab on A Chip, 2009, 9, 122-131.	3.1	76
20	The real catecholamine content of secretory vesicles in the CNS revealed by electrochemical cytometry. Scientific Reports, 2013, 3, 1447.	1.6	75
21	Tracking tonic dopamine levels in vivo using multiple cyclic square wave voltammetry. Biosensors and Bioelectronics, 2018, 121, 174-182.	5.3	75
22	MS/MS Methodology To Improve Subcellular Mapping of Cholesterol Using TOF-SIMS. Analytical Chemistry, 2008, 80, 8662-8667.	3.2	73
23	The coaction of tonic and phasic dopamine dynamics. Chemical Communications, 2015, 51, 2235-2238.	2.2	72
24	Hybrid Capillary-Microfluidic Device for the Separation, Lysis, and Electrochemical Detection of Vesicles. Analytical Chemistry, 2009, 81, 2294-2302.	3.2	67
25	In Vivo Electrochemical Measurements of Exogenously Applied Dopamine in Drosophila melanogaster. Analytical Chemistry, 2009, 81, 1848-1854.	3.2	67
26	Temporal Resolution in Electrochemical Imaging on Single PC12 Cells Using Amperometry and Voltammetry at Microelectrode Arrays. Analytical Chemistry, 2011, 83, 571-577.	3.2	64
27	Development and Characterization of a Voltammetric Carbon-Fiber Microelectrode pH Sensor. Langmuir, 2010, 26, 10386-10391.	1.6	63
28	Mass spectrometric imaging of peptide release from neuronal cells within microfluidic devices. Lab on A Chip, 2007, 7, 1454.	3.1	61
29	Voltammetric Detection of Metal Nanoparticles Separated by Liquid Chromatography. Analytical Chemistry, 2004, 76, 4911-4919.	3.2	60
30	Using in Vivo Electrochemistry To Study the Physiological Effects of Cocaine and Other Stimulants on the Drosophila melanogaster Dopamine Transporter. ACS Chemical Neuroscience, 2010, 1, 74-83.	1.7	51
31	Freeze-Etching and Vapor Matrix Deposition for ToF-SIMS Imaging of Single Cells. Langmuir, 2008, 24, 7906-7911.	1.6	47
32	A Novel Angiotensin-(1-7) Glycosylated Mas Receptor Agonist for Treating Vascular Cognitive Impairment and Inflammation-Related Memory Dysfunction. Journal of Pharmacology and Experimental Therapeutics, 2019, 369, 9-25.	1.3	47
33	Mitigating the Effects of Electrode Biofouling-Induced Impedance for Improved Long-Term Electrochemical Measurements In Vivo. Analytical Chemistry, 2020, 92, 6334-6340.	3.2	42
34	Monitoring extracellular pH, oxygen, and dopamine during reward delivery in the striatum of primates. Frontiers in Behavioral Neuroscience, 2012, 6, 36.	1.0	41
35	Time-of-Flight Secondary Ion Mass Spectrometry Imaging of Subcellular Lipid Heterogeneity: Poisson Counting and Spatial Resolution. Analytical Chemistry, 2009, 81, 5593-5602.	3.2	37
36	Polymeric Crowding Agents Improve Passive Biomacromolecule Encapsulation in Lipid Vesicles. Langmuir, 2010, 26, 13195-13200.	1.6	35

#	Article	IF	Citations
37	Characterization of poly(3,4-ethylenedioxythiophene):tosylate conductive polymer microelectrodes for transmitter detection. Analyst, The, 2012, 137, 1831.	1.7	34
38	A Novel Electrochemical Approach for Prolonged Measurement of Absolute Levels of Extracellular Dopamine in Brain Slices. ACS Chemical Neuroscience, 2015, 6, 1802-1812.	1.7	33
39	Nosema ceranae parasitism impacts olfactory learning and memory and neurochemistry in honey bees (Apis mellifera). Journal of Experimental Biology, 2018, 221, .	0.8	33
40	Fast Cyclic Square-Wave Voltammetry To Enhance Neurotransmitter Selectivity and Sensitivity. Analytical Chemistry, 2018, 90, 13348-13355.	3.2	31
41	Evaluation of electrochemical methods for tonic dopamine detection inÂvivo. TrAC - Trends in Analytical Chemistry, 2020, 132, 116049.	5.8	31
42	Analytical approaches to investigate transmitter content and release from single secretory vesicles. Analytical and Bioanalytical Chemistry, 2010, 397, 3269-3279.	1.9	28
43	Amperometric measurements of catecholamine release from single vesicles in MN9D cells. Journal of Neurochemistry, 2008, 107, 1589-1595.	2.1	26
44	Long-term effect of sub-anesthetic ketamine in reducing l -DOPA-induced dyskinesias in a preclinical model. Neuroscience Letters, 2016, 612, 121-125.	1.0	26
45	Mass Spectrometric Imaging of the Nervous System. Current Pharmaceutical Design, 2007, 13, 3325-3334.	0.9	24
46	Oral Administration of Methylphenidate Blocks the Effect of Cocaine on Uptake at the Drosophila Dopamine Transporter. ACS Chemical Neuroscience, 2013, 4, 566-574.	1.7	24
47	Preclinical evidence in support of repurposing sub-anesthetic ketamine as a treatment for L-DOPA-induced dyskinesia. Experimental Neurology, 2020, 333, 113413.	2.0	23
48	Improved Calibration of Voltammetric Sensors for Studying Pharmacological Effects on Dopamine Transporter Kinetics in Vivo. ACS Chemical Neuroscience, 2015, 6, 1509-1516.	1.7	20
49	Platform to Enable Combined Measurement of Dopamine and Neural Activity. Analytical Chemistry, 2017, 89, 2790-2799.	3.2	20
50	Differential release of dopamine in the nucleus accumbens evoked by low-versus high-frequency medial prefrontal cortex stimulation. Brain Stimulation, 2018, 11, 426-434.	0.7	20
51	Sensitive and Selective Measurement of Serotonin in Vivo Using Fast Cyclic Square-Wave Voltammetry. Analytical Chemistry, 2020, 92, 774-781.	3.2	20
52	A pain-induced tonic hypodopaminergic state augments phasic dopamine release in the nucleus accumbens. Pain, 2020, 161, 2376-2384.	2.0	20
53	Probing Electric Fields Inside Microfluidic Channels during Electroosmotic Flow with Fast-Scan Cyclic Voltammetry. Analytical Chemistry, 2004, 76, 4945-4950.	3.2	18
54	Nanotome cluster bombardment to recover spatial chemistry after preparation of biological samples for SIMS imaging. Journal of the American Society for Mass Spectrometry, 2010, 21, 833-836.	1.2	17

#	Article	IF	Citations
55	Electrochemical Generation of Hydroxyl Radicals for Examining Protein Structure. Analytical Chemistry, 2013, 85, 6185-6189.	3.2	17
56	Fast voltammetry of metals at carbon-fiber microelectrodes: copper adsorption onto activated carbon aids rapid electrochemical analysis. Analyst, The, 2014, 139, 4673-4680.	1.7	16
57	Steady-State Electrochemical Determination of Lipidic Nanotube Diameter Utilizing an Artificial Cell Model. Analytical Chemistry, 2010, 82, 1020-1026.	3.2	14
58	Microwave-Plasma Dry-Etch for Fabrication of Conducting Polymer Microelectrodes. Analytical Chemistry, 2014, 86, 1385-1390.	3.2	14
59	Lipid Detection, Identification, and Imaging Single Cells with SIMS. Methods in Molecular Biology, 2010, 656, 85-97.	0.4	14
60	Amperometric Noise at Thin Film Band Electrodes. Analytical Chemistry, 2012, 84, 7744-7749.	3.2	13
61	The combination of the opioid glycopeptide MMP-2200 and a NMDA receptor antagonist reduced l-DOPA-induced dyskinesia and MMP-2200 by itself reduced dopamine receptor 2-like agonist-induced dyskinesia. Neuropharmacology, 2018, 141, 260-271.	2.0	13
62	Highly-selective Âμ-opioid receptor antagonism does not block L-DOPA-induced dyskinesia in a rodent model. BMC Research Notes, 2020, 13, 149.	0.6	12
63	Rethinking Data Collection and Signal Processing. 1. Real-Time Oversampling Filter for Chemical Measurements. Analytical Chemistry, 2012, 84, 8422-8426.	3.2	11
64	Rethinking Data Collection and Signal Processing. 2. Preserving the Temporal Fidelity of Electrochemical Measurements. Analytical Chemistry, 2013, 85, 7654-7658.	3.2	11
65	Differential effects of the NMDA receptor antagonist MK-801 on dopamine receptor D1- and D2-induced abnormal involuntary movements in a preclinical model. Neuroscience Letters, 2014, 564, 48-52.	1.0	11
66	The Delta-Specific Opioid Glycopeptide BBI-11008: CNS Penetration and Behavioral Analysis in a Preclinical Model of Levodopa-Induced Dyskinesia. International Journal of Molecular Sciences, 2021, 22, 20.	1.8	11
67	Chemical measurements in Drosophila. TrAC - Trends in Analytical Chemistry, 2009, 28, 1223-1234.	5.8	10
68	Temporal analysis of protozoan lysis in a microfluidic device. Lab on A Chip, 2009, 9, 2796.	3.1	10
69	Rapid Voltammetric Measurements at Conducting Polymer Microelectrodes Using Ultralow-Capacitance Poly(3,4-ethylenedioxythiophene):Tosylate. Langmuir, 2016, 32, 8009-8018.	1.6	10
70	Trends in computational simulations of electrochemical processes under hydrodynamic flow in microchannels. Analytical and Bioanalytical Chemistry, 2011, 399, 183-190.	1.9	9
71	Tonic Serotonin MeasurementsIn VivoUsing N-Shaped Multiple Cyclic Square Wave Voltammetry. Analytical Chemistry, 2021, 93, 16987-16994.	3.2	9
72	Moving Fast-Scan Cyclic Voltammetry toward FDA Compliance with Capacitive Decoupling Patient Protection. ACS Sensors, 2020, 5, 1890-1899.	4.0	8

#	Article	IF	Citations
73	Biocompatible reference electrodes to enhance chronic electrochemical signal fidelity in vivo. Analytical and Bioanalytical Chemistry, 2021, 413, 6689-6701.	1.9	8
74	Design and Synthesis of Brain Penetrant Glycopeptide Analogues of PACAP With Neuroprotective Potential for Traumatic Brain Injury and Parkinsonism. Frontiers in Drug Discovery, 2022, 1, .	1.1	8
75	Pituitary Adenylate Cyclase Activating Polypeptide Modulates Catecholamine Storage and Exocytosis in PC12 Cells. PLoS ONE, 2014, 9, e91132.	1.1	6
76	Quantitative Chemical Analysis of Single Cells. Methods in Molecular Biology, 2009, 544, 153-162.	0.4	5
77	Elucidating the Structureâ€“Function Relationship of Poly(3,4-theylenedioxythiophene) Films to Advance Electrochemical Measurements. Journal of Physical Chemistry C, 2016, 120, 21114-21122.	1.5	4
78	Neurochemical challenge. Analytical and Bioanalytical Chemistry, 2006, 387, 3-4.	1.9	1
79	Solution to the neurochemical challenge. Analytical and Bioanalytical Chemistry, 2007, 388, 3-3.	1.9	1
80	Response to Comment on â€œImproved Calibration of Voltammetric Sensors for Studying Pharmacological Effects on Dopamine Transporter Kinetics in Vivoâ€• ACS Chemical Neuroscience, 2015, 6, 1652-1656.	1.7	1