

# Pavel A Takmakov

## List of Publications by Year in descending order

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Version: 2024-02-01

31  
papers

2,084  
citations

331259

21  
h-index

525886

27  
g-index

35  
all docs

35  
docs citations

35  
times ranked

2534  
citing authors

#	ARTICLE	IF	CITATIONS
1	Tissue damage thresholds during therapeutic electrical stimulation. <i>Journal of Neural Engineering</i> , 2016, 13, 021001.	1.8	258
2	Carbon Microelectrodes with a Renewable Surface. <i>Analytical Chemistry</i> , 2010, 82, 2020-2028.	3.2	194
3	Higher Sensitivity Dopamine Measurements with Faster-Scan Cyclic Voltammetry. <i>Analytical Chemistry</i> , 2011, 83, 3563-3571.	3.2	153
4	Rapid evaluation of the durability of cortical neural implants using accelerated aging with reactive oxygen species. <i>Journal of Neural Engineering</i> , 2015, 12, 026003.	1.8	150
5	Sensing DNA Hybridization via Ionic Conductance through a Nanoporous Electrode. <i>Langmuir</i> , 2005, 21, 4776-4778.	1.6	128
6	<i>In vivo</i> comparison of norepinephrine and dopamine release in rat brain by simultaneous measurements with fast-scan cyclic voltammetry. <i>Journal of Neurochemistry</i> , 2011, 119, 932-944.	2.1	120
7	Characterization of Local pH Changes in Brain Using Fast-Scan Cyclic Voltammetry with Carbon Microelectrodes. <i>Analytical Chemistry</i> , 2010, 82, 9892-9900.	3.2	107
8	Brain dopamine and serotonin differ in regulation and its consequences. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 11510-11515.	3.3	96
9	Simultaneous Decoupled Detection of Dopamine and Oxygen Using Pyrolyzed Carbon Microarrays and Fast-Scan Cyclic Voltammetry. <i>Analytical Chemistry</i> , 2009, 81, 6258-6265.	3.2	81
10	Simultaneous monitoring of dopamine concentration at spatially different brain locations in vivo. <i>Biosensors and Bioelectronics</i> , 2010, 25, 1179-1185.	5.3	80
11	Microfabricated FSCV-compatible microelectrode array for real-time monitoring of heterogeneous dopamine release. <i>Analyst</i> , 2010, 135, 1556.	1.7	75
12	Flexible Software Platform for Fast-Scan Cyclic Voltammetry Data Acquisition and Analysis. <i>Analytical Chemistry</i> , 2013, 85, 10344-10353.	3.2	75
13	Water Confinement in Hydrophobic Nanopores. <i>Pressure-Induced Wetting and Drying. ACS Nano</i> , 2010, 4, 5069-5075.	7.3	63
14	Chronically Implanted, Nafion-Coated Ag/AgCl Reference Electrodes for Neurochemical Applications. <i>ACS Chemical Neuroscience</i> , 2011, 2, 658-666.	1.7	57
15	Characterization of Parylene-C degradation mechanisms: In vitro reactive accelerated aging model compared to multiyear in vivo implantation. <i>Biomaterials</i> , 2020, 232, 119731.	5.7	56
16	Cross-hemispheric dopamine projections have functional significance. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 6985-6990.	3.3	55
17	Instrumentation for fast-scan cyclic voltammetry combined with electrophysiology for behavioral experiments in freely moving animals. <i>Review of Scientific Instruments</i> , 2011, 82, 074302.	0.6	54
18	Hydrothermally shrunk alumina nanopores and their application to DNA sensing. <i>Analyst</i> , 2006, 131, 1248.	1.7	49

#	ARTICLE	IF	CITATIONS
19	Application of anodized aluminum in fluorescence detection of biological species. Analytical and Bioanalytical Chemistry, 2006, 385, 954-958.	1.9	46
20	Electrochemical Evaluations of Fractal Microelectrodes for Energy Efficient Neurostimulation. Scientific Reports, 2018, 8, 4375.	1.6	36
21	Electrical neurostimulation with imbalanced waveform mitigates dissolution of platinum electrodes. Journal of Neural Engineering, 2016, 13, 054001.	1.8	22
22	Neural electrode resilience against dielectric damage may be improved by use of highly doped silicon as a conductive material. Journal of Neuroscience Methods, 2018, 293, 210-225.	1.3	20
23	Automated reactive accelerated aging for rapid <i>in vitro</i> evaluation of neural implant performance. Review of Scientific Instruments, 2018, 89, 094301.	0.6	20
24	Public Regulatory Databases as a Source of Insight for Neuromodulation Devices Stimulation Parameters. Neuromodulation, 2018, 21, 117-125.	0.4	17
25	Electrochemistry of a Robust Neural Interface. Electrochemical Society Interface, 2017, 26, 49-51.	0.3	7
26	Smart Nanoporous Membranes. ECS Transactions, 2007, 3, 23-29.	0.3	4
27	Real time imaging of peripheral nerve vasculature using optical coherence angiography. , 2016, , .		1
28	(Invited) Effect of Surface Area to Perimeter Ratio on Charge Storage Capacity of Microelectrodes for Neurostimulation. ECS Meeting Abstracts, 2017, , .	0.0	0
29	(Invited) Chemistry of Robust Neural Interfaces. ECS Meeting Abstracts, 2017, , .	0.0	0
30	Automated and High-Throughput Reactive Accelerated Aging System to Evaluate Performance of Neural Implants. ECS Meeting Abstracts, 2017, , .	0.0	0
31	(Invited) Invasive Cortical Microelectrode Array Longitudinal Performance: Temporal Dynamics of Electrical Impedance Spectroscopy and Multiunit Activity. ECS Meeting Abstracts, 2017, , .	0.0	0