

# Xinyan Tracy Cui

## List of Publications by Citations

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114  
papers

8,099  
citations

50  
h-index

89  
g-index

124  
ext. papers

9,354  
ext. citations

8.1  
avg, IF

6.29  
L-index

#	Paper	IF	Citations
114	Brain-controlled interfaces: movement restoration with neural prosthetics. <i>Neuron</i> , <b>2006</b> , 52, 205-20	13.9	569
113	In vivo studies of polypyrrole/peptide coated neural probes. <i>Biomaterials</i> , <b>2003</b> , 24, 777-87	15.6	435
112	Electrochemical deposition and characterization of poly(3,4-ethylenedioxythiophene) on neural microelectrode arrays. <i>Sensors and Actuators B: Chemical</i> , <b>2003</b> , 89, 92-102	8.5	430
111	Surface modification of neural recording electrodes with conducting polymer/biomolecule blends. <i>Journal of Biomedical Materials Research Part B</i> , <b>2001</b> , 56, 261-72		410
110	Electrochemically controlled release of dexamethasone from conducting polymer polypyrrole coated electrode. <i>Journal of Controlled Release</i> , <b>2006</b> , 110, 531-41	11.7	397
109	Electrically controlled drug delivery from graphene oxide nanocomposite films. <i>ACS Nano</i> , <b>2014</b> , 8, 1834-1837	14.7	293
108	Brain tissue responses to neural implants impact signal sensitivity and intervention strategies. <i>ACS Chemical Neuroscience</i> , <b>2015</b> , 6, 48-67	5.7	284
107	Electrochemical deposition and characterization of conducting polymer polypyrrole/PSS on multichannel neural probes. <i>Sensors and Actuators A: Physical</i> , <b>2001</b> , 93, 8-18	3.9	275
106	Highly stable carbon nanotube doped poly(3,4-ethylenedioxythiophene) for chronic neural stimulation. <i>Biomaterials</i> , <b>2011</b> , 32, 5551-7	15.6	192
105	Poly (3,4-ethylenedioxythiophene) for chronic neural stimulation. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , <b>2007</b> , 15, 502-8	4.8	190
104	Carbon nanotube nanoreservoir for controlled release of anti-inflammatory dexamethasone. <i>Biomaterials</i> , <b>2011</b> , 32, 6316-23	15.6	182
103	Polypyrrole doped with 2 peptide sequences from laminin. <i>Biomaterials</i> , <b>2006</b> , 27, 2405-13	15.6	161
102	Enhanced catalytic and dopamine sensing properties of electrochemically reduced conducting polymer nanocomposite doped with pure graphene oxide. <i>Biosensors and Bioelectronics</i> , <b>2014</b> , 58, 153-6	11.8	147
101	Mechanical failure modes of chronically implanted planar silicon-based neural probes for laminar recording. <i>Biomaterials</i> , <b>2015</b> , 37, 25-39	15.6	137
100	Fuzzy gold electrodes for lowering impedance and improving adhesion with electrodeposited conducting polymer films. <i>Sensors and Actuators A: Physical</i> , <b>2003</b> , 103, 384-394	3.9	135
99	Chronic tissue response to carboxymethyl cellulose based dissolvable insertion needle for ultra-small neural probes. <i>Biomaterials</i> , <b>2014</b> , 35, 9255-68	15.6	131
98	Enhanced dopamine detection sensitivity by PEDOT/graphene oxide coating on in vivo carbon fiber electrodes. <i>Biosensors and Bioelectronics</i> , <b>2017</b> , 89, 400-410	11.8	130

97	In vivo two-photon microscopy reveals immediate microglial reaction to implantation of microelectrode through extension of processes. <i>Journal of Neural Engineering</i> , <b>2012</b> , 9, 066001	5	122
96	Chronic In Vivo Evaluation of PEDOT/CNT for Stable Neural Recordings. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2016</b> , 63, 111-9	5	120
95	The surface immobilization of the neural adhesion molecule L1 on neural probes and its effect on neuronal density and gliosis at the probe/tissue interface. <i>Biomaterials</i> , <b>2011</b> , 32, 681-92	15.6	116
94	Electrochemical polymerization of poly(hydroxymethylated-3,4-ethylenedioxythiophene) (PEDOT-MeOH) on multichannel neural probes. <i>Sensors and Actuators B: Chemical</i> , <b>2004</b> , 99, 437-443	8.5	110
93	Ultrasoft microwire neural electrodes improve chronic tissue integration. <i>Acta Biomaterialia</i> , <b>2017</b> , 53, 46-58	10.8	107
92	Detection of cardiac biomarkers using single polyaniline nanowire-based conductometric biosensors. <i>Biosensors</i> , <b>2012</b> , 2, 205-20	5.9	90
91	Effects of caspase-1 knockout on chronic neural recording quality and longevity: insight into cellular and molecular mechanisms of the reactive tissue response. <i>Biomaterials</i> , <b>2014</b> , 35, 9620-34	15.6	85
90	Pure Graphene Oxide Doped Conducting Polymer Nanocomposite for Bio-interfacing. <i>Journal of Materials Chemistry B</i> , <b>2013</b> , 1, 1340-1348	7.3	85
89	Highly sensitive single polyaniline nanowire biosensor for the detection of immunoglobulin G and myoglobin. <i>Biosensors and Bioelectronics</i> , <b>2011</b> , 26, 3297-302	11.8	84
88	Directed Neural Stem Cell Differentiation with a Functionalized Graphene Oxide Nanocomposite. <i>Advanced Healthcare Materials</i> , <b>2015</b> , 4, 1408-16	10.1	81
87	In Vivo Electrochemical Analysis of a PEDOT/MWCNT Neural Electrode Coating. <i>Biosensors</i> , <b>2015</b> , 5, 618-46	7.8	78
86	Evaluation of poly(3,4-ethylenedioxythiophene)/carbon nanotube neural electrode coatings for stimulation in the dorsal root ganglion. <i>Journal of Neural Engineering</i> , <b>2015</b> , 12, 016008	5	78
85	Electrodeposited conducting polymer PEDOT doped with pure carbon nanotubes for the detection of dopamine in the presence of ascorbic acid. <i>Sensors and Actuators B: Chemical</i> , <b>2013</b> , 188, 405-410	8.5	76
84	Comprehensive chronic laminar single-unit, multi-unit, and local field potential recording performance with planar single shank electrode arrays. <i>Journal of Neuroscience Methods</i> , <b>2015</b> , 242, 15-40	7.6	76
83	Surface immobilization of neural adhesion molecule L1 for improving the biocompatibility of chronic neural probes: In vitro characterization. <i>Acta Biomaterialia</i> , <b>2008</b> , 4, 1208-17	10.8	75
82	Electrochemical polymerization and properties of PEDOT/S-EDOT on neural microelectrode arrays. <i>Journal of Electroanalytical Chemistry</i> , <b>2004</b> , 573, 43-48	4.1	75
81	Sponge-like nanostructured conducting polymers for electrically controlled drug release. <i>Electrochemistry Communications</i> , <b>2009</b> , 11, 1956	5.1	74
80	Electrochemical deposition of conducting polymer coatings on magnesium surfaces in ionic liquid. <i>Acta Biomaterialia</i> , <b>2011</b> , 7, 441-6	10.8	73

79	Dexamethasone retrodialysis attenuates microglial response to implanted probes in vivo. <i>Biomaterials</i> , <b>2016</b> , 87, 157-169	15.6	72
78	Surface modification of neural probes with conducting polymer poly(hydroxymethylated-3,4-ethylenedioxythiophene) and its biocompatibility. <i>Applied Biochemistry and Biotechnology</i> , <b>2006</b> , 128, 117-30	3.2	70
77	Self-assembled monolayers of polythiophene conductive polymers improve biocompatibility and electrical impedance of neural electrodes. <i>Biosensors and Bioelectronics</i> , <b>2007</b> , 22, 1723-32	11.8	69
76	Electrochemically controlled release based on nanoporous conducting polymers. <i>Electrochemistry Communications</i> , <b>2009</b> , 11, 402-404	5.1	66
75	Neuroadhesive L1 coating attenuates acute microglial attachment to neural electrodes as revealed by live two-photon microscopy. <i>Biomaterials</i> , <b>2017</b> , 113, 279-292	15.6	63
74	A graphene oxide/conducting polymer nanocomposite for electrochemical dopamine detection: origin of improved sensitivity and specificity. <i>Journal of Materials Chemistry B</i> , <b>2014</b> , 2, 5209-5219	7.3	62
73	Elastomeric and soft conducting microwires for implantable neural interfaces. <i>Soft Matter</i> , <b>2015</b> , 11, 4847-61	3.6	60
72	Enhanced differentiation of embryonic and neural stem cells to neuronal fates on laminin peptides doped polypyrrole. <i>Macromolecular Bioscience</i> , <b>2010</b> , 10, 1456-64	5.5	59
71	Biodegradable nanofiber-based piezoelectric transducer. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2020</b> , 117, 214-220	11.5	59
70	ROS responsive resveratrol delivery from LDLR peptide conjugated PLA-coated mesoporous silica nanoparticles across the blood-brain barrier. <i>Journal of Nanobiotechnology</i> , <b>2018</b> , 16, 13	9.4	58
69	Multi-scale, multi-modal analysis uncovers complex relationship at the brain tissue-implant neural interface: new emphasis on the biological interface. <i>Journal of Neural Engineering</i> , <b>2018</b> , 15, 033001	5	58
68	Reagentless aptamer based impedance biosensor for monitoring a neuro-inflammatory cytokine PDGF. <i>Biosensors and Bioelectronics</i> , <b>2007</b> , 23, 218-24	11.8	56
67	Recent Advances in Neural Electrode-Tissue Interfaces. <i>Current Opinion in Biomedical Engineering</i> , <b>2017</b> , 4, 21-31	4.4	52
66	Two-photon imaging of chronically implanted neural electrodes: Sealing methods and new insights. <i>Journal of Neuroscience Methods</i> , <b>2016</b> , 258, 46-55	3	52
65	In vivo effects of L1 coating on inflammation and neuronal health at the electrode-tissue interface in rat spinal cord and dorsal root ganglion. <i>Acta Biomaterialia</i> , <b>2012</b> , 8, 3561-75	10.8	52
64	Histological evaluation of a chronically-implanted electrocorticographic electrode grid in a non-human primate. <i>Journal of Neural Engineering</i> , <b>2016</b> , 13, 046019	5	50
63	Novel hydrogel-based preparation-free EEG electrode. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , <b>2010</b> , 18, 415-23	4.8	49
62	Poly (3,4-ethylenedioxythiophene) graphene oxide composite coatings for controlling magnesium implant corrosion. <i>Acta Biomaterialia</i> , <b>2017</b> , 48, 530-540	10.8	47

61	Zwitterionic polymer/polydopamine coating reduce acute inflammatory tissue responses to neural implants. <i>Biomaterials</i> , <b>2019</b> , 225, 119519	15.6	44
60	In vivo imaging of neuronal calcium during electrode implantation: Spatial and temporal mapping of damage and recovery. <i>Biomaterials</i> , <b>2018</b> , 174, 79-94	15.6	44
59	Effect of an inductive hydrogel composed of urinary bladder matrix upon functional recovery following traumatic brain injury. <i>Tissue Engineering - Part A</i> , <b>2013</b> , 19, 1909-18	3.9	43
58	Ultrasensitive protein detection using an aptamer-functionalized single polyaniline nanowire. <i>Chemical Communications</i> , <b>2011</b> , 47, 6368-70	5.8	42
57	Unique electrophysiological and impedance signatures between encapsulation types: An analysis of biological Utah array failure and benefit of a biomimetic coating in a rat model. <i>Biomaterials</i> , <b>2018</b> , 161, 117-128	15.6	40
56	Rapid real-time electrical detection of proteins using single conducting polymer nanowire-based microfluidic aptasensor. <i>Biosensors and Bioelectronics</i> , <b>2011</b> , 30, 306-9	11.8	40
55	Ultra-miniature ultra-compliant neural probes with dissolvable delivery needles: design, fabrication and characterization. <i>Biomedical Microdevices</i> , <b>2016</b> , 18, 97	3.7	35
54	Melatonin improves quality and longevity of chronic neural recording. <i>Biomaterials</i> , <b>2018</b> , 180, 225-239	15.6	34
53	Poly (3, 4-ethylenedioxythiophene)-ionic liquid coating improves neural recording and stimulation functionality of MEAs. <i>Journal of Materials Chemistry C</i> , <b>2015</b> , 3, 6515-6524	7.1	34
52	An ultra-compliant, scalable neural probe with molded biodissolvable delivery vehicle <b>2012</b> ,		34
51	Excimer laser channel creation in polyethersulfone hollow fibers for compartmentalized in vitro neuronal cell culture scaffolds. <i>Acta Biomaterialia</i> , <b>2008</b> , 4, 244-55	10.8	33
50	Seeding neural progenitor cells on silicon-based neural probes. <i>Journal of Neurosurgery</i> , <b>2010</b> , 113, 673-812	12	32
49	Direct in Vivo Electrochemical Detection of Resting Dopamine Using Poly(3,4-ethylenedioxythiophene)/Carbon Nanotube Functionalized Microelectrodes. <i>Analytical Chemistry</i> , <b>2019</b> , 91, 12917-12927	7.8	31
48	Preparation and electrochemical catalytic application of nanocrystalline cellulose doped poly(3,4-ethylenedioxythiophene) conducting polymer nanocomposites. <i>RSC Advances</i> , <b>2014</b> , 4, 24328-24333	27	27
47	Hierarchically aligned fibrous hydrogel films through microfluidic self-assembly of graphene and polysaccharides. <i>Biotechnology and Bioengineering</i> , <b>2018</b> , 115, 2654-2667	4.9	25
46	Neurorestorative effect of urinary bladder matrix-mediated neural stem cell transplantation following traumatic brain injury in rats. <i>CNS and Neurological Disorders - Drug Targets</i> , <b>2013</b> , 12, 413-425	2.6	25
45	Aptamer-functionalized neural recording electrodes for the direct measurement of cocaine in vivo. <i>Journal of Materials Chemistry B</i> , <b>2017</b> , 5, 2445-2458	7.3	23
44	Conducting polymer-based impedimetric aptamer biosensor for in situ detection. <i>Analytical and Bioanalytical Chemistry</i> , <b>2008</b> , 392, 861-4	4.4	23

43	Meningeal inflammatory response and fibrous tissue remodeling around intracortical implants: An in vivo two-photon imaging study. <i>Biomaterials</i> , <b>2019</b> , 195, 111-123	15.6	23
42	A colorimetric and ratiometric fluorescent probe for cyanide sensing in aqueous media and live cells. <i>Journal of Materials Chemistry B</i> , <b>2019</b> , 7, 4620-4629	7.3	22
41	Nanostructured Coatings for Improved Charge Delivery to Neurons <b>2014</b> , 71-134		21
40	Nanoparticle Doped PEDOT for Enhanced Electrode Coatings and Drug Delivery. <i>Advanced Healthcare Materials</i> , <b>2019</b> , 8, e1900622	10.1	20
39	Soft Conducting Elastomer for Peripheral Nerve Interface. <i>Advanced Healthcare Materials</i> , <b>2019</b> , 8, e1801311	10.1	20
38	A metabolic biofuel cell: conversion of human leukocyte metabolic activity to electrical currents. <i>Journal of Biological Engineering</i> , <b>2011</b> , 5, 5	6.3	16
37	Mitochondria modulate programmed neuritic retraction. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2019</b> , 116, 650-659	11.5	15
36	Neuroadhesive protein coating improves the chronic performance of neuroelectronics in mouse brain. <i>Biosensors and Bioelectronics</i> , <b>2020</b> , 155, 112096	11.8	14
35	Self-powered therapeutic release from conducting polymer/graphene oxide films on magnesium. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , <b>2018</b> , 14, 2495-2503	6	14
34	Electrochemical detection of exogenously administered melatonin in the brain. <i>Analyst, The</i> , <b>2020</b> , 145, 2612-2620	5	13
33	Electrically Controlled Neurochemical Release from Dual-Layer Conducting Polymer Films for Precise Modulation of Neural Network Activity in Rat Barrel Cortex. <i>Advanced Functional Materials</i> , <b>2018</b> , 28, 1703988	15.6	13
32	Enhancing surface immobilization of bioactive molecules a silica nanoparticle based coating. <i>Journal of Materials Chemistry B</i> , <b>2018</b> , 6, 3058-3067	7.3	11
31	Conducting Polymers in Neural Stimulation Applications <b>2009</b> , 217-252		11
30	Facile Synthesis of a 3,4-Ethylene-Dioxythiophene (EDOT) Derivative for Ease of Bio-Functionalization of the Conducting Polymer PEDOT. <i>Frontiers in Chemistry</i> , <b>2019</b> , 7, 178	5	10
29	Rapid modulation of local neural activity by controlled drug release from polymer-coated recording microelectrodes. <i>Journal of Neural Engineering</i> , <b>2011</b> , 8, 044001	5	10
28	Electrode Materials for Chronic Electrical Microstimulation. <i>Advanced Healthcare Materials</i> , <b>2021</b> , 10, e2100119	10.1	10
27	A superoxide scavenging coating for improving tissue response to neural implants. <i>Acta Biomaterialia</i> , <b>2019</b> , 99, 72-83	10.8	9
26	Sulforaphane-Conjugated Carbon Dots: A Versatile Nanosystem for Targeted Imaging and Inhibition of EGFR-Overexpressing Cancer Cells. <i>ACS Biomaterials Science and Engineering</i> , <b>2019</b> , 5, 4692-4699	5.5	9

25	Evaluation of a conducting elastomeric composite material for intramuscular electrode application. <i>Acta Biomaterialia</i> , <b>2020</b> , 103, 81-91	10.8	9
24	Zwitterionic Polymer Coating Suppresses Microglial Encapsulation to Neural Implants In Vitro and In Vivo. <i>Advanced Biology</i> , <b>2020</b> , 4, e1900287	3.5	8
23	Real-Time Fast Scan Cyclic Voltammetry Detection and Quantification of Exogenously Administered Melatonin in Mice Brain. <i>Frontiers in Bioengineering and Biotechnology</i> , <b>2020</b> , 8, 602216	5.8	8
22	Recent Advances in In Vivo Neurochemical Monitoring. <i>Micromachines</i> , <b>2021</b> , 12,	3.3	8
21	Controllable Fabrication, Photoluminescence Mechanism, and Novel Application of Green-Yellow-Orange Fluorescent Carbon-Based Nanodots. <i>ACS Biomaterials Science and Engineering</i> , <b>2019</b> , 5, 5060-5071	5.5	4
20	Serotonin (5-HT) released by activated white blood cells in a biological fuel cell provide a potential energy source for electricity generation. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , <b>2006</b> , 2006, 4115-8		4
19	Long-term in vivo two-photon imaging of the neuroinflammatory response to intracortical implants and micro-vessel disruptions in awake mice. <i>Biomaterials</i> , <b>2021</b> , 276, 121060	15.6	4
18	Shadow masking for nanomaterial-based biosensors incorporated with a microfluidic device. <i>Biomedical Microdevices</i> , <b>2013</b> , 15, 531-7	3.7	3
17	Nanoparticle and Biomolecule Surface Modification Synergistically Increases Neural Electrode Recording Yield and Minimizes Inflammatory Host Response. <i>Advanced Healthcare Materials</i> , <b>2021</b> , 10, e2002150	10.1	3
16	Host tissue response to floating microelectrode arrays chronically implanted in the feline spinal nerve. <i>Journal of Neural Engineering</i> , <b>2020</b> , 17, 046012	5	2
15	Ultra-compliant neural probes are subject to fluid forces during dissolution of polymer delivery vehicles. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , <b>2013</b> , 2013, 1550-3	0.9	2
14	Integrating rehabilitation engineering technology with biologics. <i>PM and R</i> , <b>2011</b> , 3, S148-57	2.2	2
13	Conducting Polymer-based Aptamer Biosensor for in situ Monitoring of Cytokine. <i>Materials Research Society Symposia Proceedings</i> , <b>2007</b> , 1065, 1		2
12	3D Fuzzy Graphene Microelectrode Array for Neurotransmitter Sensing at Sub-cellular Spatial Resolution		2
11	Laser Direct Write of Heteroatom-Doped Graphene on Molecularly Controlled Polyimides for Electrochemical Biosensors with Nanomolar Sensitivity. <i>Carbon</i> , <b>2021</b> ,	10.4	2
10	3D fuzzy graphene microelectrode array for dopamine sensing at sub-cellular spatial resolution. <i>Biosensors and Bioelectronics</i> , <b>2021</b> , 191, 113440	11.8	2
9	Surface modification of neural recording electrodes with conducting polymer/biomolecule blends <b>2001</b> , 56, 261		2
8	Correction: Aptamer-functionalized neural recording electrodes for the direct measurement of cocaine in vivo. <i>Journal of Materials Chemistry B</i> , <b>2017</b> , 5, 8417	7.3	1

7	Single metal and conducting polymer nanowires used as chemical/bio molecular sensors <b>2010</b> ,		1
6	Bio-integrative design of the neural tissue-device interface. <i>Current Opinion in Biotechnology</i> , <b>2021</b> , 72, 54-61	11.4	1
5	Imaging the Efficiency of Poly(3,4-ethylenedioxythiophene) Doped with Acid-Functionalized Carbon Nanotube and Iridium Oxide Electrode Coatings for Microstimulation. <i>Advanced NanoBiomed Research</i> , <b>2021</b> , 1, 2000092	0	1
4	Explant Analysis of Utah Electrode Arrays Implanted in Human Cortex for Brain-Computer-Interfaces.. <i>Frontiers in Bioengineering and Biotechnology</i> , <b>2021</b> , 9, 759711	5.8	0
3	Flexible and Soft Materials and Devices for Neural Interface <b>2021</b> , 1-61		
2	Response of dorsal root ganglion tissue to chronically stimulated electrodes. <i>FASEB Journal</i> , <b>2012</b> , 26, 656.10	0.9	
1	Characterization of the tissue response to functional multielectrode arrays in the feline spinal nerve. <i>FASEB Journal</i> , <b>2013</b> , 27, 650.8	0.9	