Mark Ming-Cheng Cheng

List of Publications by Year
in descending order

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Version: 2024-02-01

77 papers	4,698 citations	201385 27 h-index	114278 63 g-index
78 all docs	78 docs citations	78 times ranked	8242 citing authors

#	Article	IF	Citations
1	Solution-processed vanadium oxides as a hole-transport layer for Sb2Se3 thin-film solar cells. Solar Energy, 2022, 231, 1-7.	2.9	17
2	Ultrasensitive and Selective Bacteria Sensors Based on Functionalized Graphene Transistors. IEEE Sensors Journal, 2022, 22, 5514-5520.	2.4	14
3	Compact, Flexible Harmonic Transponder Sensor With Multiplexed Sensing Capabilities for Rapid, Contactless Microfluidic Diagnosis. IEEE Transactions on Microwave Theory and Techniques, 2020, 68, 4846-4854.	2.9	17
4	Penetrating glassy carbon neural electrode arrays for brain-machine interfaces. Biomedical Microdevices, 2020, 22, 43.	1.4	14
5	A Zero-Power Ubiquitous Wireless Liquid-Level Sensor Based on Microfluidic-Integrated Microstrip Antenna. IEEE Journal of Radio Frequency Identification, 2020, 4, 265-274.	1.5	9
6	Motion detection based on 3D-printed compound eyes. OSA Continuum, 2020, 3, 2553.	1.8	4
7	Effects of transition metal cation additives on the passivation of lithium metal anode in Liâ€“S batteries. Electrochimica Acta, 2019, 319, 511-517.	2.6	21
8	Titanium Nitride Nanotubes Electrodes for Chronic Neural Stimulation. , 2019, , .		2
9	Fabrication of Biomimetic Artificial Compound Eyes. , 2019, , .		1
10	Induced nanoscale roughness of current collectors enhances lithium ion battery performances. Journal of Power Sources, 2019, 430, 169-174.	4.0	12
11	Cathode Framework of Nanostructured Titanium Nitride/Graphene for Advanced Lithiumâ€“Sulfur Batteries. ChemElectroChem, 2019, 6, 2796-2804.	1.7	12
12	Carbon multiâ€electrode arrays as peripheral nerve interface for neural recording and nerve stimulation. Medical Devices & Sensors, 2019, 2, e10026.	2.7	3
13	Miniature Optical Fiber Pressure Sensor With Exfoliated Graphene Diaphragm. IEEE Sensors Journal, 2019, 19, 5621-5631.	2.4	23
14	Flexible 3D carbon nanotubes cuff electrodes as a peripheral nerve interface. Biomedical Microdevices, 2018, 20, 21.	1.4	11
15	Structured Titanium Nitride Nanotube Arrays/Sulfur Composite as Cathode Materials for Advanced Lithium Sulfur Battery. Journal of the Electrochemical Society, 2018, 165, A1011-A1018.	1.3	20
16	A novel fabrication method of carbon electrodes using 3D printing and chemical modification process. Biomedical Microdevices, 2018, 20, 4.	1.4	8
17	Micro-Cavity Fiber-Optic Pressure Sensor with Graphene Diaphragm. , 2018, , .		0
18	Ultrasensitive, Parityâ€“Time-Symmetric Wireless Reactive and Resistive Sensors. IEEE Sensors Journal, 2018, 18, 9548-9555.	2.4	47

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19	Design of advanced thick anode for Li-ion battery by inserting a graphite/polymer buffer layer: An in-situ mechanical study. Electrochimica Acta, 2018, 281, 282-291.	2.6	6
20	Generalized parityâ€“time symmetry condition for enhanced sensor telemetry. Nature Electronics, 2018, 1, 297-304.	13.1	186
21	Prosthetic arachnoid granulations using 3D printing technology. , 2017, , .		1
22	Toward individually tunable compound eyes with transparent graphene electrode. Bioinspiration and Biomimetics, 2017, 12, 046002.	1.5	17
23	Thermally oxidized 2D TaS ₂ as a high- Î gate dielectric for MoS ₂ field-effect transistors. 2D Materials, 2017, 4, 031002.	2.0	60
24	Anodic bonding using Gorilla Glasses. , 2017, , .		2
25	Micromachining of gorilla glass. , 2017, , .		0
26	Graphene Sensing Modulator: Toward Low-Noise, Self-Powered Wireless Microsensors. IEEE Sensors Journal, 2017, 17, 7239-7247.	2.4	24
27	Chemical-sensitive graphene modulator with a memory effect for internet-of-things applications. Microsystems and Nanoengineering, 2016, 2, 16018.	3.4	36
28	Wireless and continuous intraocular pressure sensors using transparent graphene. , 2016, , .		4
29	3D carbon nanofiber microelectrode arrays fabricated by plasma-assisted pyrolysis to enhance sensitivity and stability of real-time dopamine detection. Biomedical Microdevices, 2016, 18, 112.	1.4	9
30	Individually tunable liquid lens arrays using transparent graphene for compound eye applications. , 2016, , .		7
31	Electro-synthesis of 3D porous hierarchical Niâ€“Fe phosphate film/Ni foam as a high-efficiency bifunctional electrocatalyst for overall water splitting. Journal of Materials Chemistry A, 2016, 4, 13866-13873.	5.2	124
32	Microwave Gas Sensor based on Graphene-loaded Substrate Integrated Waveguide Cavity Resonator. , 2016, , .		13
33	Ultrathin and Atomically Flat Transition-Metal Oxide: Promising Building Blocks for Metalâ€“Insulator Electronics. ACS Applied Materials & Interfaces, 2016, 8, 34552-34558.	4.0	19
34	Mirror-backed Dark Alumina: A Nearly Perfect Absorber for Thermoelectronics and Thermophotovotaics. Scientific Reports, 2016, 6, 19984.	1.6	44
35	Versatile Miniature Tunable Liquid Lenses Using Transparent Graphene Electrodes. Langmuir, 2016, 32, 1658-1665.	1.6	23
36	Hydrogenated amorphous silicon thin film anode for proton conducting batteries. Journal of Power Sources, 2016, 302, 31-38.	4.0	26

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37	Nanoantenna harmonic sensor: theoretical analysis of contactless detection of molecules with light. Nanotechnology, 2015, 26, 415201.	1.3	7
38	A flexible and implantable microelectrode arrays using high-temperature grown vertical carbon nanotubes and a biocompatible polymer substrate. Nanotechnology, 2015, 26, 125301.	1.3	25
39	Sensors and Sensor Networks in Agriculture, Architecture, and Civil Engineering. International Journal of Distributed Sensor Networks, 2015, 11, 839167.	1.3	0
40	Effects of graphene and carbon coating modifications on electrochemical performance of silicon nanoparticle/graphene composite anode. Journal of Power Sources, 2014, 246, 335-345.	4.0	50
41	High capacity silicon nitride-based composite anodes for lithium ion batteries. Journal of Materials Chemistry A, 2014, 2, 14577-14584.	5.2	46
42	Plasma enhanced chemical vapor deposition silicon nitride for a high-performance lithium ion battery anode. Journal of Power Sources, 2014, 269, 520-525.	4.0	38
43	In-situ monitor electrochemical processes in batteries using vibrating microcantilevers. , 2014, , .		0
44	A sandwich substrate for ultrasensitive and label-free SERS spectroscopic detection of folic acid / methotrexate. Biomedical Microdevices, 2014, 16, 673-679.	1.4	27
45	High Mobility WSe₂ p- and n-Type Field-Effect Transistors Contacted by Highly Doped Graphene for Low-Resistance Contacts. Nano Letters, 2014, 14, 3594-3601.	4.5	399
46	Edge Effects on the pH Response of Graphene Nanoribbon Field Effect Transistors. Journal of Physical Chemistry C, 2013, 117, 27155-27160.	1.5	50
47	Examining the inflammatory response to nanopatterned polydimethylsiloxane using organotypic brain slice methods. Journal of Neuroscience Methods, 2013, 217, 17-25.	1.3	17
48	Improved Carrier Mobility in Few-Layer MoS₂ Field-Effect Transistors with Ionic-Liquid Gating. ACS Nano, 2013, 7, 4449-4458.	7.3	301
49	A silicon nanoparticle/reduced graphene oxide composite anode with excellent nanoparticle dispersion to improve lithium ion battery performance. Journal of Materials Science, 2013, 48, 4823-4833.	1.7	49
50	Control and enhancement of graphene sensitivity by engineering edge defects. , 2012, , .		3
51	Mobility enhancement and highly efficient gating of monolayer MoS₂ transistors with polymer electrolyte. Journal Physics D: Applied Physics, 2012, 45, 345102.	1.3	130
52	Electrowetting on dielectric experiments using graphene. Nanotechnology, 2012, 23, 375501.	1.3	25
53	Room-temperature high on/off ratio in suspended graphene nanoribbon field-effect transistors. Nanotechnology, 2011, 22, 265201.	1.3	64
54	Electrical transport properties of graphene nanoribbons produced from sonicating graphite in solution. Nanotechnology, 2011, 22, 325201.	1.3	9

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55	A flexible biocompatible graphene sensor for real-time monitoring of PH and protein. , 2011, , .		1
56	Carbon dioxide gas sensor using a graphene sheet. Sensors and Actuators B: Chemical, 2011, 157, 310-313.	4.0	617
57	Approaching the intrinsic band gap in suspended high-mobility graphene nanoribbons. Physical Review B, 2011, 84, .	1.1	36
58	A high-throughput microfluidic chip for size sorting of cells. , 2011, , .		3
59	Application of Physicochemically Modified Silicon Substrates as Reverse-Phase Protein Microarrays. Journal of Proteome Research, 2009, 8, 1247-1254.	1.8	16
60	The effect of shape on the margination dynamics of non-neutrally buoyant particles in two-dimensional shear flows. Journal of Biomechanics, 2008, 41, 2312-2318.	0.9	281
61	Mesoporous silicon particles as a multistage delivery system for imaging and therapeutic applications. Nature Nanotechnology, 2008, 3, 151-157.	15.6	637
62	Biomedical Nanotechnology for Cancer. Medical Clinics of North America, 2007, 91, 899-927.	1.1	26
63	New Valve and Bonding Designs for Microfluidic Biochips Containing Proteins. Analytical Chemistry, 2007, 79, 994-1001.	3.2	60
64	Low-Pressure Carbon Dioxide Enhanced Polymer Chain Mobility below the Bulk Glass Transition Temperature. Macromolecules, 2007, 40, 1108-1111.	2.2	19
65	Physicochemically modified silicon as a substrate for protein microarrays. Biomaterials, 2007, 28, 550-558.	5.7	66
66	Embossing of high-aspect-ratio-microstructures using sacrificial templates and fast surface heating. Polymer Engineering and Science, 2007, 47, 830-840.	1.5	19
67	Controlled-release microchips. Expert Opinion on Drug Delivery, 2006, 3, 379-394.	2.4	42
68	Fractionation of Serum Components Using Nanoporous Substrates. Bioconjugate Chemistry, 2006, 17, 654-661.	1.8	35
69	Nanoporous Surfaces as Harvesting Agents for Mass Spectrometric Analysis of Peptides in Human Plasma. Journal of Proteome Research, 2006, 5, 1261-1266.	1.8	71
70	Selective binding and enrichment for low-molecular weight biomarker molecules in human plasma after exposure to nanoporous silica particles. Proteomics, 2006, 6, 3243-3250.	1.3	84
71	Nanotechnologies for biomolecular detection and medical diagnostics. Current Opinion in Chemical Biology, 2006, 10, 11-19.	2.8	448
72	Multiscale modeling of protein transport in silicon membrane nanochannels. Part 1. Derivation of molecular parameters from computer simulations. Biomedical Microdevices, 2006, 8, 277-290.	1.4	27

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73	Multiscale modeling of protein transport in silicon membrane nanochannels. Part 2. From molecular parameters to a predictive continuum diffusion model. Biomedical Microdevices, 2006, 8, 291-298.	1.4	19
74	X-ray photoelectron spectroscopy depth profile of chemically modified porous silicon. Journal of Vacuum Science & Technology B, 2006, 24, 852.	1.3	3
75	Fluidic encapsulation in SU-8Î¼-reservoirs with Î¼-fluidic through-chip channels. Sensors and Actuators A: Physical, 2005, 120, 172-183.	2.0	27
76	A silicon microspeaker for hearing instruments. Journal of Micromechanics and Microengineering, 2004, 14, 859-866.	1.5	55
77	Fabrication of a fluid encapsulated dermal patch using multilayered SU-8. Sensors and Actuators A: Physical, 2004, 114, 478-485.	2.0	30