Itzhaq Cohen-Karni

List of Publications by Year
in descending order

45 papers	3,462 citations	279798 23 h-index	345221 36 g-index
47 all docs	47 docs citations	47 times ranked	4625 citing authors

#	Article	IF	Citations
1	Three-Dimensional, Flexible Nanoscale Field-Effect Transistors as Localized Bioprobes. Science, 2010, 329, 830-834.	12.6	734
2	Intracellular recordings of action potentials by an extracellular nanoscale field-effect transistor. Nature Nanotechnology, 2012, 7, 174-179.	31.5	412
3	Graphene and Nanowire Transistors for Cellular Interfaces and Electrical Recording. Nano Letters, 2010, 10, 1098-1102.	9.1	365
4	Flexible electrical recording from cells using nanowire transistor arrays. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 7309-7313.	7.1	206
5	Electrical Recording from Hearts with Flexible Nanowire Device Arrays. Nano Letters, 2009, 9, 914-918.	9.1	205
6	Nanowire transistor arrays for mapping neural circuits in acute brain slices. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 1882-1887.	7.1	187
7	Torsional electromechanical quantum oscillations in carbon nanotubes. Nature Nanotechnology, 2006, 1, 36-41.	31.5	133
8	Organ-on-e-chip: Three-dimensional self-rolled biosensor array for electrical interrogations of human electrogenic spheroids. Science Advances, 2019, 5, eaax0729.	10.3	132
9	Outside Looking In: Nanotube Transistor Intracellular Sensors. Nano Letters, 2012, 12, 3329-3333.	9.1	113
10	Engineering Three-Dimensional (3D) Out-of-Plane Graphene Edge Sites for Highly Selective Two-Electron Oxygen Reduction Electrocatalysis. ACS Catalysis, 2020, 10, 1993-2008.	11.2	106
11	Design and Implementation of Functional Nanoelectronic Interfaces With Biomolecules, Cells, and Tissue Using Nanowire Device Arrays. IEEE Nanotechnology Magazine, 2010, 9, 269-280.	2.0	103
12	Nanocomposite Gold-Silk Nanofibers. Nano Letters, 2012, 12, 5403-5406.	9.1	86
13	The Smartest Materials: The Future of Nanoelectronics in Medicine. ACS Nano, 2012, 6, 6541-6545.	14.6	82
14	Synthetically Encoded Ultrashort-Channel Nanowire Transistors for Fast, Pointlike Cellular Signal Detection. Nano Letters, 2012, 12, 2639-2644.	9.1	82
15	Effect of Graphene on Nonneuronal and Neuronal Cell Viability and Stress. Nano Letters, 2017, 17, 3297-3301.	9.1	65
16	Remote nongenetic optical modulation of neuronal activity using fuzzy graphene. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 13339-13349.	7.1	52
17	Nanowire-Mesh-Templated Growth of Out-of-Plane Three-Dimensional Fuzzy Graphene. ACS Nano, 2017, 11, 6301-6311.	14.6	46
18	Bioelectronics with nanocarbons. Journal of Materials Chemistry B, 2018, 6, 7159-7178.	5.8	36

#	Article	IF	Citations
19	Graphene Microelectrode Arrays for Electrical and Optical Measurements of Human Stem Cell-Derived Cardiomyocytes. Cellular and Molecular Bioengineering, 2018, 11, 407-418.	2.1	35
20	Intracellular action potential recordings from cardiomyocytes by ultrafast pulsed laser irradiation of fuzzy graphene microelectrodes. Science Advances, 2021, 7, .	10.3	35
21	Origin of torsion-induced conductance oscillations in carbon nanotubes. Physical Review B, 2008, 78, .	3.2	33
22	Ti₃C₂T_x MXene Flakes for Optical Control of Neuronal Electrical Activity. ACS Nano, 2021, 15, 14662-14671.	14.6	32
23	Three-dimensional fuzzy graphene ultra-microelectrodes for subcellular electrical recordings. Nano Research, 2020, 13, 1444-1452.	10.4	26
24	3D fuzzy graphene microelectrode array for dopamine sensing at sub-cellular spatial resolution. Biosensors and Bioelectronics, 2021, 191, 113440.	10.1	25
25	Nanowire nanoelectronics: Building interfaces with tissue and cells at the natural scale of biology. Pure and Applied Chemistry, 2013, 85, 883-901.	1.9	24
26	Bioelectrical interfaces with cortical spheroids in three-dimensions. Journal of Neural Engineering, 2021, 18, 055005.	3.5	19
27	Bioelectronics with graphene nanostructures. APL Materials, 2020, 8, .	5.1	18
28	Synthesis of Group IV Nanowires on Graphene: The Case of Ge Nanocrawlers. Nano Letters, 2016, 16, 5267-5272.	9.1	15
29	Electron Transport in Multidimensional Fuzzy Graphene Nanostructures. Nano Letters, 2019, 19, 5335-5339.	9.1	15
30	Characterization of the Coupling between Outâ€ofâ€Plane Graphene and Electrogenic Cells. Advanced Materials Interfaces, 2020, 7, 2000699.	3.7	8
31	Graphene nanostructures for inputâ€“output bioelectronics. Biophysics Reviews, 2021, 2, 041304.	2.7	7
32	Intact mangrove root electrodes for desalination. RSC Advances, 2019, 9, 4735-4743.	3.6	6
33	Toward sustainable desalination using food waste: capacitive desalination with bread-derived electrodes. RSC Advances, 2021, 11, 9628-9637.	3.6	6
34	Fabrication and Characterization of Fe-Pd Ferromagnetic Shape-Memory Thin Films. Materials Research Society Symposia Proceedings, 2003, 785, 741.	0.1	4
35	Thermal Transport in Multidimensional Silicon-Graphene Hybrid Nanostructures. ACS Applied Materials & Interfaces, 2021, 13, 50206-50212.	8.0	3
36	Nanoelectronics for Neuroscience. , 2019, , 631-649.		2

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37	Multidimensional graphene nanostructures â€“ synthesis and applications. Pure and Applied Chemistry, 2020, 92, 1929-1936.	1.9	2
38	Advanced Technologies for Engineering Tissue Mimetics. Israel Journal of Chemistry, 2013, 53, 630-636.	2.3	0
39	Biomaterials: Characterization of the Coupling between Outâ€ofâ€Plane Graphene and Electrogenic Cells (Adv. Mater. Interfaces 18/2020). Advanced Materials Interfaces, 2020, 7, 2070101.	3.7	0
40	Multi-Dimensional Fuzzy Graphene Bioelectronic Actuators. ECS Meeting Abstracts, 2021, MA2021-01, 508-508.	0.0	0
41	Three-Dimensional Graphene Microelectrode Arrays for Detection of Wound Healing Biomarkers. ECS Meeting Abstracts, 2021, MA2021-01, 536-536.	0.0	0
42	(Invited) Bioelectronics with Nanocarbons. ECS Meeting Abstracts, 2021, MA2021-01, 515-515.	0.0	0
43	Remote Optical Modulation of Cellular Electrical Activity Using Two-Dimensional Ti3C2 MXene. ECS Meeting Abstracts, 2021, MA2021-01, 507-507.	0.0	0
44	Electrical Recording from Cardiac Cells and Tissue Using Nanowire Transistors. , 2011, , 141-163.		0
45	(Invited) Multi-Modality Input/Output Interfaces with Tissue and Cells Using Nanocarbons. ECS Meeting Abstracts, 2022, MA2022-01, 705-705.	0.0	0