Peter J Burke

List of Publications by Year
in descending order

106 papers	5,578 citations	136950 32 h-index	79698 73 g-index
107 all docs	107 docs citations	107 times ranked	5287 citing authors

#	Article	IF	Citations
1	4G Signal Propagation at Ground Level. IEEE Transactions on Antennas and Propagation, 2022, 70, 2891-2903.	5.1	0
2	Three-dimensional transistor arrays for intra- and inter-cellular recording. Nature Nanotechnology, 2022, 17, 292-300.	31.5	30
3	A Three-Dimensional Printed Inertial Microfluidic Platform for Isolation of Minute Quantities of Vital Mitochondria. Analytical Chemistry, 2022, 94, 6930-6938.	6.5	7
4	NanoStat: An open source, fully wireless potentiostat. Electrochimica Acta, 2022, 422, 140481.	5.2	7
5	â€œCloudStation:â€•A Cloud-Based Ground Control Station for Drones. IEEE Journal on Miniaturization for Air and Space Systems, 2021, 2, 36-42.	2.7	3
6	Physical and Electrical Characterization of Synthesized Millimeter Size Single Crystal Graphene, Using Controlled Bubbling Transfer. Nanomaterials, 2021, 11, 2528.	4.1	1
7	An ultra-high bandwidth nano-electronic interface to the interior of living cells with integrated fluorescence readout of metabolic activity. Scientific Reports, 2020, 10, 10756.	3.3	2
8	A 4G-Connected Micro-Rover With Infinite Range. IEEE Journal on Miniaturization for Air and Space Systems, 2020, 1, 154-162.	2.7	4
9	Demonstration and application of diffusive and ballistic wave propagation for drone-to-ground and drone-to-drone wireless communications. Scientific Reports, 2020, 10, 14782.	3.3	4
10	4G Antipode: Remote Control of a Ground Vehicle From Around the World. IEEE Journal on Miniaturization for Air and Space Systems, 2020, 1, 150-153.	2.7	3
11	Measurement of the combined quantum and electrochemical capacitance of a carbon nanotube. Nature Communications, 2019, 10, 3598.	12.8	16
12	Cardiac tissue engineering: state-of-the-art methods and outlook. Journal of Biological Engineering, 2019, 13, 57.	4.7	89
13	A Safe, Open Source, 4G Connected Self-Flying Plane With 1 Hour Flight Time and All Up Weight (AUW) <300 g: Towards a New Class of Internet Enabled UAVs. IEEE Access, 2019, 7, 67833-67855.	4.2	16
14	4G coverage mapping with an ultra-micro drone. , 2019, , .		2
15	Small Unmanned Aircraft Systems (SUAS) and Manned Traffic near John Wayne Airport (KSNA) Spot Check of the SUAS Facility Map: Towards a New Paradigm for Drone Safety Near Airports. Drones, 2019, 3, 84.	4.9	8
16	Integrated Fluorescence and Scanning Microwave Microscopy: Nano-Imaging with â€œProof of Lifeâ€• , 2019, , .		2
17	Layered graphene-mica substrates induce melting of DNA origami. Materials Research Express, 2018, 5, 045035.	1.6	5
18	Carbon-Nanotubeâ€“Electrolyte Interface: Quantum and Electric Double Layer Capacitance. ACS Nano, 2018, 12, 9763-9774.	14.6	37

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19	Scanning Microwave Microscopy of Vital Mitochondria in Respiration Buffer. , 2018, 2018, 115-118.		15
20	Scalable and reusable micro-bubble removal method to flatten large-area 2D materials. Applied Physics Letters, 2018, 112, .	3.3	8
21	Detection of Immunoglobulin E with a Graphene-Based Field-Effect Transistor Aptasensor. Journal of Sensors, 2018, 2018, 1-8.	1.1	4
22	Sensing the electrical activity of single ion channels with top-down silicon nanoribbons. Nano Futures, 2018, 2, 025008.	2.2	3
23	Submillimolar Detection of Adenosine Monophosphate Using Graphene-Based Electrochemical Aptasensor. IEEE Nanotechnology Magazine, 2017, 16, 196-202.	2.0	19
24	Versatile Bottom-Up Synthesis of Tethered Bilayer Lipid Membranes on Nanoelectronic Biosensor Devices. ACS Applied Materials & Interfaces, 2017, 9, 14618-14632.	8.0	20
25	Resistive flow sensing of vital mitochondria with nanoelectrodes. Mitochondrion, 2017, 37, 8-16.	3.4	9
26	Mitochondria, Bioenergetics and Apoptosis in Cancer. Trends in Cancer, 2017, 3, 857-870.	7.4	299
27	Broadband impedance match to two-dimensional materials in the terahertz domain. Nature Communications, 2017, 8, 2233.	12.8	37
28	Microchambers with Solid-State Phosphorescent Sensor for Measuring Single Mitochondrial Respiration. Sensors, 2016, 16, 1065.	3.8	6
29	Controlling Nucleation Density While Simultaneously Promoting Edge Growth Using Oxygen-Assisted Fast Synthesis of Isolated Large-Domain Graphene. Chemistry of Materials, 2016, 28, 6511-6519.	6.7	19
30	Cristae remodeling causes acidification detected by integrated graphene sensor during mitochondrial outer membrane permeabilization. Scientific Reports, 2016, 6, 35907.	3.3	18
31	Electromagnetic coupling to nano-devices: 2D vs. 1D. , 2015, , .		0
32	A Graphene and Aptamer Based Liquid Gated FET-Like Electrochemical Biosensor to Detect Adenosine Triphosphate. IEEE Transactions on Nanobioscience, 2015, 14, 967-972.	3.3	42
33	Detection of Interferon gamma using graphene and aptamer based FET-like electrochemical biosensor. Biosensors and Bioelectronics, 2015, 71, 294-299.	10.1	117
34	Detection of single ion channel activity with carbon nanotubes. Scientific Reports, 2015, 5, 9208.	3.3	17
35	Sensing of DNA by graphene-on-silicon FET structures at DC and 101 GHz. Sensing and Bio-Sensing Research, 2015, 5, 19-23.	4.2	8
36	Fluorescence Analysis of Single Mitochondria with Nanofluidic Channels. Methods in Molecular Biology, 2015, 1264, 35-46.	0.9	2

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37	Towards perfect impedance matching of free space to a 2D material. , 2014, , .		2
38	Towards perfect impedance matching of free space to a 2D material. , 2014, , .		1
39	AC conductivity parameters of graphene derived from THz etalon transmittance. Nanoscale, 2014, 6, 13895-13899.	5.6	20
40	Charging the Quantum Capacitance of Graphene with a Single Biological Ion Channel. ACS Nano, 2014, 8, 4228-4238.	14.6	32
41	Polyelectrolyte multilayer electrostatic gating of graphene field-effect transistors. Nano Research, 2014, 7, 1650-1658.	10.4	27
42	A large-area and contamination-free graphene transistor for liquid-gated sensing applications. Applied Physics Letters, 2013, 103, .	3.3	54
43	Nanofluidic Platform for Single Mitochondria Analysis Using Fluorescence Microscopy. Analytical Chemistry, 2013, 85, 6018-6025.	6.5	31
44	Ultrahigh conductivity of large area suspended few layer graphene films. Applied Physics Letters, 2012, 101, 263101.	3.3	22
45	Terahertz graphene optics. Nano Research, 2012, 5, 667-678.	10.4	95
46	Radio frequency nanoelectronics based on carbon nanotubes. , 2012, , .		2
47	Wafer-scale mitochondrial membrane potential assays. Lab on A Chip, 2012, 12, 2719.	6.0	15
48	Protein nanopore-gated bio-transistor for membrane ionic current recording. , 2011, , .		2
49	Fabrication of supported lipid bilayer (SLB) and nanotube transistor hybrid biosensing platform using microfluidic channels. , 2011, , .		1
50	Carbon nanotube purified ink-based printed thin film transistors: Novel approach in controlling the electrical performance. , 2011, , .		0
51	Novel approach towards performance enhancement of all semiconducting carbon nanotube devices for printed electronics. , 2011, , .		0
52	Broadband conductivity of graphene from DC to THz. , 2011, , .		16
53	Editorial [device concepts, architectural strategies, and interfacing methodologies for realizing nanoscale sensor systems]. IEEE Nanotechnology Magazine, 2011, 10, 3-6.	2.0	2
54	Performance Control of High Mobility, Printed Thin Film Transistors using Semiconducting Nanotube Ink. Materials Research Society Symposia Proceedings, 2011, 1340, 1.	0.1	0

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55	High-Performance Semiconducting Nanotube Inks: Progress and Prospects. ACS Nano, 2011, 5, 8471-8487.	14.6	157
56	Fundamental Limits on the Mobility of Nanotubeâ€Based Semiconducting Inks. Advanced Materials, 2011, 23, 94-99.	21.0	104
57	All-Semiconducting Nanotube Networks: Towards High Performance Printed Nanoelectronics. Materials Research Society Symposia Proceedings, 2011, 1283, 1.	0.1	0
58	Effect of Source, Surfactant, and Deposition Process on Electronic Properties of Nanotube Arrays. Journal of Nanomaterials, 2011, 2011, 1-7.	2.7	9
59	Towards a single-chip, implantable RFID system: is a single-cell radio possible?. Biomedical Microdevices, 2010, 12, 589-596.	2.8	27
60	An RF Circuit Model of a Quantum Point Contact. IEEE Sensors Journal, 2010, 10, 391-394.	4.7	1
61	Preface to Special Topic: Selected Papers from the International Conference on Flexible and Printed Electronics, Jeju Island, Korea, 2009. Journal of Applied Physics, 2010, 108, 102701.	2.5	2
62	Assessment of mitochondrial membrane potential using an on-chip microelectrode in a microfluidic device. Lab on A Chip, 2010, 10, 1683.	6.0	20
63	Nanoscale Devices for Large-Scale Applications. IEEE Microwave Magazine, 2010, 11, 72-80.	0.8	17
64	Microfabricated arrays of cylindrical wells facilitate singleâ€molecule enzymology of Î±â€chymotrypsin. Biotechnology Progress, 2009, 25, 929-937.	2.6	5
65	Nanoelectromagnetics: Circuit and Electromagnetic Properties of Carbon Nanotubes. Small, 2009, 5, 884-906.	10.0	121
66	Nanotube electronics for radiofrequency applications. Nature Nanotechnology, 2009, 4, 811-819.	31.5	269
67	Nanotubeâ^'Peptide Interactions on a Silicon Chip. Journal of Physical Chemistry C, 2009, 113, 3978-3985.	3.1	32
68	Wafer scale synthesis of dense aligned arrays of single-walled carbon nanotubes. Nano Research, 2008, 1, 158-165.	10.4	81
69	NANOSCALE IMAGING TECHNOLOGY FOR THz-FREQUENCY TRANSMISSION MICROSCOPY. International Journal of High Speed Electronics and Systems, 2008, 18, 205-222.	0.7	18
70	rf resistance and inductance of massively parallel single walled carbon nanotubes: Direct, broadband measurements and near perfect 50Î© impedance matching. Applied Physics Letters, 2008, 93, .	3.3	49
71	NANOSCALE IMAGING TECHNOLOGY FOR THZ-FREQUENCY TRANSMISSION MICROSCOPY. Selected Topics in Electornics and Systems, 2008, , 463-480.	0.2	0
72	Ultrahigh Frequency Carbon Nanotube Transistor Based on a Single Nanotube. IEEE Nanotechnology Magazine, 2007, 6, 400-403.	2.0	40

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73	Carbon Nanotube Radio. Nano Letters, 2007, 7, 3296-3299.	9.1	176
74	Nanotubes and Nanowires. Selected Topics in Electornics and Systems, 2007, , .	0.2	13
75	Carbon nanotube antennas. , 2006, 6328, 41.		6
76	Quantitative theory of nanowire and nanotube antenna performance. IEEE Nanotechnology Magazine, 2006, 5, 314-334.	2.0	330
77	Resonant frequency response of plasma wave detectors. Applied Physics Letters, 2006, 89, 213512.	3.3	18
78	Microwave nanotube transistor operation at high bias. Applied Physics Letters, 2006, 88, 233115.	3.3	22
79	Scaling of the microwave and dc conductance of metallic single-walled carbon nanotubes. , 2005, 6003, 113.		2
80	Electronics gets mechanical. Physics World, 2005, 18, 22-23.	0.0	0
81	ac ballistic transport in a two-dimensional electron gas measured inGaAsâˆ•AlGaAsheterostructures. Physical Review B, 2005, 72, .	3.2	10
82	Microwave Transport in Metallic Single-Walled Carbon Nanotubes. Nano Letters, 2005, 5, 1403-1406.	9.1	122
83	Design, fabrication, and impedance of plasma wave detectors. , 2005, , .		0
84	Aligned array FETs as a route toward THz nanotube transistors. , 2005, , .		7
85	Silicon nitride gate dielectric for top-gated carbon nanotube field effect transistors. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2004, 22, 3112.	1.6	16
86	Electronic manipulation of DNA and proteins for potential nano-bio circuit assembly. , 2004, , .		7
87	Self-assembled gold nanowires from nanoparticles: an electronic route towards DNA nanosensors. , 2004, 5515, 117.		11
88	Electrical Properties of 0.4 cm Long Single-Walled Carbon Nanotubes. Nano Letters, 2004, 4, 2003-2007.	9.1	195
89	AC performance of nanoelectronics: towards a ballistic THz nanotube transistor. Solid-State Electronics, 2004, 48, 1981-1986.	1.4	201
90	Ballistic transport at GHz frequencies in ungated HEMT structures. Solid-State Electronics, 2004, 48, 2013-2017.	1.4	8

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91	Electronic manipulation of DNA, proteins, and nanoparticles for potential circuit assembly. Biosensors and Bioelectronics, 2004, 20, 606-619.	10.1	181
92	Synthesis of Aligned Arrays of Millimeter Long, Straight Single-Walled Carbon Nanotubes. Chemistry of Materials, 2004, 16, 3414-3416.	6.7	65
93	Manipulating Nanoparticles in Solution with Electrically Contacted Nanotubes Using Dielectrophoresis. Langmuir, 2004, 20, 8612-8619.	3.5	86
94	Carbon Nanotube Transistor Operation at 2.6 GHz. Nano Letters, 2004, 4, 753-756.	9.1	213
95	Carbon nanotube devices for GHz to THz applications. , 2004, , .		19
96	Electrochemiluminescence as a tool for microscopy at the nanoscale. , 2004, 5331, 13.		0
97	An RF circuit model for carbon nanotubes. IEEE Nanotechnology Magazine, 2003, 2, 55-58.	2.0	356
98	Terahertz photoconductivity and plasmon modes in double-quantum-well field-effect transistors. Applied Physics Letters, 2002, 81, 1627-1629.	3.3	296
99	Luttinger liquid theory as a model of the gigahertz electrical properties of carbon nanotubes. IEEE Nanotechnology Magazine, 2002, 1, 129-144.	2.0	521
100	High frequency conductivity of the high-mobility two-dimensional electron gas. Applied Physics Letters, 2000, 76, 745-747.	3.3	155
101	Mixing and noise in diffusion and phonon cooled superconducting hot-electron bolometers. Journal of Applied Physics, 1999, 85, 1644-1653.	2.5	40
102	Spectrum of thermal fluctuation noise in diffusion and phonon cooled hot-electron mixers. Applied Physics Letters, 1998, 72, 1516-1518.	3.3	6
103	Frequency Dependence of Shot Noise in a Diffusive Mesoscopic Conductor. Physical Review Letters, 1997, 78, 3370-3373.	7.8	187
104	Length scaling of bandwidth and noise in hotâ€electron superconducting mixers. Applied Physics Letters, 1996, 68, 3344-3346.	3.3	65
105	Large bandwidth and low noise in a diffusionâ€cooled hotâ€electron bolometer mixer. Applied Physics Letters, 1996, 68, 1558-1560.	3.3	61
106	A heterodyne receiver at 533 GHz using a diffusion-cooled superconducting hot electron bolometer mixer. IEEE Transactions on Applied Superconductivity, 1995, 5, 2236-2239.	1.7	28