

Manoharan Muruganathan

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

69

papers

739

citations

14

h-index

24

g-index

80

ext. papers

919

ext. citations

5.3

avg, IF

4.49

L-index

#	Paper	IF	Citations
69	Carbon molecular sieve-functionalized graphene sensors for highly sensitive detection of ethanol. <i>Carbon</i> , 2022 , 190, 359-365	10.4	0
68	Current effect on suspended graphene nanoribbon studied using in situ transmission electron microscopy. <i>Applied Surface Science</i> , 2022 , 573, 151563	6.7	
67	RF Sputtered Nb-Doped MoS Thin Film for Effective Detection of NO Gas Molecules: Theoretical and Experimental Studies.. <i>ACS Omega</i> , 2022 , 7, 10492-10501	3.9	0
66	Development of Morphologically engineered Flower-like Hafnium-Doped ZnO with Experimental and DFT Validation for Low-Temperature and Ultrasensitive Detection of NO Gas.. <i>Industrial & Engineering Chemistry Research</i> , 2022 , 61, 5885-5897	3.9	0
65	Interfacial Ammonia Selectivity, Atmospheric Passivation, and Molecular Identification in Graphene-Nanopored Activated Carbon Molecular-Sieve Gas Sensors.. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 61770-61779	9.5	2
64	In-situ electrical conductance measurement of suspended ultra-narrow graphene nanoribbons observed via transmission electron microscopy. <i>Nanotechnology</i> , 2021 , 32, 025710	3.4	1
63	Revisiting the Mechanism of Electric Field Sensing in Graphene Devices.. <i>ACS Omega</i> , 2021 , 6, 34086-34093	3.9	1
62	Boron vacancy color center in diamond: Ab initio study. <i>Diamond and Related Materials</i> , 2021 , 114, 108341	3.5	0
61	Room-temperature negative magnetoresistance of helium-ion-irradiated defective graphene in the strong Anderson localization regime. <i>Carbon</i> , 2021 , 175, 87-92	10.4	3
60	Strain effect on topological and thermoelectric properties of half Heusler compoundsPtS (Sr, Ba). <i>Journal of Physics Condensed Matter</i> , 2021 , 33,	1.8	1
59	Double quantum dot-like transport in controllably doped graphene nanoribbon. <i>Applied Physics Letters</i> , 2021 , 118, 083105	3.4	1
58	Manipulating Berry curvature in hBN/bilayer graphene commensurate heterostructures. <i>Physical Review B</i> , 2020 , 101,	3.3	4
57	Adsorbed Molecules as Interchangeable Dopants and Scatterers with a Van der Waals Bonding Memory in Graphene Sensors. <i>ACS Sensors</i> , 2020 , 5, 2003-2009	9.2	5
56	Conductance Tunable Suspended Graphene Nanomesh by Helium Ion Beam Milling. <i>Micromachines</i> , 2020 , 11,	3.3	2
55	Thermoelectric properties of half Heusler topological semi-metal LiAuTe. <i>Europhysics Letters</i> , 2020 , 132, 67003	1.6	2
54	Origin of nonlinear current-voltage curves for suspended zigzag edge graphene nanoribbons. <i>Carbon</i> , 2020 , 165, 476-483	10.4	6
53	Design of Graphene Phononic Crystals for Heat Phonon Engineering. <i>Micromachines</i> , 2020 , 11,	3.3	3

52	Formation of quantum dot in graphene single nanoconstriction. <i>Applied Physics Express</i> , 2019 , 12, 025004.	4.4	
51	Defect induced magnetism in monolayer HfSe ₂ : An ab initio study. <i>Applied Surface Science</i> , 2019 , 491, 517-525	6.7	3
50	Single-charge band-to-band tunneling via multiple-dopant clusters in nanoscale Si Esaki diodes. <i>Applied Physics Letters</i> , 2019 , 114, 243502	3.4	2
49	Quantum Dot Formation in Controllably Doped Graphene Nanoribbon. <i>ACS Nano</i> , 2019 , 13, 7502-7507	16.7	7
48	Electrically controlled valley states in bilayer graphene. <i>Nanoscale</i> , 2019 , 11, 14707-14711	7.7	4
47	Modulation of twisted bilayer CVD graphene interlayer resistivity by an order of magnitude based on in-situ annealing. <i>Carbon</i> , 2019 , 153, 355-363	10.4	7
46	Piezoelectric energy harvester enhancement with graphene base layer. <i>Materials Today: Proceedings</i> , 2019 , 7, 792-797	1.4	3
45	Dielectric-Screening Reduction-Induced Large Transport Gap in Suspended Sub-10 nm Graphene Nanoribbon Functional Devices. <i>Small</i> , 2019 , 15, e1903025	11	8
44	Nanoscale Graphene-Based Environmental Gas Sensing 2019 , 167-185		
43	Sub-thermal switching of ultra-narrow graphene nanoribbon tunnel field effect transistors. <i>Superlattices and Microstructures</i> , 2019 , 128, 76-82	2.8	1
42	Stacking of nanocrystalline graphene for nano-electro-mechanical (NEM) actuator applications. <i>Microsystem Technologies</i> , 2019 , 25, 3083-3089	1.7	4
41	Structurally Controlled Large-Area 10 nm Pitch Graphene Nanomesh by Focused Helium Ion Beam Milling. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 10362-10368	9.5	25
40	Fabrication of a three-terminal graphene nanoelectromechanical switch using two-dimensional materials. <i>Nanoscale</i> , 2018 , 10, 12349-12355	7.7	14
39	Comparison of piezoelectric energy harvesting performance using silicon and graphene cantilever beam. <i>Microsystem Technologies</i> , 2018 , 24, 3783-3789	1.7	9
38	Controlled fabrication of electrically contacted carbon nanoscrolls. <i>Nanotechnology</i> , 2018 , 29, 235605	3.4	5
37	Stress analysis of perforated graphene nano-electro-mechanical (NEM) contact switches by 3D finite element simulation. <i>Microsystem Technologies</i> , 2018 , 24, 1179-1187	1.7	6
36	Sub-10nm graphene nano-ribbon tunnel field-effect transistor. <i>Carbon</i> , 2018 , 126, 588-593	10.4	32
35	Enhanced Sodium Ion Storage in Interlayer Expanded Multiwall Carbon Nanotubes. <i>Nano Letters</i> , 2018 , 18, 5688-5696	11.5	34

34	Thermoelectric Properties and Carrier Localization in Ultrathin Layer of Nb-Doped MoS ₂ . <i>Physica Status Solidi (B): Basic Research</i> , 2018 , 255, 1800125	1.3	1
33	Graphene Nanomechanical Resonator Mass Sensing of Mixed H ₂ /Ar Gas. <i>International Journal of Automation Technology</i> , 2018 , 12, 24-28	0.8	5
32	Zeptogram Level Mass Sensing of Light Weight Gas Molecules Using Graphene Nanomechanical (GNEM) Resonator 2018 ,		2
31	Chemical Simultaneous Synthesis Strategy of Two Nitrogen-Rich Carbon Nanomaterials for All-Solid-State Symmetric Supercapacitor. <i>ACS Omega</i> , 2018 , 3, 17276-17286	3.9	9
30	Electrically tunable localized states in sub-band of bilayer graphene nanoribbon. <i>Applied Physics Letters</i> , 2018 , 113, 133101	3.4	3
29	Highly Reproducible and Regulated Conductance Quantization in a Polymer-Based Atomic Switch. <i>Advanced Functional Materials</i> , 2017 , 27, 1605104	15.6	48
28	Single-electron quantization at room temperature in a-few-donor quantum dot in silicon nano-transistors. <i>Applied Physics Letters</i> , 2017 , 110, 093107	3.4	11
27	Study of dynamic contacts for graphene nano-electromechanical switches. <i>Japanese Journal of Applied Physics</i> , 2017 , 56, 04CK05	1.4	10
26	First-principles calculation of a negatively charged boron-vacancy center in diamond. <i>Japanese Journal of Applied Physics</i> , 2017 , 56, 04CK02	1.4	2
25	Interaction study of nitrogen ion beam with silicon. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2017 , 35, 03D101	1.3	2
24	Theoretical Insights into the Experimental Observation of Stable p-Type Conductivity and Ferromagnetic Ordering in Vacuum-Hydrogenated TiO ₂ . <i>Journal of Physical Chemistry C</i> , 2017 , 121, 14359-14366	3.8	7
23	Sharp switching behaviour in graphene nanoribbon p-n junction. <i>Carbon</i> , 2017 , 121, 399-407	10.4	14
22	Partial hydrogenation induced interaction in a graphene-SiO interface: irreversible modulation of device characteristics. <i>Nanoscale</i> , 2017 , 9, 1662-1669	7.7	14
21	Quantized conductance operation near a single-atom point contact in a polymer-based atomic switch. <i>Japanese Journal of Applied Physics</i> , 2017 , 56, 06GF02	1.4	11
20	A Statistical Study on the formation of a-few-dopant quantum dots in highly-doped Si nanowire transistors 2017 ,		1
19	Three-Dimensional Finite Element Method Simulation of Perforated Graphene Nano-Electro-Mechanical (NEM) Switches. <i>Micromachines</i> , 2017 , 8,	3.3	11
18	Inter-band Current Enhancement by Dopant-Atoms in Low-Dimensional pn Tunnel Diodes. <i>Advances in Intelligent Systems and Computing</i> , 2017 , 95-101	0.4	1
17	Room temperature detection of individual molecular physisorption using suspended bilayer graphene. <i>Science Advances</i> , 2016 , 2, e1501518	14.3	111

16	Novel suspended graphene devices for extreme sensing 2016 ,		1
15	Recent progress of graphene-based nanoelectronic devices and NEMS for challenging applications 2016 ,		4
14	Locally-Actuated Graphene-Based Nano-Electro-Mechanical Switch. <i>Micromachines</i> , 2016 , 7,	3-3	17
13	3D Finite Element Simulation of Graphene Nano-Electro-Mechanical Switches. <i>Micromachines</i> , 2016 , 7,	3-3	14
12	Precise milling of nano-gap chains in graphene with a focused helium ion beam. <i>Nanotechnology</i> , 2016 , 27, 325302	3-4	12
11	Atomistic nature in band-to-band tunneling in two-dimensional silicon pn tunnel diodes. <i>Applied Physics Letters</i> , 2016 , 108, 093502	3-4	7
10	Large-scale nanoelectromechanical switches based on directly deposited nanocrystalline graphene on insulating substrates. <i>Nanoscale</i> , 2016 , 8, 6659-65	7-7	42
9	Lateral plasma etching enhanced on/off ratio in graphene nanoribbon field-effect transistor. <i>Applied Physics Letters</i> , 2015 , 106, 033509	3-4	35
8	Electrically Tunable van der Waals Interaction in Graphene-Molecule Complex. <i>Nano Letters</i> , 2015 , 15, 8176-80	11-5	43
7	Tunneling in Systems of Coupled Dopant-Atoms in Silicon Nano-devices. <i>Nanoscale Research Letters</i> , 2015 , 10, 372	5	8
6	Hydrogen intercalation: An approach to eliminate silicon dioxide substrate doping to graphene. <i>Applied Physics Express</i> , 2015 , 8, 015101	2-4	13
5	Low pull-in voltage graphene electromechanical switch fabricated with a polymer sacrificial spacer. <i>Applied Physics Letters</i> , 2014 , 105, 033103	3-4	37
4	Point defect-induced transport bandgap widening in the downscaled armchair graphene nanoribbon device. <i>Carbon</i> , 2013 , 64, 416-423	10-4	19
3	Impact of Key Circuit Parameters on Signal-to-Noise Ratio Characteristics for the Radio Frequency Single-Electron Transistors. <i>IEEE Nanotechnology Magazine</i> , 2008 , 7, 266-272	2-6	6
2	Impact of channel constrictions on the formation of multiple tunnel junctions in heavily doped silicon single electron transistors. <i>Applied Physics Letters</i> , 2008 , 93, 112107	3-4	7
1	Silicon-on-insulator-based radio frequency single-electron transistors operating at temperatures above 4.2 K. <i>Nano Letters</i> , 2008 , 8, 4648-52	11-5	16