Balaji Panchapakesan

List of Publications by Year
in descending order

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Version: 2024-02-01

77 papers	2,551 citations	201575 27 h-index	197736 49 g-index
80 all docs	80 docs citations	80 times ranked	2884 citing authors

#	Article	IF	Citations
1	Microhotplate platforms for chemical sensor research. Sensors and Actuators B: Chemical, 2001, 77, 579-591.	4.0	259
2	Integrated molecular targeting of IGF1R and HER2 surface receptors and destruction of breast cancer cells using single wall carbon nanotubes. Nanotechnology, 2007, 18, 315101.	1.3	154
3	Photoconductivity in single wall carbon nanotube sheets. Nanotechnology, 2006, 17, 1843-1850.	1.3	130
4	Experimental and Theoretical Advances in MXene-Based Gas Sensors. ACS Omega, 2021, 6, 2450-2461.	1.6	102
5	Graphene-nanoplatelet-based photomechanical actuators. Nanotechnology, 2012, 23, 045501.	1.3	95
6	Graphene/elastomer composite-based photo-thermal nanopositioners. Scientific Reports, 2013, 3, 1900.	1.6	94
7	Nanoparticle engineering and control of tin oxide microstructures for chemical microsensor applications. Nanotechnology, 2001, 12, 336-349.	1.3	90
8	Optically driven nanotube actuators. Nanotechnology, 2005, 16, 2548-2554.	1.3	87
9	Single-Wall Carbon Nanotube Nanobomb Agents for Killing Breast Cancer Cells. Nanobiotechnology, 2005, 1, 133-140.	1.2	82
10	Nanotube micro-optomechanical actuators. Applied Physics Letters, 2006, 88, 253107.	1.5	78
11	Nanotubeâ€“antibody biosensor arrays for the detection of circulating breast cancer cells. Nanotechnology, 2008, 19, 465101.	1.3	72
12	Photomechanical responses of carbon nanotube/polymer actuators. Nanotechnology, 2007, 18, 305502.	1.3	71
13	Pt-decorated phosphorene as a propitious room temperature VOC gas sensor for sensitive and selective detection of alcohols. Journal of Materials Chemistry C, 2021, 9, 9242-9250.	2.7	62
14	Liquid biopsy using the nanotube-CTC-chip: capture of invasive CTCs with high purity using preferential adherence in breast cancer patients. Lab on A Chip, 2019, 19, 1899-1915.	3.1	60
15	Outstanding Performance of Transition-Metal-Decorated Single-Layer Graphene-like BC₆N Nanosheets for Disease Biomarker Detection in Human Breath. ACS Omega, 2021, 6, 4696-4707.	1.6	56
16	Layer dependent mechanical responses of graphene composites to near-infrared light. Applied Physics Letters, 2012, 100, 073108.	1.5	53
17	Ultrasensitive Label-Free Sensing of IL-6 Based on PASE Functionalized Carbon Nanotube Micro-Arrays with RNA-Aptamers as Molecular Recognition Elements. Biosensors, 2017, 7, 17.	2.3	52
18	Spin-on nanoparticle tin oxide for microhotplate gas sensors. Sensors and Actuators B: Chemical, 2001, 77, 145-154.	4.0	51

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19	Gold nanoprobes for theranostics. Nanomedicine, 2011, 6, 1787-1811.	1.7	51
20	Load transfer and mechanical properties of chemically reduced graphene reinforcements in polymer composites. Nanotechnology, 2012, 23, 505713.	1.3	44
21	Nanotube micro-opto-mechanical systems. Nanotechnology, 2007, 18, 065501.	1.3	42
22	MoS₂actuators: reversible mechanical responses of MoS₂-polymer nanocomposites to photons. Nanotechnology, 2015, 26, 261001.	1.3	41
23	Pt-, Rh-, Ru-, and Cu-Single-Wall Carbon Nanotubes Are Exceptional Candidates for Design of Anti-Viral Surfaces: A Theoretical Study. International Journal of Molecular Sciences, 2020, 21, 5211.	1.8	41
24	CNT biodevices for early liver cancer diagnosis based on biomarkers detection- a promising platform. Journal of Molecular Graphics and Modelling, 2022, 114, 108208.	1.3	39
25	A density functional theory study on the interaction of toluene with transition metal decorated carbon nanotubes: a promising platform for early detection of lung cancer from human breath. Nanotechnology, 2020, 31, 415707.	1.3	38
26	Applications of Carbon Nanotubes for Cancer Research. Nanobiotechnology, 2005, 1, 171-182.	1.2	32
27	Dimensional dependence of photomechanical response in carbon nanostructure composites: a case for carbon-based mixed-dimensional systems. Nanotechnology, 2012, 23, 215501.	1.3	31
28	Two-dimensional PdPS and PdPSe nanosheets: Novel promising sensing platforms for harmful gas molecules. Applied Surface Science, 2022, 579, 152115.	3.1	30
29	Alignment dependent mechanical responses of carbon nanotubes to light. Applied Physics Letters, 2007, 91, 103106.	1.5	28
30	Sensitivity, selectivity and stability of tin oxide nanostructures on large area arrays of microhotplates. Nanotechnology, 2006, 17, 415-425.	1.3	27
31	Stimuli-responsive transformation in carbon nanotube/expanding microsphereâ€“polymer composites. Nanotechnology, 2013, 24, 185703.	1.3	25
32	Vacuum filtration based formation of liquid crystal films of semiconducting carbon nanotubes and high performance transistor devices. Nanotechnology, 2014, 25, 175201.	1.3	25
33	Static micro-array isolation, dynamic time series classification, capture and enumeration of spiked breast cancer cells in blood: the nanotubeâ€“CTC chip. Nanotechnology, 2016, 27, 44LT03.	1.3	23
34	Photo-mechanical actuation of carbon nanotubes: mechanisms and applications in micro and nano-devices. Journal of Micro-Nano Mechatronics, 2009, 5, 29-41.	1.0	22
35	Chromatic Mechanical Response in 2-D Layered Transition Metal Dichalcogenide (TMDs) based Nanocomposites. Scientific Reports, 2016, 6, 34831.	1.6	21
36	All-Optical Micromirrors From Nanotube MOMS With Wavelength Selectivity. Journal of Microelectromechanical Systems, 2007, 16, 1515-1523.	1.7	20

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37	Synergy among binary (MWNT, SLG) nano-carbons in polymer nano-composites: a Raman study. Nanotechnology, 2012, 23, 315706.	1.3	20
38	Green Phosphorene as a Promising Biosensor for Detection of Furan and p-Xylene as Biomarkers of Disease: A DFT Study. Sensors, 2022, 22, 3178.	2.1	20
39	Biomolecular Tuning of Electronic Transport Properties of Carbon Nanotubes via Antibody Functionalization. IEEE Sensors Journal, 2006, 6, 1422-1428.	2.4	19
40	Alignment enhanced photoconductivity in single wall carbon nanotube films. Nanotechnology, 2009, 20, 035203.	1.3	19
41	First-principles insight into two-dimensional palladium phosphide tellurium (PdPTe) monolayer as a promising scavenger for detecting SF6 decompositions. Journal of Materials Science, 2022, 57, 5497-5506.	1.7	19
42	Hybrid platinum/single-wall carbon nanotube nanowire actuators: metallic artificial muscles. Nanotechnology, 2006, 17, 888-894.	1.3	18
43	Nanotechnology for Sensing, Imaging, and Treating Cancer. Surgical Oncology Clinics of North America, 2007, 16, 293-305.	0.6	18
44	Exfoliated WS2-Nafion Composite based Electromechanical Actuators. Scientific Reports, 2017, 7, 14599.	1.6	18
45	Large photocurrents in single layer graphene thin films: effects of diffusion and drift. Nanotechnology, 2012, 23, 265203.	1.3	17
46	Single-Wall Carbon Nanotubes with Adsorbed Antibodies Detect Live Breast Cancer Cells. Nanobiotechnology, 2005, 1, 353-360.	1.2	16
47	Computational Study on Sensing Properties of Pdâ€Decorated Phosphorene for Detecting Acetone, Ethanol, Methanol, and Tolueneâ€"A Density Functional Theory Investigation. Advanced Theory and Simulations, 2021, 4, 2100256.	1.3	16
48	Nanotube liquid crystal elastomers: photomechanical response and flexible energy conversion of layered polymer composites. Nanotechnology, 2014, 25, 355501.	1.3	15
49	Micromachined silicon torsional resonator for magnetic anisotropy measurement. Review of Scientific Instruments, 1998, 69, 3908-3912.	0.6	14
50	Micro- and nanotechnology approaches for capturing circulating tumor cells. Cancer Nanotechnology, 2010, 1, 3-11.	1.9	14
51	Label-free capture of breast cancer cells spiked in buffy coats using carbon nanotube antibody micro-arrays. Nanotechnology, 2016, 27, 13LT02.	1.3	14
52	Novel green phosphorene as a superior gas sensor for dissolved gas analysis in oil transformers: using DFT method. Molecular Simulation, 2022, 48, 541-550.	0.9	13
53	Photo-thermal polymerization of nanotube/polymer composites: Effects of load transfer and mechanical strength. Applied Physics Letters, 2012, 100, 131907-1319075.	1.5	12
54	The Coupled Straintronic-Photothermic Effect. Scientific Reports, 2018, 8, 64.	1.6	8

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55	Electric Fieldâ€“Assisted Deposition of Nanowires on Carbon Nanotubes for Nanoelectronics and Sensor Applications. Journal of Nanoscience and Nanotechnology, 2005, 5, 313-318.	0.9	7
56	Sonochemical Synthesis of Platinum Nanowires and Their Applications as Electro-Chemical Actuators. Journal of Nanoscience and Nanotechnology, 2007, 7, 2473-2479.	0.9	6
57	Electrical detection of specific versus non-specific binding events in breast cancer cells. Proceedings of SPIE, 2012, 8460, 84600S.	0.8	4
58	Versatile high-performance inkjet-printed paper photo-actuators based on 2D materials. Nanotechnology, 2020, 31, 025708.	1.3	4
59	Nanotube Devices for Digital Profiling: A focus on cancer biomarkers and circulating tumor cells.. IEEE Nanotechnology Magazine, 2013, 7, 20-26.	0.9	2
60	A Thermoacoustic Model for High Aspect Ratio Nanostructures. Actuators, 2016, 5, 23.	1.2	2
61	Metallic and Semiconducting Nanowires from Single Wall Carbon Nanotubes. Materials Research Society Symposia Proceedings, 2004, 818, 118.	0.1	1
62	Nanotube devices for digital profiling of cancer biomarkers and circulating tumor cells. , 2013, , .		1
63	Synergism in Binary (MWNT, SLG) Nano-carbons in Polymer Nano-composites: A Raman Study. Materials Research Society Symposia Proceedings, 2013, 1505, 1.	0.1	1
64	Classification of biosensor time series using dynamic time warping: applications in screening cancer cells with characteristic biomarkers. Open Access Medical Statistics, 2016, 2016, 21.	0.5	1
65	Spatially Nonuniform Heating and the Nonlinear Transient Response of Elastomeric Photomechanical Actuators. Actuators, 2016, 5, 16.	1.2	1
66	Surface Oriented Self-Assembly of Carbon Nanotubes. Materials Research Society Symposia Proceedings, 2004, 818, 124.	0.1	0
67	Carbon Nanotube Micro-Opto-Mechanical Grippers. Materials Research Society Symposia Proceedings, 2006, 947, 1.	0.1	0
68	Carbon Nanotubes as Optical Materials. Materials Research Society Symposia Proceedings, 2007, 1015, 1.	0.1	0
69	Microfluidic Pumping With Optically Induced Actuation of a Carbon Nanotube Membrane. , 2010, , .		0
70	Carbon based micro- and nano-opto-mechanical systems (C-MOMS/NOMS). , 2011, , .		0
71	Opto-Mechanical Actuation of Carbon Nanotube/Polymer Composite Membranes for Microfluidic Pumping Applications. , 2012, , .		0
72	Photothermal nanopositioners based on graphene nanocomposites. Proceedings of SPIE, 2014, , .	0.8	0

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73	Programmable Skins based on Core-Shell Microsphere/Nanotube/Polymer Composites. Materials Research Society Symposia Proceedings, 2015, 1800, 1.	0.1	0
74	Ultraflexible nanostructures and implications for future nanorobots. , 2016, , .		0
75	Science and Applications of Photomechanical Actuation of Carbon Nanostructures. , 2012, , 177-236.		0
76	Micro-array isolation of circulating tumor cells (CTCs): the droplet biopsy chip. , 2017, , .		0
77	Chromatic photo-thermal actuators based on 2H-MoS2 based nanocomposites. , 2017, , .		0