

# Balaji Panchapakesan

## List of Publications by Citations

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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.

70  
papers

1,920  
citations

24  
h-index

42  
g-index

80  
ext. papers

2,220  
ext. citations

3.7  
avg, IF

5.12  
L-index

#	Paper	IF	Citations
70	Microhotplate platforms for chemical sensor research. <i>Sensors and Actuators B: Chemical</i> , <b>2001</b> , 77, 579-594	3.4	220
69	Integrated molecular targeting of IGF1R and HER2 surface receptors and destruction of breast cancer cells using single wall carbon nanotubes. <i>Nanotechnology</i> , <b>2007</b> , 18, 315101	3.4	130
68	Photoconductivity in single wall carbon nanotube sheets. <i>Nanotechnology</i> , <b>2006</b> , 17, 1843-1850	3.4	112
67	Graphene-nanoplatelet-based photomechanical actuators. <i>Nanotechnology</i> , <b>2012</b> , 23, 045501	3.4	80
66	Graphene/elastomer composite-based photo-thermal nanositioners. <i>Scientific Reports</i> , <b>2013</b> , 3, 1900	4.9	79
65	Optically driven nanotube actuators. <i>Nanotechnology</i> , <b>2005</b> , 16, 2548-2554	3.4	78
64	Single-wall carbon nanotube nanobomb agents for killing breast cancer cells. <i>Nanobiotechnology</i> , <b>2005</b> , 1, 133-140		74
63	Nanoparticle engineering and control of tin oxide microstructures for chemical microsensor applications. <i>Nanotechnology</i> , <b>2001</b> , 12, 336-349	3.4	73
62	Nanotube micro-optomechanical actuators. <i>Applied Physics Letters</i> , <b>2006</b> , 88, 253107	3.4	68
61	Photomechanical responses of carbon nanotube/polymer actuators. <i>Nanotechnology</i> , <b>2007</b> , 18, 305502	3.4	61
60	Nanotube-antibody biosensor arrays for the detection of circulating breast cancer cells. <i>Nanotechnology</i> , <b>2008</b> , 19, 465101	3.4	57
59	Layer dependent mechanical responses of graphene composites to near-infrared light. <i>Applied Physics Letters</i> , <b>2012</b> , 100, 073108	3.4	46
58	Gold nanoprobe for theranostics. <i>Nanomedicine</i> , <b>2011</b> , 6, 1787-811	5.6	43
57	Spin-on nanoparticle tin oxide for microhotplate gas sensors. <i>Sensors and Actuators B: Chemical</i> , <b>2001</b> , 77, 145-154	8.5	42
56	Liquid biopsy using the nanotube-CTC-chip: capture of invasive CTCs with high purity using preferential adherence in breast cancer patients. <i>Lab on A Chip</i> , <b>2019</b> , 19, 1899-1915	7.2	39
55	Load transfer and mechanical properties of chemically reduced graphene reinforcements in polymer composites. <i>Nanotechnology</i> , <b>2012</b> , 23, 505713	3.4	39
54	Nanotube micro-opto-mechanical systems. <i>Nanotechnology</i> , <b>2007</b> , 18, 065501	3.4	37

53	MoS2 actuators: reversible mechanical responses of MoS2-polymer nanocomposites to photons. <i>Nanotechnology</i> , <b>2015</b> , 26, 261001	3-4	35
52	Ultrasensitive Label-Free Sensing of IL-6 Based on PASE Functionalized Carbon Nanotube Micro-Arrays with RNA-Aptamers as Molecular Recognition Elements. <i>Biosensors</i> , <b>2017</b> , 7,	5-9	35
51	Experimental and Theoretical Advances in MXene-Based Gas Sensors. <i>ACS Omega</i> , <b>2021</b> , 6, 2450-2461	3-9	34
50	Pt-, Rh-, Ru-, and Cu-Single-Wall Carbon Nanotubes Are Exceptional Candidates for Design of Anti-Viral Surfaces: A Theoretical Study. <i>International Journal of Molecular Sciences</i> , <b>2020</b> , 21,	6-3	27
49	Dimensional dependence of photomechanical response in carbon nanostructure composites: a case for carbon-based mixed-dimensional systems. <i>Nanotechnology</i> , <b>2012</b> , 23, 215501	3-4	25
48	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. <i>Nanotechnology</i> , <b>2020</b> , 31, 415707	3-4	24
47	Applications of carbon nanotubes for cancer research. <i>Nanobiotechnology</i> , <b>2005</b> , 1, 171-182		24
46	Outstanding Performance of Transition-Metal-Decorated Single-Layer Graphene-like BCN Nanosheets for Disease Biomarker Detection in Human Breath. <i>ACS Omega</i> , <b>2021</b> , 6, 4696-4707	3-9	24
45	Alignment dependent mechanical responses of carbon nanotubes to light. <i>Applied Physics Letters</i> , <b>2007</b> , 91, 103106	3-4	23
44	Sensitivity, selectivity and stability of tin oxide nanostructures on large area arrays of microhotplates. <i>Nanotechnology</i> , <b>2006</b> , 17, 415-425	3-4	23
43	Stimuli-responsive transformation in carbon nanotube/expanding microsphere-polymer composites. <i>Nanotechnology</i> , <b>2013</b> , 24, 185703	3-4	22
42	Vacuum filtration based formation of liquid crystal films of semiconducting carbon nanotubes and high performance transistor devices. <i>Nanotechnology</i> , <b>2014</b> , 25, 175201	3-4	22
41	Synergy among binary (MWNT, SLG) nano-carbons in polymer nano-composites: a Raman study. <i>Nanotechnology</i> , <b>2012</b> , 23, 315706	3-4	19
40	Chromatic Mechanical Response in 2-D Layered Transition Metal Dichalcogenide (TMDs) based Nanocomposites. <i>Scientific Reports</i> , <b>2016</b> , 6, 34831	4-9	18
39	Photo-mechanical actuation of carbon nanotubes: mechanisms and applications in micro and nano-devices. <i>Journal of Micro-Nano Mechatronics</i> , <b>2009</b> , 5, 29-41		18
38	All-Optical Micromirrors From Nanotube MOMS With Wavelength Selectivity. <i>Journal of Microelectromechanical Systems</i> , <b>2007</b> , 16, 1515-1523	2-5	18
37	Static micro-array isolation, dynamic time series classification, capture and enumeration of spiked breast cancer cells in blood: the nanotube-CTC chip. <i>Nanotechnology</i> , <b>2016</b> , 27, 44LT03	3-4	18
36	Nanotechnology for sensing, imaging, and treating cancer. <i>Surgical Oncology Clinics of North America</i> , <b>2007</b> , 16, 293-305	2-7	17

35	Hybrid platinum/single-wall carbon nanotube nanowire actuators: metallic artificial muscles. <i>Nanotechnology</i> , <b>2006</b> , 17, 888-894	3.4	17
34	Biomolecular Tuning of Electronic Transport Properties of Carbon Nanotubes via Antibody Functionalization. <i>IEEE Sensors Journal</i> , <b>2006</b> , 6, 1422-1428	4	17
33	Large photocurrents in single layer graphene thin films: effects of diffusion and drift. <i>Nanotechnology</i> , <b>2012</b> , 23, 265203	3.4	16
32	Exfoliated WS-Nafion Composite based Electromechanical Actuators. <i>Scientific Reports</i> , <b>2017</b> , 7, 14599	4.9	15
31	Alignment enhanced photoconductivity in single wall carbon nanotube films. <i>Nanotechnology</i> , <b>2009</b> , 20, 035203	3.4	15
30	Micromachined silicon torsional resonator for magnetic anisotropy measurement. <i>Review of Scientific Instruments</i> , <b>1998</b> , 69, 3908-3912	1.7	14
29	Single-wall carbon nanotubes with adsorbed antibodies detect live breast cancer cells. <i>Nanobiotechnology</i> , <b>2005</b> , 1, 353-360		13
28	Nanotube liquid crystal elastomers: photomechanical response and flexible energy conversion of layered polymer composites. <i>Nanotechnology</i> , <b>2014</b> , 25, 355501	3.4	12
27	Label-free capture of breast cancer cells spiked in buffy coats using carbon nanotube antibody micro-arrays. <i>Nanotechnology</i> , <b>2016</b> , 27, 13LT02	3.4	11
26	Pt-decorated phosphorene as a propitious room temperature VOC gas sensor for sensitive and selective detection of alcohols. <i>Journal of Materials Chemistry C</i> ,	7.1	11
25	Micro- and nanotechnology approaches for capturing circulating tumor cells. <i>Cancer Nanotechnology</i> , <b>2010</b> , 1, 3-11	7.9	10
24	Photo-thermal polymerization of nanotube/polymer composites: Effects of load transfer and mechanical strength. <i>Applied Physics Letters</i> , <b>2012</b> , 100, 131907-1319075	3.4	9
23	The Coupled Straintronic-Photothermic Effect. <i>Scientific Reports</i> , <b>2018</b> , 8, 64	4.9	7
22	Two-dimensional PdPS and PdPSe nanosheets: Novel promising sensing platforms for harmful gas molecules. <i>Applied Surface Science</i> , <b>2022</b> , 579, 152115	6.7	7
21	Electric field-assisted deposition of nanowires on carbon nanotubes for nanoelectronics and sensor applications. <i>Journal of Nanoscience and Nanotechnology</i> , <b>2005</b> , 5, 313-8	1.3	6
20	Computational Study on Sensing Properties of Pd-Decorated Phosphorene for Detecting Acetone, Ethanol, Methanol, and Toluene—Density Functional Theory Investigation. <i>Advanced Theory and Simulations</i> , <b>2021</b> , 4, 2100256	3.5	6
19	Sonochemical synthesis of platinum nanowires and their applications as electro-chemical actuators. <i>Journal of Nanoscience and Nanotechnology</i> , <b>2007</b> , 7, 2473-9	1.3	4
18	Versatile high-performance inkjet-printed paper photo-actuators based on 2D materials. <i>Nanotechnology</i> , <b>2020</b> , 31, 025708	3.4	4

17	First-principles insight into two-dimensional palladium phosphide tellurium (PdPTe) monolayer as a promising scavenger for detecting SF6 decompositions. <i>Journal of Materials Science</i> , <b>2022</b> , 57, 5497-5506	4.3	4
16	Electrical detection of specific versus non-specific binding events in breast cancer cells. <i>Proceedings of SPIE</i> , <b>2012</b> , 8460, 84600S	1.7	3
15	Novel green phosphorene as a superior gas sensor for dissolved gas analysis in oil transformers: using DFT method. <i>Molecular Simulation</i> , 1-10	2	3
14	CNT biodevices for early liver cancer diagnosis based on biomarkers detection- a promising platform.. <i>Journal of Molecular Graphics and Modelling</i> , <b>2022</b> , 114, 108208	2.8	3
13	. <i>IEEE Nanotechnology Magazine</i> , <b>2013</b> , 7, 20-26	1.7	2
12	Green Phosphorene as a Promising Biosensor for Detection of Furan and p-Xylene as Biomarkers of Disease: A DFT Study.. <i>Sensors</i> , <b>2022</b> , 22,	3.8	2
11	Photomechanical Effects in Polymer Nanocomposites <b>2017</b> , 179-231		1
10	Metallic and Semiconducting Nanowires from Single Wall Carbon Nanotubes. <i>Materials Research Society Symposia Proceedings</i> , <b>2004</b> , 818, 118		1
9	Classification of biosensor time series using dynamic time warping: applications in screening cancer cells with characteristic biomarkers. <i>Open Access Medical Statistics</i> , <b>2016</b> , 2016, 21-29		1
8	Spatially Nonuniform Heating and the Nonlinear Transient Response of Elastomeric Photomechanical Actuators. <i>Actuators</i> , <b>2016</b> , 5, 16	2.4	1
7	A Thermoacoustic Model for High Aspect Ratio Nanostructures. <i>Actuators</i> , <b>2016</b> , 5, 23	2.4	1
6	Programmable Skins based on Core-Shell Microsphere/Nanotube/Polymer Composites. <i>Materials Research Society Symposia Proceedings</i> , <b>2015</b> , 1800, 1		
5	Synergism in Binary (MWNT, SLG) Nano-carbons in Polymer Nano-composites: A Raman Study. <i>Materials Research Society Symposia Proceedings</i> , <b>2013</b> , 1505, 1		
4	Carbon Nanotube Micro-Opto-Mechanical Grippers. <i>Materials Research Society Symposia Proceedings</i> , <b>2006</b> , 947, 1		
3	Carbon Nanotubes as Optical Materials. <i>Materials Research Society Symposia Proceedings</i> , <b>2007</b> , 1015, 1		
2	Surface Oriented Self-Assembly of Carbon Nanotubes. <i>Materials Research Society Symposia Proceedings</i> , <b>2004</b> , 818, 124		
1	Science and Applications of Photomechanical Actuation of Carbon Nanostructures <b>2012</b> , 177-236		