

# Anupama Kaul

## List of Publications by Citations

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93  
papers

1,073  
citations

17  
h-index

30  
g-index

119  
ext. papers

1,314  
ext. citations

3.2  
avg, IF

5.1  
L-index

#	Paper	IF	Citations
93	Two-dimensional layered materials: Structure, properties, and prospects for device applications. <i>Journal of Materials Research</i> , <b>2014</b> , 29, 348-361	2.5	143
92	Electromechanical carbon nanotube switches for high-frequency applications. <i>Nano Letters</i> , <b>2006</b> , 6, 942-7	11.5	124
91	Biocompatible, large-format, inkjet printed heterostructure MoS <sub>2</sub> -graphene photodetectors on conformable substrates. <i>Npj 2D Materials and Applications</i> , <b>2017</b> , 1,	8.8	59
90	Probing noise in flux qubits via macroscopic resonant tunneling. <i>Physical Review Letters</i> , <b>2008</b> , 101, 117002	9.1	54
89	Internally shunted sputtered NbN Josephson junctions with a TaN <sub>x</sub> barrier for nonlatching logic applications. <i>Applied Physics Letters</i> , <b>2001</b> , 78, 99-101	3.4	52
88	Geometrical dependence of the low-frequency noise in superconducting flux qubits. <i>Physical Review B</i> , <b>2009</b> , 79,	3.3	50
87	Ultra-high optical absorption efficiency from the ultraviolet to the infrared using multi-walled carbon nanotube ensembles. <i>Small</i> , <b>2013</b> , 9, 1058-65	11	37
86	Inkjet-Printed Organohalide 2D Layered Perovskites for High-Speed Photodetectors on Flexible Polyimide Substrates. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 10809-10819	9.5	31
85	Ultra-high Photoresponsivity in Suspended Metal-Semiconductor-Metal Mesoscopic Multilayer MoS <sub>2</sub> Broadband Detector from UV-to-IR with Low Schottky Barrier Contacts. <i>Scientific Reports</i> , <b>2018</b> , 8, 12764	4.9	30
84	On the chemically-assisted excitonic enhancement in environmentally-friendly solution dispersions of two-dimensional MoS <sub>2</sub> and WS <sub>2</sub> . <i>Journal of Materials Chemistry C</i> , <b>2017</b> , 5, 5323-5333	7.1	28
83	Engineering chemically exfoliated dispersions of two-dimensional graphite and molybdenum disulphide for ink-jet printing. <i>Nanotechnology</i> , <b>2016</b> , 27, 485602	3.4	25
82	A thermally-invariant, additively manufactured, high-power graphene resistor for flexible electronics. <i>2D Materials</i> , <b>2017</b> , 4, 025076	5.9	23
81	Photophysical Dynamics in Semiconducting Graphene Quantum Dots Integrated with 2D MoS <sub>2</sub> for Optical Enhancement in the Near UV. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2021</b> , 13, 5379-5389	9.5	23
80	High-performance ink-jet printed graphene resistors formed with environmentally-friendly surfactant-free inks for extreme thermal environments. <i>Applied Materials Today</i> , <b>2017</b> , 6, 16-21	6.6	22
79	Quantum Multibody Interactions in Halide-Assisted Vapor-Synthesized Monolayer WSe <sub>2</sub> and Its Integration in a High Responsivity Photodetector with Low-Interface Trap Density. <i>Chemistry of Materials</i> , <b>2019</b> , 31, 9861-9874	9.6	21
78	Dramatic Enhancement of Optoelectronic Properties of Electrophoretically Deposited C-Graphene Hybrids. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 24349-24359	9.5	18
77	. <i>IEEE Transactions on Applied Superconductivity</i> , <b>1999</b> , 9, 3232-3235	1.8	18

76	Chemical exfoliation efficacy of semiconducting WS and its use in an additively manufactured heterostructure graphene-WS-graphene photodiode.. <i>RSC Advances</i> , <b>2019</b> , 9, 25805-25816	3.7	16
75	Very small critical current spreads in Nb/Al-AlOx/Nb integrated circuits using low-temperature and low-stress ECR PECVD silicon oxide films. <i>IEEE Transactions on Applied Superconductivity</i> , <b>1999</b> , 9, 3208-3211	1.8	15
74	Sc3N@C80 and La@C82 doped graphene for a new class of optoelectronic devices. <i>Journal of Materials Chemistry C</i> , <b>2020</b> , 8, 3970-3981	7.1	15
73	Fabrication of wide-IF 200-300GHz superconductor-insulator-superconductor mixers with suspended metal beam leads formed on silicon-on-insulator. <i>Journal of Vacuum Science &amp; Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , <b>2004</b> , 22, 2417		14
72	High-Tc superconducting NbN films with low particulate density grown at 25 °C using pulsed laser deposition. <i>Journal of Materials Research</i> , <b>2001</b> , 16, 1223-1226	2.5	14
71	In situ characterization of vertically oriented carbon nanofibers for three-dimensional nano-electro-mechanical device applications. <i>Nanotechnology</i> , <b>2010</b> , 21, 315501	3.4	13
70	Synchronization of multiple coupled rf-SQUID flux qubits. <i>New Journal of Physics</i> , <b>2009</b> , 11, 123022	2.9	11
69	NbN/TaN/sub x//NbN SNS Josephson junctions by pulsed laser deposition. <i>IEEE Transactions on Applied Superconductivity</i> , <b>2001</b> , 11, 88-91	1.8	11
68	Light-matter interactions in two-dimensional layered WSe for gauging evolution of phonon dynamics. <i>Beilstein Journal of Nanotechnology</i> , <b>2020</b> , 11, 782-797	3	10
67	Opto-electro-mechanical percolative composites from 2D layered materials: Properties and applications in strain sensing. <i>Composites Science and Technology</i> , <b>2019</b> , 182, 107687	8.6	10
66	A photo-capacitive sensor operational from 6 K to 350 K with a solution printable, thermally-robust hexagonal boron nitride (h-BN) dielectric and conductive graphene electrodes. <i>Applied Materials Today</i> , <b>2020</b> , 20, 100660	6.6	10
65	Role of metal contacts and effect of annealing in high performance 2D WSe2 field-effect transistors. <i>Surface and Coatings Technology</i> , <b>2020</b> , 381, 125084	4.4	10
64	Single, aligned carbon nanotubes in 3D nanoscale architectures enabled by top-down and bottom-up manufacturable processes. <i>Nanotechnology</i> , <b>2009</b> , 20, 075303	3.4	9
63	Carrier photodynamics in 2D perovskites with solution-processed silver and graphene contacts for bendable optoelectronics. <i>Npj 2D Materials and Applications</i> , <b>2021</b> , 5,	8.8	9
62	Superconducting NbN films grown using pulsed laser deposition for potential application in internally shunted Josephson junctions. <i>Superconductor Science and Technology</i> , <b>1999</b> , 12, 1030-1032	3.1	8
61	Investigation of nonlinear optical properties of exfoliated MoS2 using Photoacoustic Zscan. <i>MRS Advances</i> , <b>2016</b> , 1, 3215-3221	0.7	7
60	Carbon Nanotube Vacuum Gauges With Wide Dynamic Range. <i>IEEE Nanotechnology Magazine</i> , <b>2009</b> , 8, 252-257	2.6	7
59	Inkjet printing of liquid-exfoliated, highly conducting graphene/poly(3,4 ethylenedioxythiophene):poly(styrenesulfonate) nanosheets for organic electronics. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , <b>2017</b> , 35, 03D112	1.3	6

58	Interrogating vertically oriented carbon nanofibers with nanomanipulation for nanoelectromechanical switching applications. <i>Applied Physics Letters</i> , <b>2009</b> , 95, 093103	3.4	6
57	Gas sensing with long, diffusively contacted single-walled carbon nanotubes. <i>Nanotechnology</i> , <b>2009</b> , 20, 155501	3.4	6
56	Submicrometer $\text{Nb}/\text{Al}/\text{AlO}_x/\text{Nb}$ Integrated Circuit Fabrication Process for Quantum Computing Applications. <i>IEEE Transactions on Applied Superconductivity</i> , <b>2009</b> , 19, 226-229	1.8	6
55	Nanosheets of MoO <sub>x</sub> crystallites synthesized via chemical vapor deposition and its potential in bolometric applications. <i>Surface and Coatings Technology</i> , <b>2020</b> , 382, 125031	4.4	6
54	Characterization of 2D MoS <sub>2</sub> and WS <sub>2</sub> Dispersed in Organic Solvents for Composite Applications. <i>MRS Advances</i> , <b>2016</b> , 1, 2303-2308	0.7	6
53	Inkjet printed graphene as an interconnect for optoelectronic devices. <i>Journal of Materials Science: Materials in Electronics</i> , <b>2019</b> , 30, 12500-12509	2.1	5
52	Nano-electro-mechanical-systems (NEMS) and energy-efficient electronics and the emergence of two-dimensional layered materials beyond graphene <b>2013</b> ,		5
51	Carbon nanofiber high frequency nanomechanical resonators. <i>Nanoscale</i> , <b>2017</b> , 9, 11864-11870	7.7	5
50	Nanopatterning of catalyst by Dip Pen nanolithography (DPN) for synthesis of carbon nanotubes (CNT). <i>Scanning</i> , <b>2010</b> , 32, 42-8	1.6	5
49	Sol-gel synthesized indium tin oxide as a transparent conducting oxide with solution-processed black phosphorus for its integration into solar-cells. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , <b>2020</b> , 38, 063203	1.3	5
48	Solution dispersed 2D graphene & MoS <sub>2</sub> for an inkjet printed biocompatible photodetector <b>2016</b> ,		5
47	Tungsten Disulfide Nanodispersions for Inkjet Printing and Semiconducting Devices. <i>MRS Advances</i> , <b>2017</b> , 2, 3691-3696	0.7	4
46	Effects of Synthesis Parameters on CVD Molybdenum Disulfide Growth. <i>MRS Advances</i> , <b>2016</b> , 1, 2291-2296		4
45	Aluminum nitride tunnel barrier formation with low-energy nitrogen ion beams. <i>Journal of Materials Research</i> , <b>2005</b> , 20, 3047-3053	2.5	4
44	Inkjet-printed MoS <sub>2</sub> -based field-effect transistors with graphene and hexagonal boron nitride inks. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , <b>2020</b> , 38, 042206	1.3	4
43	Optimization of fluid characteristics of 2D materials for inkjet printing. <i>MRS Advances</i> , <b>2016</b> , 1, 2199-2206	7	4
42	Application specific electrode-integrated nanotube cathodes (ASINCs) for miniature analytical instruments for space exploration <b>2008</b> ,		3
41	Black Phosphorus-Molybdenum Disulfide Hetero-Junctions Formed with Ink-Jet Printing for Potential Solar Cell Applications with Indium-Tin-Oxide. <i>Crystals</i> , <b>2021</b> , 11, 560	2.3	3

40	Polydimethylsiloxane and polyisoprene-based graphene composites for strain-sensing. <i>Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics</i> , <b>2017</b> , 35, 03D106	1.3	2
39	Nanoscale Characterization of WSe2 for Opto-electronics Applications. <i>MRS Advances</i> , <b>2017</b> , 2, 3715-3720	0.7	2
38	Electronic and Optical Properties Characterization of MoS2 Two-Dimensional Exfoliated nanomaterials. <i>MRS Advances</i> , <b>2016</b> , 1, 3223-3228	0.7	2
37	Characterization of Plasma Synthesized Vertical Carbon Nanofibers for Nanoelectronics Applications. <i>Materials Research Society Symposia Proceedings</i> , <b>2012</b> , 1451, 117-122		2
36	Carbon nanotube switches for communication and memory applications <b>2008</b> ,		2
35	3D-printed and injection molded polymer matrix composites with 2D layered materials. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2020</b> , 38, 042201	2.9	2
34	Fabrication and characterization of inkjet-printed 2D perovskite optoelectronic devices. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2020</b> , 38, 052202	2.9	2
33	Photodetectors with Buckminsterfullerene Decorated WSe2. <i>Journal of the Electrochemical Society</i> , <b>2022</b> , 169, 047503	3.9	2
32	Vibrational spectroscopy on solution-dispersed MoS2 for inkjet-printed photodetectors. <i>Emergent Materials</i> , <b>2022</b> , 5, 477-487	3.5	2
31	Investigation of structural morphology and electrical properties of graphene-C60 hybrids. <i>Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics</i> , <b>2017</b> , 35, 03D111	1.3	1
30	High-Performance, Flexible, Inkjet Printed Heterostructure Photodetector for Biosensing Applications. <i>MRS Advances</i> , <b>2019</b> , 4, 621-627	0.7	1
29	Two-dimensional atomic crystals beyond graphene <b>2014</b> ,		1
28	Graphene and two-dimensional layered materials for device applications <b>2013</b> ,		1
27	Vacuum microelectronics applications using carbon nanotube cathodes <b>2008</b> ,		1
26	Vertically Aligned Carbon Nanotubes Formed Using dc PECVD as Switching Elements for Extreme Environment Space Electronics. <i>Materials Research Society Symposia Proceedings</i> , <b>2008</b> , 1081, 1		1
25	Ion Beam Nitridation of Al for Tunnel Barrier Applications. <i>IEEE Transactions on Applied Superconductivity</i> , <b>2007</b> , 17, 198-201	1.8	1
24	Air Bridge and Vertical Carbon Nanotube Switches for High Performance Switching Applications. <i>Materials Research Society Symposia Proceedings</i> , <b>2006</b> , 924, 1		1
23	Spectroscopic, structural, and strain-dependent analysis of suspended bulk WSe2 sheets. <i>Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics</i> , <b>2022</b> , 40, 022202	1.3	1

22	Many-body Interactions in Halide-assisted CVD Grown WSe <sub>2</sub> for High Performance Photodetectors <b>2020</b> ,		1
21	Electrical and Optoelectronic Properties Analysis in Two-dimensional Multilayer WSe <sub>2</sub> Phototransistor for High Speed Device Applications <b>2020</b> ,		1
20	Inks of dielectric h-BN and semiconducting WS <sub>2</sub> for capacitive structures with graphene. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , <b>2020</b> , 38, 052201	1.3	1
19	Chemically and mechanically exfoliated MoS <sub>2</sub> for electronic & opto-electronic devices <b>2016</b> ,		1
18	Methylammonium Lead Tri-Iodide Perovskite Solar Cells with Varying Equimolar Concentrations of Perovskite Precursors. <i>Applied Sciences (Switzerland)</i> , <b>2021</b> , 11, 11689	2.6	1
17	Nano Carbon 1D and 2D Nanomechanical Resonators. <i>Materials Research Society Symposia Proceedings</i> , <b>2014</b> , 1693, 37		0
16	Chemical Exfoliation of Black Phosphorus for Nanoelectronics Applications. <i>MRS Advances</i> , <b>2017</b> , 2, 3697-3702		0.7
15	Single and Few-Layer MoS <sub>2</sub> : CVD Synthesis, Transference, and Photodetection Application. <i>MRS Advances</i> , <b>2017</b> , 2, 3709-3714		0.7
14	Optoelectronic properties of graphene quantum dots with molybdenum disulfide. <i>MRS Advances</i> , <b>2019</b> , 4, 615-620		0.7
13	Characterization of Few layer Tungsten diselenide based FET under Thermal Excitation. <i>MRS Advances</i> , <b>2017</b> , 2, 3721-3726		0.7
12	Hybrid Zero-Dimensional C <sub>60</sub> clusters with Graphene [5] Synthesis, Fabrication and Transport Characteristics. <i>MRS Advances</i> , <b>2017</b> , 2, 3727-3732		0.7
11	Electrical Characterization and Nanoindentation of Opto-electro-mechanical Percolative Composites from 2D Layered Materials. <i>MRS Advances</i> , <b>2017</b> , 2, 3741-3747		0.7
10	Broad-band, High-efficiency Optical Absorbers Derived From Carbon Nanomaterials. <i>Materials Research Society Symposia Proceedings</i> , <b>2013</b> , 1505, 1		
9	Graphene and The Advent of Other Layered-2D Materials for Nanoelectronics, Photonics and Related Applications. <i>Materials Research Society Symposia Proceedings</i> , <b>2013</b> , 1549, 11-16		
8	Electrostatic Switching in Vertically Oriented Nanotubes for Nonvolatile Memory Applications. <i>Materials Research Society Symposia Proceedings</i> , <b>2009</b> , 1186, 1		
7	Switching Voltage in a Carbon Nanotube Memory Device. <i>Materials Research Society Symposia Proceedings</i> , <b>2009</b> , 1186, 13		
6	High-throughput top-down and bottom-up processes for forming single-nanotube based architectures for 3D electronics. <i>Materials Research Society Symposia Proceedings</i> , <b>2009</b> , 1179, 33		
5	Carbon Nanomaterials for Energy Efficient Green Electronics. <i>Materials Research Society Symposia Proceedings</i> , <b>2012</b> , 1478, 20		

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| 4 | Modeling and in-situ observation of mechanical resonances in single, vertically-oriented carbon nanofibers. <i>Journal of Nanoscience and Nanotechnology</i> , <b>2010</b> , 10, 6388-94   | 1.3 |
| 3 | Characterization of Electronic Properties of Two-dimensional Refractory Selenides and Tellurides. <i>MRS Advances</i> , <b>2016</b> , 1, 3229-3234   | 0.7 |
| 2 | Solution-based Production of 2D-layered Materials. <i>MRS Advances</i> , <b>2016</b> , 1, 2267-2272  | 0.7 |
| 1 | Photocurrent Generation Mechanisms in Molybdenum-Contacted Semiconducting Black Phosphorus and Contributions from the Photobolometric Effect. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2021</b> , 218, 2100196 | 1.6 |