Sanjay K Behura

List of Publications by Year
in descending order

45 papers	942 citations	471509 17 h-index	454955 30 g-index
45 all docs	45 docs citations	45 times ranked	1736 citing authors

#	Article	IF	Citations
1	Large-Area, Transfer-Free, Oxide-Assisted Synthesis of Hexagonal Boron Nitride Films and Their Heterostructures with MoS₂ and WS₂. Journal of the American Chemical Society, 2015, 137, 13060-13065.	13.7	110
2	Grapheneâ€“semiconductor heterojunction sheds light on emerging photovoltaics. Nature Photonics, 2019, 13, 312-318.	31.4	94
3	Biomolecular photosensitizers for dye-sensitized solar cells: Recent developments and critical insights. Renewable and Sustainable Energy Reviews, 2020, 121, 109678.	16.4	91
4	Junction characteristics of chemically-derived graphene/p-Si heterojunction solar cell. Carbon, 2014, 67, 766-774.	10.3	58
5	Highly Efficient Osmotic Energy Harvesting in Charged Boronâ€Nitrideâ€Nanopore Membranes. Advanced Functional Materials, 2021, 31, 2009586.	14.9	52
6	Introduction of Protonated Sites on Exfoliated, Large-Area Sheets of Hexagonal Boron Nitride. ACS Nano, 2018, 12, 9931-9939.	14.6	48
7	Anode supported solid oxide fuel cells (SOFC) by electrophoretic deposition. International Journal of Hydrogen Energy, 2011, 36, 14930-14935.	7.1	41
8	Retained Carrier-Mobility and Enhanced Plasmonic-Photovoltaics of Graphene via ring-centered Î·⁶ Functionalization and Nanointerfacing. Nano Letters, 2017, 17, 4381-4389.	9.1	39
9	Confined, Oriented, and Electrically Anisotropic Graphene Wrinkles on Bacteria. ACS Nano, 2016, 10, 8403-8412.	14.6	35
10	Chemical Interaction-Guided, Metal-Free Growth of Large-Area Hexagonal Boron Nitride on Silicon-Based Substrates. ACS Nano, 2017, 11, 4985-4994.	14.6	30
11	Interfacial Nondegenerate Doping of MoS2and Other Two-Dimensional Semiconductors. ACS Nano, 2015, 9, 2227-2230.	14.6	29
12	Cuboctahedral stability in Titanium halide perovskites via machine learning. Computational Materials Science, 2020, 173, 109415.	3.0	23
13	Vertically oriented few-layer graphene as an electron field-emitter. Physica Status Solidi (A) Applications and Materials Science, 2013, 210, 1817-1821.	1.8	22
14	WS2/Silicon Heterojunction Solar Cells: A CVD Process for the Fabrication of WS2 Films on p-Si Substrates for Photovoltaic and Spectral Responses. IEEE Nanotechnology Magazine, 2017, 11, 33-38.	1.3	21
15	Direct growth of hexagonal boron nitride on non-metallic substrates and its heterostructures with graphene. IScience, 2021, 24, 103374.	4.1	19
16	Electrical Transport and Network Percolation in Graphene and Boron Nitride Mixed-Platelet Structures. ACS Applied Materials & Interfaces, 2016, 8, 8721-8727.	8.0	18
17	Graphene, conducting polymer and their composites as transparent and current spreading electrode in GaN solar cells. Superlattices and Microstructures, 2016, 92, 366-373.	3.1	17
18	WS₂-induced enhanced optical absorption and efficiency in graphene/silicon heterojunction photovoltaic cells. Nanoscale, 2018, 10, 20218-20225.	5.6	17

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19	MoirÃ© physics in twisted van der Waals heterostructures of 2D materials. Emergent Materials, 2021, 4, 813-826.	5.7	17
20	Theoretical simulation of photovoltaic response of graphene-on-semiconductors. Applied Physics A: Materials Science and Processing, 2013, 111, 1159-1163.	2.3	16
21	Metal/InGaN Schottky junction solar cells: an analytical approach. Applied Physics A: Materials Science and Processing, 2015, 118, 1459-1468.	2.3	13
22	Temperature dependent device characteristics of graphene/h-BN/Si heterojunction. Semiconductor Science and Technology, 2020, 35, 075020.	2.0	12
23	Optimizing Performance Parameters of Chemically-Derived Graphene/<I>p</I>-Si Heterojunction Solar Cell. Journal of Nanoscience and Nanotechnology, 2015, 15, 4877-4882.	0.9	11
24	Intergrain Diffusion of Carbon Radical for Wafer-Scale, Direct Growth of Graphene on Silicon-Based Dielectrics. ACS Applied Materials & Interfaces, 2018, 10, 26517-26525.	8.0	11
25	Fabrication of Bi-Layer Graphene and Theoretical Simulation for Its Possible Application in Thin Film Solar Cell. Journal of Nanoscience and Nanotechnology, 2014, 14, 3022-3027.	0.9	9
26	Electric-Field-Induced Phase Change in Copper Oxide Nanostructures. ACS Omega, 2021, 6, 33130-33140.	3.5	8
27	Graphene as transparent and current spreading electrode in silicon solar cell. AIP Advances, 2014, 4, 117111.	1.3	7
28	Catalyst-free synthesis of silicon nanowires by oxidation and reduction process. Journal of Materials Science, 2014, 49, 3592-3597.	3.7	7
29	Organophilicity of Graphene Oxide for Enhanced Wettability of ZnO Nanorods. ACS Applied Materials & Interfaces, 2020, 12, 39772-39780.	8.0	7
30	A study on the 2D simulation of Pt/InGaN/GaN/metal Schottky junction solar cell. Semiconductor Science and Technology, 2013, 28, 055012.	2.0	6
31	Flexible polymer-multiwall carbon nanotubes composite developed by in situ polymerization technique. Polymer Composites, 2016, 37, 2860-2870.	4.6	6
32	Development of photovoltaic solar cells based on heterostructure of layered materials: challenges and opportunities. Emergent Materials, 2021, 4, 881-900.	5.7	6
33	Transparent Conductive Multiwall Carbon Nanotubes-Polymer Composite for Electrode Applications. Journal of Nanoscience and Nanotechnology, 2014, 14, 2816-2822.	0.9	5
34	p-GaN/i-In $$_mathrm{x }$$ x Ga1 $$_mathrm{x }$$ x N/n-GaN solar cell with indium compositional grading. Optical and Quantum Electronics, 2015, 47, 1117-1126.	3.3	5
35	Photovoltaic and impedance spectroscopic characteristics of heterojunction of graphene-PEDOT:PSS composite and n-silicon prepared via solution-based process. Materials Research Innovations, 2017, 21, 263-268.	2.3	5
36	Photo-organometallic, Nanoparticle Nucleation on Graphene for Cascaded Doping. ACS Nano, 2019, 13, 12929-12938.	14.6	5

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37	Perovskite semiconductor-engineered cascaded molecular energy levels in naturally-sensitized photoanodes. Renewable and Sustainable Energy Reviews, 2021, 151, 111606.	16.4	5
38	Chemical Vapor Deposited Few-Layer Graphene as an Electron Field Emitter. Journal of Nanoscience and Nanotechnology, 2016, 16, 287-295.	0.9	4
39	Electrical Characteristics of Horizontally and Vertically Oriented Few-Layer Graphene on Si-Based Dielectrics. Journal of Nanoscience and Nanotechnology, 2016, 16, 6246-6251.	0.9	3
40	Preface on:â€œChallenges and Opportunities for 2D Materials and Heterostructure Devicesâ€• Emergent Materials, 2021, 4, 811-812.	5.7	3
41	The effect of indium composition on open-circuit voltage of InGaN thin-film solar cell: An analytical and computer simulation study. , 2012, , .		2
42	Nanoscience and Nanotechnology for Food and Agroforestry. ES Food & Agroforestry, 2021, , .	1.3	2
43	MXene: A Non-oxide Next-Generation Energy Storage Materials for Batteries and Supercapacitors. Materials Horizons, 2021, , 73-98.	0.6	2
44	CHAPTER 8. Highly Efficient Dye-sensitized Solar Cells with Integrated 3D Graphene-based Materials. Chemistry in the Environment, 2021, , 205-236.	0.4	1
45	Fabrication of multiple layer graphene films on Cuâ•SiO[sub 2]â•Si substrate by hot-filament chemical vapor deposition. , 2013, , .		0