

Sayan Bayan

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.

39
papers

580
citations

14
h-index

22
g-index

42
ext. papers

695
ext. citations

4.4
avg, IF

4.3
L-index

#	Paper	IF	Citations
39	Interface engineered silver nanoparticles decorated g-C ₃ N ₄ nanosheets for textile based triboelectric nanogenerators as wearable power sources. <i>Nano Energy</i> , 2022 , 94, 106928	17.1	6
38	Nanoceutical Fabric Prevents COVID-19 Spread through Expelled Respiratory Droplets: A Combined Computational, Spectroscopic, and Antimicrobial Study. <i>ACS Applied Bio Materials</i> , 2021 , 4, 5471-5484	4.1	7
37	Development of Triboelectroceutical Fabrics for Potential Applications in Self-Sanitizing Personal Protective Equipment.. <i>ACS Applied Bio Materials</i> , 2021 , 4, 5485-5493	4.1	1
36	2D WS embedded PVDF nanocomposites for photosensitive piezoelectric nanogenerators with a colossal energy conversion efficiency of ~25.6. <i>Nanoscale</i> , 2021 , 13, 15819-15829	7.7	7
35	Boron Carbonitride Nanosheet/ZnO Nanorod Heterojunctions for White-Light Emission. <i>ACS Applied Nano Materials</i> , 2021 , 4, 8572-8585	5.6	1
34	Superior Performance Self-Powered Photodetectors Utilizing the Piezo-Phototronic Effect in SnO Nanosheet/ZnO Nanorod Hybrid Heterojunctions. <i>ACS Applied Electronic Materials</i> , 2020 , 2, 1716-1723	4	10
33	Nanoengineered Conductive Polyaniline Enabled Sensor for Sensitive Humidity Detection. <i>IEEE Sensors Journal</i> , 2020 , 20, 12574-12581	4	8
32	Self-powered flexible photodetectors based on Ag nanoparticle-loaded g-CN nanosheets and PVDF hybrids: role of plasmonic and piezoelectric effects. <i>Nanotechnology</i> , 2020 , 31, 365401	3.4	13
31	Flexible Biomechanical Energy Harvesters with Colossal Piezoelectric Output (~2.07 V/kPa) Based on Transition Metal Dichalcogenides-Poly(vinylidene fluoride) Nanocomposites. <i>ACS Applied Electronic Materials</i> , 2020 , 2, 3327-3335	4	5
30	Two-dimensional graphitic carbon nitride nanosheets: a novel platform for flexible, robust and optically active triboelectric nanogenerators. <i>Nanoscale</i> , 2020 , 12, 21334-21343	7.7	7
29	Faster Resonance Energy Transfer Mediated Charge Separation in Plasmonic 2D/1D Hybrid Heterojunctions of Ag/C ₃ N ₄ /ZnO for Enhanced Photodetection. <i>ACS Applied Nano Materials</i> , 2019 , 2, 3848-3856	5.6	17
28	Plasmon mediated enhancement of visible light emission of Au-ZnO nanocomposites. <i>Journal of Luminescence</i> , 2018 , 194, 15-21	3.8	17
27	Rectification and Amplification of Ionic Current in Planar Graphene/Graphene-Oxide Junctions: An Electrochemical Diode and Transistor. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 11378-11384	3.8	5
26	Piezo-phototronic mediated enhanced photodetection characteristics of plasmonic Au-g-CN/CdS/ZnO based hybrid heterojunctions on a flexible platform. <i>Nanoscale</i> , 2018 , 10, 19203-19217	7.7	21
25	Highly Luminescent WS Quantum Dots/ZnO Heterojunctions for Light Emitting Devices. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 558-565	9.5	75
24	Plasmon mediated enhancement and tuning of optical emission properties of two dimensional graphitic carbon nitride nanosheets. <i>Nanotechnology</i> , 2017 , 28, 485204	3.4	9
23	Origin of Modified Luminescence Response in Reduced Graphitic Carbon Nitride Nanosheets. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 19383-19391	3.8	25

22	White light emission characteristics of two dimensional graphitic carbon nitride and ZnO nanorod hybrid heterojunctions. <i>Carbon</i> , 2016 , 108, 335-342	10.4	54
21	Narrowing of band gap and effective charge carrier separation in oxygen deficient TiO ₂ nanotubes with improved visible light photocatalytic activity. <i>Journal of Colloid and Interface Science</i> , 2016 , 465, 1-10	9.3	45
20	Modified photoluminescence and photodetection characteristics of chemically grown SnO coated ZnO nanoneedles. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2016 , 34, 061201	1.3	1
19	A comprehensive secondary ion mass spectrometry analysis of ZnO nanowalls: Correlation to photocatalytic responses. <i>Journal of Applied Physics</i> , 2015 , 117, 095304	2.5	6
18	ZnS nanoparticle decorated ZnO nanowall network: investigation through electron microscopy and secondary ion mass spectrometry. <i>Surface and Interface Analysis</i> , 2015 , 47, 37-44	1.5	5
17	Defect-dominated optical emission and enhanced ultraviolet photoconductivity properties of ZnO nanorods synthesized by simple and catalyst-free approach. <i>Applied Physics A: Materials Science and Processing</i> , 2014 , 115, 1193-1203	2.6	19
16	Efficient UV photosensitive and photoluminescence properties of sol-gel derived Sn doped ZnO nanostructures. <i>Sensors and Actuators A: Physical</i> , 2014 , 211, 8-14	3.9	50
15	Enhanced vacuum-photoconductivity of chemically synthesized ZnO nanostructures. <i>Philosophical Magazine</i> , 2014 , 94, 914-924	1.6	6
14	Secondary ion mass spectrometry and photoluminescence study on microstructural characteristics of chemically synthesized ZnO nanowalls. <i>Applied Surface Science</i> , 2014 , 303, 233-240	6.7	17
13	Enhancement of persistent photoconductivity of ZnO nanorods under polyvinyl alcohol encapsulation. <i>Materials Science in Semiconductor Processing</i> , 2014 , 24, 200-207	4.3	12
12	Significant Fowler-Nordheim tunneling across ZnO Nanorod based nanojunctions for nanoelectronic device applications. <i>Current Applied Physics</i> , 2013 , 13, 705-709	2.6	6
11	Fragmentation of elongated-shaped ZnO nanostructures into spherical particles by swift ion impact. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2013 , 54, 288-294	3	6
10	ZnO nanorod-based UV photodetection and the role of persistent photoconductivity. <i>Philosophical Magazine</i> , 2012 , 92, 3909-3919	1.6	13
9	Unusual Rectifying Response of Nanojunctions Using Randomly Oriented Nanorods (RON) of ZnO Irradiated with 80-MeV Oxygen Ions. <i>Journal of Electronic Materials</i> , 2012 , 41, 1955-1961	1.9	2
8	Defect mediated optical emission of randomly oriented ZnO nanorods and unusual rectifying behavior of Schottky nanojunctions. <i>Journal of Applied Physics</i> , 2011 , 110, 054316	2.5	39
7	Peacock feather supported self assembled ZnO nanostructures for tuning photonic properties. <i>European Physical Journal D</i> , 2011 , 61, 463-468	1.3	2
6	Interplay of native defect-related photoluminescence response of ZnO nanosticks subjected to 80 keV Ar ion irradiation. <i>Radiation Effects and Defects in Solids</i> , 2011 , 166, 884-893	0.9	2
5	Effect of 80-MeV nitrogen ion irradiation on ZnO nanoparticles: Mechanism of selective defect related radiative emission features. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2011 , 269, 374-379	1.2	18

4	Directed growth characteristics and optoelectronic properties of Eu-doped ZnO nanorods and urchins. <i>Journal of Applied Physics</i> , 2010 , 108, 023512	2.5	18
3	Role of cohesive energy on the interparticle coalescence behavior of dispersed nanoparticles subjected to energetic ion irradiation. <i>Journal of Materials Research</i> , 2010 , 25, 814-820	2.5	6
2	Development of Tb-doped ZnO nanorods: Effect of nitrogen ion irradiation on luminescence and structural evolution. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2010 , 207, 1859-1863	1.6	17
1	Nanocetical Fabric Prevents COVID-19 Spread through Expelled Respiratory Droplets: A Combined Computational, Spectroscopic and Anti-microbial Study		2