Sayan Bayan

List of Publications by Year
in descending order

40	848	430442 18	500791 28
papers	citations	h-index	g-index

42	42	42	1219
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Highly Luminescent WS₂ Quantum Dots/ZnO Heterojunctions for Light Emitting Devices. ACS Applied Materials & Interfaces, 2017, 9, 558-565.	4.0	99
2	White light emission characteristics of two dimensional graphitic carbon nitride and ZnO nanorod hybrid heterojunctions. Carbon, 2016, 108, 335-342.	5.4	67
3	Efficient UV photosensitive and photoluminescence properties of solâ€“gel derived Sn doped ZnO nanostructures. Sensors and Actuators A: Physical, 2014, 211, 8-14.	2.0	60
4	Narrowing of band gap and effective charge carrier separation in oxygen deficient TiO 2 nanotubes with improved visible light photocatalytic activity. Journal of Colloid and Interface Science, 2016, 465, 1-10.	5.0	60
5	Defect mediated optical emission of randomly oriented ZnO nanorods and unusual rectifying behavior of Schottky nanojunctions. Journal of Applied Physics, 2011, 110, 054316.	1.1	43
6	Interface engineered silver nanoparticles decorated g-C3N4 nanosheets for textile based triboelectric nanogenerators as wearable power sources. Nano Energy, 2022, 94, 106928.	8.2	39
7	Origin of Modified Luminescence Response in Reduced Graphitic Carbon Nitride Nanosheets. Journal of Physical Chemistry C, 2017, 121, 19383-19391.	1.5	33
8	Self-powered flexible photodetectors based on Ag nanoparticle-loaded g-C₃N₄ nanosheets and PVDF hybrids: role of plasmonic and piezoelectric effects. Nanotechnology, 2020, 31, 365401.	1.3	32
9	Piezo-phototronic mediated enhanced photodetection characteristics of plasmonic Au-g-C₃N₄/CdS/ZnO based hybrid heterojunctions on a flexible platform. Nanoscale, 2018, 10, 19203-19211.	2.8	30
10	Two-dimensional graphitic carbon nitride nanosheets: a novel platform for flexible, robust and optically active triboelectric nanogenerators. Nanoscale, 2020, 12, 21334-21343.	2.8	29
11	Defect-dominated optical emission and enhanced ultraviolet photoconductivity properties of ZnO nanorods synthesized by simple and catalyst-free approach. Applied Physics A: Materials Science and Processing, 2014, 115, 1193-1203.	1.1	26
12	2D WS₂ embedded PVDF nanocomposites for photosensitive piezoelectric nanogenerators with a colossal energy conversion efficiency of â¼25.6%. Nanoscale, 2021, 13, 15819-15829.	2.8	26
13	Secondary ion mass spectrometry and photoluminescence study on microstructural characteristics of chemically synthesized ZnO nanowalls. Applied Surface Science, 2014, 303, 233-240.	3.1	22
14	FÃ¶rster Resonance Energy Transfer Mediated Charge Separation in Plasmonic 2D/1D Hybrid Heterojunctions of Agâ€“C₃N₄/ZnO for Enhanced Photodetection. ACS Applied Nano Materials, 2019, 2, 3848-3856.	2.4	22
15	Directed growth characteristics and optoelectronic properties of Eu-doped ZnO nanorods and urchins. Journal of Applied Physics, 2010, 108, .	1.1	20
16	Effect of 80-MeV nitrogen ion irradiation on ZnO nanoparticles: Mechanism of selective defect related radiative emission features. Nuclear Instruments & Methods in Physics Research B, 2011, 269, 374-379.	0.6	20
17	Plasmon mediated enhancement of visible light emission of Au-ZnO nanocomposites. Journal of Luminescence, 2018, 194, 15-21.	1.5	19
18	Development of Tbâ€doped ZnO nanorods: Effect of nitrogen ion irradiation on luminescence and structural evolution. Physica Status Solidi (A) Applications and Materials Science, 2010, 207, 1859-1863.	0.8	18

#	Article	IF	Citations
19	ZnO nanorod-based UV photodetection and the role of persistent photoconductivity. Philosophical Magazine, 2012, 92, 3909-3919.	0.7	18
20	Superior Performance Self-Powered Photodetectors Utilizing the Piezo-Phototronic Effect in SnO Nanosheet/ZnO Nanorod Hybrid Heterojunctions. ACS Applied Electronic Materials, 2020, 2, 1716-1723.	2.0	18
21	Nanoceutical Fabric Prevents COVID-19 Spread through Expelled Respiratory Droplets: A Combined Computational, Spectroscopic, and Antimicrobial Study. ACS Applied Bio Materials, 2021, 4, 5471-5484.	2.3	17
22	Flexible Biomechanical Energy Harvesters with Colossal Piezoelectric Output (â¼2.07 V/kPa) Based on Transition Metal Dichalcogenides-Poly(vinylidene fluoride) Nanocomposites. ACS Applied Electronic Materials, 2020, 2, 3327-3335.	2.0	15
23	Enhancement of persistent photoconductivity of ZnO nanorods under polyvinyl alcohol encapsulation. Materials Science in Semiconductor Processing, 2014, 24, 200-207.	1.9	14
24	Plasmon mediated enhancement and tuning of optical emission properties of two dimensional graphitic carbon nitride nanosheets. Nanotechnology, 2017, 28, 485204.	1.3	12
25	Nanoengineered Conductive Polyaniline Enabled Sensor for Sensitive Humidity Detection. IEEE Sensors Journal, 2020, 20, 12574-12581.	2.4	12
26	Enhanced vacuum-photoconductivity of chemically synthesized ZnO nanostructures. Philosophical Magazine, 2014, 94, 914-924.	0.7	10
27	A comprehensive secondary ion mass spectrometry analysis of ZnO nanowalls: Correlation to photocatalytic responses. Journal of Applied Physics, 2015, 117, .	1.1	9
28	ZnS nanoparticle decorated ZnO nanowall network: investigation through electron microscopy and secondary ion mass spectrometry. Surface and Interface Analysis, 2015, 47, 37-44.	0.8	8
29	Fragmentation of elongated-shaped ZnO nanostructures into spherical particles by swift ion impact. Physica E: Low-Dimensional Systems and Nanostructures, 2013, 54, 288-294.	1.3	7
30	Role of cohesive energy on the interparticle coalescence behavior of dispersed nanoparticles subjected to energetic ion irradiation. Journal of Materials Research, 2010, 25, 814-820.	1.2	6
31	Significant Fowlerâ€“Nordheim tunneling across ZnO â€“ Nanorod based nanojunctions for nanoelectronic device applications. Current Applied Physics, 2013, 13, 705-709.	1.1	6
32	Rectification and Amplification of Ionic Current in Planar Graphene/Graphene-Oxide Junctions: An Electrochemical Diode and Transistor. Journal of Physical Chemistry C, 2018, 122, 11378-11384.	1.5	6
33	Boron Carbonitride Nanosheet/ZnO Nanorod Heterojunctions for White-Light Emission. ACS Applied Nano Materials, 2021, 4, 8572-8585.	2.4	6
34	Peacock feather supported self assembled ZnO nanostructures for tuning photonic properties. European Physical Journal D, 2011, 61, 463-468.	0.6	5
35	Modified photoluminescence and photodetection characteristics of chemically grown SnO coated ZnO nanoneedles. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2016, 34, .	0.6	3
36	Interplay of native defect-related photoluminescence response of ZnO nanosticks subjected to 80ÂkeV Ar ion irradiation. Radiation Effects and Defects in Solids, 2011, 166, 884-893.	0.4	2

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37	Unusual Rectifying Response of Nanojunctions Using Randomly Oriented Nanorods (RON) of ZnO Irradiated with 80-MeV Oxygen Ions. Journal of Electronic Materials, 2012, 41, 1955-1961.	1.0	2
38	Development of Triboelectroceutical Fabrics for Potential Applications in Self-Sanitizing Personal Protective Equipment. ACS Applied Bio Materials, 2021, 4, 5485-5493.	2.3	2
39	Functionalized Two-Dimensional Carbon Nitride Nanodots Detect and Reverse Lead Toxicity in the Physiological Milieu. ACS Applied Materials & Interfaces, 2022, 14, 27002-27012.	4.0	2
40	Crystallographic, luminescence and photoconductive characteristics of chemically tailored ZnO nanorods. , 2014, , .		1