

Sai-Anand Gopalan

List of Publications by Year in descending order

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77
papers

2,419
citations

186209

28
h-index

223716

46
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78
all docs

78
docs citations

78
times ranked

3037
citing authors

#	ARTICLE	IF	CITATIONS
1	Functionalized conjugated polymers for sensing and molecular imprinting applications. <i>Progress in Polymer Science</i> , 2019, 88, 1-129.	11.8	173
2	Tin oxide for optoelectronic, photovoltaic and energy storage devices: a review. <i>Journal of Materials Chemistry A</i> , 2021, 9, 16621-16684.	5.2	146
3	Recent Progress on the Sensing of Pathogenic Bacteria Using Advanced Nanostructures. <i>Bulletin of the Chemical Society of Japan</i> , 2019, 92, 216-244.	2.0	108
4	Tailored PEDOT:PSS hole transport layer for higher performance in perovskite solar cells: Enhancement of electrical and optical properties with improved morphology. <i>Journal of Energy Chemistry</i> , 2020, 44, 41-50.	7.1	105
5	Direct electrochemistry of cytochrome c immobilized on titanium nitride/multi-walled carbon nanotube composite for amperometric nitrite biosensor. <i>Biosensors and Bioelectronics</i> , 2016, 79, 543-552.	5.3	100
6	Functional solid additive modified PEDOT:PSS as an anode buffer layer for enhanced photovoltaic performance and stability in polymer solar cells. <i>Scientific Reports</i> , 2017, 7, 45079.	1.6	98
7	Efficient visible-light-driven photocatalytic degradation of nitrophenol by using graphene-encapsulated TiO ₂ nanowires. <i>Journal of Hazardous Materials</i> , 2015, 283, 400-409.	6.5	80
8	Fabrication of horseradish peroxidase immobilized poly(N-[3-(trimethoxy silyl)propyl]aniline) gold nanorods film modified electrode and electrochemical hydrogen peroxide sensing. <i>Electrochimica Acta</i> , 2013, 92, 71-78.	2.6	64
9	Nanodiamond based sponges with entrapped enzyme: A novel electrochemical probe for hydrogen peroxide. <i>Biosensors and Bioelectronics</i> , 2013, 46, 136-141.	5.3	62
10	Energy-efficient MAC protocols for wireless body area networks: Survey. , 2010, , .		61
11	Highly sensitive voltammetric immunosensor for the detection of prostate specific antigen based on silver nanoprobe assisted graphene oxide modified screen printed carbon electrode. <i>Talanta</i> , 2020, 208, 120389.	2.9	61
12	Non-Enzymatic Amperometric Glucose Sensor Based on Carbon Nanodots and Copper Oxide Nanocomposites Electrode. <i>Sensors</i> , 2020, 20, 808.	2.1	59
13	Mixed Copper/Copper Oxide Anchored Mesoporous Fullerene Nanohybrids as Superior Electrocatalysts toward Oxygen Reduction Reaction. <i>Small</i> , 2020, 16, e1903937.	5.2	58
14	Efficient exciton generation in atomic passivated CdSe/ZnS quantum dots light-emitting devices. <i>Scientific Reports</i> , 2016, 6, 34659.	1.6	54
15	Current advancements on charge selective contact interfacial layers and electrodes in flexible hybrid perovskite photovoltaics. <i>Journal of Energy Chemistry</i> , 2021, 54, 151-173.	7.1	51
16	A new optical-electrical integrated buffer layer design based on gold nanoparticles tethered thiol containing sulfonated polyaniline towards enhancement of solar cell performance. <i>Solar Energy Materials and Solar Cells</i> , 2018, 174, 112-123.	3.0	50
17	Highly ordered iron oxide-mesoporous fullerene nanocomposites for oxygen reduction reaction and supercapacitor applications. <i>Microporous and Mesoporous Materials</i> , 2019, 285, 21-31.	2.2	50
18	Recent Advances in Functionalized Nanoporous Carbons Derived from Waste Resources and Their Applications in Energy and Environment. <i>Advanced Sustainable Systems</i> , 2021, 5, .	2.7	49

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19	Low dark current and improved detectivity of hybrid ultraviolet photodetector based on carbon-quantum-dots/zinc-oxide-nanorod composites. <i>Organic Electronics</i> , 2016, 39, 250-257.	1.4	45
20	Recent Progress in the Abatement of Hazardous Pollutants Using Photocatalytic TiO ₂ -Based Building Materials. <i>Nanomaterials</i> , 2020, 10, 1854.	1.9	44
21	Direct electrochemistry of cytochrome c with three-dimensional nanoarchitected multicomponent composite electrode and nitrite biosensing. <i>Sensors and Actuators B: Chemical</i> , 2016, 228, 737-747.	4.0	42
22	Photocatalytic Water Splitting Utilizing Electrospun Semiconductors for Solar Hydrogen Generation: Fabrication, Modification and Performance. <i>Bulletin of the Chemical Society of Japan</i> , 2021, 94, 8-20.	2.0	42
23	Additive assisted morphological optimization of photoactive layer in polymer solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2018, 182, 246-254.	3.0	39
24	Preparation of Visible Light Photocatalytic Graphene Embedded Rutile Titanium(IV) Oxide Composite Nanowires and Enhanced NO _x Removal. <i>Catalysts</i> , 2019, 9, 170.	1.6	39
25	Efficient Plastic Recycling and Remolding Circular Economy Using the Technology of Trust-Blockchain. <i>Sustainability</i> , 2021, 13, 9142.	1.6	38
26	Polyethylene Glycol Coated Magnetic Nanoparticles: Hybrid Nanofluid Formulation, Properties and Drug Delivery Prospects. <i>Nanomaterials</i> , 2021, 11, 440.	1.9	34
27	Mild wetting poor solvent induced hydrogen bonding interactions for improved performance in bulk heterojunction solar cells. <i>Journal of Materials Chemistry A</i> , 2014, 2, 2174-2186.	5.2	33
28	A futuristic strategy to influence the solar cell performance using fixed and mobile dopants incorporated sulfonated polyaniline based buffer layer. <i>Solar Energy Materials and Solar Cells</i> , 2015, 141, 275-290.	3.0	32
29	Electrostatic nanoassembly of contact interfacial layer for enhanced photovoltaic performance in polymer solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2016, 153, 148-163.	3.0	31
30	Facile synthesis of functionalized graphene-palladium nanoparticle incorporated multicomponent TiO ₂ composite nanofibers. <i>Materials Chemistry and Physics</i> , 2015, 154, 125-136.	2.0	27
31	Manganese and Graphene Included Titanium Dioxide Composite Nanowires: Fabrication, Characterization and Enhanced Photocatalytic Activities. <i>Nanomaterials</i> , 2020, 10, 456.	1.9	27
32	Low Dark-Current, High Current-Gain of PVK/ZnO Nanoparticles Composite-Based UV Photodetector by PN-Heterojunction Control. <i>Sensors</i> , 2016, 16, 74.	2.1	26
33	Development of a surface plasmon assisted label-free calorimetric method for sensitive detection of mercury based on functionalized gold nanorods. <i>Journal of Analytical Atomic Spectrometry</i> , 2013, 28, 488.	1.6	25
34	Nanoscale control of grain boundary potential barrier, dopant density and filled trap state density for higher efficiency perovskite solar cells. <i>Information Materials</i> , 2020, 2, 409-423.	8.5	25
35	Preparation of new self-humidifying composite membrane by incorporating graphene and phosphotungstic acid into sulfonated poly(ether ether ketone) film. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 17162-17177.	3.8	24
36	Pyridine-based additive optimized P3HT:PC61BM nanomorphology for improved performance and stability in polymer solar cells. <i>Applied Surface Science</i> , 2019, 484, 825-834.	3.1	22

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37	Preheated solvent exposure on P3HT:PCBM thin film: A facile strategy to enhance performance in bulk heterojunction photovoltaic cells. <i>Current Applied Physics</i> , 2014, 14, 1443-1450.	1.1	21
38	Improving Photovoltaic Properties of P3HT:IC60BA through the Incorporation of Small Molecules. <i>Polymers</i> , 2018, 10, 121.	2.0	20
39	Response Characterization of a Fiber Optic Sensor Array with Dye-Coated Planar Waveguide for Detection of Volatile Organic Compounds. <i>Sensors</i> , 2014, 14, 11659-11671.	2.1	19
40	All-solution-processed high-brightness hybrid white quantum-dot light-emitting devices utilizing polymer modified quantum dots. <i>Organic Electronics</i> , 2017, 42, 393-398.	1.4	19
41	Effective decoupling of seebeck coefficient and the electrical conductivity through isovalent substitution of erbium in bismuth selenide thermoelectric material. <i>Journal of Alloys and Compounds</i> , 2021, 857, 157559.	2.8	18
42	Improving Air-Stability and Performance of Bulk Heterojunction Polymer Solar Cells Using Solvent Engineered Hole Selective Interlayer. <i>Materials</i> , 2018, 11, 1143.	1.3	17
43	One Pot Synthesis of New Gold Nanoparticles Dispersed Poly(2-aminophenyl boronic acid) Composites for Fabricating an Affinity Based Electrochemical Detection of Glucose. <i>Science of Advanced Materials</i> , 2014, 6, 1356-1364.	0.1	17
44	Conducting polymer based visible light photocatalytic composites for pollutant removal: Progress and prospects. <i>Environmental Technology and Innovation</i> , 2022, 28, 102698.	3.0	16
45	Solution Processable CdSe/ZnS Quantum Dots Light-Emitting Diodes Using ZnO Nanocrystal as Electron Transport Layer. <i>Journal of Nanoscience and Nanotechnology</i> , 2015, 15, 7416-7420.	0.9	15
46	A β -cyclodextrin Modified Graphitic Carbon Nitride with Au Co-Catalyst for Efficient Photocatalytic Hydrogen Peroxide Production. <i>Nanomaterials</i> , 2020, 10, 1969.	1.9	15
47	An energy-efficient configuration management for multi-hop wireless body area networks. , 2010, , .		13
48	A Comparative Evaluation of Physicochemical Properties and Photocatalytic Efficiencies of Cerium Oxide and Copper Oxide Nanofluids. <i>Catalysts</i> , 2020, 10, 34.	1.6	13
49	Facile Fabrication of Metal Oxide Based Catalytic Electrodes by AC Plasma Deposition and Electrochemical Detection of Hydrogen Peroxide. <i>Catalysts</i> , 2019, 9, 888.	1.6	12
50	Materials Design and Optimization for Next-Generation Solar Cell and Light-Emitting Technologies. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 4638-4657.	2.1	12
51	Optimization and modeling of efficient photocatalytic TiO ₂ -ZnO composite preparation parameters by response surface methodology. <i>Journal of Environmental Chemical Engineering</i> , 2021, 9, 106417.	3.3	12
52	A survey on power-efficient MAC protocols for wireless body area networks. , 2010, , .		11
53	Fabrication of Gold Nanoflower Anchored Conducting Polymer Hybrid Film Electrode by Pulse Potentiostatic Deposition. <i>IEEE Electron Device Letters</i> , 2013, 34, 1065-1067.	2.2	11
54	Efficient Photocatalytic Degradation of Gaseous Benzene and Toluene over Novel Hybrid PIL@TiO ₂ /m-GO Composites. <i>Catalysts</i> , 2021, 11, 126.	1.6	11

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55	Rapid and Sensitive Detection of Lung Cancer Biomarker Using Nanoporous Biosensor Based on Localized Surface Plasmon Resonance Coupled with Interferometry. <i>Journal of Nanomaterials</i> , 2015, 2015, 1-11.	1.5	10
56	Au-Polypyrrole Framework Nanostructures for Improved Localized Surface Plasmon Resonance Volatile Organic Compounds Gas Sensing. <i>Journal of Nanoscience and Nanotechnology</i> , 2015, 15, 7738-7742.	0.9	10
57	Enhancing the Photovoltaic Performance of Polymer Solar Cells by Manipulating Photoactive/Metal Interface. <i>Journal of Nanoscience and Nanotechnology</i> , 2017, 17, 8024-8030.	0.9	10
58	Mesoporous Carbons with Hexagonally Ordered Pores Prepared from Carbonated Soft-Drink for CO ₂ Capture at High Pressure. <i>Journal of Nanoscience and Nanotechnology</i> , 2018, 18, 7830-7837.	0.9	10
59	Employing PCBDPP as an Efficient Donor Polymer for High Performance Ternary Polymer Solar Cells. <i>Polymers</i> , 2019, 11, 1423.	2.0	9
60	Facile Electrodeposition of Flower Like Gold Nanostructures on a Conducting Polymer Support. <i>Journal of Nanoscience and Nanotechnology</i> , 2014, 14, 3256-3261.	0.9	7
61	Incorporation of Gold Nanodots Into Poly(3,4-ethylenedioxythiophene):Poly(styrene sulfonate) for an Efficient Anode Interfacial Layer for Improved Plasmonic Organic Photovoltaics. <i>Journal of Nanoscience and Nanotechnology</i> , 2015, 15, 7092-7098.	0.9	7
62	p-i-n Structured Semitransparent Perovskite Solar Cells with Solution-Processed Electron Transport Layer. <i>Journal of Electronic Materials</i> , 2021, 50, 5732-5739.	1.0	7
63	Cost-Effective Production of TiO ₂ with 90-Fold Enhanced Photocatalytic Activity Via Facile Sequential Calcination and Ball Milling Post-Treatment Strategy. <i>Materials</i> , 2020, 13, 5072.	1.3	6
64	Enhanced compressive strength of rammed earth walls stabilized with eco-friendly multi-functional polymeric system. <i>Renewable and Sustainable Energy Reviews</i> , 2021, 152, 111681.	8.2	6
65	Hybrid Electrocatalytic Nanocomposites Based on Carbon Nanotubes/Nickel Oxide/Nafion toward an Individual and Simultaneous Determination of Serotonin and Dopamine in Human Serum. <i>Bulletin of the Chemical Society of Japan</i> , 2020, 93, 1393-1400.	2.0	6
66	Enhancement of CdSe/ZnS quantum dot-based LED by core-shell modification. <i>Journal of the Korean Physical Society</i> , 2015, 66, 82-86.	0.3	5
67	New Heterojunction Titanium Dioxide Nanowire as Photocatalyst. <i>Journal of Nanoscience and Nanotechnology</i> , 2015, 15, 7421-7425.	0.9	4
68	Facile Use of Silver Nanoparticles-Loaded Alumina/Silica in Nanofluid Formulations for Enhanced Catalytic Performance toward 4-Nitrophenol Reduction. <i>International Journal of Environmental Research and Public Health</i> , 2021, 18, 2994.	1.2	4
69	Enhanced Performance of Light-Emitting Diodes by Surface Ligand Modification on Quantum Dots. <i>Journal of Nanoscience and Nanotechnology</i> , 2015, 15, 7169-7172.	0.9	3
70	Kinetic Monte Carlo Simulation of Perovskite Solar Cells to Probe Film Coverage and Thickness. <i>Advanced Energy and Sustainability Research</i> , 2021, 2, 2000068.	2.8	3
71	An Organic/Inorganic Nanomaterial and Nanocrystal Quantum Dots-Based Multi-Level Resistive Memory Device. <i>Nanomaterials</i> , 2021, 11, 3004.	1.9	3
72	Interface modification using a post-treatment-free heteropolyacid for effective charge selective bilayer formation in perovskite solar cells. <i>Materials Letters</i> , 2020, 277, 128393.	1.3	2

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73	Development of Novel Electrospun Functional Nanofibrous Mats for Efficient Uranium/Lithium Recovery. <i>Science of Advanced Materials</i> , 2014, 6, 1365-1374.	0.1	2
74	Optical gas sensor based on LSPR using ZnO nanoparticles and AAO nanostructure. , 2015, , .		1
75	Fabrication of a Self-Powered Glucose Sensor Using Carbon Nanotube-Based Nanomesh and Direct Electron Transfer: A Prospective Approach for Energy Harvesting in Sensor Networks. <i>Journal of Nanoelectronics and Optoelectronics</i> , 2010, 5, 129-134.	0.1	1
76	Editorial: Special Issue on "Emerging Nanostructured Catalytic Materials for Energy and Environmental Applications". <i>Catalysts</i> , 2021, 11, 285.	1.6	0
77	Selective Sensing for the Detection of Volatile Organic Compounds Using Optical Fiber Sensor with Dye-Coated Planar Waveguide. <i>Sensor Letters</i> , 2015, 13, 693-696.	0.4	0