Saranya Reddy Shriram

List of Publications by Year
in descending order

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62 papers	713 citations	567281 15 h-index	610901 24 g-index
62 all docs	62 docs citations	62 times ranked	715 citing authors

#	Article	IF	Citations
1	High-performance, long-wave (â^¼10.2â€‰Î¼m) InGaAs/GaAs quantum dot infrared photodetector with quaternary In0.21Al0.21Ga0.58As capping. Applied Physics Letters, 2011, 99, .	3.3	60
2	Nanosurface Energy Transfer Based Highly Selective and Ultrasensitive â€œTurn onâ€•Fluorescence Mercury Sensor. ACS Sensors, 2016, 1, 789-797.	7.8	53
3	Investigation of the structural, electronic, and optical properties of Mn-doped CsPbCl₃: theory and experiment. RSC Advances, 2019, 9, 29556-29565.	3.6	52
4	A multicolor, broadband (5â€“20â€‰Î¼m), quaternary-capped InAs/GaAs quantum dot infrared photodetector. Applied Physics Letters, 2012, 101, .	3.3	47
5	Enhancement in optical characteristics of c-axis-oriented radio frequencyâ€“sputtered ZnO thin films through growth ambient and annealing temperature optimization. Materials Science in Semiconductor Processing, 2017, 66, 1-8.	4.0	33
6	Magneto-optical Kerr effect spectroscopy based study of LandÃ© g-factor for holes in GaAs/AlGaAs single quantum wells under low magnetic fields. Journal of Applied Physics, 2013, 113, .	2.5	28
7	Ultranarrow spectral response of InGaAs QDIPs through the optimization of strain-coupled stacks and capping layer composition. Materials Science in Semiconductor Processing, 2017, 60, 40-44.	4.0	28
8	Development and validation of a noncontact spectroscopic device for hemoglobin estimation at point-of-care. Journal of Biomedical Optics, 2017, 22, 055006.	2.6	19
9	Hydrophobic interpenetrating polyamide-PDMS membranes for desalination, pesticides removal and enhanced chlorine tolerance. Chemosphere, 2020, 258, 127179.	8.2	19
10	Effects of phosphorus implantation time on the optical, structural, and elemental properties of ZnO thin films and its correlation with the 3.31-eV peak. Journal of Alloys and Compounds, 2018, 768, 800-809.	5.5	18
11	Density Modulation of Embedded Nanoparticles via Spatial, Temporal, and Chemical Control Elements. Advanced Materials, 2019, 31, e1901802.	21.0	18
12	Optimization of the Number of Stacks in the Submonolayer Quantum Dot Heterostructure for Infrared Photodetectors. IEEE Nanotechnology Magazine, 2016, 15, 214-219.	2.0	17
13	Evidence of quantum dot size uniformity in strain-coupled multilayered In(Ga)As/GaAs QDs grown with constant overgrowth percentage. Journal of Luminescence, 2017, 192, 562-566.	3.1	17
14	Role of Pzn-2Vzn centre on the luminescence properties of phosphorus doped ZnO thin films by varying doping concentration. Journal of Luminescence, 2018, 200, 120-125.	3.1	17
15	Inversion of activity in DSSC for TiO2 and ZnO photo-anodes depending on the choice of sensitizer and carrier dynamics. Journal of Luminescence, 2019, 207, 169-176.	3.1	17
16	GLAD synthesised erbium doped In2O3 nano-columns for UV detection. Journal of Materials Science: Materials in Electronics, 2019, 30, 12739-12752.	2.2	16
17	Higher performance optoelectronic devices with In0.21Al0.21Ga0.58As/In0.15Ga0.85As capping of III-V quantum dots. Journal of Luminescence, 2019, 210, 75-82.	3.1	16
18	Boosted UV Sensitivity of Er-Doped In2O3 Thin Films Using Plasmonic Ag Nanoparticle-Based Surface Texturing. Plasmonics, 2018, 13, 1105-1113.	3.4	13

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19	DNA Biomaterial Based Fiber Optic Sensor: Characterization and Application for Monitoringinâ€…situMercury Pollution. ChemistrySelect, 2016, 1, 2916-2922.	1.5	12
20	Impact of an In_xGa_{1â€“x}As Capping Layer in Impeding Indium Desorption from Vertically Coupled InAs/GaAs Quantum Dot Interfaces. ACS Applied Nano Materials, 2018, 1, 4317-4331.	5.0	12
21	â€œShape-Codingâ€: Morphology-Based Information System for Polymers and Composites. ACS Applied Materials & Interfaces, 2020, 12, 27555-27561.	8.0	12
22	Effect of annealing temperature on optical and electrical properties of nitrogen implanted p-type ZnMgO thin films. Journal of Materials Science: Materials in Electronics, 2015, 26, 9759-9765.	2.2	11
23	A comprehensive analysis of strain profile in the heterogeneously coupled Stranski-Krastanov (SK) on Submonolayer (SML) quantum dot heterostructures. Journal of Alloys and Compounds, 2020, 847, 156483.	5.5	11
24	Phosphorus doping of ZnO using spinâ€on dopant process: A better choice than costly and destructive ion-implantation technique. Journal of Luminescence, 2021, 233, 117921.	3.1	11
25	Passivation of Surface States of AlGaN Nanowires Using H₃PO₄ Treatment To Enhance the Performance of UV-LEDs and Photoanodes. ACS Applied Nano Materials, 2018, 1, 1968-1975.	5.0	9
26	Theoretical correlation and effect of annealing on the photoresponse of vertically strain-coupled In0.5Ga0.5As/GaAs quantum dot heterostructures. Journal of Applied Physics, 2019, 126, .	2.5	9
27	Vertically Coupled Hybrid InAs Sub-Monolayer on InAs Stranskiâ€“Krastanov Quantum Dot Heterostructure: Toward Next Generation Broadband IR Detection. IEEE Nanotechnology Magazine, 2020, 19, 76-83.	2.0	9
28	AuGe surface plasmon enhances photoluminescence of the InAs/GaAs bilayer quantum dot heterostructure. RSC Advances, 2016, 6, 26908-26913.	3.6	8
29	Ultrafast electronic spectroscopy on the coupling of Stranski-Krastanov and submonolayer quantum dots for potential application in near infrared light harvesting. Materials Research Express, 2019, 6, 085903.	1.6	8
30	Enhancement in structural, elemental and optical properties of boronâ€“phosphorus Co-doped ZnO thin films by high-temperature annealing. Journal of Luminescence, 2021, 238, 118221.	3.1	8
31	InN Nanowires Based Near-Infrared Broadband Optical Detector. IEEE Photonics Technology Letters, 2019, 31, 1526-1529.	2.5	7
32	Enhancing Acceptor-Based Optical Behavior in Phosphorus-Doped ZnO Thin Films Using Boron as Compensating Species. ACS Applied Electronic Materials, 2019, 1, 325-339.	4.3	6
33	In-Situ Tailoring of Vertically Coupled InAs p-i-p Quantum-Dot Infrared Photodetectors: Toward Homogeneous Dot Size Distribution and Minimization of Inâ€“Ga Intermixing. ACS Applied Electronic Materials, 2020, 2, 1243-1253.	4.3	6
34	Hybrid strain-coupled multilayer SK and SML InAs/GaAs quantum dot heterostructure: Enabling higher absorptivity and strain minimization for enhanced optical and structural characteristics. Journal of Luminescence, 2021, 233, 117899.	3.1	6
35	Self-assembled InGaAs/GaAs quantum dot photodetector on germanium substrate. Physica Status Solidi C: Current Topics in Solid State Physics, 2012, 9, 322-325.	0.8	5
36	Bipolar Analog Memristive Switching of In₂O₃ Using Al Nanoparticles. Journal of Nanoscience and Nanotechnology, 2019, 19, 8126-8134.	0.9	5

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37	Broad tunability of emission wavelength by strain coupled InAs/GaAs1â€‰â€“â€‰xSbx quantum dot heterostructures. Journal of Applied Physics, 2019, 126, 154302.	2.5	5
38	Enhanced Performance of In(Ga)As QD Based Optoelectronic Devices through Improved Interface Quality between QD and Matrix Material. Physica Status Solidi (B): Basic Research, 2019, 256, 1900138.	1.5	5
39	In situ measurement of temperature dependent picosecond resolved carrier dynamics in near infrared (NIR) sensitive device on action. Review of Scientific Instruments, 2019, 90, 043909.	1.3	5
40	Spatial Optimization of Modulation Doping in P-I-P QDIPs: Towards Achieving Higher Operating Temperature. IEEE Nanotechnology Magazine, 2020, 19, 247-254.	2.0	5
41	Study on Inter Band and Inter Sub-Band Optical Transitions With Varying InAs/InGaAs Sub-Monolayer Quantum Dot Heterostructure Stacks Grown by Molecular Beam Epitaxy. IEEE Nanotechnology Magazine, 2020, 19, 601-608.	2.0	5
42	Understanding the Effect of Mn Doping in CsPbBr₃ Using Ab-Initio Method With Experimental Validation. IEEE Journal of Photovoltaics, 2020, 10, 1359-1364.	2.5	5
43	The role and growth of strain â€“ reducing layer by molecular -beam epitaxy in a multi â€“ stack InAs/(In,Ga)As sub - monolayer quantum dot heterostructure. Optical Materials, 2021, 114, 110817.	3.6	5
44	Evaluation of In(Ga)As capping in a multilayer coupled InAs quantum dot system: Growth strategy involving the same overgrowth percentage. Journal of Luminescence, 2021, 239, 118340.	3.1	5
45	Ab Initio Computational Details With Facile High-Temperature Synthesis of Pure and Alloyed CsPbI₃ With Inherent Stability Analysis for Optoelectronic Applications. IEEE Journal of Photovoltaics, 2022, 12, 625-633.	2.5	5
46	Room-temperature ultraviolet-ozone annealing of ZnO and ZnMgO nanorods to attain enhanced optical properties. Journal of Materials Science: Materials in Electronics, 2020, 31, 18777-18790.	2.2	4
47	Hybrid stranski-krastanov/submonolayer quantum dot heterostructure with type-II band alignment: an efficient way of near infrared photovoltaic energy conversion. Journal of Luminescence, 2021, 238, 118281.	3.1	4
48	Subsiding strain-induced In-Ga intermixing in InAs/In Ga1â€²As sub-monolayer quantum dots for room temperature photodetectors. Infrared Physics and Technology, 2022, 121, 104047.	2.9	4
49	Utilization of self-assembled AuGe nanoparticles for improving performance of InGaAs/GaAs quantum dot infrared detector. Journal of Materials Science: Materials in Electronics, 2017, 28, 12497-12502.	2.2	3
50	Room temperature synthesis of UO_{2+x} nanocrystals and thin films via hydrolysis of uranium(<scp>iv</scp>) complexes. Inorganic Chemistry Frontiers, 2022, 9, 678-685.	6.0	3
51	Enhancing the performance of heterogeneously coupled InAs Stranski-Krastanov on submonolayer quantum dot heterostructures. Superlattices and Microstructures, 2019, 135, 106260.	3.1	2
52	Analytical Model and Experimental Analysis to Estimate the Interdiffusion and Optoelectronic Properties of Coupled InAs Quantum Dots Post Rapid Thermal Processing. IEEE Transactions on Electron Devices, 2022, 69, 3775-3782.	3.0	2
53	Implementation of high performance Readout Integrated Circuit. , 2014, , .		1
54	Influence of Sb accumulation on the inter-band and inter-subband transitions of InAs/GaAs1-x Sbx sub-mono layer (SML) quantum dot heterostructures. Superlattices and Microstructures, 2020, 145, 106646.	3.1	1

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55	Influence of Sb composition on the band alignment and optical characteristics of strain coupled vertically aligned InAs/GaAsSb quantum dots. , 2021, , .		1
56	Demonstration of indigenous 320 Ã— 256 focal plane arrays: A journey from investigation of varying QD heterostructures and devices, to ultimate demonstration of the thermal imaging sensor array. , 2018, , .		0
57	Effect of InGaAs as a strain reducing layer on molecular beam epitaxy grown InAs quantum dots. , 2018, , .		0
58	Investigation of strain-profile and optoelectronic properties of In(Ga)As/GaAs Trilayer QDIP. , 2018, , .		0
59	Enhancing the quantum confinement effect by means of quaternary AlxGayIn1-x-yAs barrier material in type-I InAs/InxGa1-xAs SML QDs for laser applications. , 2021, , .		0
60	Effects of In, Sb and N Alloyed Capping on the Electronic Band Structures of Vertically Coupled InAs SK-SML Quantum Dot System. IEEE Nanotechnology Magazine, 2021, 20, 922-927.	2.0	0
61	Quaternary â€“ alloyed capping for strain and band engineering in InAs sub â€“ monolayer quantum dots. , 2022, , 207189.		0
62	A comparative study of single layer InAs SK, SML, and coupled SK-on-SML QDs heterostructure by incorporating InGaAsSb (Type-II) as capping layer. , 2022, , .		0