Saranya Reddy Shriram

List of Publications by Year
in descending order

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	Room temperature synthesis of UO_{2+<i>x</i>} nanocrystals and thin films <i>via</i> hydrolysis of uranium(<scp>iv</scp>) complexes. Inorganic Chemistry Frontiers, 2022, 9, 678-685.	6.0	3
2	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
3	Subsiding strain-induced In-Ga intermixing in InAs/In Ga1âˆ’As sub-monolayer quantum dots for room temperature photodetectors. Infrared Physics and Technology, 2022, 121, 104047.	2.9	4
4	Quaternary â€“ alloyed capping for strain and band engineering in InAs sub â€“ monolayer quantum dots. , 2022, , 207189.		0
5	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
6	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
7	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
8	Influence of Sb composition on the band alignment and optical characteristics of strain coupled vertically aligned InAs/GaAsSb quantum dots. , 2021, , .		1
9	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
10	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
11	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
12	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
13	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
14	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
15	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
16	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
17	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
18	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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19	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
20	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
21	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
22	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
23	Hydrophobic interpenetrating polyamide-PDMS membranes for desalination, pesticides removal and enhanced chlorine tolerance. Chemosphere, 2020, 258, 127179.	8.2	19
24	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
25	â€œShape-Codingâ€ Morphology-Based Information System for Polymers and Composites. ACS Applied Materials & Interfaces, 2020, 12, 27555-27561.	8.0	12
26	Bipolar Analog Memristive Switching of In₂O₃ Using Al Nanoparticles. Journal of Nanoscience and Nanotechnology, 2019, 19, 8126-8134.	0.9	5
27	Density Modulation of Embedded Nanoparticles via Spatial, Temporal, and Chemical Control Elements. Advanced Materials, 2019, 31, e1901802.	21.0	18
28	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
29	Enhancing the performance of heterogeneously coupled InAs Stranski-Krastanov on submonolayer quantum dot heterostructures. Superlattices and Microstructures, 2019, 135, 106260.	3.1	2
30	InN Nanowires Based Near-Infrared Broadband Optical Detector. IEEE Photonics Technology Letters, 2019, 31, 1526-1529.	2.5	7
31	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
32	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
33	GLAD synthesised erbium doped In2O3 nano-columns for UV detection. Journal of Materials Science: Materials in Electronics, 2019, 30, 12739-12752.	2.2	16
34	<i>In situ</i> 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
35	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
36	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

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37	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
38	Investigation of the structural, electronic, and optical properties of Mn-doped CsPbCl₃: theory and experiment. RSC Advances, 2019, 9, 29556-29565.	3.6	52
39	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
40	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
41	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
42	Boosted UV Sensitivity of Er-Doped In2O3 Thin Films Using Plasmonic Ag Nanoparticle-Based Surface Texturing. Plasmonics, 2018, 13, 1105-1113.	3.4	13
43	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
44	Effect of InGaAs as a strain reducing layer on molecular beam epitaxy grown InAs quantum dots. , 2018, , .		0
45	Investigation of strain-profile and optoelectronic properties of In(Ga)As/GaAs Trilayer QDIP. , 2018, , .		0
46	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
47	Impact of an In_{<i>x</i>}Ga_{1â€"<i>x</i>}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
48	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
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	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
51	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
52	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
53	AuGe surface plasmon enhances photoluminescence of the InAs/GaAs bilayer quantum dot heterostructure. RSC Advances, 2016, 6, 26908-26913.	3.6	8
54	Nanosurface Energy Transfer Based Highly Selective and Ultrasensitive â€œTurn onâ€• Fluorescence Mercury Sensor. ACS Sensors, 2016, 1, 789-797.	7.8	53

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55	DNA Biomaterial Based Fiber Optic Sensor: Characterization and Application for Monitoring<i>inâ€…situ</i>Mercury Pollution. ChemistrySelect, 2016, 1, 2916-2922.	1.5	12
56	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
57	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
58	Implementation of high performance Readout Integrated Circuit. , 2014, , .		1
59	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
60	A multicolor, broadband (5â€“20â€‰Î¼m), quaternary-capped InAs/GaAs quantum dot infrared photodetector. Applied Physics Letters, 2012, 101, .	3.3	47
61	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
62	High-performance, long-wave (âˆ¼10.2â€‰<i>Î¼</i>m) InGaAs/GaAs quantum dot infrared photodetector with quaternary In0.21Al0.21Ga0.58As capping. Applied Physics Letters, 2011, 99, .	3.3	60