

Vishnukanthan Venkatachalapathy

List of Publications by Year in descending order

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55
papers

980
citations

471509

17
h-index

454955

30
g-index

56
all docs

56
docs citations

56
times ranked

1344
citing authors

#	ARTICLE	IF	CITATIONS
1	Disorder-Induced Ordering in Gallium Oxide Polymorphs. <i>Physical Review Letters</i> , 2022, 128, 015704.	7.8	36
2	Radiation-induced defect accumulation and annealing in Si-implanted gallium oxide. <i>Journal of Applied Physics</i> , 2022, 131, .	2.5	17
3	Mechanical, Structural and Optical Properties of the Silicon Nanowire Arrays. <i>Zeitschrift Fur Physikalische Chemie</i> , 2021, 235, 497-509.	2.8	0
4	Reinforcement of alumina with carbon nano cones and characterization. <i>Materials Today: Proceedings</i> , 2021, 35, 57-61.	1.8	1
5	Influence of tin (IV) doping on structural and optical properties of rhombohedral barium titanate (BaTiO ₃). <i>Materials Today: Proceedings</i> , 2021, 35, 13-16.	1.8	16
6	Al-doped ZnO prepared by co-precipitation method and its thermoelectric characteristics. <i>Materials Letters</i> , 2021, 288, 129352.	2.6	21
7	Correlations of thermal properties with grain structure, morphology, and defect balance in nanoscale polycrystalline ZnO films. <i>Applied Surface Science</i> , 2021, 546, 149095.	6.1	11
8	Dominating migration barrier for intrinsic defects in gallium oxide: Dose-rate effect measurements. <i>Applied Physics Letters</i> , 2021, 118, .	3.3	15
9	Technical review: Improvement of mechanical properties and suitability towards armor applications “Alumina composites. <i>Ceramics International</i> , 2021, 47, 23693-23701.	4.8	15
10	Activation energy of silicon diffusion in gallium oxide: Roles of the mediating defects charge states and phase modification. <i>Applied Physics Letters</i> , 2021, 119, .	3.3	6
11	Misidentification of hexagonal phase as barium carbonate during chemical synthesis of barium titanate nanopowders. <i>Materials Today: Proceedings</i> , 2020, 23, 81-84.	1.8	2
12	Al incorporation during metal organic chemical vapour deposition of aluminium zinc oxide. <i>Thin Solid Films</i> , 2020, 709, 138245.	1.8	3
13	Acceptor complex signatures in oxygen-rich ZnO thin films implanted with chlorine ions. <i>Journal of Applied Physics</i> , 2020, 128, .	2.5	5
14	Investigating antireflection properties of hybrid silicon nanostructures comprising rod-like nanopores and nano-textured surface. <i>Materials Letters</i> , 2020, 275, 128087.	2.6	2
15	Carbon-dioxide as annealing atmosphere to retain the electrical properties of indium-tin oxide. <i>Materials Letters</i> , 2020, 276, 128195.	2.6	2
16	Influence of metal assisted chemical etching time period on mesoporous structure in as-cut upgraded metallurgical grade silicon for solar cell application. <i>Journal of Materials Science: Materials in Electronics</i> , 2019, 30, 8676-8685.	2.2	18
17	Effects of silver catalyst concentration in metal assisted chemical etching of silicon. <i>Materials Letters</i> , 2018, 221, 206-210.	2.6	42
18	Micromorphology analysis of sputtered indium tin oxide fabricated with variable ambient combinations. <i>Materials Letters</i> , 2018, 220, 169-171.	2.6	7

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19	Band gap maps beyond the delocalization limit: correlation between optical band gaps and plasmon energies at the nanoscale. <i>Scientific Reports</i> , 2018, 8, 848.	3.3	20
20	Properties of Al-doped zinc oxide and In-doped zinc oxide bilayer transparent conducting oxides for solar cell applications. <i>Materials Letters</i> , 2018, 222, 50-53.	2.6	37
21	Influence of Fermi level position on vacancy-assisted diffusion of aluminum in zinc oxide. <i>Physical Review B</i> , 2018, 98, .	3.2	7
22	Reply to Comment on "Nanoscale mapping of optical band gaps using monochromated electron energy loss spectroscopy". <i>Nanotechnology</i> , 2018, 29, 318002.	2.6	0
23	Phase stability and strain accumulation in CdO as a function of Cd/O supply during MOVPE synthesis. <i>Superlattices and Microstructures</i> , 2018, 120, 569-577.	3.1	0
24	Bandgap and band edge positions in compositionally graded ZnCdO. <i>Journal of Applied Physics</i> , 2018, 124, .	2.5	5
25	GaZn-VZn acceptor complex defect in Ga-doped ZnO. <i>Science China: Physics, Mechanics and Astronomy</i> , 2018, 61, 1.	5.1	6
26	Comparison of the structural properties of Zn-face and O-face single crystal homoepitaxial ZnO epilayers grown by RF-magnetron sputtering. <i>Journal of Applied Physics</i> , 2017, 121, .	2.5	5
27	Nanoscale mapping of optical band gaps using monochromated electron energy loss spectroscopy. <i>Nanotechnology</i> , 2017, 28, 105703.	2.6	15
28	Texture of Al films for wafer-level thermocompression bonding. <i>Superlattices and Microstructures</i> , 2017, 106, 216-233.	3.1	3
29	Self-diffusion measurements in isotopic heterostructures of undoped and indoped ZnO: Zinc vacancy energetics. <i>Physical Review B</i> , 2016, 94, .	3.2	17
30	Microwave irradiation on carbon black: Studies on the transformation of particles into nano-balls, nano-sticks and nano-onion like structures. <i>Journal of Physics and Chemistry of Solids</i> , 2016, 99, 173-181.	4.0	5
31	Fluorine doping: a feasible solution to enhancing the conductivity of high-resistance wide bandgap Mg _{0.51} Zn _{0.49} O active components. <i>Scientific Reports</i> , 2015, 5, 15516.	3.3	16
32	Preparation of meta-stable phases of barium titanate by Sol-hydrothermal method. <i>AIP Advances</i> , 2015, 5, .	1.3	30
33	Study of Photoluminescence Properties of Cu _x O Thin Films Prepared by Reactive Radio Frequency Magnetron Sputtering. <i>Materials Research Society Symposia Proceedings</i> , 2015, 1792, 1.	0.1	5
34	Zinc oxide formation in galvanized metallic wire by simple selective growth method. <i>Superlattices and Microstructures</i> , 2015, 82, 327-335.	3.1	1
35	A novel synthesis of tin oxide thin films by the sol-gel process for optoelectronic applications. <i>AIP Advances</i> , 2015, 5, .	1.3	76
36	Influence of target power on properties of Cu _x O thin films prepared by reactive radio frequency magnetron sputtering. <i>Thin Solid Films</i> , 2015, 594, 250-255.	1.8	34

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37	Peanut shaped ZnO microstructures: controlled synthesis and nucleation growth toward low-cost dye sensitized solar cells. <i>Materials Research Express</i> , 2015, 2, 066202.	1.6	23
38	Effect of ambient combinations of argon, oxygen, and hydrogen on the properties of DC magnetron sputtered indium tin oxide films. <i>AIP Advances</i> , 2015, 5, .	1.3	45
39	Tunneling in ZnO/ZnCdO quantum wells towards next generation photovoltaic cells. <i>Solar Energy</i> , 2014, 106, 82-87.	6.1	10
40	CdO/ZnO multiple quantum wells as components for next generation solar cells. , 2013, , .		1
41	Preparation of DC reactive magnetron sputtered ZnO thin film towards photovoltaic applications. , 2013, , .		2
42	Carrier dynamics in linearly and step graded bandgap Zn _{1-x} Cd _x O structures. <i>Applied Physics Letters</i> , 2013, 102, .	3.3	3
43	Testing ZnO based photoanodes for PEC applications. <i>Energy Procedia</i> , 2012, 22, 101-107.	1.8	11
44	Time-resolved spectroscopy of carrier dynamics in graded ZnCdO multilayer structures. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2012, 9, 1805-1808.	0.8	1
45	Engineering of nearly strain-free ZnO films on Si(111) by tuning AlN buffer thickness. <i>Physica B: Condensed Matter</i> , 2012, 407, 1476-1480.	2.7	4
46	Understanding phase separation in ZnCdO by a combination of structural and optical analysis. <i>Physical Review B</i> , 2011, 83, .	3.2	52
47	MgZnO synthesis employing weak oxidants for accurate Mg incorporation control. <i>Journal of Crystal Growth</i> , 2011, 333, 66-69.	1.5	1
48	Tuning light absorption by band gap engineering in ZnCdO as a function of MOVPE-synthesis conditions and annealing. <i>Journal of Crystal Growth</i> , 2011, 315, 301-304.	1.5	25
49	On the mechanism of enhanced photocatalytic activity of composite TiO ₂ /carbon nanofilms. <i>Applied Catalysis B: Environmental</i> , 2011, 106, 337-342.	20.2	24
50	Defect evolution and impurity migration in Na-implanted ZnO. <i>Physical Review B</i> , 2011, 84, .	3.2	28
51	Changing vacancy balance in ZnO by tuning synthesis between zinc/oxygen lean conditions. <i>Journal of Applied Physics</i> , 2010, 108, 046101.	2.5	14
52	Deep level related photoluminescence in ZnMgO. <i>Applied Physics Letters</i> , 2010, 97, .	3.3	71
53	Optical Diagnostics Study of Gas Particle Transport Phenomena in Cold Gas Dynamic Spraying and Comparison with Model Predictions. <i>Journal of Thermal Spray Technology</i> , 2008, 17, 551-563.	3.1	29
54	Structural and optical properties of polar and non-polar ZnO films grown by MOVPE. <i>Journal of Crystal Growth</i> , 2008, 310, 5020-5024.	1.5	17

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55	Effect of heat treatment on properties of cold sprayed nanocrystalline copper alumina coatings. Acta Materialia, 2007, 55, 4741-4751.	7.9	116