Vishnukanthan Venkatachalapathy

List of Publications by Year
in descending order

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	Effect of heat treatment on properties of cold sprayed nanocrystalline copper alumina coatings. Acta Materialia, 2007, 55, 4741-4751.	7.9	116
2	A novel synthesis of tin oxide thin films by the sol-gel process for optoelectronic applications. AIP Advances, 2015, 5, .	1.3	76
3	Deep level related photoluminescence in ZnMgO. Applied Physics Letters, 2010, 97, .	3.3	71
4	Understanding phase separation in ZnCdO by a combination of structural and optical analysis. Physical Review B, 2011, 83, .	3.2	52
5	Effect of ambient combinations of argon, oxygen, and hydrogen on the properties of DC magnetron sputtered indium tin oxide films. AIP Advances, 2015, 5, .	1.3	45
6	Effects of silver catalyst concentration in metal assisted chemical etching of silicon. Materials Letters, 2018, 221, 206-210.	2.6	42
7	Properties of Al-doped zinc oxide and In-doped zinc oxide bilayer transparent conducting oxides for solar cell applications. Materials Letters, 2018, 222, 50-53.	2.6	37
8	Disorder-Induced Ordering in Gallium Oxide Polymorphs. Physical Review Letters, 2022, 128, 015704.	7.8	36
9	Influence of target power on properties of CuxO thin films prepared by reactive radio frequency magnetron sputtering. Thin Solid Films, 2015, 594, 250-255.	1.8	34
10	Preparation of meta-stable phases of barium titanate by Sol-hydrothermal method. AIP Advances, 2015, 5, .	1.3	30
11	Optical Diagnostics Study of Gas Particle Transport Phenomena in Cold Gas Dynamic Spraying and Comparison with Model Predictions. Journal of Thermal Spray Technology, 2008, 17, 551-563.	3.1	29
12	Defect evolution and impurity migration in Na-implanted ZnO. Physical Review B, 2011, 84, .	3.2	28
13	Tuning light absorption by band gap engineering in ZnCdO as a function of MOVPE-synthesis conditions and annealing. Journal of Crystal Growth, 2011, 315, 301-304.	1.5	25
14	On the mechanism of enhanced photocatalytic activity of composite TiO2/carbon nanofilms. Applied Catalysis B: Environmental, 2011, 106, 337-342.	20.2	24
15	Peanut shaped ZnO microstructures: controlled synthesis and nucleation growth toward low-cost dye sensitized solar cells. Materials Research Express, 2015, 2, 066202.	1.6	23
16	Al-doped ZnO prepared by co-precipitation method and its thermoelectric characteristics. Materials Letters, 2021, 288, 129352.	2.6	21
17	Band gap maps beyond the delocalization limit: correlation between optical band gaps and plasmon energies at the nanoscale. Scientific Reports, 2018, 8, 848.	3.3	20
18	Influence of metal assisted chemical etching time period on mesoporous structure in as-cut upgraded metallurgical grade silicon for solar cell application. Journal of Materials Science: Materials in Electronics, 2019, 30, 8676-8685.	2.2	18

#	ARTICLE	IF	CITATIONS
19	Structural and optical properties of polar and non-polar ZnO films grown by MOVPE. Journal of Crystal Growth, 2008, 310, 5020-5024.	1.5	17
20	Self-diffusion measurements in isotopic heterostructures of undoped andin situdoped ZnO: Zinc vacancy energetics. Physical Review B, 2016, 94, .	3.2	17
21	Radiation-induced defect accumulation and annealing in Si-implanted gallium oxide. Journal of Applied Physics, 2022, 131, .	2.5	17
22	Fluorine doping: a feasible solution to enhancing the conductivity of high-resistance wide bandgap Mg0.51Zn0.49O active components. Scientific Reports, 2015, 5, 15516.	3.3	16
23	Influence of tin (IV) doping on structural and optical properties of rhombohedral barium titanate (BaTiO3). Materials Today: Proceedings, 2021, 35, 13-16.	1.8	16
24	Nanoscale mapping of optical band gaps using monochromated electron energy loss spectroscopy. Nanotechnology, 2017, 28, 105703.	2.6	15
25	Dominating migration barrier for intrinsic defects in gallium oxide: Dose-rate effect measurements. Applied Physics Letters, 2021, 118, .	3.3	15
26	Technical review: Improvement of mechanical properties and suitability towards armor applications â€“ Alumina composites. Ceramics International, 2021, 47, 23693-23701.	4.8	15
27	Changing vacancy balance in ZnO by tuning synthesis between zinc/oxygen lean conditions. Journal of Applied Physics, 2010, 108, 046101.	2.5	14
28	Testing ZnO based photoanodes for PEC applications. Energy Procedia, 2012, 22, 101-107.	1.8	11
29	Correlations of thermal properties with grain structure, morphology, and defect balance in nanoscale polycrystalline ZnO films. Applied Surface Science, 2021, 546, 149095.	6.1	11
30	Tunneling in ZnO/ZnCdO quantum wells towards next generation photovoltaic cells. Solar Energy, 2014, 106, 82-87.	6.1	10
31	Micromorphology analysis of sputtered indium tin oxide fabricated with variable ambient combinations. Materials Letters, 2018, 220, 169-171.	2.6	7
32	Influence of Fermi level position on vacancy-assisted diffusion of aluminum in zinc oxide. Physical Review B, 2018, 98, .	3.2	7
33	GaZn-VZn acceptor complex defect in Ga-doped ZnO. Science China: Physics, Mechanics and Astronomy, 2018, 61, 1.	5.1	6
34	Activation energy of silicon diffusion in gallium oxide: Roles of the mediating defects charge states and phase modification. Applied Physics Letters, 2021, 119, .	3.3	6
35	Study of Photoluminescence Properties of Cu_xO Thin Films Prepared by Reactive Radio Frequency Magnetron Sputtering. Materials Research Society Symposia Proceedings, 2015, 1792, 1.	0.1	5
36	Microwave irradiation on carbon black: Studies on the transformation of particles into nano-balls, nano-sticks and nano-onion like structures. Journal of Physics and Chemistry of Solids, 2016, 99, 173-181.	4.0	5

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37	Comparison of the structural properties of Zn-face and O-face single crystal homoepitaxial ZnO epilayers grown by RF-magnetron sputtering. Journal of Applied Physics, 2017, 121, .	2.5	5
38	Bandgap and band edge positions in compositionally graded ZnCdO. Journal of Applied Physics, 2018, 124, .	2.5	5
39	Acceptor complex signatures in oxygen-rich ZnO thin films implanted with chlorine ions. Journal of Applied Physics, 2020, 128, .	2.5	5
40	Engineering of nearly strain-free ZnO films on Si(111) by tuning AlN buffer thickness. Physica B: Condensed Matter, 2012, 407, 1476-1480.	2.7	4
41	Carrier dynamics in linearly and step graded bandgap Zn1â^'xCdxO structures. Applied Physics Letters, 2013, 102, .	3.3	3
42	Texture of Al films for wafer-level thermocompression bonding. Superlattices and Microstructures, 2017, 106, 216-233.	3.1	3
43	Al incorporation during metal organic chemical vapour deposition of aluminium zinc oxide. Thin Solid Films, 2020, 709, 138245.	1.8	3
44	Preparation of DC reactive magnetron sputtered ZnO thin film towards photovoltaic applications. , 2013, , .		2
45	Misidentification of hexagonal phase as barium carbonate during chemical synthesis of barium titanate nanopowders. Materials Today: Proceedings, 2020, 23, 81-84.	1.8	2
46	Investigating antireflection properties of hybrid silicon nanostructures comprising rod-like nanopores and nano-textured surface. Materials Letters, 2020, 275, 128087.	2.6	2
47	Carbon-dioxide as annealing atmosphere to retain the electrical properties of indium-tin oxide. Materials Letters, 2020, 276, 128195.	2.6	2
48	MgZnO synthesis employing weak oxidants for accurate Mg incorporation control. Journal of Crystal Growth, 2011, 333, 66-69.	1.5	1
49	Time-resolved spectroscopy of carrier dynamics in graded ZnCdx O multilayer structures. Physica Status Solidi C: Current Topics in Solid State Physics, 2012, 9, 1805-1808.	0.8	1
50	CdO/ZnO multiple quantum wells as components for next generation solar cells. , 2013, , .		1
51	Zinc oxide formation in galvanized metallic wire by simple selective growth method. Superlattices and Microstructures, 2015, 82, 327-335.	3.1	1
52	Reinforcement of alumina with carbon nano cones and characterization. Materials Today: Proceedings, 2021, 35, 57-61.	1.8	1
53	Reply to Comment on â€˜Nanoscale mapping of optical band gaps using monochromated electron energy loss spectroscopyâ€™. Nanotechnology, 2018, 29, 318002.	2.6	0
54	Phase stability and strain accumulation in CdO as a function of Cd/O supply during MOVPE synthesis. Superlattices and Microstructures, 2018, 120, 569-577.	3.1	0

#	ARTICLE	IF	CITATIONS
55	Mechanical, Structural and Optical Properties of the Silicon Nanowire Arrays. Zeitschrift Fur Physikalische Chemie, 2021, 235, 497-509.	2.8	0