

# Vishnukanthan Venkatachalapathy

## List of Publications by Year in descending order

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55  
papers

980  
citations

471061

17  
h-index

454577

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. <i>Acta Materialia</i> , 2007, 55, 4741-4751.	3.8	116
2	A novel synthesis of tin oxide thin films by the sol-gel process for optoelectronic applications. <i>AIP Advances</i> , 2015, 5, .	0.6	76
3	Deep level related photoluminescence in ZnMgO. <i>Applied Physics Letters</i> , 2010, 97, .	1.5	71
4	Understanding phase separation in ZnCdO by a combination of structural and optical analysis. <i>Physical Review B</i> , 2011, 83, .	1.1	52
5	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, .	0.6	45
6	Effects of silver catalyst concentration in metal assisted chemical etching of silicon. <i>Materials Letters</i> , 2018, 221, 206-210.	1.3	42
7	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.	1.3	37
8	Disorder-Induced Ordering in Gallium Oxide Polymorphs. <i>Physical Review Letters</i> , 2022, 128, 015704.	2.9	36
9	Influence of target power on properties of $Cu_xO$ thin films prepared by reactive radio frequency magnetron sputtering. <i>Thin Solid Films</i> , 2015, 594, 250-255.	0.8	34
10	Preparation of meta-stable phases of barium titanate by Sol-hydrothermal method. <i>AIP Advances</i> , 2015, 5, .	0.6	30
11	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.	1.6	29
12	Defect evolution and impurity migration in Na-implanted ZnO. <i>Physical Review B</i> , 2011, 84, .	1.1	28
13	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.	0.7	25
14	On the mechanism of enhanced photocatalytic activity of composite $TiO_2$ /carbon nanofilms. <i>Applied Catalysis B: Environmental</i> , 2011, 106, 337-342.	10.8	24
15	Peanut shaped ZnO microstructures: controlled synthesis and nucleation growth toward low-cost dye sensitized solar cells. <i>Materials Research Express</i> , 2015, 2, 066202.	0.8	23
16	Al-doped ZnO prepared by co-precipitation method and its thermoelectric characteristics. <i>Materials Letters</i> , 2021, 288, 129352.	1.3	21
17	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.	1.6	20
18	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.	1.1	18

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19	Structural and optical properties of polar and non-polar ZnO films grown by MOVPE. Journal of Crystal Growth, 2008, 310, 5020-5024.	0.7	17
20	Self-diffusion measurements in isotopic heterostructures of undoped and indium doped ZnO: Zinc vacancy energetics. Physical Review B, 2016, 94, .	1.1	17
21	Radiation-induced defect accumulation and annealing in Si-implanted gallium oxide. Journal of Applied Physics, 2022, 131, .	1.1	17
22	Fluorine doping: a feasible solution to enhancing the conductivity of high-resistance wide bandgap Mg <sub>0.51</sub> Zn <sub>0.49</sub> O active components. Scientific Reports, 2015, 5, 15516.	1.6	16
23	Influence of tin (IV) doping on structural and optical properties of rhombohedral barium titanate (BaTiO <sub>3</sub> ). Materials Today: Proceedings, 2021, 35, 13-16.	0.9	16
24	Nanoscale mapping of optical band gaps using monochromated electron energy loss spectroscopy. Nanotechnology, 2017, 28, 105703.	1.3	15
25	Dominating migration barrier for intrinsic defects in gallium oxide: Dose-rate effect measurements. Applied Physics Letters, 2021, 118, .	1.5	15
26	Technical review: Improvement of mechanical properties and suitability towards armor applications of Alumina composites. Ceramics International, 2021, 47, 23693-23701.	2.3	15
27	Changing vacancy balance in ZnO by tuning synthesis between zinc/oxygen lean conditions. Journal of Applied Physics, 2010, 108, 046101.	1.1	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.	3.1	11
30	Tunneling in ZnO/ZnCdO quantum wells towards next generation photovoltaic cells. Solar Energy, 2014, 106, 82-87.	2.9	10
31	Micromorphology analysis of sputtered indium tin oxide fabricated with variable ambient combinations. Materials Letters, 2018, 220, 169-171.	1.3	7
32	Influence of Fermi level position on vacancy-assisted diffusion of aluminum in zinc oxide. Physical Review B, 2018, 98, .	1.1	7
33	GaZn-VZn acceptor complex defect in Ga-doped ZnO. Science China: Physics, Mechanics and Astronomy, 2018, 61, 1.	2.0	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, .	1.5	6
35	Study of Photoluminescence Properties of Cu <sub>x</sub> O 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.	1.9	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, .	1.1	5
38	Bandgap and band edge positions in compositionally graded ZnCdO. Journal of Applied Physics, 2018, 124, .	1.1	5
39	Acceptor complex signatures in oxygen-rich ZnO thin films implanted with chlorine ions. Journal of Applied Physics, 2020, 128, .	1.1	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.	1.3	4
41	Carrier dynamics in linearly and step graded bandgap Zn <sub>1-x</sub> Cd <sub>x</sub> O structures. Applied Physics Letters, 2013, 102, .	1.5	3
42	Texture of Al films for wafer-level thermocompression bonding. Superlattices and Microstructures, 2017, 106, 216-233.	1.4	3
43	Al incorporation during metal organic chemical vapour deposition of aluminium zinc oxide. Thin Solid Films, 2020, 709, 138245.	0.8	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.	0.9	2
46	Investigating antireflection properties of hybrid silicon nanostructures comprising rod-like nanopores and nano-textured surface. Materials Letters, 2020, 275, 128087.	1.3	2
47	Carbon-dioxide as annealing atmosphere to retain the electrical properties of indium-tin oxide. Materials Letters, 2020, 276, 128195.	1.3	2
48	MgZnO synthesis employing weak oxidants for accurate Mg incorporation control. Journal of Crystal Growth, 2011, 333, 66-69.	0.7	1
49	Time-resolved spectroscopy of carrier dynamics in graded ZnCd <sub>x</sub> 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.	1.4	1
52	Reinforcement of alumina with carbon nano cones and characterization. Materials Today: Proceedings, 2021, 35, 57-61.	0.9	1
53	Reply to Comment on "Nanoscale mapping of optical band gaps using monochromated electron energy loss spectroscopy". Nanotechnology, 2018, 29, 318002.	1.3	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.	1.4	0

#	ARTICLE	IF	CITATIONS
55	Mechanical, Structural and Optical Properties of the Silicon Nanowire Arrays. Zeitschrift Fur Physikalische Chemie, 2021, 235, 497-509.	1.4	0