Vikram S Kumar

List of Publications by Year
in descending order

132	3,162	201575	168321
papers	citations	27 h-index	53 g-index

135	135	135	3153
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A Comprehensive Review on Recent Developments in Ohmic and Schottky Contacts on Ga₂O₃ for Device Applications. ACS Applied Electronic Materials, 2022, 4, 2589-2628.	2.0	32
2	Non Destructive Evaluation of AlGaN/GaN HEMT structure by cathodoluminescence spectroscopy. Journal of Luminescence, 2021, 232, 117834.	1.5	3
3	Localized probiotic-guided pocket recolonization in the treatment of chronic periodontitis: a randomized controlled clinical trial. Journal of Periodontal and Implant Science, 2021, 51, 199.	0.9	7
4	Tuberculosis treatment spills the beans on Wilsonâ€™s disease and more. Medical Journal Armed Forces India, 2021, , .	0.3	0
5	Two-dimensional analytical modelling of drain current collapse in AlGaN/GaN HEMTs using multi-phonon ionisation by an electric field. Semiconductor Science and Technology, 2020, 35, 085035.	1.0	2
6	Growth, properties, and applications of Î²-Ga2O3 nanostructures. , 2019, , 91-115.		4
7	Carbon Nanowalls: A Potential 2-Dimensional Material for Field Emission and Energy-Related Applications. Advanced Structured Materials, 2018, , 27-71.	0.3	3
8	Temperature Dependent Electrical Characteristics of Nanostructured WO₃ Based Ambipolar Bottom Gate FET. IEEE Nanotechnology Magazine, 2018, 17, 1288-1294.	1.1	2
9	Diameter Tuning of Î² $$ eta $$ -Ga2O3 Nanowires Using Chemical Vapor Deposition Technique. Nanoscale Research Letters, 2017, 12, 184.	3.1	30
10	Study of GaN nanowires converted fromÎ²-Ga₂O₃and photoconduction in a single nanowire. Semiconductor Science and Technology, 2017, 32, 085012.	1.0	13
11	Highly dispersible and uniform size Cu2ZnSnS4 nanoparticles for photocatalytic application. Advanced Powder Technology, 2017, 28, 2402-2409.	2.0	25
12	Temperature dependent growth of GaN nanowires using CVD technique. AIP Conference Proceedings, 2016, , .	0.3	1
13	Synthesis of Cu2ZnSnS4 nanoparticles by solvothermal route. AIP Conference Proceedings, 2016, , .	0.3	2
14	Electrical conduction noise and its correlation with structural properties of Cu2ZnSnS4thin films. Materials Research Express, 2016, 3, 076404.	0.8	13
15	Barrier inhomogeneities limited current and 1/f noise transport in GaN based nanoscale Schottky barrier diodes. Scientific Reports, 2016, 6, 27553.	1.6	35
16	Aperiodic Silicon Nanowire Arrays: Fabrication, Light Trapping Properties and Solar Cell Applications. Advanced Structured Materials, 2016, , 329-363.	0.3	6
17	Enhanced Thermionic Emission and Low 1/f Noise in Exfoliated Graphene/GaN Schottky Barrier Diode. ACS Applied Materials & Interfaces, 2016, 8, 8213-8223.	4.0	60
18	Designing variable height carbon nanotube bundle for enhanced electron field emission. Physica E: Low-Dimensional Systems and Nanostructures, 2015, 69, 171-176.	1.3	7

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19	High Field Emission Current Density from Patterned Carbon Nanotube Field Emitter Arrays with Random Growth. Journal of Nanoscience and Nanotechnology, 2015, 15, 3846-3851.	0.9	3
20	Simulation of field emission behavior from multiple carbon nanotubes in an integrated gate triode configuration. Physica E: Low-Dimensional Systems and Nanostructures, 2014, 63, 268-271.	1.3	3
21	Fabrication of silicon nanowire arrays based solar cell with improved performance. Solar Energy Materials and Solar Cells, 2011, 95, 215-218.	3.0	165
22	Role of surface modification of colloidal CdSe quantum dots on the properties of hybrid organicâ€“inorganic nanocomposites. Colloid and Polymer Science, 2010, 288, 841-849.	1.0	18
23	Excellent antireflection properties of vertical silicon nanowire arrays. Solar Energy Materials and Solar Cells, 2010, 94, 1506-1511.	3.0	229
24	Poly(3-hexylthiophene): Functionalized single-walled carbon nanotubes: (6,6)-phenyl-C61-butyric acid methyl ester composites for photovoltaic cell at ambient condition. Solar Energy Materials and Solar Cells, 2010, 94, 2386-2394.	3.0	37
25	Jâ€“V characteristics of GaN containing traps at several discrete energy levels. Solid-State Electronics, 2010, 54, 288-293.	0.8	4
26	The origin of DC electrical conduction and dielectric relaxation in pristine and doped poly(3â€hexylthiophene) films. Journal of Polymer Science, Part B: Polymer Physics, 2010, 48, 1047-1053.	2.4	12
27	Enhancement in hole current density on polarization in poly(3-hexylthiophene):cadmium selenide quantum dot nanocomposite thin films. Applied Physics Letters, 2009, 94, .	1.5	19
28	Effect of Active Layer Thickness on Open Circuit Voltage in Organic Photovoltaic Devices. Japanese Journal of Applied Physics, 2009, 48, 121501.	0.8	19
29	Broad spectral sensitivity and improved efficiency in CuPc/Sub-Pc organic photovoltaic devices. Journal Physics D: Applied Physics, 2009, 42, 015103.	1.3	46
30	Effect of illumination intensity and temperature on open circuit voltage in organic solar cells. Applied Physics Letters, 2009, 94, .	1.5	48
31	Effect of illumination on the space charge limited current inÂorganic bulk heterojunction diodes. Applied Physics A: Materials Science and Processing, 2009, 94, 281-286.	1.1	28
32	Large-scale synthesis, characterization and photoluminescence properties of amorphous silica nanowires by thermal evaporation of silicon monoxide. Physica E: Low-Dimensional Systems and Nanostructures, 2009, 41, 1545-1549.	1.3	34
33	Effect of temperature on the performance of CuPc/C60photovoltaic device. Journal Physics D: Applied Physics, 2009, 42, 015102.	1.3	21
34	Effect of non-zero Schottky barrier on the J-V characteristics of organic diodes. European Physical Journal E, 2009, 28, 361-368.	0.7	12
35	A model for the J-V characteristics of P3HT:PCBM solar cells. Journal of Applied Physics, 2009, 105, .	1.1	77
36	A model for the currentâ€“voltage characteristics of organic bulk heterojunction solar cells. Journal Physics D: Applied Physics, 2009, 42, 055102.	1.3	25

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37	Excellent Field Emission Properties of Short Conical Carbon Nanotubes Prepared by Microwave Plasma Enhanced CVD Process. Nanoscale Research Letters, 2008, 3, .	3.1	27
38	Effect of Substrate Morphology on Growth and Field Emission Properties of Carbon Nanotube Films. Nanoscale Research Letters, 2008, 3, 205-212.	3.1	16
39	Trap filled limit and high currentâ€“voltage characteristics of organic diodes with non-zero Schottky barrier. Journal Physics D: Applied Physics, 2008, 41, 155108.	1.3	9
40	Effect of FeCl3 on the stability of Ï€-conjugation of electronic polymer. Corrosion Science, 2008, 50, 301-308.	3.0	4
41	Conduction mechanisms in poly(3-hexylthiophene) thin-film sandwiched structures. Semiconductor Science and Technology, 2008, 23, 035008.	1.0	13
42	Effect of CoFe magnetic nanoparticles on the hole transport in poly(2-methoxy, 5-(2-ethylhexiloxy)) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	1.3	8
43	Effect of surface passivating ligand on structural and optoelectronic properties of polymerâ€‰:â€‰CdSe quantum dot composites. Journal Physics D: Applied Physics, 2008, 41, 235409.	1.3	44
44	Effect of CdSe quantum dots on hole transport in poly(3-hexylthiophene) thin films. Applied Physics Letters, 2008, 92, .	1.5	21
45	Effect of Catalyst Film Thickness on the Growth, Microstructure and Field Emission Characteristics of Carbon Nanotubes. , 2007, , .		4
46	Fabrication of WOLED by blue florescent host doped with red phosphorescent dyes. , 2007, , .		0
47	Low frequency ac conduction and dielectric relaxation in pristine poly(3-octylthiophene) films. New Journal of Physics, 2007, 9, 40-40.	1.2	24
48	Study of electron mobility in small molecular SAlq by transient electroluminescence method. Journal Physics D: Applied Physics, 2007, 40, 7313-7317.	1.3	11
49	Currentâ€“voltage characteristics of an organic diode: Revisited. Synthetic Metals, 2007, 157, 905-909.	2.1	14
50	Trap filled limit voltage (VTFL) and V2 law in space charge limited currents. Journal of Applied Physics, 2007, 102, .	1.1	83
51	Improved efficiency of Organic Light Emitting Diodes by doping of hole transport layer. , 2007, , .		0
52	Effect of thermal treatment on the performance of organic bulk-hetrojunction photovoltaic devices. , 2007, , .		0
53	A novel non-TOPO route for the synthesis of colloidal CdSe quantum dots with high luminescence and stability. , 2007, , .		1
54	Charge transport through conducting organic poly(2-methoxy-5- (2-ethylhexyloxy)-1,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 62 Td (4-phe	1.3	32

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55	Self-assembly of SWCNT in P3HT matrix. Diamond and Related Materials, 2007, 16, 446-453.	1.8	20
56	Micromorphology, photophysical and electrical properties of pristine and ferric chloride doped poly(3-hexylthiophene) films. Materials Chemistry and Physics, 2007, 104, 390-396.	2.0	44
57	Temperature Effect on Currentâ€"Voltage Characteristics of Molecular Organic Tris(8-hydroxyquinoline) Aluminium Complex. Japanese Journal of Applied Physics, 2006, 45, 7621-7624.	0.8	11
58	Enhanced field emission characteristics of nitrogen-doped carbon nanotube films grown by microwave plasma enhanced chemical vapor deposition process. Thin Solid Films, 2006, 515, 1851-1856.	0.8	83
59	Analysis of leakage currents in MOCVD grown GaInAsSb based photodetectors operating at 2 Âµm. Journal of Electronic Materials, 2006, 35, 1613-1617.	1.0	20
60	Characteristics of a conducting organic diode with finite (nonzero) Schottky barrier. Journal of Applied Physics, 2006, 100, 114506.	1.1	25
61	Structureâ€"conductivity correlation in ferric chloride-doped poly(3-hexylthiophene). New Journal of Physics, 2006, 8, 112-112.	1.2	56
62	dc electrical conduction and morphology of poly(3-octylthiophene) films. Journal Physics D: Applied Physics, 2006, 39, 196-202.	1.3	19
63	Mechanism of charge transport in poly(3-octylthiophene). Journal of Applied Physics, 2006, 100, 016106.	1.1	17
64	The origin of low-frequency negative transconductance dispersion in a pseudomorphic HEMT. Semiconductor Science and Technology, 2005, 20, 783-787.	1.0	5
65	Improvement in crystalline quality of Cd1â^'xZnxTe(x=4%) crystals grown in graphite crucible. Journal of Crystal Growth, 2004, 260, 148-158.	0.7	21
66	Trap density in conducting organic semiconductors determined from temperature dependence of Jâ^'V characteristics. Journal of Applied Physics, 2003, 94, 1283-1285.	1.1	143
67	Effect of ambient on the thermal parameters of a micromachined bolometer. Applied Physics Letters, 2003, 82, 2721-2723.	1.5	2
68	Effect of field dependent trap occupancy on organic thin film transistor characteristics. Journal of Applied Physics, 2003, 94, 5302.	1.1	12
69	Carrier transport in conducting polymers with field dependent trap occupancy. Journal of Applied Physics, 2002, 92, 7325-7329.	1.1	25
70	Temperature dependence of carrier transport in conducting polymers: Similarity to amorphous inorganic semiconductors. Journal of Applied Physics, 2002, 92, 3835-3838.	1.1	62
71	Excellent rectifying characteristics in Au/n-CdTe diodes upon exposure to rf nitrogen plasma. Semiconductor Science and Technology, 1999, 14, 909-914.	1.0	3
72	XRT mapping of strain induced by 200 MeV Ag14+ ions in Si(001). Materials Chemistry and Physics, 1998, 54, 293-295.	2.0	1

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73	Evidence for two Si-related DX like centers in AlxGa1âˆ’xAs and GaAs. Solid State Communications, 1998, 106, 163-168.	0.9	1
74	CO-implantation of Si and Be in SI GaAs for improved device performance. Solid-State Electronics, 1998, 42, 1905-1910.	0.8	1
75	Conductance deep-level transient spectroscopic study of anomalous hole trap in GaAs MESFETs. Semiconductor Science and Technology, 1998, 13, 1094-1099.	1.0	7
76	Inverted order of acceptor and donor levels of the Si-related DX center inAlxGa1âˆ’xAs. Physical Review B, 1997, 55, 4042-4045.	1.1	6
77	The physics and technology of gallium antimonide: An emerging optoelectronic material. Journal of Applied Physics, 1997, 81, 5821-5870.	1.1	631
78	Confirmation of metastable neutral DX0 state of Si-related DX center in AlxGa1âˆ’xAs by transient photoconductivity. Solid State Communications, 1997, 104, 781-785.	0.9	7
79	Carrier compensation and scattering mechanisms inpâ€GaSb. Journal of Applied Physics, 1996, 80, 2847-2853.	1.1	32
80	Deep level transient spectroscopic study of DX center in heavily doped ion-implanted GaAs. Solid State Communications, 1996, 98, 195-199.	0.9	2
81	Modelling temperature distribution in cylindrical crystal growth furnaces. International Communications in Heat and Mass Transfer, 1996, 23, 377-386.	2.9	2
82	Influence of arsenic concentration on the surface morphology and photoluminescence of LPE grown with high aluminium content. Journal of Crystal Growth, 1996, 160, 177-180.	0.7	1
83	Fine structure in 1.4 eV luminescence band from plasma deposited amorphous silicon layers on silicon substrates. Applied Physics Letters, 1996, 68, 1458-1460.	1.5	4
84	Passivation of surface and bulk defects inpâ€‰â€GaSb by hydrogenated amorphous silicon treatment. Journal of Applied Physics, 1996, 79, 3246-3252.	1.1	12
85	Shallow donor neutralization in CdTe:In by atomic hydrogen. Applied Physics Letters, 1996, 68, 2424-2426.	1.5	21
86	Hydrogen Passivation of Shallow Dopants in InP Studied by Photoluminescence Spectroscopy. Materials Research Society Symposia Proceedings, 1995, 378, 453.	0.1	0
87	Hydrogen Passivation of Shallow Dopants in Indium Doped Bulk CdTe. Materials Research Society Symposia Proceedings, 1995, 378, 423.	0.1	2
88	Effect of Hydrogenation on the Electrical and Optical Properties of GaSb. Materials Research Society Symposia Proceedings, 1995, 396, 533.	0.1	0
89	Morphological Evolution and Properties of LPE Grown GaSb, AlGaSb and AlGaAsSb. Materials Research Society Symposia Proceedings, 1995, 399, 153.	0.1	0
90	Cathodoluminescence Spectroscopy For Evaluation Of Defect Passivation In GaSb. Materials Research Society Symposia Proceedings, 1995, 406, 537.	0.1	0

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91	Numerical analysis of melt-solid interface shapes and growth rates of gallium antimonide in a single-zone vertical Bridgman furnace. Journal of Crystal Growth, 1995, 154, 213-222.	0.7	11
92	Buckling patterns in diamond-like carbon films. Thin Solid Films, 1995, 256, 94-100.	0.8	60
93	Liquid phase epitaxial growth of pure and doped GaSb layers: morphological evolution and native defects. Bulletin of Materials Science, 1995, 18, 865-874.	0.8	4
94	Some recent advances in bulk growth of mercury cadmium telluride crystals. Bulletin of Materials Science, 1995, 18, 385-394.	0.8	0
95	Reactivation kinetics of acceptors in hydrogenated InP during unbiased annealing. Physical Review B, 1995, 51, 1536-1540.	1.1	7
96	Optical and electrical properties of hydrogen-passivated gallium antimonide. Physical Review B, 1995, 51, 2153-2158.	1.1	14
97	Effect of hydrogenation and thermal annealing on the photoluminescence ofpâ€InP. Journal of Applied Physics, 1995, 77, 5398-5405.	1.1	8
98	Electrical characterization of surface defects in GaSb created by hydrogen plasma. Applied Physics Letters, 1995, 66, 1986-1988.	1.5	10
99	Effect of ruthenium passivation on the optical and electrical properties of gallium antimonide. Journal of Applied Physics, 1995, 77, 4825-4827.	1.1	19
100	Current transport properties of metal/hydrogenated amorphous silicon/GaSb structures. Applied Physics Letters, 1995, 67, 1001-1003.	1.5	8
101	Resistance switching in indium phosphide using hydrogen passivation of acceptors. Applied Physics Letters, 1994, 64, 2256-2257.	1.5	6
102	Donorâ€related deep level in bulk GaSb. Applied Physics Letters, 1994, 65, 1412-1414.	1.5	26
103	Sulphur passivation of gallium antimonide surfaces. Applied Physics Letters, 1994, 65, 1695-1697.	1.5	57
104	Growth of gallium antimonide by vertical Bridgman technique with planar crystal-melt interface. Journal of Crystal Growth, 1994, 141, 44-50.	0.7	45
105	Experimental determination of melt-solid interface shapes and actual growth rates of gallium antimonide grown by vertical Bridgman method. Journal of Crystal Growth, 1994, 141, 476-478.	0.7	8
106	Influence of deviation from stoichiometry on the photoluminescence in CdTe doped with indium. Bulletin of Materials Science, 1994, 17, 1057-1064.	0.8	6
107	A deepâ€level spectroscopic technique for determining capture crossâ€section activation energy of Siâ€relatedDXcenters in AlxGa1â^'xAs. Journal of Applied Physics, 1994, 75, 8243-8245.	1.1	5
108	Reduced phosphorus loss from InP surface during hydrogen plasma treatment. Applied Physics Letters, 1994, 64, 1696-1698.	1.5	16

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109	Bright red electroluminescence in diffused porous siliconp-n junction. Bulletin of Materials Science, 1993, 16, 239-241.	0.8	5
110	Interfacial electrical properties of diamond-like carbon/gallium arsenide heterostructures. Diamond and Related Materials, 1993, 2, 1459-1463.	1.8	1
111	Reverseâ€bias annealing kinetics of Mgâ€H complexes in InP. Journal of Applied Physics, 1993, 74, 4521-4526.	1.1	17
112	Anomalous Dopant Redistribution in Nd:YAG Laser Annealed Low Energy Ion Implanted Silicon. Japanese Journal of Applied Physics, 1992, 31, 1287-1289.	0.8	7
113	Direct evidence for the negative-Unature of theDXcenter inAlxGa1â^'xAs. Physical Review B, 1992, 46, 7533-7536.	1.1	13
114	Evidence for Metastabile State of DX Center in AxGa1-xAs. Materials Research Society Symposia Proceedings, 1992, 262, 579.	0.1	0
115	Passivation of Surface and Bulk Defects in InP. Materials Research Society Symposia Proceedings, 1992, 262, 413.	0.1	1
116	Transient photoconductivity in Si-doped Al0.26Ga0.74As. Solid State Communications, 1992, 83, 37-39.	0.9	6
117	High-frequency capacitance-voltage characteristics of amorphous (undoped)/crystalline silicon heterostructures. Solid-State Electronics, 1991, 34, 535-543.	0.8	4
118	Silver- and Gold-Related Deep Levels in Gallium Arsenide. Japanese Journal of Applied Physics, 1991, 30, 2815-2818.	0.8	4
119	Characterization of defects in gallium arsenide. Bulletin of Materials Science, 1990, 13, 83-88.	0.8	0
120	Interface State Density Distribution in Amorphous/Crystalline Silicon Heterostructures. Japanese Journal of Applied Physics, 1989, 28, L744-L746.	0.8	1
121	Neutralization of phosphorus in polycrystalline silicon by hydrogenation. Journal of Applied Physics, 1988, 63, 2867-2868.	1.1	3
122	Determination of activation energy for thermal regeneration of EL2 from its metastable state by thermally stimulated photocurrent measurements. Journal of Applied Physics, 1988, 64, 956-958.	1.1	20
123	System effects in doubleâ€channel gatedâ€integratorâ€based deepâ€level transient spectroscopy. Journal of Applied Physics, 1988, 64, 6311-6314.	1.1	5
124	Electrical properties of nickelâ€related deep levels in silicon. Journal of Applied Physics, 1987, 61, 1449-1455.	1.1	24
125	Comment on â€˜â€˜Interstitial hydrogen and neutralization of shallow-donor impurities in single-crystal siliconâ€™â€™. Physical Review Letters, 1987, 59, 2115-2115.	2.9	7
126	Theoretical optimization of metalpâ€“n silicon Schottky barrier solar cell. Pramana - Journal of Physics, 1985, 25, 587-596.	0.9	0

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127	A DLTS technique for surface state capture cross-section measurement of MOS diodes. Applications of Surface Science, 1985, 22-23, 1004-1010.	1.0	1
128	The photoionisation energy of the thermally induced Ev+0.42 eV level in p-silicon. Journal of Physics C: Solid State Physics, 1985, 18, 5095-5098.	1.5	3
129	Graphical method to include temperature variation of activation energy in Hall data analysis. Journal of Applied Physics, 1985, 57, 5529-5531.	1.1	0
130	Applicability of the van der Pauwâ€“Hall measurement technique to implanted samples. Journal of Applied Physics, 1984, 55, 4450-4451.	1.1	2
131	Deep levels related to ionâ€implanted tellurium in silicon. Journal of Applied Physics, 1983, 54, 6417-6420.	1.1	8
132	Characteristics of Cr-SiO2-nSi tunnel diodes. Solid-State Electronics, 1977, 20, 143-152.	0.8	59