

Rahul Kumar

List of Publications by Year in descending order

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papers

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all docs

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docs citations

30
times ranked

360
citing authors

#	ARTICLE	IF	CITATIONS
1	Single crystalline Ge thin film growth on c-plane sapphire substrates by molecular beam epitaxy (MBE). CrystEngComm, 2022, 24, 4372-4380.	1.3	4
2	GaAs layer on c-plane sapphire for light emitting sources. Applied Surface Science, 2021, 542, 148554.	3.1	3
3	Indium segregation in ultra-thin In(Ga)As/GaAs single quantum wells revealed by photoluminescence spectroscopy. Applied Physics Letters, 2021, 118, .	1.5	5
4	InAs nanostructures for solar cell: Improved efficiency by submonolayer quantum dot. Solar Energy Materials and Solar Cells, 2021, 224, 111026.	3.0	7
5	GaAs epitaxial growth on R-plane sapphire substrate. Journal of Crystal Growth, 2020, 548, 125848.	0.7	7
6	Evolution of InAs quantum dots and wetting layer on GaAs (001): Peculiar photoluminescence near onset of quantum dot formation. Journal of Applied Physics, 2020, 127, .	1.1	9
7	Crystalline GaAs Thin Film Growth on a c-Plane Sapphire Substrate. Crystal Growth and Design, 2019, 19, 5088-5096.	1.4	17
8	A simple method to overcome the limitation of hybrid monochromator in the identification of peaks in the HRXRD pattern of Al _{0.4} Ga _{0.6} N/Al _{0.6} Ga _{0.4} N multi quantum wells. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2019, 240, 92-96.	1.7	0
9	Detecting Single Photons Using Capacitive Coupling of Single Quantum Dots. ACS Photonics, 2018, 5, 2008-2021.	3.2	3
10	Excitation intensity and thickness dependent emission mechanism from an ultrathin InAs layer in GaAs matrix. Journal of Applied Physics, 2018, 124, .	1.1	14
11	High temperature capacitors using AlN grown by MBE as the dielectric. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2018, 36, 041202.	0.6	4
12	Evolution of lateral V-defects on InGaN/GaN on Si(111) during PAMBE: the role of strain on defect kinetics. CrystEngComm, 2018, 20, 4151-4163.	1.3	5
13	Fast Response (7.6s) Acetone Sensing by InGaN/GaN on Si (111) at 373 K. IEEE Electron Device Letters, 2017, 38, 383-386.	2.2	17
14	Non-intrusive real-time monitoring of PV generation at inverters using Internet of photovoltaics. Electronics Letters, 2017, 53, 1137-1138.	0.5	10
15	Highly Sensitive Acetone Sensor Based on Pd/AlGaIn/GaN Resistive Device Grown by Plasma-Assisted Molecular Beam Epitaxy. IEEE Transactions on Electron Devices, 2017, 64, 4650-4656.	1.6	16
16	Non-avalanche single photon detection without carrier transit-time delay through quantum capacitive coupling. Optics Express, 2017, 25, 26508.	1.7	2
17	Tilt investigation of In(Al,Ga)As metamorphic buffer layers on GaAs (001) substrate: A novel technique for tilt determination. Crystal Research and Technology, 2016, 51, 723-729.	0.6	3
18	Investigation of cross-hatch surface and study of anisotropic relaxation and dislocation on InGaAs on GaAs (001). Electronic Materials Letters, 2016, 12, 356-364.	1.0	9

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19	Reverse bias leakage current mechanism of AlGaIn/InGaIn/GaN heterostructure. <i>Electronic Materials Letters</i> , 2016, 12, 232-236.	1.0	8
20	Thermodynamic analysis of acetone sensing in Pd/AlGaIn/GaN heterostructure Schottky diodes at low temperatures. <i>Scripta Materialia</i> , 2016, 113, 39-42.	2.6	19
21	Enhancement of two dimensional electron gas concentrations due to Si ₃ N ₄ passivation on Al _{0.3} Ga _{0.7} N/GaN heterostructure: strain and interface capacitance analysis. <i>AIP Advances</i> , 2015, 5, .	0.6	23
22	Comparison of different grading schemes in InGaAs metamorphic buffers on GaAs substrate: Tilt dependence on cross-hatch irregularities. <i>Applied Surface Science</i> , 2015, 357, 922-930.	3.1	27
23	Evolution and analysis of nitride surface and interfaces by statistical techniques: A correlation with RHEED through kinetic roughening. <i>Electronic Materials Letters</i> , 2015, 11, 707-716.	1.0	7
24	2DEG modulation in double quantum well enhancement mode nitride HEMT. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2015, 74, 59-64.	1.3	17
25	A novel growth strategy and characterization of fully relaxed un-tilted FCC GaAs on Si(100). <i>Journal of Crystal Growth</i> , 2015, 418, 138-144.	0.7	7
26	Comparison of different pathways in metamorphic graded buffers on GaAs substrate: Indium incorporation with surface roughness. <i>Applied Surface Science</i> , 2015, 324, 304-309.	3.1	12
27	Graded barrier AlGaIn/AlN/GaN heterostructure for improved 2-dimensional electron gas carrier concentration and mobility. <i>Electronic Materials Letters</i> , 2014, 10, 1087-1092.	1.0	7
28	High-resolution X-ray diffraction analysis of Al _x Ga _{1-x} N/In _x Ga _{1-x} N/GaN on sapphire multilayer structures: Theoretical, simulations, and experimental observations. <i>Journal of Applied Physics</i> , 2014, 115, 174507.	1.1	31
29	Comprehensive strain and band gap analysis of PA-MBE grown AlGaIn/GaN heterostructures on sapphire with ultra thin buffer. <i>AIP Advances</i> , 2014, 4, .	0.6	16