

Moon-Deock Kim

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54
papers

681
citations

17
h-index

23
g-index

62
ext. papers

965
ext. citations

4.2
avg, IF

4.36
L-index

#	Paper	IF	Citations
54	H ₂ , H ₂ S gas sensing properties of rGO/GaN nanorods at room temperature: Effect of UV illumination. <i>Sensors and Actuators B: Chemical</i> , 2018 , 264, 353-362	8.5	49
53	Enhancing the Charge Carrier Separation and Transport via Nitrogen-Doped Graphene Quantum Dot-TiO Nanoplate Hybrid Structure for an Efficient NO Gas Sensor. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 13428-13436	9.5	48
52	NO _x gas sensors based on layer-transferred n-MoS ₂ /p-GaN heterojunction at room temperature: Study of UV light illuminations and humidity. <i>Sensors and Actuators B: Chemical</i> , 2020 , 308, 127700	8.5	38
51	Analysis of leakage current mechanisms in Pt/Au Schottky contact on Ga-polarity GaN by Frenkel-Poole emission and deep level studies. <i>Journal of Applied Physics</i> , 2011 , 110, 013716	2.5	32
50	Comparison of stress states in GaN films grown on different substrates: Langasite, sapphire and silicon. <i>Journal of Crystal Growth</i> , 2015 , 425, 149-153	1.6	30
49	CVD-deposited hybrid lead halide perovskite films for high-responsivity, self-powered photodetectors with enhanced photo stability under ambient conditions. <i>Nano Energy</i> , 2020 , 74, 104872 ^{17.1}	17.1	29
48	DNA-CTMA functionalized GaN surfaces for NO ₂ gas sensor at room temperature under UV illumination. <i>Organic Electronics</i> , 2019 , 65, 334-340	3.5	28
47	Reduction of internal polarization fields in InGaN quantum wells by InGaN/AlGaIn ultra-thin superlattice barriers with different indium composition. <i>Journal of Applied Physics</i> , 2011 , 110, 123108	2.5	25
46	Interaction activated interfacial charge transfer in 2D g-C ₃ N ₄ /GaN nanorods heterostructure for self-powered UV photodetector and room temperature NO ₂ gas sensor at ppb level. <i>Sensors and Actuators B: Chemical</i> , 2021 , 329, 129175	8.5	25
45	Solution-processed Au@rGO/GaN nanorods hybrid-structure for self-powered UV, visible photodetector and CO gas sensors. <i>Current Applied Physics</i> , 2019 , 19, 938-945	2.6	22
44	Temperature-dependent electrical properties of (Pt/Au)/Ga-polarity GaN/Si(111) Schottky diode. <i>Microelectronic Engineering</i> , 2012 , 93, 100-104	2.5	22
43	Analysis of electrical properties and deep level defects in undoped GaN Schottky barrier diode. <i>Thin Solid Films</i> , 2013 , 534, 603-608	2.2	22
42	The growth of a low defect InAs HEMT structure on Si by using an AlGaSb buffer layer containing InSb quantum dots for dislocation termination. <i>Nanotechnology</i> , 2009 , 20, 225201	3.4	22
41	A novel low-temperature resistive NO gas sensor based on InGaIn/GaN multi-quantum well-embedded p-i-n GaN nanorods. <i>Dalton Transactions</i> , 2019 , 48, 1367-1375	4.3	19
40	UV-light enhanced CO gas sensors based on InGaIn nanorods decorated with p-Phenylenediamine-graphene oxide composite. <i>Sensors and Actuators B: Chemical</i> , 2020 , 307, 127649	8.5	19
39	Ag Nanowire-Plasmonic-Assisted Charge Separation in Hybrid Heterojunctions of Ppy-PEDOT:PSS/GaN Nanorods for Enhanced UV Photodetection. <i>ACS Applied Materials & Interfaces</i> , 2020 ,	9.5	19
38	Low operating temperature NO gas sensors based hydrogen peroxide treated GaN nanorods. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2020 , 116, 113725	3	17

37	Hydrogen Generation using non-polar coaxial InGaN/GaN Multiple Quantum Well Structure Formed on Hollow n-GaN Nanowires. <i>Scientific Reports</i> , 2016 , 6, 31996	4.9	15
36	Gold nanoparticle-embedded DNA thin films for ultraviolet photodetectors. <i>Sensors and Actuators B: Chemical</i> , 2018 , 275, 137-144	8.5	13
35	Antibacterial activity of novel Cu ₂ ZnSnS ₄ nanoparticles against pathogenic strains. <i>RSC Advances</i> , 2015 , 5, 106400-106405	3.7	13
34	Hydrogen passivation effect on the yellow-green emission band and bound exciton in n - ZnO. <i>Solid State Communications</i> , 2011 , 151, 768-770	1.6	13
33	Domain matching epitaxy of GaN films on a novel langasite substrate: an in-plane epitaxial relationship analysis. <i>CrystEngComm</i> , 2015 , 17, 4455-4461	3.3	12
32	Improved Schottky behavior of GaN nanorods using hydrogen plasma treatment. <i>Current Applied Physics</i> , 2017 , 17, 192-196	2.6	12
31	Doughnut-shaped hierarchical Cu ₂ ZnSnS ₄ microparticles synthesized by cyclic microwave irradiation. <i>Advanced Powder Technology</i> , 2014 , 25, 1554-1559	4.6	10
30	p-Phenylendiamine functionalized rGO/Si heterostructure Schottky junction for UV photodetectors. <i>Diamond and Related Materials</i> , 2019 , 93, 208-215	3.5	9
29	PrGO decorated TiO ₂ nanoplates hybrid nanocomposite for augmented NO ₂ gas detection with faster gas kinetics under UV light irradiation. <i>Sensors and Actuators B: Chemical</i> , 2022 , 358, 131503	8.5	8
28	High performance UV photodetectors using Nd and Er single- and co-doped DNA thin films. <i>Biosensors and Bioelectronics</i> , 2019 , 126, 44-50	11.8	8
27	Influence of growth parameters on the optical properties of selective area grown GaN nanorods by plasma-assisted molecular beam epitaxy. <i>Journal of Luminescence</i> , 2014 , 151, 188-192	3.8	7
26	High performance langasite based SAW NO gas sensor using 2D g-CN@TiO hybrid nanocomposite.. <i>Journal of Hazardous Materials</i> , 2021 , 427, 128174	12.8	7
25	Current-Voltage characteristics and deep-level study of GaN nanorod Schottky-diode-based photodetector. <i>Semiconductor Science and Technology</i> , 2021 , 36, 035010	1.8	7
24	Efficient Charge Separation in Polypyrrole/GaN-Nanorod-Based Hybrid Heterojunctions for High-Performance Self-Powered UV Photodetection. <i>Physica Status Solidi - Rapid Research Letters</i> , 2005 , 18, 215	2.5	7
23	Surface acoustic device for high response NO ₂ gas sensor using p-phenylenediamine-reduced graphene oxide nanocomposite coated on langasite. <i>Smart Materials and Structures</i> , 2021 , 30, 095016	3.4	6
22	High electron mobility transistors with Fe-doped semi-insulating GaN buffers on (1 1 0) Si substrates grown by ammonia molecular beam epitaxy. <i>Journal of Crystal Growth</i> , 2019 , 509, 141-145	1.6	5
21	Hydrogen passivation: a proficient strategy to enhance the optical and photoelectrochemical performance of InGaN/GaN single-quantum-well nanorods. <i>Nanotechnology</i> , 2020 , 31, 475201	3.4	5
20	Proliferation of the Light and Gas Interaction with GaN Nanorods Grown on a V-Grooved Si(111) Substrate for UV Photodetector and NO Gas Sensor Applications. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 30146-30154	9.5	5

19	Hydrogenation-produced InO/InN core-shell nanorod and its effect on NO gas sensing behavior. <i>Nanotechnology</i> , 2020 , 31, 335503	3.4	4
18	Optical and crystal properties of ammonia MBE-grown GaN layers on plasma-assisted MBE-grown AlN/Si (110) substrates. <i>Current Applied Physics</i> , 2014 , 14, S29-S33	2.6	4
17	Control of polarity and defects in the growth of AlN films on Si (111) surfaces by inserting an Al interlayer. <i>Current Applied Physics</i> , 2012 , 12, 385-388	2.6	4
16	GaN nanorods on V-groove textured Si (111): significant light trapping for photoelectrocatalytic water splitting. <i>Applied Physics Letters</i> , 2021 , 119, 023901	3.4	4
15	Ferromagnetic properties of GaN nanorods: Effect of silicon doping and hydrogenation. <i>Current Applied Physics</i> , 2016 , 16, 886-889	2.6	4
14	DNA nanostructures doped with lanthanide ions for highly sensitive UV photodetectors. <i>Colloids and Surfaces B: Biointerfaces</i> , 2019 , 175, 212-220	6	4
13	Thickness dependence of temperature-induced emission mechanism in InGaN/AlGaIn short-period superlattices. <i>Journal of Applied Physics</i> , 2012 , 112, 043102	2.5	3
12	Plasmonic Pt nanoparticles triggered efficient charge separation in TiO ₂ /GaN NRs hybrid heterojunction for the high performance self-powered UV photodetectors. <i>Applied Surface Science</i> , 2022 , 594, 153474	6.7	3
11	Influence of p-GaN shape on the light emission characteristics of InGaIn nanodisk embedded p-i-n GaN nanorods. <i>Current Applied Physics</i> , 2015 , 15, S2-S6	2.6	2
10	Selective area growth of GaN nanorods by using molecular beam epitaxy: Effect of growth temperature and Ga flux. <i>Journal of the Korean Physical Society</i> , 2014 , 65, 1634-1638	0.6	2
9	Excitonic transitions in (Ga _{1-x} Mnx)N thin films with high Curie temperature. <i>Journal of Crystal Growth</i> , 2005 , 278, 671-674	1.6	2
8	Effect of H ₂ O ₂ Surface Passivation on the Electrical Properties of GaN Film. <i>Nanoscience and Nanotechnology Letters</i> , 2016 , 8, 864-868	0.8	2
7	Enhanced sensitivity of langasite-based surface acoustic wave CO gas sensor using highly porous Ppy@PEDOT:PSS hybrid nanocomposite. <i>Sensors and Actuators B: Chemical</i> , 2022 , 363, 131786	8.5	2
6	Influence of an embedded low-temperature AlN strain relaxation layer on the strain states and the buffer characteristics of GaN films grown on (110) Si substrates by using ammonia molecular beam epitaxy. <i>Journal of the Korean Physical Society</i> , 2015 , 66, 1766-1770	0.6	1
5	Effects of reduced internal electric field in InGaIn/pseudo-AlInGaIn multi-quantum-well on forward leakage current and photocurrent properties. <i>Journal of Applied Physics</i> , 2019 , 126, 045703	2.5	1
4	A study of the red-shift of a neutral donor bound exciton in GaN nanorods by hydrogenation. <i>Nanotechnology</i> , 2017 , 28, 365702	3.4	1
3	Room-temperature continuous-wave operation of ZnSe-based blue-green laser diode grown by molecular beam epitaxy. <i>Journal of Crystal Growth</i> , 1997 , 175-176, 637-641	1.6	1
2	A Study on Strain and Shape of GaN Nanorods with Variation of Si Concentration Grown on Patterned Si(111) Substrates. <i>Journal of Nanoscience and Nanotechnology</i> , 2016 , 16, 11486-11489	1.3	1

- 1 Temperature- and Al/N ratio-dependent AlN seed layer formation on (110) Si substrates by using plasma-assisted molecular beam epitaxy. *Journal of the Korean Physical Society*, **2014**, 64, 1577-1580 0.6