

# Moon-Deock Kim

## List of Publications by Year in descending order

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Version: 2024-02-01

61  
papers

1,212  
citations

331259

21  
h-index

395343

33  
g-index

62  
all docs

62  
docs citations

62  
times ranked

1273  
citing authors

#	ARTICLE	IF	CITATIONS
1	Enhancing the Charge Carrier Separation and Transport via Nitrogen-Doped Graphene Quantum Dot-TiO <sub>2</sub> Nanoplate Hybrid Structure for an Efficient NO Gas Sensor. ACS Applied Materials & Interfaces, 2020, 12, 13428-13436.	4.0	88
2	NO <sub>x</sub> gas sensors based on layer-transferred n-MoS <sub>2</sub> /p-GaN heterojunction at room temperature: Study of UV light illuminations and humidity. Sensors and Actuators B: Chemical, 2020, 308, 127700.	4.0	87
3	H <sub>2</sub> , H <sub>2</sub> S gas sensing properties of rGO/GaN nanorods at room temperature: Effect of UV illumination. Sensors and Actuators B: Chemical, 2018, 264, 353-362.	4.0	69
4	High performance langasite based SAW NO <sub>2</sub> gas sensor using 2D g-C <sub>3</sub> N <sub>4</sub> @TiO <sub>2</sub> hybrid nanocomposite. Journal of Hazardous Materials, 2022, 427, 128174.	6.5	69
5	Interaction activated interfacial charge transfer in 2D g-C <sub>3</sub> N <sub>4</sub> /GaN nanorods heterostructure for self-powered UV photodetector and room temperature NO <sub>2</sub> gas sensor at ppb level. Sensors and Actuators B: Chemical, 2021, 329, 129175.	4.0	68
6	CVD-deposited hybrid lead halide perovskite films for high-responsivity, self-powered photodetectors with enhanced photo stability under ambient conditions. Nano Energy, 2020, 74, 104872.	8.2	50
7	DNA-CTMA functionalized GaN surfaces for NO <sub>2</sub> gas sensor at room temperature under UV illumination. Organic Electronics, 2019, 65, 334-340.	1.4	45
8	Ag Nanowire-Plasmonic-Assisted Charge Separation in Hybrid Heterojunctions of Ppy-PEDOT:PSS/GaN Nanorods for Enhanced UV Photodetection. ACS Applied Materials & Interfaces, 2020, 12, 54181-54190.	4.0	44
9	Analysis of leakage current mechanisms in Pt/Au Schottky contact on Ga-polarity GaN by Frenkel-Poole emission and deep level studies. Journal of Applied Physics, 2011, 110, .	1.1	43
10	PrGO decorated TiO <sub>2</sub> nanoplates hybrid nanocomposite for augmented NO <sub>2</sub> gas detection with faster gas kinetics under UV light irradiation. Sensors and Actuators B: Chemical, 2022, 358, 131503.	4.0	42
11	Comparison of stress states in GaN films grown on different substrates: Langasite, sapphire and silicon. Journal of Crystal Growth, 2015, 425, 149-153.	0.7	36
12	Solution-processed Au@rGO/GaN nanorods hybrid-structure for self-powered UV, visible photodetector and CO gas sensors. Current Applied Physics, 2019, 19, 938-945.	1.1	35
13	UV-light enhanced CO gas sensors based on InGaN nanorods decorated with p-Phenylenediamine-graphene oxide composite. Sensors and Actuators B: Chemical, 2020, 307, 127649.	4.0	32
14	A novel low-temperature resistive NO gas sensor based on InGaN/GaN multi-quantum well-embedded p-GaN nanorods. Dalton Transactions, 2019, 48, 1367-1375.	1.6	28
15	Antibacterial activity of novel Cu <sub>2</sub> ZnSnS <sub>4</sub> nanoparticles against pathogenic strains. RSC Advances, 2015, 5, 106400-106405.	1.7	27
16	Reduction of internal polarization fields in InGaN quantum wells by InGaN/AlGaN ultra-thin superlattice barriers with different indium composition. Journal of Applied Physics, 2011, 110, .	1.1	26
17	Plasmonic Pt nanoparticles triggered efficient charge separation in TiO <sub>2</sub> /GaN NRs hybrid heterojunction for the high performance self-powered UV photodetectors. Applied Surface Science, 2022, 594, 153474.	3.1	26
18	Analysis of electrical properties and deep level defects in undoped GaN Schottky barrier diode. Thin Solid Films, 2013, 534, 603-608.	0.8	25

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19	Low operating temperature NO gas sensors based hydrogen peroxide treated GaN nanorods. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2020, 116, 113725.	1.3	25
20	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.	1.3	24
21	Temperature-dependent electrical properties of (Pt/Au)/Ga-polarity GaN/Si(1 1 1) Schottky diode. <i>Microelectronic Engineering</i> , 2012, 93, 100-104.	1.1	24
22	Proliferation of the Light and Gas Interaction with GaN Nanorods Grown on a V-Grooved Si(111) Substrate for UV Photodetector and NO <sub>2</sub> Gas Sensor Applications. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 30146-30154.	4.0	21
23	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> , 2021, 15, 2000518.	1.2	19
24	Current-voltage characteristics and deep-level study of GaN nanorod Schottky-diode-based photodetector. <i>Semiconductor Science and Technology</i> , 2021, 36, 035010.	1.0	17
25	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.	1.6	16
26	Gold nanoparticle-embedded DNA thin films for ultraviolet photodetectors. <i>Sensors and Actuators B: Chemical</i> , 2018, 275, 137-144.	4.0	16
27	Surface acoustic device for high response NO <sub>2</sub> gas sensor using p-phenylenediamine-reduced graphene oxide nanocomposite coated on langasite. <i>Smart Materials and Structures</i> , 2021, 30, 095016.	1.8	16
28	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.	4.0	15
29	Domain matching epitaxy of GaN films on a novel langasite substrate: an in-plane epitaxial relationship analysis. <i>CrystEngComm</i> , 2015, 17, 4455-4461.	1.3	14
30	Improved Schottky behavior of GaN nanorods using hydrogen plasma treatment. <i>Current Applied Physics</i> , 2017, 17, 192-196.	1.1	14
31	p-Pheneylendiamine functionalized rGO/Si heterostructure Schottky junction for UV photodetectors. <i>Diamond and Related Materials</i> , 2019, 93, 208-215.	1.8	14
32	Hydrogen passivation effect on the yellow-green emission band and bound exciton in n - ZnO. <i>Solid State Communications</i> , 2011, 151, 768-770.	0.9	13
33	High performance UV photodetectors using Nd <sup>3+</sup> and Er <sup>3+</sup> single- and co-doped DNA thin films. <i>Biosensors and Bioelectronics</i> , 2019, 126, 44-50.	5.3	12
34	Doughnut-shaped hierarchical Cu <sub>2</sub> ZnSnS <sub>4</sub> microparticles synthesized by cyclic microwave irradiation. <i>Advanced Powder Technology</i> , 2014, 25, 1554-1559.	2.0	11
35	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.	1.3	10
36	Photovoltaic Photodetectors Based on In <sub>2</sub> O <sub>3</sub> /InN Core-Shell Nanorods. <i>ACS Applied Nano Materials</i> , 2022, 5, 7418-7426.	2.4	10

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37	GaN nanorods on V-groove textured Si (111): significant light trapping for photoelectrocatalytic water splitting. Applied Physics Letters, 2021, 119, .	1.5	9
38	High electron mobility transistors with Fe-doped semi-insulating GaN buffers on (111) Si substrates grown by ammonia molecular beam epitaxy. Journal of Crystal Growth, 2019, 509, 141-145.	0.7	8
39	Influence of growth parameters on the optical properties of selective area grown GaN nanorods by plasma-assisted molecular beam epitaxy. Journal of Luminescence, 2014, 151, 188-192.	1.5	7
40	DNA nanostructures doped with lanthanide ions for highly sensitive UV photodetectors. Colloids and Surfaces B: Biointerfaces, 2019, 175, 212-220.	2.5	7
41	Hydrogenation-produced In <sub>2</sub> O <sub>3</sub> /InN core-shell nanorod and its effect on NO <sub>2</sub> gas sensing behavior. Nanotechnology, 2020, 31, 335503.	1.3	7
42	Feather-Shaped InGa <sub>2</sub> N Nanorods for Selective ppb-Level Detection of NO <sub>2</sub> Gas at Room Temperature. ACS Applied Nano Materials, 2021, 4, 13288-13296.	2.4	7
43	Control of polarity and defects in the growth of AlN films on Si (111) surfaces by inserting an Al interlayer. Current Applied Physics, 2012, 12, 385-388.	1.1	5
44	Optical and crystal properties of ammonia MBE-grown GaN layers on plasma-assisted MBE-grown AlN/Si (110) substrates. Current Applied Physics, 2014, 14, S29-S33.	1.1	5
45	Ferromagnetic properties of GaN nanorods: Effect of silicon doping and hydrogenation. Current Applied Physics, 2016, 16, 886-889.	1.1	4
46	Thickness dependence of temperature-induced emission mechanism in InGa <sub>2</sub> N/AlGa <sub>2</sub> N short-period superlattices. Journal of Applied Physics, 2012, 112, 043102.	1.1	3
47	Effects of reduced internal electric field in InGa <sub>2</sub> N/pseudo-AlInGa <sub>2</sub> N multi-quantum-well on forward leakage current and photocurrent properties. Journal of Applied Physics, 2019, 126, .	1.1	3
48	Excitonic transitions in (Ga <sub>1-x</sub> Mnx)N thin films with high Curie temperature. Journal of Crystal Growth, 2005, 278, 671-674.	0.7	2
49	Selective area growth of GaN nanorods by using molecular beam epitaxy: Effect of growth temperature and Ga flux. Journal of the Korean Physical Society, 2014, 65, 1634-1638.	0.3	2
50	Influence of p-GaN shape on the light emission characteristics of InGa <sub>2</sub> N nanodisk embedded p-i-n GaN nanorods. Current Applied Physics, 2015, 15, S2-S6.	1.1	2
51	A study of the red-shift of a neutral donor bound exciton in GaN nanorods by hydrogenation. Nanotechnology, 2017, 28, 365702.	1.3	2
52	Effect of H <sub>2</sub> O <sub>2</sub> Surface Passivation on the Electrical Properties of GaN Film. Nanoscience and Nanotechnology Letters, 2016, 8, 864-868.	0.4	2
53	Room-temperature continuous-wave operation of ZnSe-based blue-green laser diode grown by molecular beam epitaxy. Journal of Crystal Growth, 1997, 175-176, 637-641.	0.7	1
54	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. Journal of the Korean Physical Society, 2015, 66, 1766-1770.	0.3	1

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55	A Study on Strain and Shape of GaN Nanorods with Variation of Si Concentration Grown on Patterned Si(111) Substrates. Journal of Nanoscience and Nanotechnology, 2016, 16, 11486-11489.	0.9	1
56	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.	0.3	0
57	Structural Properties of AlN Films Grown on Dome Shape Nano-structure Si(111) Substrates with Different Heights and Pitches. New Physics: Sae Mulli, 2016, 66, 133-139.	0.0	0
58	Origin of the Leakage Current in GaN Films with Different Ga Fluxes. New Physics: Sae Mulli, 2016, 66, 1385-1390.	0.0	0
59	Study of the Strain and Electric Properties of Fe-doped GaN Grown on Si(110) by Using Molecular Beam Epitaxy. New Physics: Sae Mulli, 2017, 67, 1302-1307.	0.0	0
60	Solid-state light-emitting devices using novel green luminescent material of semiconductive nanoporous ZnMnO. , 2019, , .		0
61	Enhancement of photocurrent in InGaN/pseudo-AlGaIn multi quantum wells by surface acoustic wave. , 2019, , .		0