

Baikui Li

List of Publications by Year in descending order

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89
papers

1,864
citations

304602

22
h-index

302012

39
g-index

89
all docs

89
docs citations

89
times ranked

2132
citing authors

#	ARTICLE	IF	CITATIONS
1	Interface Engineering of Monolayer MoS ₂ /GaN Hybrid Heterostructure: Modified Band Alignment for Photocatalytic Water Splitting Application by Nitridation Treatment. ACS Applied Materials & Interfaces, 2018, 10, 17419-17426.	4.0	214
2	High-field linear magneto-resistance in topological insulator Bi ₂ Se ₃ thin films. Applied Physics Letters, 2012, 100, .	1.5	104
3	Mechanism of Threshold Voltage Shift in μ -GaN Gate AlGaN/GaN Transistors. IEEE Electron Device Letters, 2018, 39, 1145-1148.	2.2	96
4	Low On-Resistance Normally-Off GaN Double-Channel Metal-Oxide-Semiconductor High-Electron-Mobility Transistor. IEEE Electron Device Letters, 2015, 36, 1287-1290.	2.2	88
5	Exciton and trion in few-layer MoS ₂ : Thickness- and temperature-dependent photoluminescence. Applied Surface Science, 2020, 515, 146033.	3.1	79
6	Characterization of VT-instability in enhancement-mode Al ₂ O ₃ -AlGaIn/GaN MIS-HEMTs. Physica Status Solidi C: Current Topics in Solid State Physics, 2013, 10, 1397-1400.	0.8	66
7	Influence of AlN Passivation on Dynamic ON-Resistance and Electric Field Distribution in High-Voltage AlGaIn/GaN-on-Si HEMTs. IEEE Transactions on Electron Devices, 2014, 61, 2785-2792.	1.6	52
8	Theoretical study on the photocatalytic properties of 2D InX(X = S, Se)/transition metal disulfide (MoS ₂ and WS ₂) van der Waals heterostructures. Nanoscale, 2020, 12, 20025-20032.	2.8	49
9	Strain-tunable III-nitride/ZnO heterostructures for photocatalytic water-splitting: A hybrid functional calculation. APL Materials, 2020, 8, .	2.2	48
10	Surface nitridation for improved dielectric/III-nitride interfaces in GaN MIS-HEMTs. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 1059-1065.	0.8	41
11	Improved Gate Dielectric Deposition and Enhanced Electrical Stability for Single-Layer MoS ₂ MOSFET with an AlN Interfacial Layer. Scientific Reports, 2016, 6, 27676.	1.6	39
12	Enhancement-mode GaN double-channel MOS-HEMT with low on-resistance and robust gate recess. , 2015, , .		38
13	Control of secondary phases and disorder degree in Cu ₂ ZnSnS ₄ films by sulfurization at varied subatmospheric pressures. Solar Energy Materials and Solar Cells, 2019, 200, 109915.	3.0	33
14	Enhancement of Raman Scattering and Exciton/Trion Photoluminescence of Monolayer and Few-Layer MoS ₂ by Ag Nanoprisms and Nanoparticles: Shape and Size Effects. Journal of Physical Chemistry C, 2021, 125, 4119-4132.	1.5	32
15	An Analytical Investigation on the Charge Distribution and Gate Control in the Normally-Off GaN Double-Channel MOS-HEMT. IEEE Transactions on Electron Devices, 2018, 65, 2757-2764.	1.6	30
16	Interfacially Bound Exciton State in a Hybrid Structure of Monolayer WS ₂ and InGaIn Quantum Dots. Nano Letters, 2018, 18, 5640-5645.	4.5	29
17	Asymmetric Bipolar Injection in a Schottky-Metal/ μ -GaIn/AlGaIn/GaN Device Under Forward Bias. IEEE Electron Device Letters, 2019, 40, 1389-1392.	2.2	28
18	Tunable Interaction-Induced Localization of Surface Electrons in Antidot Nanostructured Bi ₂ Te ₃ Thin Films. ACS Nano, 2014, 8, 9616-9621.	7.3	27

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37	GaN ϵ -Si vertical conduction mechanisms in AlGaN/GaN ϵ -Si lateral heterojunction FET structures. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2014, 11, 949-952.	0.8	17
38	Degradation of transient OFF-state leakage current in AlGaN/GaN HEMTs induced by ON-state gate overdrive. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2014, 11, 928-931.	0.8	16
39	Characterization of Static and Dynamic Behaviors in AlGaN/GaN-on-Si Power Transistors With Photonic-Ohmic Drain. <i>IEEE Transactions on Electron Devices</i> , 2016, 63, 2831-2837.	1.6	16
40	Broadband White-Light Emission from Alumina Nitride Bulk Single Crystals. <i>ACS Photonics</i> , 2018, 5, 4009-4013.	3.2	16
41	Effect of Hole-Injection on Leakage Degradation in a p^+ -GaN Gate AlGaN/GaN Power Transistor. <i>IEEE Electron Device Letters</i> , 2018, 39, 1203-1206.	2.2	16
42	Defect influence on in-plane photocurrent of InAs/InGaAs quantum dot array: long-term electron trapping and Coulomb screening. <i>Nanotechnology</i> , 2019, 30, 305701.	1.3	15
43	MoS ₂ two-dimensional quantum dots with weak lateral quantum confinement: Intense exciton and trion photoluminescence. <i>Surfaces and Interfaces</i> , 2021, 23, 100909.	1.5	15
44	Near-infrared lateral photoresponse in InGaAs/GaAs quantum dots. <i>Semiconductor Science and Technology</i> , 2020, 35, 055029.	1.0	14
45	Robust two-dimensional superconductivity and vortex system in Bi ₂ Te ₃ /FeTe heterostructures. <i>Scientific Reports</i> , 2016, 6, 26168.	1.6	13
46	Linear positive and negative magnetoresistance in topological insulator Bi ₂ Se ₃ flakes. <i>Applied Physics Letters</i> , 2018, 113, .	1.5	13
47	Gate Structure Design of SiC Trench IGBTs for Injection-Enhancement Effect. <i>IEEE Transactions on Electron Devices</i> , 2019, 66, 3034-3039.	1.6	13
48	Mechanism of leakage current increase in p-GaN gate AlGaN/GaN power devices induced by ON-state gate bias. <i>Japanese Journal of Applied Physics</i> , 2018, 57, 124101.	0.8	11
49	Exciton aggregation induced photoluminescence enhancement of monolayer WS ₂ . <i>Applied Physics Letters</i> , 2019, 114, .	1.5	11
50	Optoelectronic devices on AlGaN/GaN HEMT platform. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2016, 213, 1213-1221.	0.8	10
51	Demonstration of Electron/Hole Injections in the Gate of p^+ -GaN/AlGaN/GaN Power Transistors and Their Effect on Device Dynamic Performance. , 2019, , .		10
52	Thermally enhanced hole injection and breakdown in a Schottky-metal/ <i>p</i> -GaN/AlGaN/GaN device under forward bias. <i>Applied Physics Letters</i> , 2020, 117, .	1.5	10
53	AlN/GaN heterostructure TFTs with plasma enhanced atomic layer deposition of epitaxial AlN thin film. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2014, 11, 953-956.	0.8	9
54	Influence of anharmonicity and interlayer interaction on Raman spectra in mono- and few-layer MoS ₂ : A computational study. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2022, 136, 114999.	1.3	9

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55	Formation Dynamics of Excitons and Temporal Behaviors of Fano Resonance Due to the Excitonâ€“Impurityâ€“Phonon Configuration Interaction in ZnO. <i>Journal of Physical Chemistry A</i> , 2012, 116, 381-385.	1.1	8
56	Red-shifted photoluminescence and gamma irradiation stability of â€œmicromorphâ€“(nc-Si/SiO ₂)/DLC down-converter anti-reflection coatings. <i>Diamond and Related Materials</i> , 2019, 100, 107578.	1.8	8
57	InAs/InGaAs quantum dots confined by InAlAs barriers for enhanced room temperature light emission: Photoelectric properties and deep levels. <i>Microelectronic Engineering</i> , 2021, 238, 111514.	1.1	8
58	Interface effect in Nb-Bi ₂ Te ₃ hybrid structure. <i>Applied Physics Letters</i> , 2013, 103, .	1.5	7
59	Photocurrent characteristics of metalâ€“AlGa _x N/GaN Schottky-on-heterojunction diodes induced by GaN interband excitation. <i>Applied Physics Express</i> , 2018, 11, 054101.	1.1	7
60	Spectroscopy and Theoretical Modeling of Phonon Vibration Modes and Band Gap Energy of Cu ₂ ZnSn(S _x Se _{1-x}) ₄ Bulk Crystals and Thin Films. <i>ACS Omega</i> , 2021, 6, 29137-29148.	1.6	7
61	Investigation of Thermally Induced Threshold Voltage Shift in Normally-OFF p-GaN Gate HEMTs. <i>IEEE Transactions on Electron Devices</i> , 2022, 69, 2287-2292.	1.6	7
62	Plasmonic enhancement of exciton and trion photoluminescence in 2D MoS ₂ decorated with Au nanorods: Impact of nonspherical shape. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2022, 140, 115213.	1.3	7
63	Raman Scattering and Exciton Photoluminescence in Few-Layer GaSe: Thickness- and Temperature-Dependent Behaviors. <i>Journal of Physical Chemistry C</i> , 2022, 126, 10459-10468.	1.5	7
64	Anomalous photocurrent observed in an Feâ€“ZnS:Fe Schottky diode. <i>Applied Physics Letters</i> , 2007, 91, 172104.	1.5	6
65	Schottky-on-heterojunction optoelectronic functional devices realized on AlGa _x N/GaN-on-Si platform. , 2014, , .		6
66	Photon emission and current-collapse suppression of AlGa _x N/GaN field-effect transistors with photonicâ€“ohmic drain at high temperatures. <i>Applied Physics Express</i> , 2018, 11, 071003.	1.1	6
67	Kinetics peculiarities of photovoltage in vertical metamorphic InAs/InGaAs quantum dot structures. <i>Semiconductor Science and Technology</i> , 2019, 34, 075025.	1.0	6
68	Hexagram bi-layer MoS ₂ flake: The impact of polycrystallinity and strains on the exciton and trion photoluminescence. <i>Surfaces and Interfaces</i> , 2021, 26, 101343.	1.5	6
69	Observation of negative differential resistance from a Schottky-barrier structure embedded with Fe quantum dots. <i>Journal of Crystal Growth</i> , 2009, 311, 2155-2159.	0.7	5
70	Nitridation of GaN surface for power device application: A first-principles study. , 2016, , .		5
71	Effect of substrate doping concentration on quantum well states of Pb island grown on Si(111). <i>Surface Science</i> , 2010, 604, 175-180.	0.8	4
72	On-chip addressable Schottky-on-heterojunction light-emitting diode arrays on AlGa _x N/GaN-on-Si platform. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2016, 13, 365-368.	0.8	4

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73	Defect levels and interface space charge area responsible for negative photovoltage component in InAs/GaAs quantum dot photodetector structure. <i>Microelectronic Engineering</i> , 2020, 230, 111367.	1.1	4
74	MoS ₂ monolayer quantum dots on a flake: Efficient sensitization of exciton and trion photoluminescence via resonant nonradiative energy and charge transfers. <i>Applied Surface Science</i> , 2022, 601, 154209.	3.1	4
75	Switching Behaviors of On-Chip Photon Source on AlGaIn/GaN-on-Si Power HEMTs Platform. <i>IEEE Photonics Technology Letters</i> , 2016, 28, 2803-2806.	1.3	3
76	Photoelectric and deep level study of metamorphic InAs/InGaAs quantum dots with GaAs confining barriers for photoluminescence enhancement. <i>Semiconductor Science and Technology</i> , 2020, 35, 095022.	1.0	3
77	Investigation of the threshold voltage instability in normally-off p-GaN/AlGaIn/GaN HEMTs by optical analysis. <i>Japanese Journal of Applied Physics</i> , 2021, 60, 104001.	0.8	3
78	On-chip optical pumping of deep traps in AlGaIn/GaN-on-Si power HEMTs. , 2015, , .		2
79	Ambipolar Photocarrier Doping and Transport in Monolayer WS ₂ , by Forming a Graphene/WS ₂ /Quantum Dots Heterostructure. <i>IEEE Electron Device Letters</i> , 2021, 42, 371-374.	2.2	2
80	Theoretical study of Raman scattering in MoS ₂ x Se ₂ (1-x) layered alloys. <i>Journal of Raman Spectroscopy</i> , 2021, 52, 1193-1205.	1.2	2
81	The formation of a charge layer at the interface of GaMnAs and an organic material. <i>Europhysics Letters</i> , 2009, 88, 46002.	0.7	1
82	Monolithically integrated 600-V E/D-mode SiN/AlGaIn/GaN MIS-HEMTs and their applications in low-standby-power start-up circuit for switched-mode power supplies. , 2013, , .		1
83	Impact of integrated photonic-ohmic drain on static and dynamic characteristics of GaN-on-Si heterojunction power transistors. , 2016, , .		1
84	New Power MOSFET with Beyond-1D-Limit RSP-BV Trade-Off and Superior Reverse Recovery Characteristics. <i>Materials</i> , 2020, 13, 2581.	1.3	1
85	A New SiC Planar-Gate IGBT for Injection Enhancement Effect and Low Oxide Field. <i>Energies</i> , 2021, 14, 82.	1.6	1
86	Metamorphic InAs/InGaAs Quantum Dot Structures: Photoelectric Properties and Deep Levels. <i>Springer Proceedings in Physics</i> , 2020, , 319-336.	0.1	1
87	Interface dipole formation between GaMnAs and organic material. <i>Journal of Physics: Conference Series</i> , 2009, 193, 012105.	0.3	0
88	Enhancing dynamic performance of GaN-on-Si power devices with on-chip photon pumping. , 2016, , .		0
89	Enhanced Conduction Characteristics in SiC IGBT with Floating p-Grid Shielded Thick Current Storage Layer. <i>ECS Journal of Solid State Science and Technology</i> , 2019, 8, Q230-Q233.	0.9	0