

Baikui Li

List of Publications by Year in descending order

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papers

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304602

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times ranked

2132
citing authors

#	ARTICLE	IF	CITATIONS
1	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
2	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
3	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
4	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
5	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
6	Enhancement of Raman Scattering and Exciton/Trion Photoluminescence of Monolayer and Few-Layer MoS ₂ by Ag Nanoprisms and Nanoparticles: Shape and Size Effects. <i>Journal of Physical Chemistry C</i> , 2021, 125, 4119-4132.	1.5	32
7	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
8	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
9	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
10	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
11	Observation of Diffusion and Drift of the Negative Trions in Monolayer WS ₂ . <i>Nano Letters</i> , 2021, 21, 6314-6320.	4.5	19
12	Temperature enhanced responsivity and speed in an AlGaIn/GaN metal-heterostructure-metal photodetector. <i>Applied Physics Letters</i> , 2021, 119, .	1.5	22
13	Trion Binding Energy Variation on Photoluminescence Excitation Energy and Power during Direct to Indirect Bandgap Crossover in Monolayer and Few-Layer MoS ₂ . <i>Journal of Physical Chemistry C</i> , 2021, 125, 17806-17819.	1.5	22
14	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
15	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
16	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
17	A New SiC Planar-Gate IGBT for Injection Enhancement Effect and Low Oxide Field. <i>Energies</i> , 2021, 14, 82.	1.6	1
18	Thermally enhanced hole injection and breakdown in a Schottky-metal/p-GaN/AlGaIn/GaN device under forward bias. <i>Applied Physics Letters</i> , 2020, 117, .	1.5	10

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19	Theoretical study on the photocatalytic properties of 2D InX(X = S, Se)/transition metal disulfide (MoS ₂ and WS ₂) van der Waals heterostructures. <i>Nanoscale</i> , 2020, 12, 20025-20032.	2.8	49
20	Below bandgap photoluminescence of an AlN crystal: Co-existence of two different charging states of a defect center. <i>APL Materials</i> , 2020, 8, .	2.2	24
21	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
22	Raman mapping of MoS ₂ at Cu ₂ ZnSnS ₄ /Mo interface in thin film. <i>Solar Energy</i> , 2020, 205, 154-160.	2.9	25
23	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
24	Exciton and trion in few-layer MoS ₂ : Thickness- and temperature-dependent photoluminescence. <i>Applied Surface Science</i> , 2020, 515, 146033.	3.1	79
25	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
26	Near-infrared lateral photoresponse in InGaAs/GaAs quantum dots. <i>Semiconductor Science and Technology</i> , 2020, 35, 055029.	1.0	14
27	Strain-tunable III-nitride/ZnO heterostructures for photocatalytic water-splitting: A hybrid functional calculation. <i>APL Materials</i> , 2020, 8, .	2.2	48
28	Metamorphic InAs/InGaAs Quantum Dot Structures: Photoelectric Properties and Deep Levels. <i>Springer Proceedings in Physics</i> , 2020, , 319-336.	0.1	1
29	Superjunction MOSFET With Dual Built-In Schottky Diodes for Fast Reverse Recovery: A Numerical Simulation Study. <i>IEEE Electron Device Letters</i> , 2019, 40, 1155-1158.	2.2	25
30	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
31	Barrier Inhomogeneity of Schottky Diode on Nonpolar AlN Grown by Physical Vapor Transport. <i>IEEE Journal of the Electron Devices Society</i> , 2019, 7, 662-667.	1.2	24
32	Red-shifted photoluminescence and gamma irradiation stability of amorphous (nc-Si/SiO ₂)/DLC down-converter anti-reflection coatings. <i>Diamond and Related Materials</i> , 2019, 100, 107578.	1.8	8
33	Demonstration of Electron/Hole Injections in the Gate of p-GaN/AlGaIn/GaN Power Transistors and Their Effect on Device Dynamic Performance. , 2019, , .		10
34	Asymmetric Bipolar Injection in a Schottky-Metal/p-GaN/AlGaIn/GaN Device Under Forward Bias. <i>IEEE Electron Device Letters</i> , 2019, 40, 1389-1392.	2.2	28
35	Interface charge-transfer induced intralayer excited-state biexcitons in graphene/WS ₂ van der Waals heterostructures. <i>Nanoscale</i> , 2019, 11, 13552-13557.	2.8	18
36	Exciton aggregation induced photoluminescence enhancement of monolayer WS ₂ . <i>Applied Physics Letters</i> , 2019, 114, .	1.5	11

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37	Control of secondary phases and disorder degree in Cu ₂ ZnSnS ₄ films by sulfurization at varied subatmospheric pressures. <i>Solar Energy Materials and Solar Cells</i> , 2019, 200, 109915.	3.0	33
38	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
39	Quantitative Analysis of Weak Antilocalization Effect of Topological Surface States in Topological Insulator BiSbTeSe ₂ . <i>Nano Letters</i> , 2019, 19, 2450-2455.	4.5	26
40	Kinetics peculiarities of photovoltage in vertical metamorphic InAs/InGaAs quantum dot structures. <i>Semiconductor Science and Technology</i> , 2019, 34, 075025.	1.0	6
41	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
42	Photocurrent characteristics of metal-AlGaIn/GaN Schottky-on-heterojunction diodes induced by GaN interband excitation. <i>Applied Physics Express</i> , 2018, 11, 054101.	1.1	7
43	Channel-to-Channel Coupling in Normally-Off GaN Double-Channel MOS-HEMT. <i>IEEE Electron Device Letters</i> , 2018, 39, 59-62.	2.2	24
44	Interface Engineering of Monolayer MoS ₂ /GaN Hybrid Heterostructure: Modified Band Alignment for Photocatalytic Water Splitting Application by Nitridation Treatment. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 17419-17426.	4.0	214
45	Bandgap Engineering of InSe Single Crystals through S Substitution. <i>Crystal Growth and Design</i> , 2018, 18, 2899-2904.	1.4	18
46	Simulation Study of a Power MOSFET with Built-in Channel Diode for Enhanced Reverse Recovery Performance. <i>IEEE Electron Device Letters</i> , 2018, , 1-1.	2.2	26
47	Mechanism of leakage current increase in p-GaN gate AlGaIn/GaN power devices induced by ON-state gate bias. <i>Japanese Journal of Applied Physics</i> , 2018, 57, 124101.	0.8	11
48	Linear positive and negative magnetoresistance in topological insulator Bi ₂ Se ₃ flakes. <i>Applied Physics Letters</i> , 2018, 113, .	1.5	13
49	An Analytical Investigation on the Charge Distribution and Gate Control in the Normally-Off GaN Double-Channel MOS-HEMT. <i>IEEE Transactions on Electron Devices</i> , 2018, 65, 2757-2764.	1.6	30
50	Broadband White-Light Emission from Alumina Nitride Bulk Single Crystals. <i>ACS Photonics</i> , 2018, 5, 4009-4013.	3.2	16
51	Effect of Hole-Injection on Leakage Degradation in a $\text{p}^+\text{GaIn}/\text{GaIn}/\text{GaIn}$ Gate AlGaIn/GaN Power Transistor. <i>IEEE Electron Device Letters</i> , 2018, 39, 1203-1206.	2.2	16
52	Interfacially Bound Exciton State in a Hybrid Structure of Monolayer WS ₂ and InGaIn Quantum Dots. <i>Nano Letters</i> , 2018, 18, 5640-5645.	4.5	29
53	Photon emission and current-collapse suppression of AlGaIn/GaN field-effect transistors with photonic ohmic drain at high temperatures. <i>Applied Physics Express</i> , 2018, 11, 071003.	1.1	6
54	Mechanism of Threshold Voltage Shift in p^+GaIn -GaN Gate AlGaIn/GaN Transistors. <i>IEEE Electron Device Letters</i> , 2018, 39, 1145-1148.	2.2	96

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55	Revealing the Nitridation Effects on GaN Surface by First-Principles Calculation and X-Ray/Ultraviolet Photoemission Spectroscopy. IEEE Transactions on Electron Devices, 2017, 64, 4036-4043.	1.6	25
56	Enhancing dynamic performance of GaN-on-Si power devices with on-chip photon pumping. , 2016, , .		0
57	Nitridation of GaN surface for power device application: A first-principles study. , 2016, , .		5
58	Characterization of Static and Dynamic Behaviors in AlGaIn/GaN-on-Si Power Transistors With Photonic-Ohmic Drain. IEEE Transactions on Electron Devices, 2016, 63, 2831-2837.	1.6	16
59	Switching Behaviors of On-Chip Photon Source on AlGaIn/GaN-on-Si Power HEMTs Platform. IEEE Photonics Technology Letters, 2016, 28, 2803-2806.	1.3	3
60	Robust two-dimensional superconductivity and vortex system in Bi2Te3/FeTe heterostructures. Scientific Reports, 2016, 6, 26168.	1.6	13
61	Impact of integrated photonic-ohmic drain on static and dynamic characteristics of GaN-on-Si heterojunction power transistors. , 2016, , .		1
62	Improved Gate Dielectric Deposition and Enhanced Electrical Stability for Single-Layer MoS2 MOSFET with an AlN Interfacial Layer. Scientific Reports, 2016, 6, 27676.	1.6	39
63	On-chip addressable Schottky-on-heterojunction light-emitting diode arrays on AlGaIn/GaN-on-Si platform. Physica Status Solidi C: Current Topics in Solid State Physics, 2016, 13, 365-368.	0.8	4
64	Optoelectronic devices on AlGaIn/GaN HEMT platform. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 1213-1221.	0.8	10
65	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
66	Enhancement-mode GaN double-channel MOS-HEMT with low on-resistance and robust gate recess. , 2015, , .		38
67	III-Nitride transistors with photonic-ohmic drain for enhanced dynamic performances. , 2015, , .		18
68	Normally off Al_{0.25}Ga_{0.75}N MIS-HEMT With Transparent Gate Electrode for Gate Degradation Investigation. IEEE Transactions on Electron Devices, 2015, 62, 821-827.	1.6	18
69	Optical pumping of deep traps in AlGaIn/GaN-on-Si HEMTs using an on-chip Schottky-on-heterojunction light-emitting diode. Applied Physics Letters, 2015, 106, .	1.5	18
70	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
71	On-chip optical pumping of deep traps in AlGaIn/GaN-on-Si power HEMTs. , 2015, , .		2
72	Schottky-on-heterojunction optoelectronic functional devices realized on AlGaIn/GaN-on-Si platform. , 2014, , .		6

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73	P-doping-free III-nitride high electron mobility light-emitting diodes and transistors. Applied Physics Letters, 2014, 105, 032105.	1.5	22
74	GaN-on-Si vertical conduction mechanisms in AlGaN/GaN-on-Si lateral heterojunction FET structures. Physica Status Solidi C: Current Topics in Solid State Physics, 2014, 11, 949-952.	0.8	17
75	AlN/GaN heterostructure TFTs with plasma enhanced atomic layer deposition of epitaxial AlN thin film. Physica Status Solidi C: Current Topics in Solid State Physics, 2014, 11, 953-956.	0.8	9
76	Degradation of transient OFF-state leakage current in AlGaN/GaN HEMTs induced by ON-state gate overdrive. Physica Status Solidi C: Current Topics in Solid State Physics, 2014, 11, 928-931.	0.8	16
77	Influence of AlN Passivation on Dynamic ON-Resistance and Electric Field Distribution in High-Voltage AlGaN/GaN-on-Si HEMTs. IEEE Transactions on Electron Devices, 2014, 61, 2785-2792.	1.6	52
78	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
79	Monolithically integrated 600-V E/D-mode SiN _x /AlGaN/GaN MIS-HEMTs and their applications in low-standby-power start-up circuit for switched-mode power supplies. , 2013, , .		1
80	Characterization of VT-instability in enhancement-mode Al ₂ O ₃ -AlGaN/GaN MIS-HEMTs. Physica Status Solidi C: Current Topics in Solid State Physics, 2013, 10, 1397-1400.	0.8	66
81	Interface effect in Nb-Bi ₂ Te ₃ hybrid structure. Applied Physics Letters, 2013, 103, .	1.5	7
82	Formation Dynamics of Excitons and Temporal Behaviors of Fano Resonance Due to the Exciton-“Impurity”-Phonon Configuration Interaction in ZnO. Journal of Physical Chemistry A, 2012, 116, 381-385.	1.1	8
83	High-field linear magneto-resistance in topological insulator Bi ₂ Se ₃ thin films. Applied Physics Letters, 2012, 100, .	1.5	104
84	Effect of substrate doping concentration on quantum well states of Pb island grown on Si(111). Surface Science, 2010, 604, 175-180.	0.8	4
85	Observation of negative differential resistance from a Schottky-barrier structure embedded with Fe quantum dots. Journal of Crystal Growth, 2009, 311, 2155-2159.	0.7	5
86	Fermi-level depinning and hole injection induced two-dimensional electron related radiative emissions from a forward biased Ni/Au-AlGaN/GaN Schottky diode. Applied Physics Letters, 2009, 95, .	1.5	20
87	The formation of a charge layer at the interface of GaMnAs and an organic material. Europhysics Letters, 2009, 88, 46002.	0.7	1
88	Interface dipole formation between GaMnAs and organic material. Journal of Physics: Conference Series, 2009, 193, 012105.	0.3	0
89	Anomalous photocurrent observed in an Fe-“ZnS:Fe Schottky diode. Applied Physics Letters, 2007, 91, 172104.	1.5	6