

Xiaomin Ren

List of Publications by Year in descending order

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papers

923
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516561

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137
all docs

137
docs citations

137
times ranked

1072
citing authors

#	ARTICLE	IF	CITATIONS
1	Carrier transport effect on the high speed modulation performance of integrated optoelectronic transceiving chip. <i>Optical and Quantum Electronics</i> , 2022, 54, 1.	1.5	1
2	Design and Implementation of More Than 50m Real-Time Underwater Wireless Optical Communication System. <i>Journal of Lightwave Technology</i> , 2022, 40, 3654-3668.	2.7	20
3	Design of Silicon Nitride Edge Coupler for Monolithically Integrated Laser on Silicon Photonic Circuits With Relaxed Alignment Tolerance and High Efficiency. <i>IEEE Photonics Journal</i> , 2022, 14, 1-6.	1.0	6
4	The Optoelectronic Mixing Characterization of Uni-Traveling Carrier Photodetector. <i>IEEE Transactions on Electron Devices</i> , 2022, 69, 3742-3747.	1.6	2
5	The Tunable Phase Shift of High-Speed PIN Photodetector and Modified Uni-Traveling Carrier Photodetector. <i>Journal of Lightwave Technology</i> , 2021, 39, 1873-1879.	2.7	6
6	Performance Analysis and Design Considerations of the Shallow Underwater Optical Wireless Communication System with Solar Noises Utilizing a Photon Tracing-Based Simulation Platform. <i>Electronics (Switzerland)</i> , 2021, 10, 632.	1.8	12
7	Experimental Demonstration of OFDM-VLC System Employing Clustering Algorithm. , 2021, , .		1
8	Design and optimization of unidirectional emitting multi-wavelength InAs/GaAs quantum dot microring lasers on silicon. <i>Applied Physics A: Materials Science and Processing</i> , 2021, 127, 1.	1.1	1
9	Design of Novel InP/InGaAs Photodetectors With NiO Transparent p-Region and Electrode. <i>IEEE Transactions on Electron Devices</i> , 2021, 68, 3876-3880.	1.6	1
10	Study on Frequency-dependent Saturation Characteristics of Modified Uni-traveling Carrier Photodetector. , 2021, , .		0
11	Impact of silver nanospheres array for enhanced optical absorption in plasmonic-based InGaAs photodetector. , 2021, , .		0
12	Novel Fundamental Concepts beneath Quantum Photonics. , 2021, , .		0
13	An InP-InGaAs-NiO p-i-n photodiode with partially depleted-absorber and depleted nonabsorbing region. , 2021, , .		0
14	The Second Order Harmonic Optoelectronic Mixing in Modified Uni-traveling Carrier Photodetector. , 2021, , .		1
15	A Low-Threshold Miniaturized Plasmonic Nanowire Laser with High-Reflectivity Metal Mirrors. <i>Nanomaterials</i> , 2020, 10, 1928.	1.9	5
16	High Bandwidth-Efficiency Product MPIN Photodiode With Parallel-Connected Microstructure. <i>IEEE Journal of Quantum Electronics</i> , 2020, 56, 1-5.	1.0	7
17	Inclined Ultrathin Bi ₂ O ₃ Se Films: A Building Block for Functional van der Waals Heterostructures. <i>ACS Nano</i> , 2020, 14, 16803-16812.	7.3	45
18	Analysis of optical resonant cavity composed of nonparallel reflectors. <i>Optical and Quantum Electronics</i> , 2020, 52, 1.	1.5	1

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19	Performance Enhancement of Ultra-Thin Nanowire Array Solar Cells by Bottom Reflectivity Engineering. <i>Nanomaterials</i> , 2020, 10, 184.	1.9	9
20	Optimization design for high-quality factor 1.3 μ m InAs/InGaAs quantum dot square microcavity lasers on silicon with output waveguide structures. <i>Applied Physics A: Materials Science and Processing</i> , 2019, 125, 1.	1.1	2
21	High-Speed Characteristics of Uni-Traveling-Carrier Photodiode Under Bias-Free Operation. <i>IEEE Photonics Technology Letters</i> , 2019, 31, 1553-1556.	1.3	5
22	Tracing the Motion of Finger Joints for Gesture Recognition via Sewing RGO-Coated Fibers Onto a Textile Glove. <i>IEEE Sensors Journal</i> , 2019, 19, 9504-9511.	2.4	44
23	Realization of a Compact Broadband Polarization Beam Splitter Using the Three-Waveguide Coupler. <i>IEEE Photonics Technology Letters</i> , 2019, 31, 1807-1810.	1.3	10
24	Study of the operation optical power in modified uni-traveling carrier photodetector for low amplitude to phase conversion. <i>Optical and Quantum Electronics</i> , 2019, 51, 1.	1.5	2
25	Enhanced performance of graphene/GaAs nanowire photoelectric conversion devices by improving the Schottky barrier height. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2019, 37, 051202.	0.6	6
26	High performance transistors and photodetectors based on self-catalyzed zinc-blende InP nanowires. <i>Applied Physics Letters</i> , 2019, 114, .	1.5	8
27	Broadband and High Extinction Ratio Mode Converter Using the Tapered Hybrid Plasmonic Waveguide. <i>IEEE Photonics Journal</i> , 2019, 11, 1-8.	1.0	18
28	Design and Implementation of Adaptive Filtering Algorithm for VLC Based on Convolutional Neural Network. , 2019, , .		3
29	Highly efficient broadband photodetectors based on lithography-free Au/Bi ₂ O ₃ /Se/Au heterostructures. <i>Nanoscale</i> , 2019, 11, 20707-20714.	2.8	32
30	120m 10Mbps Ethernet Transmission Based on Visible Light Communication using a Single Commercially Available LED. , 2019, , .		3
31	Experiment on VCSEL Composed of Special Structure DBRs in Integrated Optoelectronic Chip. <i>IEEE Access</i> , 2019, 7, 175622-175627.	2.6	1
32	Liquid Crystal Tunable Narrow Linewidth Filter Based On Subwavelength Gratings Reflector. , 2019, , .		0
33	The Power-dependent Phase Change in a Low-bias High-speed Modified Uni-traveling Carrier Photodetector. , 2019, , .		0
34	Design of Bias-Free Operational Uni-traveling-Carrier Photodiodes by Transient Simulation for High-power Pulsed Millimeter-Wave Signal Generation in the Sub-THz Regime. <i>Journal of Infrared, Millimeter, and Terahertz Waves</i> , 2019, 40, 17-30.	1.2	6
35	Influences of contact electrode shape and incidence direction on $\text{p}^+\text{i}^-\text{n}$ photodiodes. <i>IET Optoelectronics</i> , 2019, 13, 151-154.	1.8	6
36	Focusing reflectors based on two-dimensional subwavelength gratings. <i>Optical Engineering</i> , 2019, 58, 1.	0.5	0

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37	Optically pumped lasing in a rolled-up dot-in-a-well (DWELL) microtube via the support of Au pad. Applied Physics B: Lasers and Optics, 2018, 124, 1.	1.1	5
38	Photovoltaic Performance of a Nanowire/Quantum Dot Hybrid Nanostructure Array Solar Cell. Nanoscale Research Letters, 2018, 13, 62.	3.1	9
39	Influences of ultrathin amorphous buffer layers on GaAs/Si grown by metal-organic chemical vapor deposition. Applied Physics A: Materials Science and Processing, 2018, 124, 1.	1.1	1
40	A Multi-Diameter GaAs Nano wire Array Solar Cell with Axial p-i-n Junctions. , 2018, , .		0
41	Contrallable Synaptic Behavior in Photonic Neuromorphic Transistor. , 2018, , .		1
42	Enhanced efficiency of graphene/GaAs nanowire solar cell by chemical doping. , 2018, , .		0
43	1.3 Åµm whispering gallery modes observed in a Si-based rolled-up InAs/GaAs bilayer quantum dot (BQD) microtube at room-temperature. , 2018, , .		0
44	Measurement and analysis for capacitance of PIN photodetector. , 2018, , .		0
45	1.34 Åµm InGaAsP/InP MQW Superluminescent Diodes with J-shaped Ridge Waveguide. , 2018, , .		0
46	Experiment and Numerical Simulation of p-i-n Photodetectors Integrated with Different Reflectors. , 2018, , .		0
47	Design Monolithic High-Contrast Grating Resonant-Cavity-Enhanced Photodetector In 1550nm. , 2018, , .		1
48	Sensitive Liquid Sensing Using Rolled-Up InAs/GaAs Quantum Dot Microtube Ring Resonator. , 2018, , .		1
49	Bias Modulation Characteristic Analysis Using a Uni-Traveling-Carrier Photodiode. , 2018, , .		0
50	Optical Power Dependence of Capacitance in Uni-Traveling-Carrier Photodetectors. , 2018, , .		1
51	Symmetrical Back-to-Back Zero-Bias Operational Uni-Traveling Carrier Photodiode. , 2018, , .		1
52	Ultra-high quantum efficiency mushroom-type RCE photodetector. , 2018, , .		3
53	A high-responsivity subwavelength GaAs nanowire photodetector with a dipole antenna. , 2018, , .		2
54	Frequency Dependence of Negative Differential Capacitance in InP-Based Photodetectors with Wide Spectral Range. , 2018, , .		0

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55	A pair of integrated optoelectronic chips for optical interconnects. , 2018, , .		0
56	Phase delay beam splitter based on silicon - sub-wavelength grating in optical communication. , 2018, , .		0
57	Broadband focusing reflectors based on subwavelength gratings. , 2018, , .		0
58	Graphene-based dual-band antenna in the millimeter-wave band. Microwave and Optical Technology Letters, 2018, 60, 3014-3019.	0.9	10
59	Thermal stress distribution in a laser array structure selectively grown on V-groove-patterned silicon. AIP Advances, 2018, 8, 085007.	0.6	0
60	High-reflectivity non-periodic sub-wavelength gratings with small-angle beam-steering ability and its application in Fabry-Perot cavity. Optical and Quantum Electronics, 2018, 50, 1.	1.5	2
61	Monolithic vertical integration of VCSEL and RCEPD for bidirectional optical interconnects. Optik, 2018, 174, 296-306.	1.4	2
62	Modulating photoelectric performance of graphene/gallium arsenide nanowire photodetectors by applying gate voltage. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2018, 36, .	0.6	5
63	Design of bias-free operational uni-traveling carrier photodiodes for terahertz wave generation. Optical and Quantum Electronics, 2018, 50, 1.	1.5	8
64	Optimization of GaAs Nanowire Pin Junction Array Solar Cells by Using AlGaAs/GaAs Heterojunctions. Nanoscale Research Letters, 2018, 13, 126.	3.1	13
65	A Pair of Integrated Optoelectronic Chips for Optical Interconnects. , 2018, , .		0
66	A High-Efficiency Si Nanowire Array/Perovskite Hybrid Solar Cell. Nanoscale Research Letters, 2017, 12, 14.	3.1	12
67	Realization of uniaxially strained, rolled-up monolayer CVD graphene on a Si platform via heteroepitaxial InGaAs/GaAs bilayers. RSC Advances, 2017, 7, 14481-14486.	1.7	10
68	Low-threshold room-temperature AlGaAs/GaAs nanowire/single-quantum-well heterostructure laser. Applied Physics Letters, 2017, 110, .	1.5	13
69	Self-catalyzed Growth of InAs Nanowires on InP Substrate. Nanoscale Research Letters, 2017, 12, 34.	3.1	12
70	Polarization-Independent Focusing Reflectors Using Two-Dimensional SWG. IEEE Photonics Technology Letters, 2017, 29, 209-212.	1.3	11
71	Controllable photoresponse behavior in a single InAs nanowire phototransistor. Applied Physics Letters, 2017, 111, .	1.5	15
72	Analysis of dark current considering trap-assisted tunneling mechanism for InGaAs PIN photodetectors. Optical and Quantum Electronics, 2017, 49, 1.	1.5	5

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73	Uni-Traveling-Carrier Photodetector With High-Reflectivity DBR Mirrors. IEEE Photonics Technology Letters, 2017, 29, 1203-1206.	1.3	5
74	Low-bias high-speed modified uni-traveling-carrier photodiode. , 2017, , .		1
75	Effect of grating mirrors size on focusing reflectors based on two-dimensional high-contrast sub-wavelength gratings. , 2017, , .		0
76	Mushroom-mesa vertical incidence photodiodes. , 2017, , .		0
77	A new type vertically integrated device for optical interconnects. , 2017, , .		0
78	Design and optimization of photodiode array electrodes. , 2017, , .		1
79	Symiton: Indispensable participator in electron-photon interactions and probably a kind of dark matter. , 2017, , .		1
80	Wearable photosensor devices based on rGO-coated fabrics. , 2017, , .		0
81	Optical resonances from InAs quantum dots embedded in rolled-up tubular microcavity. , 2017, , .		0
82	Silver film deposited over large-area self-assembled array of silica nanospheres as ultrasensitive SERS substrate. , 2017, , .		0
83	Mode characteristics for 1.55 μ m square microcavity laser monolithically integrated on GaAs substrates. , 2017, , .		0
84	A thickness-varying sub-wavelength grating focusing lens for TE polarization light. , 2017, , .		1
85	Design and optimization of GaAsP/Si dual-junction solar cells. , 2017, , .		0
86	SOI-based subwavelength grating polarization beam splitter with focusing ability. , 2017, , .		0
87	Monolithic Symmetric-Connected Photodiode Array. IEEE Photonics Technology Letters, 2017, 29, 1627-1630.	1.3	0
88	Transient simulation of UTC-PD using drift-diffusion model. , 2017, , .		3
89	The simulation of monolithic vertical integration of VCSEL and RCE photodiode. , 2017, , .		0
90	Design and optimization of photodetector array electrodes. , 2017, , .		1

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91	A vertical integrated optoelectronic chip for optical interconnect. , 2017, , .		0
92	Using time-domain transient simulation to characterize nonlinear intermodulation distortions in photodetectors. , 2017, , .		0
93	Association analysis of nonlinear saturation characteristics based on high-speed and high-output photodetectors. , 2017, , .		0
94	Fabrication and optical properties of type-II InP/InAs nanowire/quantum-dot heterostructures. Physica Status Solidi - Rapid Research Letters, 2016, 10, 168-171.	1.2	2
95	Design of mixed HCG/DBR multilayer reflectors. , 2016, , .		0
96	A single crystalline InP nanowire photodetector. Applied Physics Letters, 2016, 109, .	1.5	38
97	A monolayer graphene/GaAs nanowire array Schottky junction self-powered photodetector. Applied Physics Letters, 2016, 109, .	1.5	57
98	Mushroom-Mesa Photodetectors Using Subwavelength Gratings as Focusing Reflectors. IEEE Photonics Technology Letters, 2016, 28, 2273-2276.	1.3	18
99	Modified dislocation filter method: toward growth of GaAs on Si by metal organic chemical vapor deposition. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	1.1	7
100	Self-catalyzed growth of pure zinc blende $\sqrt{110}$ InP nanowires. Applied Physics Letters, 2015, 107, .	1.5	16
101	Anomalous photoconductive behavior of a single InAs nanowire photodetector. Applied Physics Letters, 2015, 107, .	1.5	22
102	Micro-photoluminescence and micro-Raman investigations of rolled-up InGaAs/GaAs microtubes monolithically integrated on silicon. Applied Physics Letters, 2015, 107, 082108.	1.5	7
103	High-speed uni-traveling-carrier photodetector with the new design of absorber and collector. , 2015, , .		1
104	Micro-Raman investigations of free-standing GaAs/AlGaAs single quantum well (SQW) microtubes. , 2015, , .		0
105	Extremely Low-Threshold Current Density InGaAs/AlGaAs Quantum-Well Lasers on Silicon. Journal of Lightwave Technology, 2015, 33, 3163-3169.	2.7	25
106	High speed and high responsivity dual-absorption InGaAs/InP UTC-PDs. , 2015, , .		1
107	Plasmon-Enhanced Light Absorption in GaAs Nanowire Array Solar Cells. Nanoscale Research Letters, 2015, 10, 436.	3.1	43
108	Fabrication and optical properties of multishell InAs quantum dots on GaAs nanowires. Journal of Applied Physics, 2015, 117, 054301.	1.1	3

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109	Polarization-Insensitive Focusing Lens Using 2D Blocky High-Contrast Gratings. IEEE Photonics Technology Letters, 2015, 27, 697-700.	1.3	10
110	Coalescence of GaAs on (001) Si nano-trenches based on three-stage epitaxial lateral overgrowth. Applied Physics Letters, 2015, 106, .	1.5	21
111	Axially connected nanowire core-shell p-n junctions: a composite structure for high-efficiency solar cells. Nanoscale Research Letters, 2015, 10, 22.	3.1	15
112	Plasmonic circular resonators for refractive index sensors and filters. Nanoscale Research Letters, 2015, 10, 211.	3.1	37
113	Analysis of Critical Dimensions for Nanowire Core-Multishell Heterostructures. Nanoscale Research Letters, 2015, 10, 389.	3.1	15
114	Observation of enhanced spontaneous and stimulated emission of GaAs/AlGaAs nanowire via the Purcell effect. AIP Advances, 2015, 5, 087148.	0.6	7
115	Controllable growth and optical properties of InP and InP/InAs nanostructures on the sidewalls of GaAs nanowires. Journal of Applied Physics, 2014, 116, 214304.	1.1	3
116	Evanescent-wave pumped room-temperature single-mode GaAs/AlGaAs core-shell nanowire lasers. Applied Physics Letters, 2014, 104, .	1.5	25
117	Thermodynamic model of coherent island formation on vicinal substrate. Journal of Applied Physics, 2014, 115, 163508.	1.1	3
118	Asymmetric hybrid plasmonic waveguides with centimeter-scale propagation length under subwavelength confinement for photonic components. Nanoscale Research Letters, 2014, 9, 599.	3.1	16
119	Analysis of dispersions of coupled asymmetric subwavelength-diameter wires. Optik, 2014, 125, 2749-2751.	1.4	3
120	Self-rolled-up InGaAs/GaAs microtubes fabricated directly on Si (100) substrates. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2014, 32, 030603.	0.6	3
121	Optical absorption in InP/InGaAs/InP double-heterostructure nanopillar arrays for solar cells. Applied Physics Letters, 2014, 104, .	1.5	7
122	Realization of Stranškić-Krastanow InAs quantum dots on nanowire-based InGaAs nanoshells. Journal of Materials Chemistry C, 2013, 1, 7914.	2.7	9
123	Morphological control of GaAs/InAs radial heterostructure nanowires: From cylindrical to coherent quantum dot structure. Journal of Applied Physics, 2013, 113, 114301.	1.1	10
124	A Novel Hybrid Integrated Photodetector Based on a Cone Absorption Cavity. Journal of Lightwave Technology, 2013, 31, 1234-1239.	2.7	5
125	Subwavelength Energy Transport Along a Dielectric Nanoparticle Chain in a Metal Slot. IEEE Photonics Journal, 2013, 5, 4500309-4500309.	1.0	3
126	Growth and characterization of InAs quantum dots on InP nanowires with zinc blende structure. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2013, 31, .	0.6	2

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127	Dependence of doubly curved regions on drying method in the fabrication of long-side rolled-up III-V microtubes. Applied Physics Letters, 2013, 103, 051909.	1.5	8
128	Morphological and temperature-dependent optical properties of InAs quantum dots on GaAs nanowires with different InAs coverage. Applied Physics Letters, 2013, 103, .	1.5	4
129	High-Efficiency InGaAs/InP Photodetector Incorporating SOI-Based Concentric Circular Subwavelength Gratings. IEEE Photonics Technology Letters, 2012, 24, 863-865.	1.3	27
130	Analysis of critical dimensions for axial double heterostructure nanowires. Journal of Applied Physics, 2012, 112, .	1.1	5
131	Realization of vertical GaAs/InAs nanowire heterostructures on Si substrate. , 2011, , .		0
132	A novel resonant cavity enhanced photodetector with flat-top and steep-edge response. Optoelectronics Letters, 2010, 6, 265-268.	0.4	8
133	Extinction ratio enhancement of self-phase modulation based all-optical regenerated signals in microstructured fibers. Microwave and Optical Technology Letters, 2010, 52, 347-351.	0.9	1
134	Size-Independent Growth of GaAs Nanowires. , 2010, , .		0
135	First-Principles Study of Structural and Electronic Properties of Ga _N As _{1-X} Alloys. , 2010, , .		0
136	First-principles investigations of GaAs (112)-(2×2) surface reconstruction. , 2010, , .		1
137	Ultra-narrow spectral linewidth photodetector based on taper cavity. Electronics Letters, 2003, 39, 113.	0.5	15