Daehwan Jung

List of Publications by Year
in descending order

81 papers	2,692 citations	172457 29 h-index	189892 50 g-index
81 all docs	81 docs citations	81 times ranked	1992 citing authors

#	Article	IF	Citations
1	Carrier Recombination Properties of Low-Threshold 1.3 Î¼m Quantum Dot Lasers on Silicon. IEEE Journal of Selected Topics in Quantum Electronics, 2022, 28, 1-10.	2.9	4
2	Delta-Doping for Enhanced III-V Tunnel Junction Performance. IEEE Journal of Photovoltaics, 2022, 12, 976-981.	2.5	1
3	Flexible p-i-n InAs thin-film photodetector with low dark current enabled by an InAlAs barrier. Optical Materials Express, 2022, 12, 2374.	3.0	5
4	Degradation of 1.3 Î¼m InAs Quantum-Dot Laser Diodes: Impact of Dislocation Density and Number of Quantum Dot Layers. IEEE Journal of Quantum Electronics, 2021, 57, 1-8.	1.9	12
5	Flexible GaAs Photodetectors with Ultrathin Thermally Grown Silicon Dioxide as a Longâ€Lived Barrier for Chronic Biomedical Implants. Advanced Photonics Research, 2021, 2, 2000051.	3.6	4
6	Reliability of lasers on silicon substrates for silicon photonics. , 2021, , 239-271.		6
7	Comparative study of metamorphic InAs layers grown on GaAs and Si for mid-infrared photodetectors. Solid-State Electronics, 2021, 176, 107942.	1.4	2
8	Optical properties of coherent InAs/InGaAs quantum dash-in-a-well for strong 2ÂÎ¼m emission enabled by ripening process. Journal of Alloys and Compounds, 2021, 859, 157783.	5.5	2
9	High-Performance Flexible InAs Thin-Film Photodetector Arrays with Heteroepitaxial Growth Using an Abruptly Graded In_xAl_{1â€“x}As Buffer. ACS Applied Materials & Interfaces, 2021, 13, 55648-55655.	8.0	10
10	Investigation of Current-Driven Degradation of 1.3 Î¼m Quantum-Dot Lasers Epitaxially Grown on Silicon. IEEE Journal of Selected Topics in Quantum Electronics, 2020, 26, 1-8.	2.9	13
11	Epitaxial quantum dot lasers on silicon with high thermal stability and strong resistance to optical feedback. APL Photonics, 2020, 5, .	5.7	32
12	Recombination-enhanced dislocation climb in InAs quantum dot lasers on silicon. Journal of Applied Physics, 2020, 128, .	2.5	21
13	Defect filtering for thermal expansion induced dislocations in IIIâ€“V lasers on silicon. Applied Physics Letters, 2020, 117, .	3.3	38
14	Flexible GaAs photodetector arrays hetero-epitaxially grown on GaP/Si for a low-cost III-V wearable photonics platform. Optics Express, 2020, 28, 36559.	3.4	13
15	40â€‰â€‰Gbit/s waveguide photodiode using IIIâ€“V on silicon heteroepitaxy. Optics Letters, 2020, 45, 2954.	3.3	14
16	Effect of p-doping on the intensity noise of epitaxial quantum dot lasers on silicon. Optics Letters, 2020, 45, 4887.	3.3	21
17	Optimized InAlAs graded buffer and tensile-strained dislocation filter layer for high quality InAs photodetector grown on Si. Applied Physics Letters, 2020, 117, 262106.	3.3	8
18	The Importance of p-Doping for Quantum Dot Laser on Silicon Performance. IEEE Journal of Quantum Electronics, 2019, 55, 1-11.	1.9	41

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19	Influence of the polarization anisotropy on the linewidth enhancement factor and reflection sensitivity of 1.55- Î¼ m InP-based InAs quantum dash lasers. Applied Physics Letters, 2019, 115, .	3.3	11
20	High-Performance O-Band Quantum-Dot Semiconductor Optical Amplifiers Directly Grown on a CMOS Compatible Silicon Substrate. ACS Photonics, 2019, 6, 2523-2529.	6.6	27
21	High performance lasers on Si. , 2019, , .		0
22	Design and growth of multi-functional InAsP metamorphic buffers for mid-infrared quantum well lasers on InP. Journal of Applied Physics, 2019, 125, .	2.5	5
23	1.3-<inline-formula> <tex-math notation="LaTeX">mu </tex-math> </inline-formula>m Reflection Insensitive InAs/GaAs Quantum Dot Lasers Directly Grown on Silicon. IEEE Photonics Technology Letters, 2019, 31, 345-348.	2.5	83
24	Linewidth Enhancement Factor in InAs/GaAs Quantum Dot Lasers and Its Implication in Isolator-Free and Narrow Linewidth Applications. IEEE Journal of Selected Topics in Quantum Electronics, 2019, 25, 1-9.	2.9	33
25	Physical Origin of the Optical Degradation of InAs Quantum Dot Lasers. IEEE Journal of Quantum Electronics, 2019, 55, 1-7.	1.9	16
26	Defect Characterization of InAs/InGaAs Quantum Dot p-i-n Photodetector Grown on GaAs-on-V-Grooved-Si Substrate. ACS Photonics, 2019, 6, 1100-1105.	6.6	37
27	A Review of High-Performance Quantum Dot Lasers on Silicon. IEEE Journal of Quantum Electronics, 2019, 55, 1-11.	1.9	107
28	Bright Mid-Infrared Photoluminescence from Thin-Film Black Phosphorus. Nano Letters, 2019, 19, 1488-1493.	9.1	90
29	16.8%-Efficient n⁺/p GaAs Solar Cells on Si With High Short-Circuit Current Density. IEEE Journal of Photovoltaics, 2019, 9, 660-665.	2.5	12
30	Relative intensity noise of silicon-based quantum dot lasers. , 2019, , .		1
31	O-Band Quantum Dot Semiconductor Optical Amplifier Directly Grown on CMOS Compatible Si Substrate. , 2019, , .		0
32	Low-Threshold Continuous-Wave Operation of Electrically Pumped 1.55 Î¼m InAs Quantum Dash Microring Lasers. ACS Photonics, 2019, 6, 279-285.	6.6	24
33	Recent Advances in InAs Quantum Dot Lasers Grown on Onâ€Axis (001) Silicon by Molecular Beam Epitaxy. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1800602.	1.8	34
34	Reduced thermal conductivity of epitaxial GaAs on Si due to symmetry-breaking biaxial strain. Physical Review Materials, 2019, 3, .	2.4	20
35	Composition-dependent structural transition in epitaxial <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Bi</mml:mi><mml:mrow><mml:mn>1</mml:mn> thin films on Si(111). Physical Review Materials, 2019, 3, .	2.4	6
36	III-V on silicon avalanche photodiodes by heteroepitaxy. Optics Letters, 2019, 44, 3538.	3.3	18

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37	High-channel-count 20â€‰â€‰GHz passively mode-locked quantum dot laser directly grown on Si with 41â€‰â€‰Tbit/s transmission capacity. Optica, 2019, 6, 128.	9.3	129
38	A Low-noise High-channel-count 20 GHz Passively Mode Locked Quantum Dot Laser Grown on Si. , 2019, , .		1
39	Impact of threading dislocation density on the lifetime of InAs quantum dot lasers on Si. Applied Physics Letters, 2018, 112, .	3.3	127
40	490 fs pulse generation from passively modeâ€locked single section quantum dot laser directly grown on onâ€axis GaP/Si. Electronics Letters, 2018, 54, 432-433.	1.0	49
41	Highly Reliable Low-Threshold InAs Quantum Dot Lasers on On-Axis (001) Si with 87% Injection Efficiency. ACS Photonics, 2018, 5, 1094-1100.	6.6	120
42	Perspective: The future of quantum dot photonic integrated circuits. APL Photonics, 2018, 3, .	5.7	188
43	On-Chip Detection from Directly Modulated Quantum Dot Microring Lasers on Si. , 2018, , .		2
44	Low Linewidth Enhancement Factor and High Optical Feedback Resistance of p-Doped Silicon Based Quantum Dot Lasers. , 2018, , .		1
45	Gain Characterization of p-Doped 1.3 Î¼m InAs Quantum Dot Lasers on Silicon: Theory and Experiment. , 2018, , .		0
46	Continuous Tuning of Gain Peak Linewidth Enhancement Factor from Negative to Positive with p Doping in InAs QD Laser on Si. , 2018, , .		3
47	High performance and reliable 1.3 Î¼m InAs quantum dot lasers epitaxially grown on Si. , 2018, , .		1
48	Physical Properties of 1.3 Î¼m InAs-Based Quantum Dot Laser on Silicon. , 2018, , .		0
49	NRZ and PAM-4 Direct Modulation of <tex>$1.3 mumathrm{m}$</tex> Quantum Dot Lasers Grown Directly on On-Axis (001) Si. , 2018, , .		1
50	9 GHz passively mode locked quantum dot lasers directly grown on Si. , 2018, , .		0
51	Low-dark current 10 Gbit/s operation of InAs/InGaAs quantum dot p-i-n photodiode grown on on-axis (001) GaP/Si. Applied Physics Letters, 2018, 113, .	3.3	25
52	Semiconductor quantum dot lasers epitaxially grown on silicon with low linewidth enhancement factor. Applied Physics Letters, 2018, 112, .	3.3	63
53	Monolithic 9â€‰GHz passively mode locked quantum dot lasers directly grown on on-axis (001) Si. Applied Physics Letters, 2018, 113, 041108.	3.3	26
54	Low dark current IIIâ€“V on silicon photodiodes by heteroepitaxy. Optics Express, 2018, 26, 13605.	3.4	36

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55	Directly modulated quantum dot lasers on silicon with a milliampere threshold and high temperature stability. Photonics Research, 2018, 6, 776.	7.0	55
56	Directly modulated 13 Î¼m quantum dot lasers epitaxially grown on silicon. Optics Express, 2018, 26, 7022.	3.4	51
57	Rare-Earth Monopnictide Alloys for Tunable, Epitaxial, Designer Plasmonics. ACS Photonics, 2018, 5, 3051-3056.	6.6	9
58	Effects of modulation p doping in InAs quantum dot lasers on silicon. Applied Physics Letters, 2018, 113, .	3.3	35
59	Effect of growth interruption in 1.55 Î¼m InAs/InAlGaAs quantum dots on InP grown by molecular beam epitaxy. Journal of Applied Physics, 2018, 123, .	2.5	14
60	Direct observation of recombination-enhanced dislocation glide in heteroepitaxial GaAs on silicon. Physical Review Materials, 2018, 2, .	2.4	30
61	High performance quantum dot lasers epitaxially integrated on Si. , 2018, , .		3
62	Highly tensile-strained Ge/InAlAs nanocomposites. Nature Communications, 2017, 8, 14204.	12.8	15
63	High efficiency low threshold current 1.3â€‰Î¼m InAs quantum dot lasers on on-axis (001) GaP/Si. Applied Physics Letters, 2017, 111, .	3.3	114
64	Growth rate and surfactant-assisted enhancements of rare-earth arsenide InGaAs nanocomposites for terahertz generation. APL Materials, 2017, 5, 096106.	5.1	5
65	Low threading dislocation density GaAs growth on on-axis GaP/Si (001). Journal of Applied Physics, 2017, 122, .	2.5	96
66	Mid-infrared quantum well lasers on multi-functional metamorphic buffers. , 2017, , .		0
67	O-band electrically injected quantum dot micro-ring lasers on on-axis (001) GaP/Si and V-groove Si. Optics Express, 2017, 25, 26853.	3.4	53
68	Monolithically integrated InAs/InGaAs quantum dot photodetectors on silicon substrates. Optics Express, 2017, 25, 27715.	3.4	71
69	13â€‰â€‰Î¼m submilliamp threshold quantum dot micro-lasers on Si. Optica, 2017, 4, 940.	9.3	142
70	Electrically pumped continuous-wave 13â€‰â€‰Î¼m quantum-dot lasers epitaxially grown on on-axis (001)â€‰â€‰GaP/Si. Optics Letters, 2017, 42, 338.	3.3	127
71	Room-temperature mid-infrared quantum well lasers on multi-functional metamorphic buffers. Applied Physics Letters, 2016, 109, .	3.3	15
72	High-efficiency AlGaInP solar cells grown by molecular beam epitaxy. Applied Physics Letters, 2016, 109, .	3.3	19

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73	Large-Area Dry Transfer of Single-Crystalline Epitaxial Bismuth Thin Films. Nano Letters, 2016, 16, 6931-6938.	9.1	87
74	Surfactant-assisted growth and properties of rare-earth arsenide InGaAs nanocomposites for terahertz generation. Applied Physics Letters, 2016, 108, .	3.3	7
75	Mid-infrared electroluminescence from InAs type-I quantum wells grown on InAsP/InP metamorphic buffers. Journal of Applied Physics, 2015, 118, .	2.5	11
76	High performance ultrathin GaAs solar cells. , 2015, , .		7
77	High Performance Ultrathin GaAs Solar Cells Enabled with Heterogeneously Integrated Dielectric Periodic Nanostructures. ACS Nano, 2015, 9, 10356-10365.	14.6	78
78	InGaAs/GaAs quantum well lasers grown on exact GaP/Si (001). Electronics Letters, 2014, 50, 1226-1227.	1.0	39
79	Increased InAs quantum dot size and density using bismuth as a surfactant. Applied Physics Letters, 2014, 105, .	3.3	17
80	Strain-driven growth of GaAs(111) quantum dots with low fine structure splitting. Applied Physics Letters, 2014, 105, .	3.3	33
81	2.8â€‰Î¼m emission from type-I quantum wells grown on InAsxP1â^'x/InP metamorphic graded buffers. Applied Physics Letters, 2012, 101, .	3.3	16