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	Perspective: The future of quantum dot photonic integrated circuits. APL Photonics, 2018, 3, .	5.7	188
2	13â€‰â€‰Î¼m submilliamp threshold quantum dot micro-lasers on Si. Optica, 2017, 4, 940.	9.3	142
3	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
4	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
5	Impact of threading dislocation density on the lifetime of InAs quantum dot lasers on Si. Applied Physics Letters, 2018, 112, .	3.3	127
6	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
7	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
8	A Review of High-Performance Quantum Dot Lasers on Silicon. IEEE Journal of Quantum Electronics, 2019, 55, 1-11.	1.9	107
9	Low threading dislocation density GaAs growth on on-axis GaP/Si (001). Journal of Applied Physics, 2017, 122, .	2.5	96
10	Bright Mid-Infrared Photoluminescence from Thin-Film Black Phosphorus. Nano Letters, 2019, 19, 1488-1493.	9.1	90
11	Large-Area Dry Transfer of Single-Crystalline Epitaxial Bismuth Thin Films. Nano Letters, 2016, 16, 6931-6938.	9.1	87
12	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
13	High Performance Ultrathin GaAs Solar Cells Enabled with Heterogeneously Integrated Dielectric Periodic Nanostructures. ACS Nano, 2015, 9, 10356-10365.	14.6	78
14	Monolithically integrated InAs/InGaAs quantum dot photodetectors on silicon substrates. Optics Express, 2017, 25, 27715.	3.4	71
15	Semiconductor quantum dot lasers epitaxially grown on silicon with low linewidth enhancement factor. Applied Physics Letters, 2018, 112, .	3.3	63
16	Directly modulated quantum dot lasers on silicon with a milliampere threshold and high temperature stability. Photonics Research, 2018, 6, 776.	7.0	55
17	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
18	Directly modulated 13 Î¼m quantum dot lasers epitaxially grown on silicon. Optics Express, 2018, 26, 7022.	3.4	51

#	Article	IF	Citations
19	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
20	The Importance of p-Doping for Quantum Dot Laser on Silicon Performance. IEEE Journal of Quantum Electronics, 2019, 55, 1-11.	1.9	41
21	InGaAs/GaAs quantum well lasers grown on exact GaP/Si (001). Electronics Letters, 2014, 50, 1226-1227.	1.0	39
22	Defect filtering for thermal expansion induced dislocations in IIIâ€“V lasers on silicon. Applied Physics Letters, 2020, 117, .	3.3	38
23	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
24	Low dark current IIIâ€“V on silicon photodiodes by heteroepitaxy. Optics Express, 2018, 26, 13605.	3.4	36
25	Effects of modulation p doping in InAs quantum dot lasers on silicon. Applied Physics Letters, 2018, 113, .	3.3	35
26	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
27	Strain-driven growth of GaAs(111) quantum dots with low fine structure splitting. Applied Physics Letters, 2014, 105, .	3.3	33
28	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
29	Epitaxial quantum dot lasers on silicon with high thermal stability and strong resistance to optical feedback. APL Photonics, 2020, 5, .	5.7	32
30	Direct observation of recombination-enhanced dislocation glide in heteroepitaxial GaAs on silicon. Physical Review Materials, 2018, 2, .	2.4	30
31	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
32	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
33	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
34	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
35	Recombination-enhanced dislocation climb in InAs quantum dot lasers on silicon. Journal of Applied Physics, 2020, 128, .	2.5	21
36	Effect of p-doping on the intensity noise of epitaxial quantum dot lasers on silicon. Optics Letters, 2020, 45, 4887.	3.3	21

#	Article	IF	Citations
37	Reduced thermal conductivity of epitaxial GaAs on Si due to symmetry-breaking biaxial strain. Physical Review Materials, 2019, 3, .	2.4	20
38	High-efficiency AlGaInP solar cells grown by molecular beam epitaxy. Applied Physics Letters, 2016, 109, .	3.3	19
39	III-V on silicon avalanche photodiodes by heteroepitaxy. Optics Letters, 2019, 44, 3538.	3.3	18
40	Increased InAs quantum dot size and density using bismuth as a surfactant. Applied Physics Letters, 2014, 105, .	3.3	17
41	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
42	Physical Origin of the Optical Degradation of InAs Quantum Dot Lasers. IEEE Journal of Quantum Electronics, 2019, 55, 1-7.	1.9	16
43	Room-temperature mid-infrared quantum well lasers on multi-functional metamorphic buffers. Applied Physics Letters, 2016, 109, .	3.3	15
44	Highly tensile-strained Ge/InAlAs nanocomposites. Nature Communications, 2017, 8, 14204.	12.8	15
45	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
46	40â€‰â€‰Gbit/s waveguide photodiode using IIIâ€“V on silicon heteroepitaxy. Optics Letters, 2020, 45, 2954.	3.3	14
47	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
48	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
49	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
50	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
51	Mid-infrared electroluminescence from InAs type-I quantum wells grown on InAsP/InP metamorphic buffers. Journal of Applied Physics, 2015, 118, .	2.5	11
52	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
53	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
54	Rare-Earth Monopnictide Alloys for Tunable, Epitaxial, Designer Plasmonics. ACS Photonics, 2018, 5, 3051-3056.	6.6	9

#	Article	IF	Citations
55	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
56	High performance ultrathin GaAs solar cells. , 2015, , .		7
57	Surfactant-assisted growth and properties of rare-earth arsenide InGaAs nanocomposites for terahertz generation. Applied Physics Letters, 2016, 108, .	3.3	7
58	Reliability of lasers on silicon substrates for silicon photonics. , 2021, , 239-271.		6
59	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
60	Growth rate and surfactant-assisted enhancements of rare-earth arsenide InGaAs nanocomposites for terahertz generation. APL Materials, 2017, 5, 096106.	5.1	5
61	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
62	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
63	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
64	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
65	Continuous Tuning of Gain Peak Linewidth Enhancement Factor from Negative to Positive with p Doping in InAs QD Laser on Si. , 2018, , .		3
66	High performance quantum dot lasers epitaxially integrated on Si. , 2018, , .		3
67	On-Chip Detection from Directly Modulated Quantum Dot Microring Lasers on Si. , 2018, , .		2
68	Comparative study of metamorphic InAs layers grown on GaAs and Si for mid-infrared photodetectors. Solid-State Electronics, 2021, 176, 107942.	1.4	2
69	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
70	Low Linewidth Enhancement Factor and High Optical Feedback Resistance of p-Doped Silicon Based Quantum Dot Lasers. , 2018, , .		1
71	High performance and reliable 1.3 Î¼m InAs quantum dot lasers epitaxially grown on Si. , 2018, , .		1
72	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

#	Article	IF	Citations
73	Relative intensity noise of silicon-based quantum dot lasers. , 2019, , .		1
74	A Low-noise High-channel-count 20 GHz Passively Mode Locked Quantum Dot Laser Grown on Si. , 2019, , .		1
75	Delta-Doping for Enhanced III-V Tunnel Junction Performance. IEEE Journal of Photovoltaics, 2022, 12, 976-981.	2.5	1
76	Mid-infrared quantum well lasers on multi-functional metamorphic buffers. , 2017, , .		0
77	Gain Characterization of p-Doped 1.3 Î¼m InAs Quantum Dot Lasers on Silicon: Theory and Experiment. , 2018, , .		0
78	Physical Properties of 1.3 Î¼m InAs-Based Quantum Dot Laser on Silicon. , 2018, , .		0
79	9 GHz passively mode locked quantum dot lasers directly grown on Si. , 2018, , .		0
80	High performance lasers on Si. , 2019, , .		0
81	O-Band Quantum Dot Semiconductor Optical Amplifier Directly Grown on CMOS Compatible Si Substrate. , 2019, , .		0