

Donguk Nam

List of Publications by Year in descending order

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46
papers

1,414
citations

361413
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48
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48
docs citations

48
times ranked

1093
citing authors

#	ARTICLE	IF	CITATIONS
1	Direct bandgap germanium-on-silicon inferred from 57% $\pm 100^\circ$ uniaxial tensile strain [Invited]. Photonics Research, 2014, 2, A8.	7.0	139
2	Low-threshold optically pumped lasing in highly strained germanium nanowires. Nature Communications, 2017, 8, 1845.	12.8	131
3	Strained germanium thin film membrane on silicon substrate for optoelectronics. Optics Express, 2011, 19, 25866.	3.4	114
4	Strain-Induced Pseudoheterostructure Nanowires Confining Carriers at Room Temperature with Nanoscale-Tunable Band Profiles. Nano Letters, 2013, 13, 3118-3123.	9.1	107
5	Roadmap to an Efficient Germanium-on-Silicon Laser: Strain vs. n-Type Doping. IEEE Photonics Journal, 2012, 4, 2002-2009.	2.0	90
6	Monolithic infrared silicon photonics: The rise of (Si)GeSn semiconductors. Applied Physics Letters, 2021, 118, .	3.3	80
7	Electroluminescence from strained germanium membranes and implications for an efficient Si-compatible laser. Applied Physics Letters, 2012, 100, .	3.3	79
8	Theoretical Analysis of GeSn Alloys as a Gain Medium for a Si-Compatible Laser. IEEE Journal of Selected Topics in Quantum Electronics, 2013, 19, 1502706-1502706.	2.9	77
9	Direct Bandgap Light Emission from Strained Germanium Nanowires Coupled with High-Q Nanophotonic Cavities. Nano Letters, 2016, 16, 2168-2173.	9.1	72
10	Fluorine passivation of vacancy defects in bulk germanium for Ge metal-oxide-semiconductor field-effect transistor application. Applied Physics Letters, 2012, 101, 072104.	3.3	41
11	Resonant nanostructures for highly confined and ultra-sensitive surface phonon-polaritons. Nature Communications, 2020, 11, 1863.	12.8	39
12	Observation of improved minority carrier lifetimes in high-quality Ge-on-insulator using time-resolved photoluminescence. Optics Letters, 2014, 39, 6205.	3.3	34
13	Study of Carrier Statistics in Uniaxially Strained Ge for a Low-Threshold Ge Laser. IEEE Journal of Selected Topics in Quantum Electronics, 2014, 20, 16-22.	2.9	31
14	Pseudo-magnetic field-induced slow carrier dynamics in periodically strained graphene. Nature Communications, 2021, 12, 5087.	12.8	31
15	Monolithic integration of germanium-on-insulator p-i-n photodetector on silicon. Optics Express, 2015, 23, 15816.	3.4	30
16	Bandgap-customizable germanium using lithographically determined biaxial tensile strain for silicon-compatible optoelectronics. Optics Express, 2015, 23, 16740.	3.4	28
17	1D photonic crystal direct bandgap GeSn-on-insulator laser. Applied Physics Letters, 2021, 119, .	3.3	26
18	Band structure of $\text{Ge}_{1-x}\text{Sn}_x$ alloy: a full-zone 30-band $k \cdot p$ model. New Journal of Physics, 2019, 21, 073037.	2.9	24

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19	Impact of minority carrier lifetime on the performance of strained germanium light sources. Optics Communications, 2016, 364, 233-237.	2.1	23
20	Strained germanium nanowire optoelectronic devices for photonic-integrated circuits. Journal of Physics Condensed Matter, 2018, 30, 334004.	1.8	22
21	Enhanced GeSn Microdisk Lasers Directly Released on Si. Advanced Optical Materials, 2022, 10, 2101213.	7.3	22
22	Room temperature lasing unraveled by a strong resonance between gain and parasitic absorption in uniaxially strained germanium. Physical Review B, 2018, 97, .	3.2	20
23	Rapid fabrication of complex nanostructures using room-temperature ultrasonic nanoimprinting. Nature Communications, 2021, 12, 3146.	12.8	20
24	Strain-relaxed GeSn-on-insulator (GeSnOI) microdisks. Optics Express, 2021, 29, 28959.	3.4	19
25	Lateral overgrowth of germanium for monolithic integration of germanium-on-insulator on silicon. Journal of Crystal Growth, 2015, 416, 21-27.	1.5	18
26	Theoretical Modeling for the Interaction of Tin Alloying With N-Type Doping and Tensile Strain for GeSn Lasers. IEEE Electron Device Letters, 2016, 37, 1307-1310.	3.9	18
27	Heterostrain-enabled dynamically tunable moiré superlattice in twisted bilayer graphene. Scientific Reports, 2021, 11, 21402.	3.3	16
28	Ge microdisk with lithographically-tunable strain using CMOS-compatible process. Optics Express, 2015, 23, 33249.	3.4	12
29	Ultimate limits of biaxial tensile strain and n-type doping for realizing an efficient low-threshold Ge laser. Japanese Journal of Applied Physics, 2016, 55, 024301.	1.5	8
30	Optically pumped low-threshold microdisk lasers on a GeSn-on-insulator substrate with reduced defect density. Photonics Research, 2022, 10, 1332.	7.0	8
31	Triaxially strained suspended graphene for large-area pseudo-magnetic fields. Optics Letters, 2022, 47, 2174.	3.3	7
32	Oxide Thin-Film Transistor-Based Vertically Stacked Complementary Inverter for Logic and Photo-Sensor Operations. Materials, 2019, 12, 3815.	2.9	6
33	Approaches for a viable Germanium laser: Tensile strain, GeSn alloys, and n-type doping. , 2013, , .		4
34	Band Structure of Strained $\text{Ge}_{1-x}\text{Sn}_x$ Alloy: A Full-Zone 30-Band $k \cdot p$ Model. IEEE Journal of Quantum Electronics, 2020, 56, 1-8.	1.9	4
35	Anomalous threshold reduction from $<100^\circ$ uniaxial strain for a low-threshold Ge laser. Optics Communications, 2016, 379, 32-35.	2.1	3
36	Second-harmonic generation in germanium-on-insulator from visible to telecom wavelengths. Applied Physics Letters, 2022, 120, .	3.3	3

#	ARTICLE	IF	CITATIONS
37	Systematic study on photoexcited carrier dynamics related to defects in GeSn films with low Sn content at room temperature. Semiconductor Science and Technology, 2021, 36, 125018.	2.0	2
38	Demonstration of Electroluminescence from Strained Ge Membrane LED. , 2012, , .		1
39	Direct bandgap GeSn nanowires enabled with ultrahigh tension from harnessing intrinsic compressive strain. Applied Physics Letters, 2022, 120, .	3.3	1
40	Simulation for efficient Germanium VCSEL for optical interconnects. , 2012, , .		0
41	A nanomembrane-based bandgap-tunable Ge microdisk for Si-compatible optoelectronics. , 2015, , .		0
42	Strained Ge nanowire with high-Q optical cavity for Ge laser applications. , 2015, , .		0
43	Remarkable interplay between strain and parasitic absorption unravelling the best route for Si-compatible Germanium laser at room temperature. , 2016, , .		0
44	Improved GeSn microdisk lasers directly sitting on Si. , 2022, , .		0
45	Tensile-strained direct bandgap GeSnOI micro/nanostructures by harnessing residual strain. , 2022, , .		0
46	1D photonic crystal GeSn-on-insulator nanobeam laser. , 2022, , .		0