

Kunal Mukherjee

List of Publications by Year in descending order

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28
papers

566
citations

759055

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28
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354
citing authors

#	ARTICLE	IF	CITATIONS
1	A Pathway to Thin GaAs Virtual Substrate on On-axis Si (001) with Ultralow Threading Dislocation Density. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2021, 218, 2000402.	0.8	48
2	Materials science of defects in GaAs-based semiconductor lasers. , 2021, , 113-176.		2
3	High temperature reliable epitaxially grown quantum dot lasers on (001) Si with record performance. , 2021, , .		0
4	Reliability of lasers on silicon substrates for silicon photonics. , 2021, , 239-271.		6
5	Interface structure and luminescence properties of epitaxial PbSe films on InAs(111)A. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2021, 39, .	0.9	14
6	High-temperature reliable quantum-dot lasers on Si with misfit and threading dislocation filters. <i>Optica</i> , 2021, 8, 749.	4.8	76
7	Reduced dislocation growth leads to long lifetime InAs quantum dot lasers on silicon at high temperatures. <i>Applied Physics Letters</i> , 2021, 118, .	1.5	20
8	Advances in heteroepitaxial integration of III-V and IV-VI semiconductors with electron channeling contrast imaging. <i>Microscopy and Microanalysis</i> , 2021, 27, 908-910.	0.2	0
9	Pipe-diffusion-enriched dislocations and interfaces in SnSe/PbSe heterostructures. <i>Physical Review Materials</i> , 2021, 5, .	0.9	4
10	Perspectives on Advances in Quantum Dot Lasers and Integration with Si Photonic Integrated Circuits. <i>ACS Photonics</i> , 2021, 8, 2555-2566.	3.2	67
11	Kinetically limited misfit dislocations formed during post-growth cooling in III-V lasers on silicon. <i>Journal Physics D: Applied Physics</i> , 2021, 54, 494001.	1.3	7
12	Degradation Behaviors in InAs Quantum Dot Lasers on Silicon using Misfit Dislocation Trapping Layers. , 2021, , .		0
13	Bright mid-infrared photoluminescence from high dislocation density epitaxial PbSe films on GaAs. <i>APL Materials</i> , 2021, 9, .	2.2	3
14	Recombination-enhanced dislocation climb in InAs quantum dot lasers on silicon. <i>Journal of Applied Physics</i> , 2020, 128, .	1.1	21
15	Defect filtering for thermal expansion induced dislocations in III-V lasers on silicon. <i>Applied Physics Letters</i> , 2020, 117, .	1.5	38
16	Nucleation control and interface structure of rocksalt PbSe on (001) zincblende III-V surfaces. <i>Physical Review Materials</i> , 2020, 4, .	0.9	14
17	Controlling facets and defects of InP nanostructures in confined epitaxial lateral overgrowth. <i>Physical Review Materials</i> , 2020, 4, .	0.9	3
18	Non-radiative recombination at dislocations in InAs quantum dots grown on silicon. <i>Applied Physics Letters</i> , 2019, 115, .	1.5	27

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19	Glide of threading dislocations in (In)AlGaAs on Si induced by carrier recombination: Characteristics, mitigation, and filtering. <i>Journal of Applied Physics</i> , 2019, 125, .	1.1	9
20	Anomalous tilting in InGaAs graded buffers from dislocation sources at wafer edges. <i>Journal of Crystal Growth</i> , 2019, 512, 169-175.	0.7	4
21	Fast Diffusion and Segregation along Threading Dislocations in Semiconductor Heterostructures. <i>Nano Letters</i> , 2019, 19, 1428-1436.	4.5	17
22	Improving Reliability of InAs Quantum Dot Lasers on Silicon Substrates. , 2019, , .		0
23	Recent Advances in InAs Quantum Dot Lasers Grown on On-axis (001) Silicon by Molecular Beam Epitaxy. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2019, 216, 1800602.	0.8	34
24	Direct observation of recombination-enhanced dislocation glide in heteroepitaxial GaAs on silicon. <i>Physical Review Materials</i> , 2018, 2, .	0.9	30
25	Low threading dislocation density GaAs growth on on-axis GaP/Si (001). <i>Journal of Applied Physics</i> , 2017, 122, .	1.1	96
26	Praseodymium Cuprate Thin Film Cathodes for Intermediate Temperature Solid Oxide Fuel Cells: Roles of Doping, Orientation, and Crystal Structure. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 34295-34302.	4.0	11
27	Direct-Gap 2.1~2.2 eV AlInP Solar Cells on GaInAs/GaAs Metamorphic Buffers. <i>IEEE Journal of Photovoltaics</i> , 2016, 6, 571-577.	1.5	10
28	Epitaxial Integration and Defect Structure of Layered SnSe Films on PbSe/III-V Substrates. <i>Crystal Growth and Design</i> , 0, , .	1.4	5