

Kunal Mukherjee

List of Publications by Year in descending order

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28
papers

566
citations

758635

12
h-index

713013

21
g-index

28
all docs

28
docs citations

28
times ranked

354
citing authors

#	ARTICLE	IF	CITATIONS
1	Low threading dislocation density GaAs growth on on-axis GaP/Si (001). Journal of Applied Physics, 2017, 122, .	1.1	96
2	High-temperature reliable quantum-dot lasers on Si with misfit and threading dislocation filters. Optica, 2021, 8, 749.	4.8	76
3	Perspectives on Advances in Quantum Dot Lasers and Integration with Si Photonic Integrated Circuits. ACS Photonics, 2021, 8, 2555-2566.	3.2	67
4	A Pathway to Thin GaAs Virtual Substrate on On-axis Si (001) with Ultralow Threading Dislocation Density. Physica Status Solidi (A) Applications and Materials Science, 2021, 218, 2000402.	0.8	48
5	Defect filtering for thermal expansion induced dislocations in III-V lasers on silicon. Applied Physics Letters, 2020, 117, .	1.5	38
6	Recent Advances in InAs Quantum Dot Lasers Grown on On-axis (001) Silicon by Molecular Beam Epitaxy. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1800602.	0.8	34
7	Direct observation of recombination-enhanced dislocation glide in heteroepitaxial GaAs on silicon. Physical Review Materials, 2018, 2, .	0.9	30
8	Non-radiative recombination at dislocations in InAs quantum dots grown on silicon. Applied Physics Letters, 2019, 115, .	1.5	27
9	Recombination-enhanced dislocation climb in InAs quantum dot lasers on silicon. Journal of Applied Physics, 2020, 128, .	1.1	21
10	Reduced dislocation growth leads to long lifetime InAs quantum dot lasers on silicon at high temperatures. Applied Physics Letters, 2021, 118, .	1.5	20
11	Fast Diffusion and Segregation along Threading Dislocations in Semiconductor Heterostructures. Nano Letters, 2019, 19, 1428-1436.	4.5	17
12	Interface structure and luminescence properties of epitaxial PbSe films on InAs(111)A. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, .	0.9	14
13	Nucleation control and interface structure of rocksalt PbSe on (001) zincblende III-V surfaces. Physical Review Materials, 2020, 4, .	0.9	14
14	Praseodymium Cuprate Thin Film Cathodes for Intermediate Temperature Solid Oxide Fuel Cells: Roles of Doping, Orientation, and Crystal Structure. ACS Applied Materials & Interfaces, 2016, 8, 34295-34302.	4.0	11
15	Direct-Gap 2.1-2.2 eV AlInP Solar Cells on GaInAs/GaAs Metamorphic Buffers. IEEE Journal of Photovoltaics, 2016, 6, 571-577.	1.5	10
16	Glide of threading dislocations in (In)AlGaAs on Si induced by carrier recombination: Characteristics, mitigation, and filtering. Journal of Applied Physics, 2019, 125, .	1.1	9
17	Kinetically limited misfit dislocations formed during post-growth cooling in III-V lasers on silicon. Journal Physics D: Applied Physics, 2021, 54, 494001.	1.3	7
18	Reliability of lasers on silicon substrates for silicon photonics. , 2021, , 239-271.		6

#	ARTICLE	IF	CITATIONS
19	Epitaxial Integration and Defect Structure of Layered SnSe Films on PbSe/III-V Substrates. Crystal Growth and Design, 0, , .	1.4	5
20	Anomalous tilting in InGaAs graded buffers from dislocation sources at wafer edges. Journal of Crystal Growth, 2019, 512, 169-175.	0.7	4
21	Pipe-diffusion-enriched dislocations and interfaces in SnSe/PbSe heterostructures. Physical Review Materials, 2021, 5, .	0.9	4
22	Controlling facets and defects of InP nanostructures in confined epitaxial lateral overgrowth. Physical Review Materials, 2020, 4, .	0.9	3
23	Bright mid-infrared photoluminescence from high dislocation density epitaxial PbSe films on GaAs. APL Materials, 2021, 9, .	2.2	3
24	Materials science of defects in GaAs-based semiconductor lasers. , 2021, , 113-176.		2
25	Improving Reliability of InAs Quantum Dot Lasers on Silicon Substrates. , 2019, , .		0
26	High temperature reliable epitaxially grown quantum dot lasers on (001) Si with record performance. , 2021, , .		0
27	Advances in heteroepitaxial integration of III-V and IV-VI semiconductors with electron channeling contrast imaging. Microscopy and Microanalysis, 2021, 27, 908-910.	0.2	0
28	Degradation Behaviors in InAs Quantum Dot Lasers on Silicon using Misfit Dislocation Trapping Layers. , 2021, , .		0