

Farzan Gity

List of Publications by Year in descending order

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papers

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516215

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454577

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82
all docs

82
docs citations

82
times ranked

1756
citing authors

#	ARTICLE	IF	CITATIONS
1	Wide Spectral Photoresponse of Layered Platinum Diselenide-Based Photodiodes. Nano Letters, 2018, 18, 1794-1800.	4.5	140
2	Air sensitivity of MoS ₂ , MoSe ₂ , MoTe ₂ , HfS ₂ , and HfSe ₂ . Journal of Applied Physics, 2016, 120, .	1.1	134
3	Quantum confinement-induced semimetal-to-semiconductor evolution in large-area ultra-thin PtSe ₂ films grown at 400°C. Npj 2D Materials and Applications, 2019, 3, .	3.9	69
4	Insights into Multilevel Resistive Switching in Monolayer MoS ₂ . ACS Applied Materials & Interfaces, 2020, 12, 6022-6029.	4.0	54
5	Coexistence of Negative and Positive Photoconductivity in Few-Layer PtSe ₂ Field-Effect Transistors. Advanced Functional Materials, 2021, 31, 2105722.	7.8	53
6	Rhenium-doped MoS ₂ films. Applied Physics Letters, 2017, 111, .	1.5	40
7	Optimized Laser Thermal Annealing on Germanium for High Dopant Activation and Low Leakage Current. IEEE Transactions on Electron Devices, 2014, 61, 4047-4055.	1.6	39
8	Growth of 1T MoTe ₂ by Thermally Assisted Conversion of Electrodeposited Tellurium Films. ACS Applied Energy Materials, 2019, 2, 521-530.	2.5	30
9	Imaging and identification of point defects in PtTe ₂ . Npj 2D Materials and Applications, 2021, 5, .	3.9	29
10	Characterization of germanium/silicon <i>p-n</i> junction fabricated by low temperature direct wafer bonding and layer exfoliation. Applied Physics Letters, 2012, 100, .	1.5	27
11	Reinventing solid state electronics: Harnessing quantum confinement in bismuth thin films. Applied Physics Letters, 2017, 110, .	1.5	26
12	Isotropic conduction and negative photoconduction in ultrathin PtSe ₂ films. Applied Physics Letters, 2020, 117, 193102.	1.5	25
13	Lithographically Defined, Room Temperature Low Threshold Subwavelength Red-Emitting Hybrid Plasmonic Lasers. Nano Letters, 2016, 16, 7822-7828.	4.5	23
14	Ge/Si heterojunction photodiodes fabricated by low temperature wafer bonding. Optics Express, 2013, 21, 17309.	1.7	19
15	Modeling the Effects of Interface Traps on the Static and Dynamic Characteristics of Ge/Si Avalanche Photodiodes. IEEE Journal of Quantum Electronics, 2011, 47, 849-857.	1.0	17
16	Metal-semimetal Schottky diode relying on quantum confinement. Microelectronic Engineering, 2018, 195, 21-25.	1.1	17
17	Oxide removal and stabilization of bismuth thin films through chemically bound thiol layers. RSC Advances, 2018, 8, 33368-33373.	1.7	17
18	Hybrid Devices by Selective and Conformal Deposition of PtSe ₂ at Low Temperatures. Advanced Functional Materials, 2021, 31, 2103936.	7.8	17

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19	Comprehensive investigation of Ge-Si bonded interfaces using oxygen radical activation. Journal of Applied Physics, 2011, 109, .	1.1	16
20	Zero-Bias High-Speed Edge-Coupled Unitraveling-Carrier InGaAs Photodiode. IEEE Photonics Technology Letters, 2010, 22, 1747-1749.	1.3	15
21	Large-area growth of MoS ₂ at temperatures compatible with integrating back-end-of-line functionality. 2D Materials, 2021, 8, 025008.	2.0	14
22	The Role of Oxide Traps Aligned With the Semiconductor Energy Gap in MOS Systems. IEEE Transactions on Electron Devices, 2020, 67, 4372-4378.	1.6	13
23	Investigating the transient response of Schottky barrier back-gated MoS ₂ transistors. 2D Materials, 2020, 7, 025040.	2.0	13
24	Development, characterisation and simulation of wafer bonded Si-on-SiC substrates. Materials Science in Semiconductor Processing, 2018, 78, 69-74.	1.9	12
25	Exploring conductivity in ex-situ doped Si thin films as thickness approaches 5 nm. Journal of Applied Physics, 2019, 125, 225709.	1.1	12
26	A sub kBT/q semimetal nanowire field effect transistor. Applied Physics Letters, 2016, 109, 063108.	1.5	11
27	Effects of Annealing Temperature and Ambient on Metal/PtSe ₂ Contact Alloy Formation. ACS Omega, 2019, 4, 17487-17493.	1.6	10
28	Structural and electrical characterisation of PtS from H ₂ S-converted Pt. Applied Materials Today, 2021, 25, 101163.	2.3	7
29	Numerical analysis of void-induced thermal effects on GaAs/Al _x Ga _{1-x} As high power single-quantum-well laser diodes. Solid-State Electronics, 2006, 50, 1767-1773.	0.8	6
30	Electronic and structural properties of rhombohedral [111] and [110] oriented ultra-thin bismuth nanowires. Journal of Physics Condensed Matter, 2017, 29, 065301.	0.7	5
31	Single event effects and total ionising dose in 600V Si-on-SiC LDMOS transistors for rad-hard space applications. , 2017, , .		5
32	Two-Dimensional Materials and Their Role in Emerging Electronic and Photonic Devices. Electrochemical Society Interface, 2018, 27, 53-58.	0.3	5
33	PtSe ₂ phototransistors with negative photoconductivity. Journal of Physics: Conference Series, 2021, 1866, 012001.	0.3	5
34	Gallium Selenide Nanoribbons on Silicon Substrates for Photodetection. ACS Applied Nano Materials, 2021, 4, 7820-7831.	2.4	5
35	Ge/Si p-n Diode Fabricated by Direct Wafer Bonding and Layer Exfoliation. ECS Transactions, 2012, 45, 131-139.	0.3	4
36	The Effect of Interfacial Charge on the Development of Wafer Bonded Silicon-on-Silicon-Carbide Power Devices. Materials Science Forum, 0, 897, 747-750.	0.3	4

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37	Next generation low temperature polycrystalline materials for above IC electronics. High mobility n- and p-type III-V metalorganic vapour phase epitaxy thin films on amorphous substrates. JPhys Photonics, 2020, 2, 025003.	2.2	4
38	Doping of ultra-thin Si films: Combined first-principles calculations and experimental study. Journal of Applied Physics, 2021, 129, .	1.1	4
39	Investigating interface states and oxide traps in the MoS ₂ /oxide/Si system. Solid-State Electronics, 2021, 186, 108123.	0.8	4
40	Impact of impurities, interface traps and contacts on MoS ₂ MOSFETs: Modelling and experiments. , 2017, , .		3
41	Structural and Electronic Properties of Polycrystalline InAs Thin Films Deposited on Silicon Dioxide and Glass at Temperatures below 500 Å°C. Crystals, 2021, 11, 160.	1.0	3
42	Hysteresis in As-Synthesized MoS ₂ Transistors: Origin and Sensing Perspectives. Micromachines, 2021, 12, 646.	1.4	3
43	High Hole Mobility Polycrystalline GaSb Thin Films. Crystals, 2021, 11, 1348.	1.0	3
44	A neural network model for determination of the breakdown voltage for separate absorption and multiplication region avalanche photodiode (SAM-APD). , 0, , .		2
45	Surface activation using oxygen and nitrogen radical for Ge/Si Avalanche photodiode integration. Microelectronic Engineering, 2011, 88, 522-525.	1.1	2
46	Hall-effect mobility for a selection of natural and synthetic 2D semiconductor crystals. , 2017, , .		2
47	Performance and reliability in back-gated CVD-grown MoS ₂ devices. Solid-State Electronics, 2021, 186, 108173.	0.8	2
48	Thermal characterization of direct wafer bonded Si-on-SiC. Applied Physics Letters, 2022, 120, 113503.	1.5	2
49	Numerical analysis of void-induced thermal effects on GaAs/AlGaAs high power quantum well laser diodes. , 2006, , .		1
50	Modeling the effects of DLTs and carrier transport on the turn-on delay, steady-state time and wavelength chirp of SCH-QW lasers. , 2009, , .		1
51	Progress towards photon counting between 1¼m and 1.6¼m using silicon with infrared absorbers. , 2010, , .		1
52	Wafer Bonded Ge-Si Heterostructure for Avalanche Photodiode Application. Materials Research Society Symposia Proceedings, 2011, 1336, 71001.	0.1	1
53	Modeling the effects of interface traps on passive quenching of a Ge/Si geiger mode avalanche photodiode. Optical and Quantum Electronics, 2012, 44, 119-124.	1.5	1
54	Design and Fabrication of Silicon-on-Silicon-Carbide Substrates and Power Devices for Space Applications. E3S Web of Conferences, 2017, 16, 12003.	0.2	1

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55	Relationship between capacitance and conductance in MOS capacitors. , 2019, , .		1
56	CVD-grown back-gated MoS2 transistors. , 2020, , .		1
57	Large Area Growth of MoS2 By Chemical Vapour Deposition. ECS Meeting Abstracts, 2018, , .	0.0	1
58	Numerical Analysis of Filamentation in Conventional Double Heterostructure and Quantum Well High-Power Broad-Area Laser Diodes. , 2006, , .		0
59	Non-physical model of lossy transmission line for circuit simulation of segmented traveling wave electroabsorption modulators. , 2006, , .		0
60	Modeling the Effects of Deep Level Traps and Carrier Transport on the L-I characteristic, Transient Response and Wavelength Chirp of SCH-QW Lasers. , 2007, , .		0
61	Modelling and numerical analysis of carrier transport effects on the wavelength chirp of SCH-QW lasers. , 2007, , .		0
62	Modeling and numerical analysis of static, dynamic and wavelength chirp characteristics of asymmetric multiple quantum well lasers. , 2008, , .		0
63	Modeling and numerical analysis of temperature variations along the cavity and in the heat sink of a single quantum well high power laser diode. , 2008, , .		0
64	Design and fabrication of uni-traveling-carrier InGaAs photodiodes. Proceedings of SPIE, 2010, , .	0.8	0
65	Structural and Electrical Properties of Low Temperature Direct Bonded Germanium to Silicon Wafer for Photodetector Applications. ECS Transactions, 2010, 33, 161-168.	0.3	0
66	Modeling the effects of interface traps on passive quenching of a Ge/Si Geiger mode avalanche photodiode. , 2011, , .		0
67	Laser thermal annealing of Ge, optimized for highly activated dopants and diode I<inf>ON</inf>/I<inf>OFF</inf> ratios. , 2014, , .		0
68	Numerical simulations with energy balance model for unitraveling-carrier photodiode. , 2015, , .		0
69	Atomic-scale simulation of semimetal-to-semiconductor transition in bismuth nanowires for future generation of nanoelectronic devices. , 2016, , .		0
70	Ex-situ plasma doping of MoS<inf>2</inf> thin films synthesised by thermally assisted conversion process: Simulations and experiment. , 2017, , .		0
71	Profiling border-traps by TCAD analysis of multifrequency CV-curves in Al<inf>2</inf>O<inf>3</inf>/InGaAs stacks. , 2018, , .		0
72	On the interpretation of MOS impedance data in both series and parallel circuit topologies. Solid-State Electronics, 2021, 185, 108098.	0.8	0

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73	(Invited) Full Wafer CMOS-Compatible Integration of Ge with Si By Direct Wafer Bonding. ECS Meeting Abstracts, 2018, , .	0.0	0
74	Investigating Polycrystalline III-V Thin Films As Channel Materials for "Above IC" Logic and Memory Applications. ECS Meeting Abstracts, 2018, , .	0.0	0
75	(Invited) Investigating the Electronic Properties of Narrow Band Gap III-V Mos Systems. ECS Meeting Abstracts, 2018, , .	0.0	0
76	Transition Metal Doping of MoS ₂ : A Correlated Experimental and Theoretical Study. ECS Meeting Abstracts, 2020, MA2020-01, 847-847.	0.0	0
77	(Invited) Multi-Level Non-Volatile Memory in Au/Monolayer MoS ₂ /Au Structures. ECS Meeting Abstracts, 2020, MA2020-01, 858-858.	0.0	0
78	Schottky-Junction TMD-Based Monomaterial Field-Effect Transistor. ECS Meeting Abstracts, 2020, MA2020-01, 860-860.	0.0	0
79	Chemical Vapor Deposition of MoS ₂ for Back-End-of-Line Applications. ECS Meeting Abstracts, 2021, MA2021-02, 1952-1952.	0.0	0
80	Photoconductive Solution Processed ZnO Quasi-superlattice Films. ECS Transactions, 2020, 98, 151-158.	0.3	0
81	Photoconductive Solution Processed ZnO Quasi-superlattice Films. ECS Meeting Abstracts, 2020, MA2020-02, 1938-1938.	0.0	0
82	Two-Dimensional Gallium Selenide (GaSe) Material for Nanoelectronics Application. ECS Meeting Abstracts, 2022, MA2022-01, 868-868.	0.0	0