

# Farzan Gity

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/8678527/publications.pdf>

Version: 2024-02-01

82  
papers

981  
citations

516710

16  
h-index

454955

30  
g-index

82  
all docs

82  
docs citations

82  
times ranked

1756  
citing authors

#	ARTICLE	IF	CITATIONS
1	Thermal characterization of direct wafer bonded Si-on-SiC. Applied Physics Letters, 2022, 120, 113503.	3.3	2
2	Two-Dimensional Gallium Selenide (GaSe) Material for Nanoelectronics Application. ECS Meeting Abstracts, 2022, MA2022-01, 868-868.	0.0	0
3	Imaging and identification of point defects in PtTe <sub>2</sub> . Npj 2D Materials and Applications, 2021, 5, .	7.9	29
4	Doping of ultra-thin Si films: Combined first-principles calculations and experimental study. Journal of Applied Physics, 2021, 129, .	2.5	4
5	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.	2.2	3
6	PtSe <sub>2</sub> phototransistors with negative photoconductivity. Journal of Physics: Conference Series, 2021, 1866, 012001.	0.4	5
7	Hysteresis in As-Synthesized MoS <sub>2</sub> Transistors: Origin and Sensing Perspectives. Micromachines, 2021, 12, 646.	2.9	3
8	Gallium Selenide Nanoribbons on Silicon Substrates for Photodetection. ACS Applied Nano Materials, 2021, 4, 7820-7831.	5.0	5
9	Hybrid Devices by Selective and Conformal Deposition of PtSe <sub>2</sub> at Low Temperatures. Advanced Functional Materials, 2021, 31, 2103936.	14.9	17
10	Coexistence of Negative and Positive Photoconductivity in Few-Layer PtSe <sub>2</sub> Field-Effect Transistors. Advanced Functional Materials, 2021, 31, 2105722.	14.9	53
11	On the interpretation of MOS impedance data in both series and parallel circuit topologies. Solid-State Electronics, 2021, 185, 108098.	1.4	0
12	Performance and reliability in back-gated CVD-grown MoS <sub>2</sub> devices. Solid-State Electronics, 2021, 186, 108173.	1.4	2
13	Investigating interface states and oxide traps in the MoS <sub>2</sub> /oxide/Si system. Solid-State Electronics, 2021, 186, 108123.	1.4	4
14	Structural and electrical characterisation of PtS from H <sub>2</sub> S-converted Pt. Applied Materials Today, 2021, 25, 101163.	4.3	7
15	Large-area growth of MoS <sub>2</sub> at temperatures compatible with integrating back-end-of-line functionality. 2D Materials, 2021, 8, 025008.	4.4	14
16	High Hole Mobility Polycrystalline GaSb Thin Films. Crystals, 2021, 11, 1348.	2.2	3
17	Chemical Vapor Deposition of MoS <sub>2</sub> for Back-End-of-Line Applications. ECS Meeting Abstracts, 2021, MA2021-02, 1952-1952.	0.0	0
18	Insights into Multilevel Resistive Switching in Monolayer MoS <sub>2</sub> . ACS Applied Materials & Interfaces, 2020, 12, 6022-6029.	8.0	54

#	ARTICLE	IF	CITATIONS
19	Isotropic conduction and negative photoconduction in ultrathin PtSe <sub>2</sub> films. Applied Physics Letters, 2020, 117, 193102.	3.3	25
20	The Role of Oxide Traps Aligned With the Semiconductor Energy Gap in MOS Systems. IEEE Transactions on Electron Devices, 2020, 67, 4372-4378.	3.0	13
21	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.	4.6	4
22	Investigating the transient response of Schottky barrier back-gated MoS <sub>2</sub> transistors. 2D Materials, 2020, 7, 025040.	4.4	13
23	CVD-grown back-gated MoS <sub>2</sub> transistors. , 2020, , .		1
24	Transition Metal Doping of MoS <sub>2</sub> : A Correlated Experimental and Theoretical Study. ECS Meeting Abstracts, 2020, MA2020-01, 847-847.	0.0	0
25	(Invited) Multi-Level Non-Volatile Memory in Au/Monolayer MoS <sub>2</sub> /Au Structures. ECS Meeting Abstracts, 2020, MA2020-01, 858-858.	0.0	0
26	Schottky-Junction TMD-Based Monomaterial Field-Effect Transistor. ECS Meeting Abstracts, 2020, MA2020-01, 860-860.	0.0	0
27	Photoconductive Solution Processed ZnO Quasi-superlattice Films. ECS Transactions, 2020, 98, 151-158.	0.5	0
28	Photoconductive Solution Processed ZnO Quasi-superlattice Films. ECS Meeting Abstracts, 2020, MA2020-02, 1938-1938.	0.0	0
29	Exploring conductivity in ex-situ doped Si thin films as thickness approaches 5 nm. Journal of Applied Physics, 2019, 125, 225709.	2.5	12
30	Effects of Annealing Temperature and Ambient on Metal/PtSe <sub>2</sub> Contact Alloy Formation. ACS Omega, 2019, 4, 17487-17493.	3.5	10
31	Relationship between capacitance and conductance in MOS capacitors. , 2019, , .		1
32	Quantum confinement-induced semimetal-to-semiconductor evolution in large-area ultra-thin PtSe <sub>2</sub> films grown at 400 °C. Npj 2D Materials and Applications, 2019, 3, .	7.9	69
33	Growth of 1T MoTe <sub>2</sub> by Thermally Assisted Conversion of Electrodeposited Tellurium Films. ACS Applied Energy Materials, 2019, 2, 521-530.	5.1	30
34	Wide Spectral Photoresponse of Layered Platinum Diselenide-Based Photodiodes. Nano Letters, 2018, 18, 1794-1800.	9.1	140
35	Metal-semimetal Schottky diode relying on quantum confinement. Microelectronic Engineering, 2018, 195, 21-25.	2.4	17
36	Development, characterisation and simulation of wafer bonded Si-on-SiC substrates. Materials Science in Semiconductor Processing, 2018, 78, 69-74.	4.0	12

#	ARTICLE	IF	CITATIONS
37	Two-Dimensional Materials and Their Role in Emerging Electronic and Photonic Devices. Electrochemical Society Interface, 2018, 27, 53-58.	0.4	5
38	Oxide removal and stabilization of bismuth thin films through chemically bound thiol layers. RSC Advances, 2018, 8, 33368-33373.	3.6	17
39	Profiling border-traps by TCAD analysis of multifrequency CV-curves in Al <sub>2</sub> O <sub>3</sub> /InGaAs stacks. , 2018, , .		0
40	Large Area Growth of MoS <sub>2</sub> By Chemical Vapour Deposition. ECS Meeting Abstracts, 2018, , .	0.0	1
41	(Invited) Full Wafer CMOS-Compatible Integration of Ge with Si By Direct Wafer Bonding. ECS Meeting Abstracts, 2018, , .	0.0	0
42	Investigating Polycrystalline III-V Thin Films As Channel Materials for "Above IC" Logic and Memory Applications. ECS Meeting Abstracts, 2018, , .	0.0	0
43	(Invited) Investigating the Electronic Properties of Narrow Band Gap III-V Mos Systems. ECS Meeting Abstracts, 2018, , .	0.0	0
44	Electronic and structural properties of rhombohedral [111] and [110] oriented ultra-thin bismuth nanowires. Journal of Physics Condensed Matter, 2017, 29, 065301.	1.8	5
45	Reinventing solid state electronics: Harnessing quantum confinement in bismuth thin films. Applied Physics Letters, 2017, 110, .	3.3	26
46	Design and Fabrication of Silicon-on-Silicon-Carbide Substrates and Power Devices for Space Applications. E3S Web of Conferences, 2017, 16, 12003.	0.5	1
47	Hall-effect mobility for a selection of natural and synthetic 2D semiconductor crystals. , 2017, , .		2
48	Rhenium-doped MoS <sub>2</sub> films. Applied Physics Letters, 2017, 111, .	3.3	40
49	Single event effects and total ionising dose in 600V Si-on-SiC LDMOS transistors for rad-hard space applications. , 2017, , .		5
50	Impact of impurities, interface traps and contacts on MoS <sub>2</sub> MOSFETs: Modelling and experiments. , 2017, , .		3
51	Ex-situ plasma doping of MoS <sub>2</sub> thin films synthesised by thermally assisted conversion process: Simulations and experiment. , 2017, , .		0
52	Lithographically Defined, Room Temperature Low Threshold Subwavelength Red-Emitting Hybrid Plasmonic Lasers. Nano Letters, 2016, 16, 7822-7828.	9.1	23
53	A sub kBT/q semimetal nanowire field effect transistor. Applied Physics Letters, 2016, 109, 063108.	3.3	11
54	Air sensitivity of MoS <sub>2</sub> , MoSe <sub>2</sub> , MoTe <sub>2</sub> , HfS <sub>2</sub> , and HfSe <sub>2</sub> . Journal of Applied Physics, 2016, 120, .	2.5	134

#	ARTICLE	IF	CITATIONS
55	Atomic-scale simulation of semimetal-to-semiconductor transition in bismuth nanowires for future generation of nanoelectronic devices. , 2016, , .		0
56	Numerical simulations with energy balance model for unitraveling-carrier photodiode. , 2015, , .		0
57	Laser thermal annealing of Ge, optimized for highly activated dopants and diode &lt;inf&gt;ON&lt;/inf&gt;/&lt;inf&gt;OFF&lt;/inf&gt; ratios. , 2014, , .		0
58	Optimized Laser Thermal Annealing on Germanium for High Dopant Activation and Low Leakage Current. IEEE Transactions on Electron Devices, 2014, 61, 4047-4055.	3.0	39
59	Ge/Si heterojunction photodiodes fabricated by low temperature wafer bonding. Optics Express, 2013, 21, 17309.	3.4	19
60	Characterization of germanium/silicon <i>p-n</i> junction fabricated by low temperature direct wafer bonding and layer exfoliation. Applied Physics Letters, 2012, 100, .	3.3	27
61	Ge/Si p-n Diode Fabricated by Direct Wafer Bonding and Layer Exfoliation. ECS Transactions, 2012, 45, 131-139.	0.5	4
62	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.	3.3	1
63	Modeling the effects of interface traps on passive quenching of a Ge/Si Geiger mode avalanche photodiode. , 2011, , .		0
64	Comprehensive investigation of Ge&lt;Si bonded interfaces using oxygen radical activation. Journal of Applied Physics, 2011, 109, .	2.5	16
65	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.	1.9	17
66	Surface activation using oxygen and nitrogen radical for Ge&lt;Si Avalanche photodiode integration. Microelectronic Engineering, 2011, 88, 522-525.	2.4	2
67	Wafer Bonded Ge-Si Heterostructure for Avalanche Photodiode Application. Materials Research Society Symposia Proceedings, 2011, 1336, 71001.	0.1	1
68	Design and fabrication of uni-traveling-carrier InGaAs photodiodes. Proceedings of SPIE, 2010, , .	0.8	0
69	Progress towards photon counting between 1&sup1/4;m and 1.6&sup1/4;m using silicon with infrared absorbers. , 2010, , .		1
70	Structural and Electrical Properties of Low Temperature Direct Bonded Germanium to Silicon Wafer for Photodetector Applications. ECS Transactions, 2010, 33, 161-168.	0.5	0
71	Zero-Bias High-Speed Edge-Coupled Unitraveling-Carrier InGaAs Photodiode. IEEE Photonics Technology Letters, 2010, 22, 1747-1749.	2.5	15
72	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

#	ARTICLE	IF	CITATIONS
73	Modeling and numerical analysis of static, dynamic and wavelength chirp characteristics of asymmetric multiple quantum well lasers. , 2008, , .		0
74	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
75	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
76	Modelling and numerical analysis of carrier transport effects on the wavelength chirp of SCH-QW lasers. , 2007, , .		0
77	Numerical analysis of void-induced thermal effects on GaAs/AlGaAs high power quantum well laser diodes. , 2006, , .		1
78	Numerical analysis of void-induced thermal effects on GaAs/Al <sub>x</sub> Ga <sub>1-x</sub> As high power single-quantum-well laser diodes. Solid-State Electronics, 2006, 50, 1767-1773.	1.4	6
79	Numerical Analysis of Filamentation in Conventional Double Heterostructure and Quantum Well High-Power Broad-Area Laser Diodes. , 2006, , .		0
80	Non-physical model of lossy transmission line for circuit simulation of segmented traveling wave electroabsorption modulators. , 2006, , .		0
81	A neural network model for determination of the breakdown voltage for separate absorption and multiplication region avalanche photodiode (SAM-APD). , 0, , .		2
82	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