

Aryan Afzalian

List of Publications by Year in descending order

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20
papers

2,284
citations

933447

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1199594

12
g-index

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all docs

20
docs citations

20
times ranked

1759
citing authors

#	ARTICLE	IF	CITATIONS
1	On Superior Hot Carrier Robustness of Dynamically-Doped Field-Effect-Transistors. , 2022, , .		1
2	Advanced DFT-NEGF Transport Techniques for Novel 2-D Material and Device Exploration Including HfS ₂ /WSe ₂ van der Waals Heterojunction TFET and WTe ₂ /WS ₂ Metal/Semiconductor Contact. IEEE Transactions on Electron Devices, 2021, 68, 5372-5379.	3.0	24
3	Ab initio perspective of ultra-scaled CMOS from 2D-material fundamentals to dynamically doped transistors. Npj 2D Materials and Applications, 2021, 5, .	7.9	38
4	Ab-initio based electron-phonon scattering for 2D materials within the NEGF framework. , 2021, , .		0
5	Electron-phonon scattering in cold-metal contacted two-dimensional semiconductor devices. , 2021, , .		3
6	ATOMOS: An ATomistic MOdelling Solver for dissipative DFT transport in ultra-scaled HfS ₂ and Black phosphorus MOSFETs. , 2019, , .		15
7	Vertical Gate-All-Around Nanowire GaSb-InAs Core-Shell n-Type Tunnel FETs. Scientific Reports, 2019, 9, 202.	3.3	36
8	Sn Incorporation in Ultrathin InAs Nanowires for Next-Generation Transistors Characterized by Atom Probe Tomography. ACS Applied Nano Materials, 2019, 2, 1253-1258.	5.0	3
9	A High-Performance InAs/GaSb Core-Shell Nanowire Line-Tunneling TFET: An Atomistic Mode-Space NEGF Study. IEEE Journal of the Electron Devices Society, 2019, 7, 88-99.	2.1	19
10	Physics and performances of III-V nanowire broken-gap heterojunction TFETs using an efficient tight-binding mode-space NEGF model enabling million-atom nanowire simulations. Journal of Physics Condensed Matter, 2018, 30, 254002.	1.8	14
11	Scaling perspective for III-V broken gap nanowire TFETs: An atomistic study using a fast tight-binding mode-space NEGF model. , 2016, , .		11
12	Atomistic simulation of gate-all-around GaSb/InAs nanowire TFETs using a fast full-band mode-space NEGF model. , 2016, , .		1
13	InAs nanowire GAA n-MOSFETs with 12-15 nm diameter. , 2016, , .		14
14	Mode space tight binding model for ultra-fast simulations of III-V nanowire MOSFETs and heterojunction TFETs. , 2015, , .		5
15	Discrete Random Dopant Fluctuation Impact on Nanoscale Dopant-Segregated Schottky-Barrier Nanowires. IEEE Electron Device Letters, 2012, 33, 1228-1230.	3.9	11
16	Quantum Confinement Effects in Capacitance Behavior of Multigate Silicon Nanowire MOSFETs. IEEE Nanotechnology Magazine, 2011, 10, 300-309.	2.0	20
17	Physics of Gate Modulated Resonant Tunneling (RT)-FETs: Multi-barrier MOSFET for steep slope and high on-current. Solid-State Electronics, 2011, 59, 50-61.	1.4	23
18	Computationally efficient self-consistent born approximation treatments of phonon scattering for coupled-mode space non-equilibrium Green's function. Journal of Applied Physics, 2011, 110, .	2.5	22

#	ARTICLE	IF	CITATIONS
19	Nanowire transistors without junctions. <i>Nature Nanotechnology</i> , 2010, 5, 225-229.	31.5	1,993
20	A new F(ast)-CMS NEGF algorithm for efficient 3D simulations of switching characteristics enhancement in constricted tunnel barrier silicon nanowire MuGFETs. <i>Journal of Computational Electronics</i> , 2009, 8, 287-306.	2.5	31