Hoon Ryu

List of Publications by Year in descending order

26 papers	1,267 citations	933447 10 h-index	794594 19 g-index
26 all docs	26 docs citations	26 times ranked	1431 citing authors

#	Article	IF	Citations
1	A single-atom transistor. Nature Nanotechnology, 2012, 7, 242-246.	31.5	730
2	Atomistic Simulation of Realistically Sized Nanodevices Using NEMO 3-Dâ€”Part I: Models and Benchmarks. IEEE Transactions on Electron Devices, 2007, 54, 2079-2089.	3.0	201
3	Spin blockade and exchange in Coulomb-confined silicon double quantum dots. Nature Nanotechnology, 2014, 9, 430-435.	31.5	117
4	Moving Toward Nano-TCAD Through Multimillion-Atom Quantum-Dot Simulations Matching Experimental Data. IEEE Nanotechnology Magazine, 2009, 8, 330-344.	2.0	52
5	Quantitative excited state spectroscopy of a single InGaAs quantum dot molecule through multi-million-atom electronic structure calculations. Nanotechnology, 2011, 22, 315709.	2.6	28
6	Atomistic modeling of metallic nanowires in silicon. Nanoscale, 2013, 5, 8666.	5.6	28
7	A multi-subband Monte Carlo study on dominance of scattering mechanisms over carrier transport in sub-10-nm Si nanowire FETs. Nanoscale Research Letters, 2016, 11, 36.	5.7	17
8	A Tight-Binding Study of Single-Atom Transistors. Small, 2015, 11, 374-381.	10.0	14
9	Time-efficient simulations of tight-binding electronic structures with Intel Xeon PhiTM many-core processors. Computer Physics Communications, 2016, 209, 79-87.	7.5	14
10	Atomistic Study on Dopant-Distributions in Realistically Sized, Highly P-Doped Si Nanowires. Nano Letters, 2015, 15, 450-456.	9.1	12
11	Million Atom Electronic Structure and Device Calculations on Peta-Scale Computers. , 2009, , .		11
12	Role of Quantum Confinement in 10 nm Scale Perovskite Optoelectronics. Journal of Physical Chemistry Letters, 2019, 10, 2745-2752.	4.6	8
13	Multimillion-atom modeling of InAs/GaAs quantum dots: interplay of geometry, quantization, atomicity, strain, and linear and quadratic polarization fields. Journal of Computational Electronics, 2015, 14, 543-556.	2.5	7
14	Exploring the behaviors of electrode-driven Si quantum dot systems: from charge control to qubit operations. Nanoscale, 2021, 13, 332-339.	5.6	7
15	Fast, energy-efficient electronic structure simulations for multi-million atomic systems with GPU devices. Journal of Computational Electronics, 2018, 17, 698-706.	2.5	5
16	Performance Evaluation of Scientific Applications on Intel Xeon Phi Knights Landing Clusters. , 2018, , .		5
17	High-performance simulations of turbulent boundary layer flow using Intel Xeon Phi many-core processors. Journal of Supercomputing, 2021, 77, 9597-9614.	3.6	4
18	Piezoresistivity of InAsP Nanowires: Role of Crystal Phases and Phosphorus Atoms in Strain-Induced Channel Conductances. Molecules, 2019, 24, 3249.	3.8	3

#	Article	IF	Citations
19	On the achievement of high fidelity and scalability for largeâ€scale diagonalizations in gridâ€based DFT simulations. International Journal of Quantum Chemistry, 2018, 118, e25622.	2.0	2
20	Cost-efficient simulations of large-scale electronic structures in the standalone manycore architecture. Computer Physics Communications, 2021, 267, 108078.	7.5	1
21	Enhancing Light-emission Stability of Metal-halide Perovskites with Size and Composition Engineering. Journal of Semiconductor Technology and Science, 2020, 20, 12-18.	0.4	1
22	Optical Properties of Organic Perovskite Materials for Finite Nanostructures. , 2018, , .		0
23	Acceleration of Large-Scale Electronic Structure Simulations with Heterogeneous Parallel Computing. , 2019, , .		0
24	Cost-efficiency of Large-scale Electronic Structure Simulations with Intel Xeon Phi Processors. , 2019, , .		0
25	High Performance Simulations of Quantum Transport using Manycore Computing. , 2021, , .		0
26	Enabling Large-Scale Simulations of Quantum Transport with Manycore Computing. Electronics (Switzerland), 2021, 10, 253.	3.1	0