

# Kosuke Tatsumura

## List of Publications by Year in descending order

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38  
papers

736  
citations

840776

11  
h-index

752698

20  
g-index

39  
all docs

39  
docs citations

39  
times ranked

628  
citing authors

#	ARTICLE	IF	CITATIONS
1	Combinatorial optimization by simulating adiabatic bifurcations in nonlinear Hamiltonian systems. Science Advances, 2019, 5, eaav2372.	10.3	185
2	New Linear-Parabolic Rate Equation for Thermal Oxidation of Silicon. Physical Review Letters, 2006, 96, 196102.	7.8	85
3	High-performance combinatorial optimization based on classical mechanics. Science Advances, 2021, 7, .	10.3	74
4	Diffusion and activation of n-type dopants in germanium. Journal of Applied Physics, 2008, 104, .	2.5	63
5	Improved interatomic potential for stressed Si, O mixed systems. Applied Surface Science, 2004, 234, 207-213.	6.1	51
6	SiO <sub>2</sub> /Si interface structure and its formation studied by large-scale molecular dynamics simulation. Applied Surface Science, 2004, 237, 125-133.	6.1	45
7	Scaling out Ising machines using a multi-chip architecture for simulated bifurcation. Nature Electronics, 2021, 4, 208-217.	26.0	34
8	Diffusion of Molecular and Atomic Oxygen in Silicon Oxide. Japanese Journal of Applied Physics, 2003, 42, 3560-3565.	1.5	31
9	FPGA-Based Simulated Bifurcation Machine. , 2019, , .		27
10	Large-Scale Atomistic Modeling of Thermally Grown SiO <sub>2</sub> on Si(111) Substrate. Japanese Journal of Applied Physics, 2004, 43, 492-497.	1.5	19
11	Effects of Thermal History on Residual Order of Thermally Grown Silicon Dioxide. Japanese Journal of Applied Physics, 2003, 42, 7250-7255.	1.5	17
12	Don't Forget the Memory. , 2017, , .		16
13	Nonvolatile Programmable Switch With Adjacently Integrated Flash Memory and CMOS Logic for Low-Power and High-Speed FPGA. IEEE Transactions on Electron Devices, 2015, 62, 4009-4014.	3.0	11
14	Distance-based clustering using QUBO formulations. Scientific Reports, 2022, 12, 2669.	3.3	11
15	High density, low energy, magnetic tunnel junction based block RAMs for memory-rich FPGAs. , 2016, , .		8
16	A Currency Arbitrage Machine Based on the Simulated Bifurcation Algorithm for Ultrafast Detection of Optimal Opportunity. , 2020, , .		8
17	X-ray diffraction study of strain distribution in oxidized Si nanowires. Journal of Applied Physics, 2009, 106, 073506.	2.5	7
18	Flash-based nonvolatile programmable switch for low-power and high-speed FPGA by adjacent integration of MONOS/logic and novel programming scheme. , 2014, , .		6

#	ARTICLE	IF	CITATIONS
19	Metastable ultrathin crystal in thermally grown SiO <sub>2</sub> film on Si substrate. AIP Advances, 2012, 2, .	1.3	5
20	Enhancing FPGAs with Magnetic Tunnel Junction-Based Block RAMs. ACM Transactions on Reconfigurable Technology and Systems, 2018, 11, 1-22.	2.5	5
21	Intrinsic correlation between mobility reduction and V <sub>t</sub> shift due to interface dipole modulation in HfSiON/SiO <sub>2</sub> stack by La or Al addition. , 2008, , .		4
22	A pure-CMOS nonvolatile multi-context configuration memory for dynamically reconfigurable FPGAs. , 2014, , .		4
23	Clarification of Additional Mobility Components associated with TaC and TiN Metal Gates in scaled HfSiON MOSFETs down to sub-1.0nm EOT. , 2007, , .		3
24	Correlation between low-field mobility and high-field carrier velocity in quasi-ballistic-transport MISFETS scaled down to L <sub>ch</sub> =30 nm. , 2009, , .		3
25	Novel V <sub>th</sub> self-adjusting MISFET with SiN charge trap layer for ultra low power LSI. , 2011, , .		3
26	Probability of Atomic or Molecular Oxygen Species in Silicon and Silicon Dioxide. Japanese Journal of Applied Physics, 2003, 42, 6535-6542.	1.5	2
27	Novel Carrier-Mobility Modeling with Interface States for MOSFETs with Highly Scaled Gate Oxide Based on First-Principles Calculations. , 2007, , .		1
28	Dual nature of metal gate electrode effects on BTI and dielectric breakdown in TaC/HfSiON MISFETs. , 2009, , .		1
29	X-ray diffraction profiles of Si nanowires with trapezoidal cross-sections. Physica B: Condensed Matter, 2011, 406, 2559-2564.	2.7	1
30	Numerical Simulations of Automatic Change of Threshold Voltage Shift in SRAM With Double-Floating-Gate Structures. IEEE Transactions on Electron Devices, 2012, 59, 3255-3262.	3.0	1
31	High-density user-programmable logic array based on adjacent integration of pure-CMOS crossbar antifuse into logic CMOS circuits. , 2016, , .		1
32	Analysis of X-ray diffraction curves of trapezoidal Si nanowires with a strain distribution. Thin Solid Films, 2016, 612, 116-121.	1.8	1
33	Live Demonstration: Capturing Short-Lived Currency Arbitrage Opportunities with a Simulated Bifurcation Algorithm-Based Trading System. , 2020, , .		1
34	Interface defect engineering for high-performance MOSFETs with novel carrier mobility model: Theory and experimental verification. AIP Advances, 2020, 10, .	1.3	1
35	Large-scale combinatorial optimization in real-time systems by FPGA-based accelerators for simulated bifurcation. , 2021, , .		1
36	Advanced CMOS Technology beyond 45nm Node. , 2007, , .		0

#	ARTICLE	IF	CITATIONS
37	(Invited) Quantitative Correlation Between Low-Field Mobility and High-Field Carrier Velocity in Quasi-Ballistic-Transport MISFETs with High-k Gate Dielectrics. ECS Transactions, 2010, 28, 75-86.	0.5	0
38	Recent Progress in Theoretical Study of Formation of Semiconductor Surfaces and Interfaces Based on Microscopic Processes. Large-scale Modeling of Silicon-dioxide Films by Means of Molecular Dynamics.. Hyomen Kagaku, 2002, 23, 74-80.	0.0	0