

Hiroshi Watanabe

List of Publications by Year in descending order

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citing authors

#	ARTICLE	IF	CITATIONS
1	Effects of incomplete ionization of impurities in poly-Si gate and band gap narrowing on direct tunneling gate leakage current. Journal of Applied Physics, 2001, 90, 1600-1607.	2.5	75
2	$S=1/2$ Quantum Heisenberg Ladder and $S=1$ Haldane Phase. Journal of the Physical Society of Japan, 1993, 62, 2845-2860.	1.6	56
3	Numerical diagonalization study of an $S=1/2$ ladder model with open boundary conditions. Physical Review B, 1994, 50, 13442-13448.	3.2	29
4	Nonlocal Unitary Transformation and Haldane State in $S=1/2$ Antiferromagnetic Ladder Model. Journal of the Physical Society of Japan, 1992, 61, 39-42.	1.6	27
5	Determination of tunnel mass and physical thickness of gate oxide including poly-Si/SiO ₂ and Si/SiO ₂ interfacial transition Layers. IEEE Transactions on Electron Devices, 2006, 53, 1323-1330.	3.0	24
6	Positron Lifetime in C60/C70 Powder. Journal of the Physical Society of Japan, 1991, 60, 2812-2814.	1.6	21
7	Scaling effects on gate leakage current. IEEE Transactions on Electron Devices, 2003, 50, 1779-1784.	3.0	17
8	Hidden order and symmetry breaking in the ground state of a spin-1/2 antiferromagnetic Heisenberg ladder. Physical Review B, 1995, 52, 12508-12511.	3.2	16
9	A Novel Chip-Level Blockchain Security Solution for the Internet of Things Networks. Technologies, 2019, 7, 28.	5.1	15
10	Efficient Sensing Properties of Aluminum Nitride Nanosheets toward Toxic Pollutants under Gated Electric Field. ACS Applied Electronic Materials, 2020, 2, 1645-1652.	4.3	15
11	Depletion Layer of Gate Poly-Si. IEEE Transactions on Electron Devices, 2005, 52, 2265-2271.	3.0	13
12	Statistics of Grain Boundaries in Polysilicon. IEEE Transactions on Electron Devices, 2007, 54, 38-44.	3.0	13
13	Physics of Discrete Impurities under the Framework of Device Simulations for Nanostructure Devices. Materials, 2018, 11, 2559.	2.9	12
14	Graphene-Based Ultrasensitive Strain Sensors. ACS Applied Electronic Materials, 2020, 2, 523-528.	4.3	11
15	Universal Tunnel Mass and Charge Trapping in $(\text{SiO}_2)_{1-x}(\text{Si}_3\text{N}_4)_x(\text{Si})_y$ Film. IEEE Transactions on Electron Devices, 2010, 57, 1129-1136.	3.0	8
16	Numerical Study of $I_{\text{ON}}/I_{\text{OFF}}$ Characteristics of Double-Gate Ultrathin SOI MOSFETs. IEEE Transactions on Electron Devices, 2007, 54, 52-58.	3.0	6
17	Transient Device Simulation of Floating Gate Nonvolatile Memory Cell With a Local Trap. IEEE Transactions on Electron Devices, 2010, 57, 1873-1882.	3.0	6
18	Numerical Study of Very Small Floating Islands. IEEE Transactions on Electron Devices, 2014, 61, 1145-1152.	3.0	6

#	ARTICLE	IF	CITATIONS
19	Reduction of Accumulation Thickness in Metal Gate. , 2005, , .		6
20	Proof of Authenticity of Logistics Information with Passive RFID Tags and Blockchain. , 2021, , .		6
21	Statistical simulation of metal-gate work-function fluctuation in high- κ /metal-gate devices. , 2010, , .		5
22	Localized Tunneling Phenomena of Nanometer Scaled High- κ Gate-Stack. IEEE Transactions on Electron Devices, 2017, 64, 3077-3083.	3.0	5
23	Hopping Transport of Electrons via Si-Dot. , 2007, , 249-252.		5
24	A Tight Binding Method Study of Optimized Si-SiO_2 System. IEEE Transactions on Electron Devices, 2010, 57, 3084-3091.	3.0	4
25	Numerical Study of Data Retention Due to Direct Tunneling for Nonvolatile Memory Cell. IEEE Transactions on Electron Devices, 2005, 52, 955-961.	3.0	3
26	Experimental Study of $1/f$ Noise in Transient Leakage Current of Metal-Insulator-Metal With Stacked High- κ Polycrystalline Films. IEEE Transactions on Electron Devices, 2020, 67, 2503-2509.	3.0	3
27	Monte-Carlo simulation of biomolecules' fluid-dynamics in electrolyte facing nanowires biosensor. , 2017, , .		2
28	Monte Carlo Simulation of Nanowires Array Biosensor With AC Electroosmosis. IEEE Transactions on Electron Devices, 2018, 65, 1932-1938.	3.0	2
29	Transient device simulation of trap-assisted leakage in non-volatile memory cell. , 2008, , .		1
30	Integrated Batteryless Electron Timer. IEEE Transactions on Electron Devices, 2011, 58, 792-797.	3.0	1
31	Quantitative Discussion on Electron-Hole Universal Tunnel Mass in Ultrathin Dielectric of Oxide and Oxide-Nitride. ECS Transactions, 2011, 35, 303-320.	0.5	1
32	Three-dimensional device simulation of random telegraph noise spectroscopy with Coulomb energy variation of the trap in high- κ gate oxide. Japanese Journal of Applied Physics, 2018, 57, 124301.	1.5	1
33	Trap-Related Reliability Problems of Dielectrics in Memory Cells. Electronics (Switzerland), 2021, 10, 1287.	3.1	1
34	Leakage mechanism of ultrathin SiON gate dielectric. , 2006, , .		1
35	Trial Application of Tight-Binding Method to Si-Cluster Surrounded by SiO ₂ in Optimized Atomistic Network: Si-Cluster Surrounded SiO ₂ is Quite Unique. , 2009, , .		0
36	Depletion-Type Cell-Transistor on Partial Silicon-on-Insulator Substrate for 2 μm Generation Floating-Gate NAND Electrically Erasable Programmable Read Only Memory. Japanese Journal of Applied Physics, 2010, 49, 04DD09.	1.5	0

#	ARTICLE	IF	CITATIONS
37	(Invited) Analysis of the Scaling Effect on NAND Flash Memory Cell Operation. ECS Transactions, 2013, 50, 27-35.	0.5	0
38	Nano-meter scaled gate area high-K dielectrics with trap-assisted tunneling and random telegraph noise. , 2014, , .		0
39	Monte Carlo simulation of random dopant fluctuation in $C \sim V$ characteristics using image charge model and adequately determined length scale. Japanese Journal of Applied Physics, 2019, 58, 091004.	1.5	0
40	How can chip technology realize electronic sensing of viruses?. , 2021, , .		0
41	Impact on the Conductance Method of the Asymmetry in the AC Response Induced by Interface Trap Levels. ECS Journal of Solid State Science and Technology, 2021, 10, 043004.	1.8	0
42	Impact of Two-Dimensional Structure of nMOSFETs on Direct Tunnel Gate Current. , 2001, , .		0
43	Model of Photoinduced Disaccommodation in Oxygen-deficient Yttrium Iron Garnet. Journal of the Magnetics Society of Japan, 1999, 23, 376-378.	0.4	0