

Takahiro Mori

List of Publications by Year in descending order

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93
docs citations

93
times ranked

957
citing authors

#	ARTICLE	IF	CITATIONS
1	High-performance poly-Ge short-channel metal-oxide semiconductor field-effect transistors formed on SiO ₂ layer by flash lamp annealing. Applied Physics Express, 2014, 7, 056501.	2.4	66
2	Coupled Quantum Dots in a Graphene-Based Two-Dimensional Semimetal. Nano Letters, 2009, 9, 2891-2896.	9.1	59
3	Analog of a Quantum Heat Engine Using a Single-Spin Qubit. Physical Review Letters, 2020, 125, 166802.	7.8	57
4	Study of tunneling transport in Si-based tunnel field-effect transistors with ON current enhancement utilizing isoelectronic trap. Applied Physics Letters, 2015, 106, .	3.3	54
5	Performance Enhancement of Tunnel Field-Effect Transistors by Synthetic Electric Field Effect. IEEE Electron Device Letters, 2014, 35, 792-794.	3.9	53
6	Dielectric functions of In _x Ga _{1-x} Alloys. Physical Review B, 2003, 68, .	3.2	43
7	Unexpected equivalent-oxide-thickness dependence of the subthreshold swing in tunnel field-effect transistors. Applied Physics Express, 2014, 7, 024201.	2.4	35
8	High-temperature operation of a silicon qubit. Scientific Reports, 2019, 9, 469.	3.3	33
9	A compact model for tunnel field-effect transistors incorporating nonlocal band-to-band tunneling. Journal of Applied Physics, 2013, 114, 144512.	2.5	25
10	Quantum Interferometry with a g -Factor-Tunable Spin Qubit. Physical Review Letters, 2019, 122, 207703.	7.8	25
11	Band-to-band tunneling current enhancement utilizing isoelectronic trap and its application to TFETs. , 2014, , .		22
12	High-performance tri-gate poly-Ge junction-less p- and n-MOSFETs fabricated by flash lamp annealing process. , 2014, , .		22
13	Material engineering for silicon tunnel field-effect transistors: isoelectronic trap technology. MRS Communications, 2017, 7, 541-550.	1.8	22
14	Electrical characteristics and thermal stability of HfO ₂ metal-oxide-semiconductor capacitors fabricated on clean reconstructed GaSb surfaces. Applied Physics Letters, 2014, 104, .	3.3	20
15	Fabrication of high-k/metal-gate MoS ₂ field-effect transistor by device isolation process utilizing Ar-plasma etching. Japanese Journal of Applied Physics, 2015, 54, 046502.	1.5	20
16	Experimental realization of complementary p- and n- tunnel FinFETs with subthreshold slopes of less than 60 mV/decade and very low (pA/m) off-current on a Si CMOS platform. , 2014, , .		18
17	Tunnel Field-Effect Transistor with Epitaxially Grown Tunnel Junction Fabricated by Source/Drain-First and Tunnel-Junction-Last Processes. Japanese Journal of Applied Physics, 2013, 52, 04CC25.	1.5	16
18	Design guidelines to achieve minimum energy operation for ultra low voltage tunneling FET logic circuits. Japanese Journal of Applied Physics, 2015, 54, 04DC04.	1.5	15

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19	Introduction of SiGe/Si heterojunction into novel multilayer tunnel FinFET. Japanese Journal of Applied Physics, 2016, 55, 04EB06.	1.5	15
20	Tunnel FinFET CMOS inverter with very low short-circuit current for ultralow-power Internet of Things application. Japanese Journal of Applied Physics, 2017, 56, 04CD19.	1.5	15
21	p-Channel TFET Operation of Bilayer Structures With Type-II Heterotunneling Junction of Oxide- and Group-IV Semiconductors. IEEE Transactions on Electron Devices, 2020, 67, 1880-1886.	3.0	15
22	SiO ₂ /Si interfaces on high-index surfaces: Re-evaluation of trap densities and characterization of bonding structures. Applied Physics Letters, 2011, 98, 092906.	3.3	14
23	Characterization of Effective Mobility and Its Degradation Mechanism in MoS ₂ MOSFETs. IEEE Nanotechnology Magazine, 2016, 15, 651-656.	2.0	14
24	Tunnel Field-Effect Transistors with Extremely Low Off-Current Using Shadowing Effect in Drain Implantation. Japanese Journal of Applied Physics, 2011, 50, 06GF14.	1.5	13
25	Comparison of the capabilities of rotating-analyzer and rotating-compensator ellipsometers by measurements on a single system. Thin Solid Films, 2004, 455-456, 33-38.	1.8	12
26	CVD Growth Technologies of Layered MX ₂ Materials for Real LSI Applications—Position and Growth Direction Control and Gas Source Synthesis. IEEE Journal of the Electron Devices Society, 2018, 6, 1159-1163.	2.1	12
27	Heteroepitaxy of GaSb on Si(111) and fabrication of HfO ₂ /GaSb metal-oxide-semiconductor capacitors. Applied Physics Letters, 2014, 104, .	3.3	11
28	Verification of influence of tail states and interface states on sub-threshold swing of Si n-channel MOSFETs over a temperature range of 4–300 K. Japanese Journal of Applied Physics, 2022, 61, SC1032.	1.5	11
29	Accurate prediction of PBTI lifetime for N-type fin-channel tunnel FETs. , 2014, , .		10
30	Predictivity of the non-local BTBT model for structure dependencies of tunnel FETs. , 2014, , .		9
31	Effect of hot implantation on ON-current enhancement utilizing isoelectronic trap in Si-based tunnel field-effect transistors. Applied Physics Express, 2015, 8, 036503.	2.4	9
32	Demonstrating performance improvement of complementary TFET circuits by π -on- π enhancement based on isoelectronic trap technology. , 2016, , .		9
33	Experimental demonstration of Fano-type resonance in photoluminescence of ZnS:Mn ²⁺ -SiO ₂ one-dimensional photonic crystals. Applied Physics Letters, 2005, 87, 171106.	3.3	8
34	Steep switching less than 15 mV dec ⁻¹ in silicon-on-insulator tunnel FETs by a trimmed-gate structure. Japanese Journal of Applied Physics, 2019, 58, SBBA16.	1.5	8
35	Surface structure of InGaAs/InP(001) ordered alloy during and after growth. Applied Surface Science, 2004, 237, 230-234.	6.1	7
36	Tunnel Field-Effect Transistors with Extremely Low Off-Current Using Shadowing Effect in Drain Implantation. Japanese Journal of Applied Physics, 2011, 50, 06GF14.	1.5	7

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37	Performance evaluation of parallel electric field tunnel field-effect transistor by a distributed-element circuit model. <i>Solid-State Electronics</i> , 2014, 102, 82-86.	1.4	7
38	Electron beam lithography with negative tone resist for highly integrated silicon quantum bits. <i>Nanotechnology</i> , 2021, 32, 485301.	2.6	7
39	Source engineering for bilayer tunnel field-effect transistor with hetero tunnel junction: thickness and impurity concentration. <i>Applied Physics Express</i> , 2020, 13, 074004.	2.4	7
40	First demonstration of drain current enhancement in SOI tunnel FET with vertical-tunnel-multiplication. , 2012, , .		6
41	Improvement of epitaxial channel quality on heavily arsenic- and boron-doped Si surfaces and impact on performance of tunnel field-effect transistors. <i>Solid-State Electronics</i> , 2015, 113, 173-178.	1.4	6
42	Robust and compact key generator using physically unclonable function based on logic-transistor-compatible poly-crystalline-Si channel FinFET technology. , 2015, , .		5
43	Suppression of tunneling rate fluctuations in tunnel field-effect transistors by enhancing tunneling probability. <i>Japanese Journal of Applied Physics</i> , 2017, 56, 04CD02.	1.5	5
44	Steep switching in trimmed-gate tunnel FET. <i>AIP Advances</i> , 2018, 8, .	1.3	5
45	Effect of post-implantation annealing on Al ⁺ N isoelectronic trap formation in silicon: Al ⁺ N pair formation and defect recovery mechanisms. <i>AIP Advances</i> , 2018, 8, 055024.	1.3	5
46	EOT Scaling in Tunnel Field-Effect Transistors: Trade-off between Subthreshold Steepness and Gate Leakage. , 2012, , .		5
47	Molecular beam epitaxy and magnetic properties of GaMnNAs. <i>Journal of Crystal Growth</i> , 2007, 301-302, 642-646.	1.5	4
48	Formation of single electron transistors in single-walled carbon nanotubes with low energy Ar ion irradiation technique. <i>Journal of Vacuum Science & Technology B</i> , 2009, 27, 795-798.	1.3	4
49	Performance limit of parallel electric field tunnel FET and improvement by modified gate and channel configurations. , 2013, , .		4
50	Variation behavior of tunnel-FETs originated from dopant concentration at source region and channel edge configuration. , 2014, , .		4
51	Closed-form analytical model of static noise margin for ultra-low voltage eight-transistor tunnel FET static random access memory. <i>Japanese Journal of Applied Physics</i> , 2016, 55, 04ED06.	1.5	4
52	Epitaxial growth of Ge thin film on Si (001) by DC magnetron sputtering. <i>Materials Science in Semiconductor Processing</i> , 2017, 70, 3-7.	4.0	4
53	Process and device integration for silicon tunnel FETs utilizing isoelectronic trap technology to enhance the ON current. <i>Japanese Journal of Applied Physics</i> , 2018, 57, 04FA04.	1.5	4
54	Improvement in Electrical Characteristics of ZnSnO/Si Bilayer TFET by W/Al ₂ O ₃ Gate Stack. <i>IEEE Journal of the Electron Devices Society</i> , 2020, 8, 341-345.	2.1	4

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55	Improved temperature characteristics of single-wall carbon nanotube single electron transistors using carboxymethylcellulose dispersant. Applied Physics Letters, 2007, 91, 263511.	3.3	3
56	Optical properties and thermal stability of GaAsN alloy films. Journal of Luminescence, 2007, 122-123, 182-184.	3.1	3
57	Analysis of threshold voltage shifts in double gate tunnel FinFETs: Effects of improved electrostatics by gate dielectrics and back gate effects. , 2013, , .		3
58	Impact of fin length on threshold voltage modulation by back bias for Independent double-gate tunnel fin field-effect transistors. Solid-State Electronics, 2015, 111, 62-66.	1.4	3
59	Impact of extension implantation conditions of fin field-effect transistors on gate-induced drain leakage. Japanese Journal of Applied Physics, 2016, 55, 04EB01.	1.5	3
60	Impact of residual defects caused by extension ion implantation in FinFETs on parasitic resistance and its fluctuation. Solid-State Electronics, 2017, 132, 103-108.	1.4	3
61	Simulation study of short-channel effects of tunnel field-effect transistors. Japanese Journal of Applied Physics, 2018, 57, 04FD04.	1.5	3
62	Non-equilibrium solid-phase growth of amorphous GeSn layer on Ge-on-insulator wafer induced by flash lamp annealing. Applied Physics Express, 2021, 14, 025505.	2.4	3
63	Measurements of a component of the piezo-optic tensor of Si by reflectance difference spectroscopy. Journal of Applied Physics, 2003, 94, 1458-1460.	2.5	2
64	Ordering of In and Ga in Epitaxially Grown In _{0.53} Ga _{0.47} As Films on (001) InP Substrates. Materials Transactions, 2006, 47, 1115-1120.	1.2	2
65	Raman, nuclear magnetic resonance, and transport characteristics of ¹³ C enriched single-walled carbon nanotubes. Journal of Nanophotonics, 2009, 3, 031955.	1.0	2
66	Vacuum-ultraviolet reflectance difference spectroscopy for characterizing dielectrics-semiconductor interfaces. Thin Solid Films, 2011, 519, 2830-2833.	1.8	2
67	Understanding of BTI for tunnel FETs. , 2015, , .		2
68	On the drain bias dependence of long-channel silicon-on-insulator-based tunnel field-effect transistors. Japanese Journal of Applied Physics, 2017, 56, 04CD04.	1.5	2
69	Bias temperature instability in tunnel field-effect transistors. Japanese Journal of Applied Physics, 2017, 56, 04CA04.	1.5	2
70	Implementation of Coulomb blockade transport on a semiconductor device simulator and its application to tunnel-FET-based quantum dot devices. Japanese Journal of Applied Physics, 2020, 59, S11E02.	1.5	2
71	ON current enhancement and variability suppression in tunnel FETs by the isoelectronic trap impurity of beryllium. Japanese Journal of Applied Physics, 2021, 60, SBBA01.	1.5	2
72	Si bilayer tunnel field-effect transistor structure realized using tilted ion-implantation technique. Solid-State Electronics, 2021, 180, 107993.	1.4	2

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73	Novel Device Architecture Proposal of Source Junctionless Tunneling Field-Effect Transistor (SJL-TFET). , 2014, , .		2
74	Measurements of the Linear Electro-Optic Coefficients of ZnTe by RDS. Physica Status Solidi (B): Basic Research, 2002, 229, 605-609.	1.5	1
75	Optical anisotropy of GaNAs grown on GaAs(001) substrate. Current Applied Physics, 2004, 4, 640-642.	2.4	1
76	Study of local segregation in GaInNAs using EXAFS measurements. Journal of Physics and Chemistry of Solids, 2008, 69, 298-301.	4.0	1
77	Guidelines for symmetric threshold voltage in tunnel FinFETs with single and dual metal gate electrodes. , 2013, , .		1
78	Study of gate leakage current paths in p-channel tunnel field-effect transistor by current separation measurement and device simulation. Japanese Journal of Applied Physics, 2015, 54, 034202.	1.5	1
79	PBTI for N-type tunnel FinFETs. , 2015, , .		1
80	Enhancement of capacitance benefit by drain offset structure in tunnel field-effect transistor circuit speed associated with tunneling probability increase. Japanese Journal of Applied Physics, 2018, 57, 04FD13.	1.5	1
81	Fabrication of epitaxial tunnel junction on tunnel field effect transistors. , 2019, , .		1
82	Impact of Switching Voltage on Complementary Steep-Slope Tunnel Field Effect Transistor Circuits. IEEE Transactions on Electron Devices, 2020, 67, 3876-3882.	3.0	1
83	Mechanism of extraordinary gate-length dependence of quantum dot operation in isoelectronic-trap-assisted tunnel FETs. Applied Physics Express, 2020, 13, 114001.	2.4	1
84	Optical anisotropy and surface morphology of InGaAs lattice-mismatched with GaAs(001). Current Applied Physics, 2004, 4, 621-624.	2.4	0
85	GaNAs(001) surface phases under growing condition. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2005, 23, 1341.	1.6	0
86	Magnetic and Crystalline properties of GaMnNAs and Low-temperature annealing effect. , 2006, , .		0
87	Charge trapping effects in photovoltage measurements of (Ga,Mn)As. Physica B: Condensed Matter, 2008, 403, 4288-4291.	2.7	0
88	Modeling of parallel electric field tunnel FETs. , 2015, , .		0
89	Characterization of effective mobility by split C-V technique in MoS2 MOSFETs with high-k/metal gate. , 2015, , .		0
90	Evolution of nanoscale silicon CMOS technology for ultra low power application. , 2015, , .		0

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91	Electronics of Compound Materials Nanosheets. Hyomen Kagaku, 2016, 37, 527-534.	0.0	0
92	Structural and electrical characterization of epitaxial Ge thin films on Si(001) formed by sputtering. Japanese Journal of Applied Physics, 2017, 56, 04CB01.	1.5	0
93	Research Trends in Silicon Quantum Bit Devices. Journal of the Japan Society for Precision Engineering, 2019, 85, 1052-1056.	0.1	0