

# Takahiro Mori

## List of Publications by Year in descending order

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citations

567281

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552781

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docs citations

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times ranked

957  
citing authors

#	ARTICLE	IF	CITATIONS
1	Verification of influence of tail states and interface states on sub-threshold swing of Si n-channel MOSFETs over a temperature range of 4â€“300 K. Japanese Journal of Applied Physics, 2022, 61, SC1032.	1.5	11
2	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
3	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
4	Si bilayer tunnel field-effect transistor structure realized using tilted ion-implantation technique. Solid-State Electronics, 2021, 180, 107993.	1.4	2
5	Electron beam lithography with negative tone resist for highly integrated silicon quantum bits. Nanotechnology, 2021, 32, 485301.	2.6	7
6	Analog of a Quantum Heat Engine Using a Single-Spin Qubit. Physical Review Letters, 2020, 125, 166802.	7.8	57
7	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
8	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
9	Improvement in Electrical Characteristics of ZnSnO/Si Bilayer TFET by W/Alâ„Oâ„f Gate Stack. IEEE Journal of the Electron Devices Society, 2020, 8, 341-345.	2.1	4
10	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
11	Source engineering for bilayer tunnel field-effect transistor with hetero tunnel junction: thickness and impurity concentration. Applied Physics Express, 2020, 13, 074004.	2.4	7
12	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
13	Fabrication of epitaxial tunnel junction on tunnel field effect transistors. , 2019, , .		1
14	High-temperature operation of a silicon qubit. Scientific Reports, 2019, 9, 469.	3.3	33
15	Quantum Interferometry with a $g$ -Factor-Tunable Spin Qubit. Physical Review Letters, 2019, 122, 207703.	7.8	25
16	Steep switching less than 15 mV dec <sup>1</sup> in silicon-on-insulator tunnel FETs by a trimmed-gate structure. Japanese Journal of Applied Physics, 2019, 58, SBBA16.	1.5	8
17	Research Trends in Silicon Quantum Bit Devices. Journal of the Japan Society for Precision Engineering, 2019, 85, 1052-1056.	0.1	0
18	Process and device integration for silicon tunnel FETs utilizing isoelectronic trap technology to enhance the ON current. Japanese Journal of Applied Physics, 2018, 57, 04FA04.	1.5	4

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19	Simulation study of short-channel effects of tunnel field-effect transistors. Japanese Journal of Applied Physics, 2018, 57, 04FD04.	1.5	3
20	CVD Growth Technologies of Layered MX <sub>2</sub> 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
21	Steep switching in trimmed-gate tunnel FET. AIP Advances, 2018, 8, .	1.3	5
22	Effect of post-implantation annealing on Al—N isoelectronic trap formation in silicon: Al—N pair formation and defect recovery mechanisms. AIP Advances, 2018, 8, 055024.	1.3	5
23	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
24	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
25	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
26	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
27	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
28	Bias temperature instability in tunnel field-effect transistors. Japanese Journal of Applied Physics, 2017, 56, 04CA04.	1.5	2
29	Material engineering for silicon tunnel field-effect transistors: isoelectronic trap technology. MRS Communications, 2017, 7, 541-550.	1.8	22
30	Epitaxial growth of Ge thin film on Si (001) by DC magnetron sputtering. Materials Science in Semiconductor Processing, 2017, 70, 3-7.	4.0	4
31	Suppression of tunneling rate fluctuations in tunnel field-effect transistors by enhancing tunneling probability. Japanese Journal of Applied Physics, 2017, 56, 04CD02.	1.5	5
32	Electronics of Compound Materials Nanosheets. Hyomen Kagaku, 2016, 37, 527-534.	0.0	0
33	Demonstrating performance improvement of complementary TFET circuits by I <sub>on</sub> /I <sub>off</sub> enhancement based on isoelectronic trap technology. , 2016, , .		9
34	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
35	Characterization of Effective Mobility and Its Degradation Mechanism in MoS <sub>2</sub> MOSFETs. IEEE Nanotechnology Magazine, 2016, 15, 651-656.	2.0	14
36	Introduction of SiGe/Si heterojunction into novel multilayer tunnel FinFET. Japanese Journal of Applied Physics, 2016, 55, 04EB06.	1.5	15

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37	Closed-form analytical model of static noise margin for ultra-low voltage eight-transistor tunnel FET static random access memory. Japanese Journal of Applied Physics, 2016, 55, 04ED06.	1.5	4
38	Robust and compact key generator using physically unclonable function based on logic-transistor-compatible poly-crystalline-Si channel FinFET technology. , 2015, , .		5
39	Understanding of BTI for tunnel FETs. , 2015, , .		2
40	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
41	Modeling of parallel electric field tunnel FETs. , 2015, , .		0
42	Characterization of effective mobility by split C-V technique in MoS <sub>2</sub> MOSFETs with high-k/metal gate. , 2015, , .		0
43	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
44	Fabrication of high-k/metal-gate MoS <sub>2</sub> field-effect transistor by device isolation process utilizing Ar-plasma etching. Japanese Journal of Applied Physics, 2015, 54, 046502.	1.5	20
45	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
46	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
47	Improvement of epitaxial channel quality on heavily arsenic- and boron-doped Si surfaces and impact on performance of tunnel field-effect transistors. Solid-State Electronics, 2015, 113, 173-178.	1.4	6
48	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
49	PBTI for N-type tunnel FinFETs. , 2015, , .		1
50	Evolution of nanoscale silicon CMOS technology for ultra low power application. , 2015, , .		0
51	Unexpected equivalent-oxide-thickness dependence of the subthreshold swing in tunnel field-effect transistors. Applied Physics Express, 2014, 7, 024201.	2.4	35
52	Variation behavior of tunnel-FETs originated from dopant concentration at source region and channel edge configuration. , 2014, , .		4
53	Experimental realization of complementary p- and n- tunnel FinFETs with subthreshold slopes of less than 60 mV/decade and very low (pA/&#x03BC;m) off-current on a Si CMOS platform. , 2014, , .		18
54	Band-to-band tunneling current enhancement utilizing isoelectronic trap and its application to TFETs. , 2014, , .		22

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55	Electrical characteristics and thermal stability of HfO <sub>2</sub> metal-oxide-semiconductor capacitors fabricated on clean reconstructed GaSb surfaces. Applied Physics Letters, 2014, 104, .	3.3	20
56	High-performance poly-Ge short-channel metal-oxide-semiconductor field-effect transistors formed on SiO <sub>2</sub> layer by flash lamp annealing. Applied Physics Express, 2014, 7, 056501.	2.4	66
57	High-performance tri-gate poly-Ge junction-less p- and n-MOSFETs fabricated by flash lamp annealing process. , 2014, , .		22
58	Accurate prediction of PBTI lifetime for N-type fin-channel tunnel FETs. , 2014, , .		10
59	Heteroepitaxy of GaSb on Si(111) and fabrication of HfO <sub>2</sub> /GaSb metal-oxide-semiconductor capacitors. Applied Physics Letters, 2014, 104, .	3.3	11
60	Performance Enhancement of Tunnel Field-Effect Transistors by Synthetic Electric Field Effect. IEEE Electron Device Letters, 2014, 35, 792-794.	3.9	53
61	Predictivity of the non-local BTBT model for structure dependencies of tunnel FETs. , 2014, , .		9
62	Performance evaluation of parallel electric field tunnel field-effect transistor by a distributed-element circuit model. Solid-State Electronics, 2014, 102, 82-86.	1.4	7
63	Novel Device Architecture Proposal of Source Junctionless Tunneling Field-Effect Transistor (SJL-TFET). , 2014, , .		2
64	Analysis of threshold voltage shifts in double gate tunnel FinFETs: Effects of improved electrostatics by gate dielectrics and back gate effects. , 2013, , .		3
65	Performance limit of parallel electric field tunnel FET and improvement by modified gate and channel configurations. , 2013, , .		4
66	A compact model for tunnel field-effect transistors incorporating nonlocal band-to-band tunneling. Journal of Applied Physics, 2013, 114, 144512.	2.5	25
67	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
68	Guidelines for symmetric threshold voltage in tunnel FinFETs with single and dual metal gate electrodes. , 2013, , .		1
69	First demonstration of drain current enhancement in SOI tunnel FET with vertical-tunnel-multiplication. , 2012, , .		6
70	EOT Scaling in Tunnel Field-Effect Transistors: Trade-off between Subthreshold Steepness and Gate Leakage. , 2012, , .		5
71	Vacuum-ultraviolet reflectance difference spectroscopy for characterizing dielectrics-semiconductor interfaces. Thin Solid Films, 2011, 519, 2830-2833.	1.8	2
72	SiO <sub>2</sub> /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

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73	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
74	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
75	Formation of single electron transistors in single-walled carbon nanotubes with low energy Ar ion irradiation technique. Journal of Vacuum Science & Technology B, 2009, 27, 795-798.	1.3	4
76	Raman, nuclear magnetic resonance, and transport characteristics of $^{13}\text{C}$ enriched single-walled carbon nanotubes. Journal of Nanophotonics, 2009, 3, 031955.	1.0	2
77	Coupled Quantum Dots in a Graphene-Based Two-Dimensional Semimetal. Nano Letters, 2009, 9, 2891-2896.	9.1	59
78	Study of local segregation in GaInNAs using EXAFS measurements. Journal of Physics and Chemistry of Solids, 2008, 69, 298-301.	4.0	1
79	Charge trapping effects in photovoltage measurements of (Ga,Mn)As. Physica B: Condensed Matter, 2008, 403, 4288-4291.	2.7	0
80	Improved temperature characteristics of single-wall carbon nanotube single electron transistors using carboxymethylcellulose dispersant. Applied Physics Letters, 2007, 91, 263511.	3.3	3
81	Optical properties and thermal stability of GaAsN alloy films. Journal of Luminescence, 2007, 122-123, 182-184.	3.1	3
82	Molecular beam epitaxy and magnetic properties of GaMnNAs. Journal of Crystal Growth, 2007, 301-302, 642-646.	1.5	4
83	Magnetic and Crystalline properties of GaMnNAs and Low-temperature annealing effect. , 2006, , .		0
84	Ordering of In and Ga in Epitaxially Grown $\text{In}_{0.53}\text{Ga}_{0.47}\text{As}$ Films on (001) InP Substrates. Materials Transactions, 2006, 47, 1115-1120.	1.2	2
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	Experimental demonstration of Fano-type resonance in photoluminescence of $\text{ZnS:Mn}^{\wedge}\text{SiO}_2$ one-dimensional photonic crystals. Applied Physics Letters, 2005, 87, 171106.	3.3	8
87	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
88	Optical anisotropy of GaNAs grown on GaAs(001) substrate. Current Applied Physics, 2004, 4, 640-642.	2.4	1
89	Optical anisotropy and surface morphology of InGaAs lattice-mismatched with GaAs(001). Current Applied Physics, 2004, 4, 621-624.	2.4	0
90	Surface structure of InGaAs/InP(001) ordered alloy during and after growth. Applied Surface Science, 2004, 237, 230-234.	6.1	7

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91	Dielectric functions of $\text{In}_x\text{Ga}_{1-x}\text{As}$ alloys. Physical Review B, 2003, 68, .	3.2	43
92	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
93	Measurements of the Linear Electro-Optic Coefficients of ZnTe by RDS. Physica Status Solidi (B): Basic Research, 2002, 229, 605-609.	1.5	1