

Munehiro Tada

List of Publications by Year in descending order

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649
citing authors

#	ARTICLE	IF	CITATIONS
1	Via-Switch FPGA: 65-nm CMOS Implementation and Evaluation. IEEE Journal of Solid-State Circuits, 2022, 57, 2250-2262.	5.4	2
2	Cryogenic operation of NanoBridge at 4 K for controlling qubit. Japanese Journal of Applied Physics, 2022, 61, SC1049.	1.5	3
3	NanoBridge Technology for Nonvolatile FPGA and Memory Applications : (Invited). , 2022, , .		0
4	NanoBridge Technology for Embedded Nonvolatile Memory Application. , 2022, , .		0
5	A 171k-LUT Nonvolatile FPGA using Cu Atom-Switch Technology in 28nm CMOS. , 2020, , .		10
6	ON-state retention of Atom Switch eNVM for IoT/AI Inference Solution. , 2020, , .		3
7	33.3 Via-Switch FPGA: 65nm CMOS Implementation and Architecture Extension for AI Applications. , 2020, , .		5
8	Single-Event Effects Induced on Atom Switch-based Field-Programmable Gate Array. IEEE Transactions on Nuclear Science, 2019, 66, 1355-1360.	2.0	3
9	Low-Power Crossbar Switch With Two-Varistor Selected Complementary Atom Switch (2V-1CAS;) Tj ETQq1 1 0.784314 rgBT /Overload	3.0	6
10	An atom-switch-based field-programmable gate array with optimized driving capability buffer. Japanese Journal of Applied Physics, 2019, 58, SBBB04.	1.5	1
11	Applications of Reconfigurable Processors as Embedded Automotons in the IoT Sensor Networks in Space. , 2019, , 735-750.		0
12	Sensor Signal Processing Using High-Level Synthesis With a Layered Architecture. IEEE Embedded Systems Letters, 2018, 10, 119-122.	1.9	4
13	Via-Switch FPGA: Highly Dense Mixed-Grained Reconfigurable Architecture With Overlay Via-Switch Crossbars. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2018, 26, 2723-2736.	3.1	13
14	Atom Switch with Improved Cycle Endurance using Field Enhancement for Nonvolatile SoC. , 2018, , .		3
15	Set/Reset Switching Model of Cu Atom Switch Based on Electrolysis. IEEE Transactions on Electron Devices, 2017, 64, 1812-1817.	3.0	5
16	NanoBridge-Based FPGA in High-Temperature Environments. IEEE Micro, 2017, 37, 32-42.	1.8	7
17	Architecture optimization of nanobridge-based field-programmable gate array and its evaluation. Japanese Journal of Applied Physics, 2017, 56, 04CF03.	1.5	2
18	Programmable SpaceWire interface with atom switch: Components, short paper. , 2016, , .		2

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19	A highly-dense mixed grained reconfigurable architecture with overlay crossbar interconnect using via-switch. , 2016, , .		4
20	Novel processor architecture for onboard infrared sensors. , 2016, , .		3
21	Area-efficient nonvolatile carry chain based on pass-transistor/atom-switch hybrid logic. Japanese Journal of Applied Physics, 2016, 55, 04EF01.	1.5	3
22	Low-power embedded read-only memory using atom switch and silicon-on-thin-buried-oxide transistor. Applied Physics Express, 2015, 8, 045201.	2.4	2
23	0.5-V Highly Power-Efficient Programmable Logic using Nonvolatile Configuration Switch in BEOL. , 2015, , .		14
24	A Silicon-on-Thin-Buried-Oxide CMOS Microcontroller with Embedded Atom-Switch ROM. IEEE Micro, 2015, 35, 13-23.	1.8	5
25	Logic compatible process technology for embedded atom switches in CMOS. Japanese Journal of Applied Physics, 2015, 54, 05ED05.	1.5	1
26	ON-state Reliability of Cu Atom Switch Under Currentâ€™Temperature Stress. IEEE Transactions on Electron Devices, 2015, 62, 2992-2997.	3.0	4
27	Cu Atom Switch With Steep Time-to-ON-State Versus Switching Voltage Using Cu Ionization Control. IEEE Transactions on Electron Devices, 2015, 62, 2966-2971.	3.0	2
28	Mechanism of OFF-state lifetime improvement in complementary atom switch. Japanese Journal of Applied Physics, 2015, 54, 04DD08.	1.5	1
29	Publisherâ€™s Note: â€™Mechanism of OFF-state lifetime improvement in complementary atom switchâ€™. Japanese Journal of Applied Physics, 2015, 54, 059201.	1.5	0
30	Impact of overshoot current on set operation of atom switch. Japanese Journal of Applied Physics, 2014, 53, 04ED07.	1.5	3
31	Utility of high on-off ratio, high off resistance rewritable device to EEPROM for ultra-low voltage operation of steep subthreshold slope FETs. , 2014, , .		4
32	Improved Switching Voltage Variation of Cu Atom Switch for Nonvolatile Programmable Logic. IEEE Transactions on Electron Devices, 2014, 61, 3827-3832.	3.0	10
33	Three-Terminal Nonvolatile Resistive-Change Device Integrated in Cu-BEOL. IEEE Transactions on Electron Devices, 2014, 61, 505-510.	3.0	4
34	Improved ON-State Reliability of Atom Switch Using Alloy Electrodes. IEEE Transactions on Electron Devices, 2013, 60, 3534-3540.	3.0	27
35	Improved Off-State Reliability of Nonvolatile Resistive Switch With Low Programming Voltage. IEEE Transactions on Electron Devices, 2012, 59, 2357-2362.	3.0	28
36	Effects of Low-\$k\$ Stack Structure on Performance of Complementary Metal Oxide Semiconductor Devices and Chip Package Interaction Failure. Japanese Journal of Applied Physics, 2012, 51, 096504.	1.5	0

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37	Electronic Conduction Mechanism in Atom Switch Using Polymer Solid Electrolyte. IEEE Transactions on Electron Devices, 2012, 59, 3574-3577.	3.0	20
38	Effects of Low- <i>k</i> Stack Structure on Performance of Complementary Metal Oxide Semiconductor Devices and Chip Package Interaction Failure. Japanese Journal of Applied Physics, 2012, 51, 096504.	1.5	0
39	A Robust Low- <i>k</i> /Cu Dual Damascene Interconnect (DDI) With Sidewall Protection Layer (SPL). IEEE Transactions on Device and Materials Reliability, 2011, 11, 98-105.	2.0	3
40	Polymer Solid-Electrolyte Switch Embedded on CMOS for Nonvolatile Crossbar Switch. IEEE Transactions on Electron Devices, 2011, 58, 4398-4406.	3.0	56
41	Improved Resistive Switching Characteristics of NiO Resistance Random-Access Memory Using Post-Plasma-Oxidation Process. Japanese Journal of Applied Physics, 2011, 50, 04DD13.	1.5	6
42	ON-State Reliability of Solid-Electrolyte Switch under Pulsed Alternating Current Stress for Programmable Logic Device. Japanese Journal of Applied Physics, 2011, 50, 074201.	1.5	5
43	Programmable cell array using rewritable solid-electrolyte switch integrated in 90nm CMOS. , 2011, , .		26
44	Improved Resistive Switching Characteristics of NiO Resistance Random-Access Memory Using Post-Plasma-Oxidation Process. Japanese Journal of Applied Physics, 2011, 50, 04DD13.	1.5	2
45	ON-State Reliability of Solid-Electrolyte Switch under Pulsed Alternating Current Stress for Programmable Logic Device. Japanese Journal of Applied Physics, 2011, 50, 074201.	1.5	8
46	Nonvolatile Crossbar Switch Using $\text{TiO}_x/\text{TaSiO}_y$ Solid Electrolyte. IEEE Transactions on Electron Devices, 2010, 57, 1987-1995.	3.0	36
47	Low Temperature Germanium Growth on Silicon Oxide Using Boron Seed Layer and In Situ Dopant Activation. Journal of the Electrochemical Society, 2010, 157, H371.	2.9	19
48	Metal-induced dopant (boron and phosphorus) activation process in amorphous germanium for monolithic three-dimensional integration. Journal of Applied Physics, 2009, 106, .	2.5	18
49	Porous Low- <i>k</i> Impacts on Performance of Advanced LSI Devices with GHz Operations. Japanese Journal of Applied Physics, 2009, 48, 04C031.	1.5	6
50	Low Temperature Boron Activation in Amorphous Germanium for Three Dimensional Integrated Circuits (3D-ICs) using Ni-induced Crystallization. ECS Transactions, 2009, 16, 909-916.	0.5	0
51	Low-Temperature, Low-Pressure Chemical Vapor Deposition and Solid Phase Crystallization of Silicon- ϵ -Germanium Films. Journal of the Electrochemical Society, 2009, 156, D23.	2.9	32
52	Robust Low Oxygen Content Cu Alloy for Scaled-Down ULSI Interconnects Based on Metallurgical Thermodynamic Principles. IEEE Transactions on Electron Devices, 2009, 56, 1579-1587.	3.0	7
53	Performance Modeling of Low- <i>k</i> /Cu Interconnects for 32-nm-Node and Beyond. IEEE Transactions on Electron Devices, 2009, 56, 1852-1861.	3.0	22
54	Comprehensive Chemistry Designs in Porous SiOCH Film Stacks and Plasma Etching Gases for Damageless Cu Interconnects in Advanced ULSI Devices. IEEE Transactions on Semiconductor Manufacturing, 2008, 21, 469-480.	1.7	23

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55	Low temperature (≤ 380°C) and high performance Ge CMOS technology with novel source/drain by metal-induced dopants activation and high-k/metal gate stack for monolithic 3D integration. , 2008, , .		36
56	Via-Shape-Control for Copper Dual-Damascene Interconnects With Low-k Organic Film. IEEE Transactions on Semiconductor Manufacturing, 2008, 21, 256-262.	1.7	4
57	Low temperature boron and phosphorus activation in amorphous germanium using Ni- and Co-induced crystallization and its application for three-dimensional integrated circuits. Applied Physics Letters, 2008, 93, .	3.3	8
58	High performance germanium N+â•P and P+â•N junction diodes formed at low Temperature (â•½380Å°C) using metal-induced dopant activation. Applied Physics Letters, 2008, 93, .	3.3	29
59	Self-nucleation free and dimension dependent metal-induced lateral crystallization of amorphous germanium for single crystalline germanium growth on insulating substrate. Journal of Applied Physics, 2008, 104, 064501.	2.5	29
60	Chemical Structure Effects of Ring-Type Siloxane Precursors on Properties of Plasma-Polymerized Porous SiOCH Films. Journal of the Electrochemical Society, 2007, 154, D354.	2.9	33
61	Feasibility Study of 45-nm-Node Scaled-Down Cu Interconnects With Molecular-Pore-Stacking (MPS) SiOCH Films. IEEE Transactions on Electron Devices, 2007, 54, 797-806.	3.0	13
62	Improving Reliability of Copper Dual-Damascene Interconnects by Impurity Doping and Interface Strengthening. IEEE Transactions on Electron Devices, 2007, 54, 1867-1877.	3.0	30
63	Robust Cu Dual Damascene Interconnects With Porous SiOCH Films Fabricated by Low-Damage Multi-Hard-Mask Etching Technology. IEEE Transactions on Semiconductor Manufacturing, 2006, 19, 455-464.	1.7	12
64	Robust porous SiOCH/Cu interconnects with ultrathin sidewall protection liners. IEEE Transactions on Electron Devices, 2006, 53, 1169-1179.	3.0	12
65	PZT MIM Capacitor With Oxygen-Doped Ru-Electrodes for Embedded FeRAM Devices. IEEE Transactions on Electron Devices, 2005, 52, 2227-2235.	3.0	17
66	Effects of Material Interfaces in Cu/Low- κ -Damascene Interconnects on Their Performance and Reliability. IEEE Transactions on Electron Devices, 2004, 51, 1867-1876.	3.0	19
67	Highly thermal-stable, plasma-polymerized BCB polymer film. Plasma Sources Science and Technology, 2003, 12, S80-S88.	3.1	14
68	Sol-gel preparation and optical properties of MgF ₂ thin films containing metal and semiconductor nanoparticles. Scripta Materialia, 2001, 44, 2031-2034.	5.2	8
69	Sol-gel synthesis of inorganic complex fluorides using trifluoroacetic acid. Journal of Fluorine Chemistry, 2000, 105, 65-70.	1.7	48
70	Controlling Factors for the Conversion of Trifluoroacetate Sols into Thin Metal Fluoride Coatings. Journal of Sol-Gel Science and Technology, 2000, 19, 311-314.	2.4	56
71	Sol-gel Processing and Characterization of Alkaline Earth and Rare-earth Fluoride Thin Films. Journal of Materials Research, 1999, 14, 1610-1616.	2.6	69
72	Sol-Gel Processing of LaF ₃ Thin Films. Journal of the Ceramic Society of Japan, 1998, 106, 124-126.	1.3	24

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73	Preparation and characterization of MgF ₂ thin film by a trifluoroacetic acid method. Thin Solid Films, 1997, 304, 252-255.	1.8	73
74	Via-switch FPGA with transistor-free programmability enabling energy-efficient near-memory parallel computation. Japanese Journal of Applied Physics, 0, , .	1.5	1