Tatsuro Maeda

List of Publications by Year
in descending order

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98 papers	3,736 citations	218677 26 h-index	128289 60 g-index
98 all docs	98 docs citations	98 times ranked	3380 citing authors

#	Article	IF	Citations
1	Surface bonding state of germanium via cyclic dry treatments using plasma of hydrogen iodine and pure oxygen gases. Japanese Journal of Applied Physics, 2022, 61, SD1024.	1.5	1
2	Low thermal budget epitaxial lift off (ELO) for Ge (111)-on-insulator structure. Japanese Journal of Applied Physics, 2022, 61, SC1024.	1.5	1
3	Transparent Conductive Oxide (TCO) Gated Ingaas Mosfets for Front-Side Illuminated Short-Wave Infrared Detection. ECS Meeting Abstracts, 2022, MA2022-01, 1282-1282.	0.0	0
4	Heat transport properties of alumina gate insulator films on Ge substrates fabricated by atomic layer deposition. Materials Science in Semiconductor Processing, 2021, 121, 105396.	4.0	2
5	Spectral Responsivity Characteristics of Frontâ€Side Illumination InGaAs PhotoFETs on Si. Physica Status Solidi (A) Applications and Materials Science, 2021, 218, 2000439.	1.8	5
6	(Invited) Layer Transfer Technology for Stacked Multi-Channel Semiconductor-on-Insulator Platform. ECS Transactions, 2021, 102, 17-26.	0.5	0
7	(Invited) Layer Transfer Technology for Stacked Multi-Channel Semiconductor-on-Insulator Platform. ECS Meeting Abstracts, 2021, MA2021-01, 1089-1089.	0.0	0
8	Optical study of electron and acoustic phonon confinement in ultrathin-body germanium-on-insulator nanolayers. Nanoscale, 2021, 13, 9686-9697.	5.6	3
9	High and broadband sensitivity front-side illuminated InGaAs photo field-effect transistors (photoFETs) with SWIR transparent conductive oxide (TCO) gate. Applied Physics Letters, 2021, 119, .	3.3	7
10	InGaAs photo field-effect-transistors (PhotoFETs) on half-inch Si wafer using layer transfer technology. Japanese Journal of Applied Physics, 2020, 59, SGGE03.	1.5	6
11	Performance and reliability improvement in Ge(1ÂÔÂÔ) nMOSFETs through channel flattening process. Solid-State Electronics, 2020, 169, 107816.	1.4	3
12	(Invited) Epitaxial Growth of Ge/III-V Films and Hetero-Layer Lift-off for Ultra-Thin GeOI Fabrication. ECS Transactions, 2020, 98, 157-167.	0.5	0
13	(Invited) Epitaxial Growth of Ge/III-V Films and Hetero-Layer Lift-off for Ultra-Thin GeOI Fabrication. ECS Meeting Abstracts, 2020, MA2020-02, 1715-1715.	0.0	0
14	Germanium Layer Transfer with Low Temperature Direct Bonding and Epitaxial Lift-off Technique for Ge-based monolithic 3D integration. , 2019, , .		1
15	Carrier and heat transport properties of poly-crystalline GeSn films for thin-film transistor applications. Journal of Applied Physics, 2019, 126, .	2.5	10
16	Analysis of square-law detector for high-sensitive detection of terahertz waves. Journal of Applied Physics, 2019, 125, 174506.	2.5	12
17	Ultra-thin germanium-tin on insulator structure through direct bonding technique. Semiconductor Science and Technology, 2018, 33, 124002.	2.0	5
18	Tensile strain ultra thin body SiGe on insulator through hetero-layer transfer technique. Materials Science in Semiconductor Processing, 2017, 70, 123-126.	4.0	4

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19	Si1â^'xGex bulk single crystals for substrates of electronic devices. Materials Science in Semiconductor Processing, 2017, 70, 12-16.	4.0	6
20	Surface cleaning and pure nitridation of GaSb by in-situ plasma processing. AIP Advances, 2017, 7, 105117.	1.3	7
21	Ion implantation after germanidation technique for low thermal budget Ge CMOS devices: From bulk Ge to UTB-GeOI substrate. , 2017, , .		0
22	First Experimental Observation of Channel Thickness Scaling Induced Electron Mobility Enhancement in UTB-GeOI nMOSFETs. IEEE Transactions on Electron Devices, 2017, 64, 4615-4621.	3.0	15
23	Experimental study on interface region of two-dimensional Si layers by forming gas annealing. Japanese Journal of Applied Physics, 2016, 55, 04ED04.	1.5	0
24	Enhancement of mobility in ultra-thin-body GeOI p-channel metalâ€“oxideâ€“semiconductor field effect transistors with Si-passivated back interfaces. Applied Physics Express, 2016, 9, 091302.	2.4	10
25	Advanced germanium layer transfer for ultra thin body on insulator structure. Applied Physics Letters, 2016, 109, .	3.3	17
26	Behavior of Sn atoms in GeSn thin films during thermal annealing: Ex-situ and in-situ observations. Journal of Applied Physics, 2016, 120, .	2.5	21
27	Raman spectroscopic characterization of germanium-on-insulator nanolayers. Applied Physics Letters, 2016, 108, .	3.3	11
28	Gate-First High-Performance Germanium nMOSFET and pMOSFET Using Low Thermal Budget Ion Implantation After Germanidation Technique. IEEE Electron Device Letters, 2016, 37, 253-256.	3.9	25
29	Achieving low parasitic resistance in Ge p-channel metalâ€“oxideâ€“semiconductor field-effect transistors by ion implantation after germanidation. Applied Physics Express, 2015, 8, 054201.	2.4	11
30	Carrier and heat transport properties of polycrystalline GeSn films on SiO2. Applied Physics Letters, 2015, 107, .	3.3	33
31	Hole Hall mobility of SiGe alloys grown by the traveling liquidus-zone method. Applied Physics Letters, 2015, 107, .	3.3	7
32	Partitioning sample collection/solvent extraction cartridge packed with octadecyl-derivatized macroporous silica particles for the analysis of sesquiterpenes in air samples. Journal of Separation Science, 2015, 38, 3891-3896.	2.5	8
33	Surface-oxide stress induced band-structure modulation in two-dimensional Si layers. Japanese Journal of Applied Physics, 2015, 54, 04DC02.	1.5	9
34	Effects of HCl treatment and predeposition vacuum annealing on Al₂O₃/GaSb/GaAs metalâ€“oxideâ€“semiconductor structures. Japanese Journal of Applied Physics, 2015, 54, 021201.	1.5	4
35	Wafer-scale layer transfer of GaAs and Ge onto Si wafers using patterned epitaxial lift-off. Japanese Journal of Applied Physics, 2015, 54, 036505.	1.5	17
36	Ultrathin GeSn p-channel MOSFETs grown directly on Si(111) substrate using solid phase epitaxy. Japanese Journal of Applied Physics, 2015, 54, 04DA07.	1.5	14

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37	Unexpected equivalent-oxide-thickness dependence of the subthreshold swing in tunnel field-effect transistors. Applied Physics Express, 2014, 7, 024201.	2.4	35
38	Structural and Optical Properties of Amorphous and Crystalline GeSn Layers on Si. ECS Journal of Solid State Science and Technology, 2014, 3, P403-P408.	1.8	17
39	(Invited) Thin Epitaxial Film of Ge and III-V Directly Bonded onto Si Substrate. ECS Transactions, 2014, 64, 491-498.	0.5	9
40	Electron mobility improvement by in situ annealing before deposition of HfO₂gate dielectric with equivalent oxide thickness of sub-1.0 nm in In_{0.53}Ga_{0.47}As n-type metalâ€“insulatorâ€“semiconductor field-effect transistor. Applied Physics Express, 2014, 7, 061202.	2.4	0
41	Ultrathin Body Germanium-on-Insulator (GeOI) Pseudo-MOSFETs Fabricated by Transfer of Epitaxial Ge Films on III-V Substrates. ECS Solid State Letters, 2014, 4, P15-P18.	1.4	6
42	Self-limiting growth of ultrathin Ga₂O₃for the passivation of Al₂O₃/InGaAs interfaces. Applied Physics Express, 2014, 7, 011201.	2.4	22
43	Impact of Fermi level pinning inside conduction band on electron mobility in InGaAs metal-oxide-semiconductor field-effect transistors. Applied Physics Letters, 2013, 103, .	3.3	27
44	Ultrathin layer transfer technology for post-Si semiconductors. Microelectronic Engineering, 2013, 109, 133-136.	2.4	24
45	Impact of Fermi Level Pinning Due to Interface Traps Inside the Conduction Band on the Inversion-Layer Mobility in $hbox{In}_{x}hbox{Ga}_{1 - x}hbox{As}$ Metalâ€“Oxideâ€“Semiconductor Field Effect Transistors. IEEE Transactions on Device and Materials Reliability, 2013, 13, 456-462.	2.0	25
46	Tensile-Strained GeSn Metalâ€“Oxideâ€“Semiconductor Field-Effect Transistor Devices on Si(111) Using Solid Phase Epitaxy. Applied Physics Express, 2013, 6, 101301.	2.4	40
47	IIIâ€“V/Ge High Mobility Channel Integration of InGaAs n-Channel and Ge p-Channel Metalâ€“Oxideâ€“Semiconductor Field-Effect Transistors with Self-Aligned Ni-Based Metal Source/Drain Using Direct Wafer Bonding. Applied Physics Express, 2012, 5, 076501.	2.4	26
48	Controlling Anion Composition at Metalâ€“Insulatorâ€“Semiconductor Interfaces on IIIâ€“V Channels by Plasma Processing. Japanese Journal of Applied Physics, 2012, 51, 065701.	1.5	2
49	Impact of atomic layer deposition temperature on HfO2/InGaAs metal-oxide-semiconductor interface properties. Journal of Applied Physics, 2012, 112, .	2.5	38
50	1-nm-capacitance-equivalent-thickness HfO2/Al2O3/InGaAs metal-oxide-semiconductor structure with low interface trap density and low gate leakage current density. Applied Physics Letters, 2012, 100, .	3.3	146
51	Initial Processes of Atomic Layer Deposition of Al2O3 on InGaAs: Interface Formation Mechanisms and Impact on Metal-Insulator-Semiconductor Device Performance. Materials, 2012, 5, 404-414.	2.9	18
52	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
53	High Electron Mobility Ge n-Channel Metalâ€“Insulatorâ€“Semiconductor Field-Effect Transistors Fabricated by the Gate-Last Process with the Solid Source Diffusion Technique. Applied Physics Express, 2010, 3, 061301.	2.4	18
54	Impact of Ge nitride interfacial layers on performance of metal gate/high-k Ge-nMISFETs. , 2010, , .		4

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55	Role of germanium nitride interfacial layers in HfO2/germanium nitride/germanium metal-insulator-semiconductor structures. Applied Physics Letters, 2007, 90, 072911.	3.3	80
56	Gate dielectric formation and MIS interface characterization on Ge. Microelectronic Engineering, 2007, 84, 2314-2319.	2.4	101
57	Sulfur passivation of Ge (001) surfaces and its effects on Schottky barrier contact. Materials Science in Semiconductor Processing, 2006, 9, 706-710.	4.0	46
58	Characterization of platinum germanide/Ge(100) Schottky barrier height for Ge channel Metal Source/Drain MOSFET. Thin Solid Films, 2006, 508, 359-362.	1.8	32
59	Thin-body Ge-on-insulator p-channel MOSFETs with Pt germanide metal source/drain. Thin Solid Films, 2006, 508, 346-350.	1.8	63
60	Hole mobility enhancement of p-MOSFETs using global and local Ge-channel technologies. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2006, 135, 250-255.	3.5	24
61	Pure germanium nitride formation by atomic nitrogen radicals for application to Ge metal-insulator-semiconductor structures. Journal of Applied Physics, 2006, 100, 014101.	2.5	63
62	High-performance (110)-surface strained-SOI MOSFETs. Materials Science in Semiconductor Processing, 2005, 8, 327-336.	4.0	7
63	High-Speed Source-Heterojunction-MOS-Transistor (SHOT) Utilizing High-Velocity Electron Injection. IEEE Transactions on Electron Devices, 2005, 52, 2690-2696.	3.0	24
64	High mobility Ge-on-insulator p-channel MOSFETs using Pt germanide Schottky source/drain. IEEE Electron Device Letters, 2005, 26, 102-104.	3.9	125
65	Ge metal-insulator-semiconductor structures with Ge3N4 dielectrics by direct nitridation of Ge substrates. Applied Physics Letters, 2004, 85, 3181-3183.	3.3	89
66	SiGe-on-Insulator and Ge-on-Insulator Substrates Fabricated by Ge-Condensation Technique for High-Mobility Channel CMOS Devices. Materials Research Society Symposia Proceedings, 2004, 809, B2.1.1.	0.1	7
67	Thin-Film Strained-SOI CMOS Devicesâ€"Physical Mechanisms for Reduction of Carrier Mobility. IEEE Transactions on Electron Devices, 2004, 51, 1114-1121.	3.0	17
68	Fabrication and device characteristics of strained-Si-on-insulator (strained-SOI) CMOS. Applied Surface Science, 2004, 224, 241-247.	6.1	19
69	Room Temperature Coulomb Diamond Characteristic of Single Electron Transistor Made by AFM Nano-Oxidation Process. Japanese Journal of Applied Physics, 2002, 41, 2578-2582.	1.5	18
70	Epitaxial Growth of BaTiO3 Thin Film on SrTiO3 Substrate in Ultra High Vacuum without Introducing Oxidant. Japanese Journal of Applied Physics, 2001, 40, L463-L464.	1.5	17
71	Changes in surface states during epitaxial growth of BaTiO3 on SrTiO3 substrate in connection with composition deviation. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2001, 19, 2083-2088.	2.1	4
72	Single electron memory characteristic of silicon nanodot nanowire transistor. Electronics Letters, 2000, 36, 1322.	1.0	11

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73	Growth of epitaxial CoSi 2 for contacts of ultra-thin SOI MOSFETs. Thin Solid Films, 2000, 369, 240-243.	1.8	3
74	Highly suppressed short-channel effects in ultrathin SOI n-MOSFETs. IEEE Transactions on Electron Devices, 2000, 47, 354-359.	3.0	103
75	Spectroscopic Ellipsometry Studies on Ultrathin Hydrogenated Amorphous Silicon Films Prepared by Thermal Chemical Vapor Deposition. Japanese Journal of Applied Physics, 2000, 39, 6196-6201.	1.5	6
76	Room-temperature single-electron memory made by pulse-mode atomic force microscopy nano oxidation process on atomically flat Î±-alumina substrate. Applied Physics Letters, 2000, 76, 239-241.	3.3	92
77	Experimental and theoretical results of room-temperature single-electron transistor formed by the atomic force microscope nano-oxidation process. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2000, 18, 1321-1325.	2.1	20
78	Flattening Phenomenon Observed during Epitaxial Growth of BaTiO3 by Alternating Deposition Method. Japanese Journal of Applied Physics, 1999, 38, L1137-L1139.	1.5	2
79	Fabrication of 40â€“150 nm Gate Length Ultrathin n-MOSFETs Using Epitaxial Layer Transfer SOI Wafers. Japanese Journal of Applied Physics, 1999, 38, 2492-2495.	1.5	3
80	Electrical properties of Si nanocrystals embedded in an ultrathin oxide. Nanotechnology, 1999, 10, 127-131.	2.6	54
81	Metal-Based Room-Temperature Operating Single Electron Devices Using Scanning Probe Oxidation. Japanese Journal of Applied Physics, 1999, 38, 477-479.	1.5	20
82	Plane-view observation technique of silicon nanowires by transmission electron microscopy. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1999, 17, 1897.	1.6	5
83	Fabrication technology of ultrafine SiO[sub 2] masks and Si nanowires using oxidation of vertical sidewalls of a poly-Si layer. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1999, 17, 77.	1.6	4
84	Suppressed threshold voltage roll-off characteristic of 40 nm gate length ultrathin SOI MOSFET. Electronics Letters, 1998, 34, 2069.	1.0	12
85	Direct Observation of Helical Polysilane Nanostructures by Atomic Force Microscopy. Japanese Journal of Applied Physics, 1997, 36, L1211-L1213.	1.5	44
86	Growth and Characterization of FerroelectricPb(Zr,Ti)O3Films on Interface-ControlledCeO2(111)/Si(111)Structures. Japanese Journal of Applied Physics, 1997, 36, 6500-6503.	1.5	9
87	Unit cell layer-by-layer heteroepitaxy of BaO thin films at temperatures as low as 20â€‰Â°C. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1997, 15, 2469-2472.	2.1	29
88	Orientation-defined molecular layer epitaxy of Î±-Al2O3 thin films. Journal of Crystal Growth, 1997, 177, 95-101.	1.5	57
89	Fabrication of atomically defined oxide films on Si by laser molecular beam epitaxy. Physica B: Condensed Matter, 1996, 227, 323-325.	2.7	1
90	Molecular layer-by-layer growth of SrTiO3 and BaTiO3 films by laser molecular beam epitaxy. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1996, 41, 134-137.	3.5	12

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91	Two-dimensional laser molecular beam epitaxy and carrier modulation of infinite-layer BaCuO2 films. Physica C: Superconductivity and Its Applications, 1995, 247, 142-146.	1.2	35
92	Atomicâ€scale formation of ultrasmooth surfaces on sapphire substrates for highâ€quality thinâ€film fabrication. Applied Physics Letters, 1995, 67, 2615-2617.	3.3	378
93	Room-Temperature Epitaxial Growth of $f CeO_{2}$ Thin Films on Si(111) Substrates for Fabrication of Sharp Oxide/Silicon Interface. Japanese Journal of Applied Physics, 1995, 34, L688-L690.	1.5	106
94	Atomic Control of the SrTiO3 Crystal Surface. Science, 1994, 266, 1540-1542.	12.6	1,130
95	Topmost surface analysis of SrTiO3(001) by coaxial impactâ€collision ion scattering spectroscopy. Applied Physics Letters, 1994, 65, 3197-3199.	3.3	113
96	Mechanism of Photoinduced Charge Transfer in Co(Li)-Doped ZnO Film. Japanese Journal of Applied Physics, 1992, 31, L1079-L1082.	1.5	9
97	Fabrication of single electron memory on atomically flat Î±-Al/sub 2/O/sub 3/ substrate made by AFM nano-oxidation process. , 0, , .		1
98	Room temperature Coulomb oscillation and memory effect for single electron memory made by pulse-mode AFM nano-oxidation process. , 0, , .		2