

# Takayoshi Shimura

## List of Publications by Citations

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176  
papers

1,667  
citations

20  
h-index

30  
g-index

189  
ext. papers

1,856  
ext. citations

2  
avg, IF

4.44  
L-index

#	Paper	IF	Citations
176	Synchrotron x-ray photoelectron spectroscopy study on thermally grown SiO <sub>2</sub> /4H-SiC(0001) interface and its correlation with electrical properties. <i>Applied Physics Letters</i> , <b>2011</b> , 99, 021907	3.4	101
175	Origin of flatband voltage shift and unusual minority carrier generation in thermally grown GeO <sub>2</sub> /Ge metal-oxide-semiconductor devices. <i>Applied Physics Letters</i> , <b>2009</b> , 94, 202112	3.4	81
174	Germanium oxynitride gate dielectrics formed by plasma nitridation of ultrathin thermal oxides on Ge(100). <i>Applied Physics Letters</i> , <b>2009</b> , 95, 022102	3.4	47
173	Improved interface properties of GaN-based metal-oxide-semiconductor devices with thin Ga-oxide interlayers. <i>Applied Physics Letters</i> , <b>2017</b> , 110, 261603	3.4	40
172	Comprehensive study on initial thermal oxidation of GaN(0001) surface and subsequent oxide growth in dry oxygen ambient. <i>Journal of Applied Physics</i> , <b>2017</b> , 121, 035303	2.5	39
171	Investigation of unusual mobile ion effects in thermally grown SiO <sub>2</sub> on 4H-SiC(0001) at high temperatures. <i>Applied Physics Letters</i> , <b>2012</b> , 100, 252103	3.4	38
170	Effect of nitrogen incorporation into Al-based gate insulators in AlON/AlGa <sub>N</sub> /Ga <sub>N</sub> metal-oxide-semiconductor structures. <i>Applied Physics Express</i> , <b>2016</b> , 9, 101002	2.4	37
169	X-ray phase contrast imaging by compact Talbot-Lau interferometer with a single transmission grating. <i>Optics Letters</i> , <b>2014</b> , 39, 4297-300	3	33
168	Fabrication of Local Ge-on-Insulator Structures by Lateral Liquid-Phase Epitaxy: Effect of Controlling Interface Energy between Ge and Insulators on Lateral Epitaxial Growth. <i>Applied Physics Express</i> , <b>2009</b> , 2, 066502	2.4	32
167	Study of SiO <sub>2</sub> /4H-SiC interface nitridation by post-oxidation annealing in pure nitrogen gas. <i>AIP Advances</i> , <b>2015</b> , 5, 097134	1.5	30
166	Low-Temperature Growth of Epitaxial Si Films by Atmospheric Pressure Plasma Chemical Vapor Deposition Using Porous Carbon Electrode. <i>Japanese Journal of Applied Physics</i> , <b>2006</b> , 45, 8424-8429	1.4	30
165	Ultrahigh-temperature rapid thermal oxidation of 4H-SiC(0001) surfaces and oxidation temperature dependence of SiO <sub>2</sub> /SiC interface properties. <i>Applied Physics Letters</i> , <b>2016</b> , 109, 182114	3.4	30
164	Mobility characterization of Ge-on-insulator metal-oxide-semiconductor field-effect transistors with striped Ge channels fabricated by lateral liquid-phase epitaxy. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 173502	3.4	27
163	Impact of NO Annealing on Flatband Voltage Instability due to Charge Trapping in Si <sub>3</sub> N <sub>4</sub> /MOS Devices. <i>Materials Science Forum</i> , <b>2016</b> , 858, 599-602	0.4	24
162	Control of Ga-oxide interlayer growth and Ga diffusion in SiO <sub>2</sub> /Ga <sub>N</sub> stacks for high-quality Ga <sub>N</sub> -based metal-oxide-semiconductor devices with improved gate dielectric reliability. <i>Applied Physics Express</i> , <b>2018</b> , 11, 015701	2.4	23
161	Design and control of Ge-based metal-oxide-semiconductor interfaces for high-mobility field-effect transistors with ultrathin oxynitride gate dielectrics. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 033502	3.4	23
160	Understanding and controlling bias-temperature instability in SiC metal-oxide-semiconductor devices induced by unusual generation of mobile ions. <i>Applied Physics Letters</i> , <b>2013</b> , 102, 093510	3.4	22

159	Energy Band Structure of SiO <sub>2</sub> /4H-SiC Interfaces and its Modulation Induced by Intrinsic and Extrinsic Interface Charge Transfer. <i>Materials Science Forum</i> , <b>2011</b> , 679-680, 386-389	0.4	22
158	Characteristics of Pure Ge <sub>3</sub> N <sub>4</sub> Dielectric Layers Formed by High-Density Plasma Nitridation. <i>Japanese Journal of Applied Physics</i> , <b>2008</b> , 47, 2415-2419	1.4	22
157	Investigation of Surface and Interface Morphology of Thermally Grown SiO <sub>2</sub> Dielectrics on 4H-SiC(0001) Substrates. <i>Materials Science Forum</i> , <b>2011</b> , 679-680, 342-345	0.4	20
156	Self-limiting oxidation of SiGe alloy on silicon-on-insulator wafers. <i>Applied Physics Letters</i> , <b>2006</b> , 89, 1119-1121	3.3	20
155	Two dimensional x-ray phase imaging using single grating interferometer with embedded x-ray targets. <i>Optics Express</i> , <b>2015</b> , 23, 16582-8	3.3	19
154	Comprehensive study and design of scaled metal/high-k/Ge gate stacks with ultrathin aluminum oxide interlayers. <i>Applied Physics Letters</i> , <b>2015</b> , 106, 233503	3.4	19
153	Performance and reliability improvement in SiC power MOSFETs by implementing ALON high-k gate dielectrics <b>2012</b> ,		19
152	Hard x-ray phase contrast imaging using a tabletop Talbot-Lau interferometer with multiline embedded x-ray targets. <i>Optics Letters</i> , <b>2013</b> , 38, 157-9	3	18
151	Humidity-dependent stability of amorphous germanium nitrides fabricated by plasma nitridation. <i>Applied Physics Letters</i> , <b>2007</b> , 91, 163501	3.4	18
150	Large-Scale Atomistic Modeling of Thermally Grown SiO <sub>2</sub> on Si(111) Substrate. <i>Japanese Journal of Applied Physics</i> , <b>2004</b> , 43, 492-497	1.4	18
149	Improved bias-temperature instability characteristics in SiC metal-oxide-semiconductor devices with aluminum oxynitride dielectrics. <i>Applied Physics Letters</i> , <b>2014</b> , 104, 122105	3.4	17
148	Synthesis of large-scale transparent gold nanosheets sandwiched between stabilizers at a solid-liquid interface. <i>New Journal of Chemistry</i> , <b>2012</b> , 36, 2112	3.6	17
147	Relationship between interface property and energy band alignment of thermally grown SiO <sub>2</sub> on 4H-SiC(0001). <i>Current Applied Physics</i> , <b>2012</b> , 12, S79-S82	2.6	17
146	ALON/SiO <sub>2</sub> Stacked Gate Dielectrics for 4H-SiC MIS Devices. <i>Materials Science Forum</i> , <b>2009</b> , 615-617, 541-544	0.4	17
145	Excellent electrical properties of TiO <sub>2</sub> /HfSiO <sub>5</sub> /SiO <sub>2</sub> layered higher-k gate dielectrics with sub-1nm equivalent oxide thickness. <i>Applied Physics Letters</i> , <b>2008</b> , 92, 212902	3.4	16
144	Effects of Thermal History on Residual Order of Thermally Grown Silicon Dioxide. <i>Japanese Journal of Applied Physics</i> , <b>2003</b> , 42, 7250-7255	1.4	16
143	Strain-induced direct band gap shrinkage in local Ge-on-insulator structures fabricated by lateral liquid-phase epitaxy. <i>Applied Physics Letters</i> , <b>2014</b> , 104, 031106	3.4	15
142	Impact of Physical Vapor Deposition-Based In situ Fabrication Method on Metal/High-k Gate Stacks. <i>Japanese Journal of Applied Physics</i> , <b>2007</b> , 46, 1910-1915	1.4	15

141	Fabrication of tensile-strained single-crystalline GeSn on transparent substrate by nucleation-controlled liquid-phase crystallization. <i>Applied Physics Letters</i> , <b>2017</b> , 110, 032104	3-4	14
140	Insight into enhanced field-effect mobility of 4H-SiC MOSFET with Ba incorporation studied by Hall effect measurements. <i>AIP Advances</i> , <b>2018</b> , 8, 085305	1-5	14
139	Design and control of interface reaction between Al-based dielectrics and AlGaN layer in AlGaN/GaN metal-oxide-semiconductor structures. <i>Applied Physics Letters</i> , <b>2017</b> , 111, 042102	3-4	14
138	Insight into unusual impurity absorbability of GeO(2) in GeO(2)/Ge stacks. <i>Applied Physics Letters</i> , <b>2011</b> , 99, 142101-142103	3-4	14
137	X-ray diffraction measurements of internal strain in Si nanowires fabricated using a self-limiting oxidation process. <i>Applied Physics Letters</i> , <b>2005</b> , 86, 071903	3-4	13
136	Passive/active oxidation boundary for thermal oxidation of 4H-SiC(0001) surface in O <sub>2</sub> /Ar gas mixture and its impact on SiO <sub>2</sub> /SiC interface quality. <i>Applied Physics Express</i> , <b>2018</b> , 11, 091301	2-4	13
135	Ideal phonon-scattering-limited mobility in inversion channels of 4H-SiC(0001) MOSFETs with ultralow net doping concentrations. <i>Applied Physics Letters</i> , <b>2019</b> , 115, 132102	3-4	12
134	Insights into thermal diffusion of germanium and oxygen atoms in HfO <sub>2</sub> /GeO <sub>2</sub> /Ge gate stacks and their suppressed reaction with atomically thin AlO <sub>x</sub> interlayers. <i>Journal of Applied Physics</i> , <b>2015</b> , 118, 235704	2-5	12
133	Controlled oxide interlayer for improving reliability of SiO <sub>2</sub> /GaN MOS devices. <i>Japanese Journal of Applied Physics</i> , <b>2019</b> , 58, SCCD06	1-4	11
132	Insight into metal-enhanced oxidation using barium on 4H-SiC surfaces. <i>Japanese Journal of Applied Physics</i> , <b>2016</b> , 55, 120303	1-4	11
131	Enhancement of photoluminescence from n-type tensile-strained GeSn wires on an insulator fabricated by lateral liquid-phase epitaxy. <i>Applied Physics Letters</i> , <b>2015</b> , 107, 221109	3-4	11
130	Insights into ultraviolet-induced electrical degradation of thermally grown SiO <sub>2</sub> /4H-SiC(0001) interface. <i>Applied Physics Letters</i> , <b>2014</b> , 104, 012107	3-4	11
129	Electrical characteristics of Ge-based metal-insulator-semiconductor devices with Ge <sub>3</sub> N <sub>4</sub> dielectrics formed by plasma nitridation. <i>Journal of Nanoscience and Nanotechnology</i> , <b>2011</b> , 11, 2856-60	1-3	11
128	Fabrication of advanced La-incorporated Hf-silicate gate dielectrics using physical-vapor-deposition-based in situ method and its effective work function modulation of metal/high-k stacks. <i>Journal of Applied Physics</i> , <b>2010</b> , 107, 034104	2-5	11
127	Mechanism of Carrier Mobility Degradation Induced by Crystallization of HfO <sub>2</sub> Gate Dielectrics. <i>Applied Physics Express</i> , <b>2009</b> , 2, 071402	2-4	11
126	High-mobility p-channel metal-oxide-semiconductor field-effect transistors on Ge-on-insulator structures formed by lateral liquid-phase epitaxy. <i>Applied Physics Letters</i> , <b>2012</b> , 101, 202105	3-4	11
125	Atmospheric In situ Arsenic-Doped SiGe Selective Epitaxial Growth for Raised-Extension N-type Metal Oxide Semiconductor Field-Effect Transistor. <i>Japanese Journal of Applied Physics</i> , <b>2007</b> , 46, 1916-1920	1-4	11
124	Ge diffusion and bonding state change in metal/high-k/Ge gate stacks and its impact on electrical properties. <i>Microelectronic Engineering</i> , <b>2013</b> , 109, 137-141	2-5	10

123	Gate stack technology for advanced high-mobility Ge-channel metal-oxide-semiconductor devices □ Fundamental aspects of germanium oxides and application of plasma nitridation technique for fabrication of scalable oxynitride dielectrics. <i>Current Applied Physics</i> , <b>2012</b> , 12, S10-S19	2.6	10
122	Thermal Robustness and Improved Electrical Properties of Ultrathin Germanium Oxynitride Gate Dielectric. <i>Japanese Journal of Applied Physics</i> , <b>2011</b> , 50, 010106	1.4	10
121	Selective detection and recovery of gold at tannin-immobilized non-conducting electrode. <i>Analytica Chimica Acta</i> , <b>2015</b> , 853, 207-213	6.6	9
120	Design and demonstration of phase gratings for 2D single grating interferometer. <i>Optics Express</i> , <b>2015</b> , 23, 29399-412	3.3	9
119	Novel Approach for Improving Interface Quality of 4H-SiC MOS Devices with UV Irradiation and Subsequent Thermal Annealing. <i>Materials Science Forum</i> , <b>2013</b> , 740-742, 741-744	0.4	9
118	Lateral Polarity Control in GaN Based on Selective Growth Procedure Using Carbon Mask Layers. <i>Applied Physics Express</i> , <b>2009</b> , 2, 101001	2.4	9
117	Thermal Degradation of HfSiON Dielectrics Caused by TiN Gate Electrodes and Its Impact on Electrical Properties. <i>Japanese Journal of Applied Physics</i> , <b>2006</b> , 45, 2933-2938	1.4	9
116	Oxidation of Si(001) with a hyperthermal O-atom beam at room temperature: Suboxide distribution and residual order structure. <i>Applied Physics Letters</i> , <b>2006</b> , 88, 133512	3.4	9
115	Sub-nanometer-scale depth profiling of nitrogen atoms in SiO <sub>2</sub> /4H-SiC structures treated with NO annealing. <i>Applied Physics Express</i> , <b>2018</b> , 11, 101303	2.4	9
114	Electrical detection of surface plasmon resonance phenomena by a photoelectronic device integrated with gold nanoparticle plasmon antenna. <i>Applied Physics Letters</i> , <b>2013</b> , 102, 083702	3.4	8
113	Direct Observation of Dielectric Breakdown Spot in Thermal Oxides on 4H-SiC(0001) Using Conductive Atomic Force Microscopy. <i>Materials Science Forum</i> , <b>2010</b> , 645-648, 821-824	0.4	8
112	Systematic study on work-function-shift in metal/Hf-based high-k gate stacks. <i>Applied Physics Letters</i> , <b>2009</b> , 94, 122905	3.4	8
111	Reduction of Charge Trapping Sites in Al <sub>2</sub> O <sub>3</sub> /SiO <sub>2</sub> Stacked Gate Dielectrics by Incorporating Nitrogen for Highly Reliable 4H-SiC MIS Devices. <i>Materials Science Forum</i> , <b>2011</b> , 679-680, 496-499	0.4	8
110	Impact of UV Irradiation on Thermally Grown 4H-SiC MOS Devices. <i>Materials Science Forum</i> , <b>2012</b> , 717-720, 765-768	0.4	8
109	Interface engineering between metal electrode and GeO <sub>2</sub> dielectric for future Ge-based metal-oxide-semiconductor technologies. <i>Applied Physics Letters</i> , <b>2012</b> , 101, 201601	3.4	8
108	Characteristics of in-situ phosphorus-doped silicon selective epitaxial growth at atmospheric pressure. <i>Journal of Crystal Growth</i> , <b>2008</b> , 310, 4507-4510	1.6	8
107	Synchrotron X-Ray Topography of Lattice Undulation of Bonded Silicon-On-Insulator Wafers. <i>Japanese Journal of Applied Physics</i> , <b>2004</b> , 43, 1081-1087	1.4	8
106	Structure of silicon oxide on Si(001) grown at low temperatures. <i>Surface Science</i> , <b>1994</b> , 315, L1021-L1024.8		8

105	Reliability-aware design of metal/high-k gate stack for high-performance SiC power MOSFET <b>2017</b> ,		7
104	Impact of rapid cooling process in ultrahigh-temperature oxidation of 4H-SiC(0001). <i>Japanese Journal of Applied Physics</i> , <b>2017</b> , 56, 04CR04	1.4	7
103	Mobility enhancement in recessed-gate AlGaN/GaN MOS-HFETs using an ALON gate insulator. <i>Japanese Journal of Applied Physics</i> , <b>2019</b> , 58, SCCD16	1.4	7
102	Exact evaluation of interface-reaction-limited growth in dry and wet thermal oxidation of 4H-SiC(0001) Si-face surfaces. <i>Japanese Journal of Applied Physics</i> , <b>2015</b> , 54, 098002	1.4	7
101	Al <sub>2</sub> O <sub>3</sub> /GeO <sub>2</sub> stacked gate dielectrics formed by post-deposition oxidation of ultrathin metal Al layer directly grown on Ge substrates. <i>Current Applied Physics</i> , <b>2012</b> , 12, S75-S78	2.6	7
100	Residual order in the thermal oxide of a fully strained SiGe alloy on Si. <i>Physical Review B</i> , <b>2010</b> , 81,	3.3	7
99	A novel electroless method for the deposition of single-crystalline gold nanocrystals on and inside an organic solid-matrix. <i>New Journal of Chemistry</i> , <b>2011</b> , 35, 1031	3.6	7
98	X-ray diffraction study of strain distribution in oxidized Si nanowires. <i>Journal of Applied Physics</i> , <b>2009</b> , 106, 073506	2.5	7
97	Fabrication of Fully Relaxed SiGe Layers with High Ge Concentration on Silicon-on-Insulator Wafers by Rapid Melt Growth. <i>Applied Physics Express</i> , <b>2010</b> , 3, 105501	2.4	7
96	Comment on Observation of a Distributed Epitaxial Oxide in Thermally Grown SiO <sub>2</sub> on Si(001)□	7.4	7
95	Heavy arsenic doping of silicon grown by atmospheric pressure selective epitaxial chemical vapor deposition. <i>Science and Technology of Advanced Materials</i> , <b>2007</b> , 8, 142-145	7.1	7
94	Implementation of atomic layer deposition-based ALON gate dielectrics in AlGaN/GaN MOS structure and its physical and electrical properties. <i>Japanese Journal of Applied Physics</i> , <b>2018</b> , 57, 06KA02 <sup>1.4</sup>	1.4	7
93	Structure and Surface Morphology of Thermal SiO <sub>2</sub> Grown on 4H-SiC by Metal-Enhanced Oxidation Using Barium. <i>Materials Science Forum</i> , <b>2017</b> , 897, 340-343	0.4	6
92	Performance improvement in 4H-SiC(0001) p-channel metal-oxide-semiconductor field-effect transistors with a gate oxide grown at ultrahigh temperature. <i>Applied Physics Express</i> , <b>2019</b> , 12, 061003	2.4	6
91	Impact of Interface Defect Passivation on Conduction Band Offset at SiO <sub>2</sub> /4H-SiC Interface. <i>Materials Science Forum</i> , <b>2012</b> , 717-720, 721-724	0.4	6
90	Impact of a Treatment Combining Nitrogen Plasma Exposure and Forming Gas Annealing on Defect Passivation of SiO <sub>2</sub> /SiC Interfaces. <i>Materials Science Forum</i> , <b>2009</b> , 615-617, 525-528	0.4	6
89	Synchrotron Radiation Photoemission Study of Ge <sub>3</sub> N <sub>4</sub> /Ge Structures Formed by Plasma Nitridation. <i>Japanese Journal of Applied Physics</i> , <b>2011</b> , 50, 10PE03	1.4	6
88	(Invited) Impact of Stacked ALON/SiO <sub>2</sub> Gate Dielectrics for SiC Power Devices. <i>ECS Transactions</i> , <b>2011</b> , 35, 265-274	1	6

87	Characterization of strained Si wafers by X-ray diffraction techniques. <i>Journal of Materials Science: Materials in Electronics</i> , <b>2008</b> , 19, 189-193	2.1	6
86	Thermal Robustness and Improved Electrical Properties of Ultrathin Germanium Oxynitride Gate Dielectric. <i>Japanese Journal of Applied Physics</i> , <b>2011</b> , 50, 010106	1.4	6
85	Insight into gate dielectric reliability and stability of SiO <sub>2</sub> /GaN MOS devices. <i>Japanese Journal of Applied Physics</i> , <b>2020</b> , 59, SMMA03	1.4	5
84	Understanding and engineering of NiGe/Ge junction formed by phosphorous ion implantation after germanidation. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 062107	3.4	5
83	Suppression of surface segregation and heavy arsenic doping into silicon during selective epitaxial chemical vapor deposition under atmospheric pressure. <i>Applied Physics Letters</i> , <b>2007</b> , 91, 092115	3.4	5
82	Improved channel mobility of 4H-SiC n-MOSFETs by ultrahigh-temperature gate oxidation with low-oxygen partial-pressure cooling. <i>Japanese Journal of Applied Physics</i> , <b>2018</b> , 57, 120304	1.4	5
81	Physical and electrical characterizations of AlGaIn/GaN MOS gate stacks with AlGaIn surface oxidation treatment. <i>Japanese Journal of Applied Physics</i> , <b>2018</b> , 57, 06KA07	1.4	4
80	Schottky source/drain germanium-based metal-oxide-semiconductor field-effect transistors with self-aligned NiGe/Ge junction and aggressively scaled high-k gate stack. <i>Applied Physics Letters</i> , <b>2015</b> , 107, 252104	3.4	4
79	Cathodoluminescence study of radiative interface defects in thermally grown SiO <sub>2</sub> /4H-SiC(0001) structures. <i>Applied Physics Letters</i> , <b>2015</b> , 106, 261604	3.4	4
78	Phosphorous ion implantation into NiGe layer for Ohmic contact formation on n-type Ge. <i>Japanese Journal of Applied Physics</i> , <b>2014</b> , 53, 08LD01	1.4	4
77	Dielectric Properties of Thermally Grown SiO <sub>2</sub> on 4H-SiC(0001) Substrates. <i>Materials Science Forum</i> , <b>2013</b> , 740-742, 605-608	0.4	4
76	Surface cleaning and etching of 4H-SiC(0001) using high-density atmospheric pressure hydrogen plasma. <i>Journal of Nanoscience and Nanotechnology</i> , <b>2011</b> , 11, 2802-8	1.3	4
75	Electronic structure characterization of La incorporated Hf-based high-k gate dielectrics by NEXAFS. <i>Journal of Nanoscience and Nanotechnology</i> , <b>2011</b> , 11, 2823-8	1.3	4
74	Improved Electrical Properties of SiC-MOS Interfaces by Thermal Oxidation of Plasma Nitrided 4H-SiC(0001) Surfaces. <i>Materials Science Forum</i> , <b>2010</b> , 645-648, 507-510	0.4	4
73	A novel electroless method for the deposition of single-crystalline platinum nanoparticle films on an organic solid matrix in the presence of gold single crystals. <i>New Journal of Chemistry</i> , <b>2011</b> , 35, 1503	3.6	4
72	Nitrogen plasma cleaning of Ge(100) surfaces. <i>Applied Surface Science</i> , <b>2009</b> , 255, 6335-6337	6.7	4
71	Impact of Thermally Induced Structural Changes on the Electrical Properties of TiN/HfLaSiO Gate Stacks. <i>Japanese Journal of Applied Physics</i> , <b>2011</b> , 50, 10PA02	1.4	4
70	Large-Area X-Ray Topographs of Lattice Undulation of Bonded Silicon-On-Insulator Wafers. <i>Japanese Journal of Applied Physics</i> , <b>2003</b> , 42, L117-L119	1.4	4

69	Impact of Thermally Induced Structural Changes on the Electrical Properties of TiN/HfLaSiO Gate Stacks. <i>Japanese Journal of Applied Physics</i> , <b>2011</b> , 50, 10PA02	1.4	4
68	Synchrotron Radiation Photoemission Study of Ge <sub>3</sub> N <sub>4</sub> /Ge Structures Formed by Plasma Nitridation. <i>Japanese Journal of Applied Physics</i> , <b>2011</b> , 50, 10PE03	1.4	4
67	Synchrotron radiation X-ray photoelectron spectroscopy of Ti/Al ohmic contacts to n-type GaN: Key role of Al capping layers in interface scavenging reactions. <i>Applied Physics Express</i> , <b>2016</b> , 9, 105801	2.4	4
66	Ultrahigh-Temperature Oxidation of 4H-SiC(0001) and an Impact of Cooling Process on SiO <sub>2</sub> /SiC Interface Properties. <i>Materials Science Forum</i> , <b>2017</b> , 897, 323-326	0.4	3
65	Demonstration of mm long nearly intrinsic GeSn single-crystalline wires on quartz substrate fabricated by nucleation-controlled liquid-phase crystallization. <i>Japanese Journal of Applied Physics</i> , <b>2019</b> , 58, SBBK01	1.4	3
64	Anomalous interface fixed charge generated by forming gas annealing in SiO <sub>2</sub> /GaN MOS devices. <i>Applied Physics Express</i> , <b>2020</b> , 13, 081001	2.4	3
63	Lightly doped n-type tensile-strained single-crystalline GeSn-on-insulator structures formed by lateral liquid-phase crystallization. <i>Applied Physics Express</i> , <b>2018</b> , 11, 011304	2.4	3
62	Initial stages of high-temperature CaF <sub>2</sub> /Si(001) epitaxial growth studied by surface X-ray diffraction. <i>Journal of Nanoscience and Nanotechnology</i> , <b>2011</b> , 11, 2990-6	1.3	3
61	Interface Reaction and Rate Enhancement of SiGe Thermal Oxidation. <i>ECS Transactions</i> , <b>2010</b> , 33, 893-899		3
60	(Invited) Gate Stack Technologies for SiC Power MOSFETs. <i>ECS Transactions</i> , <b>2011</b> , 41, 77-90	1	3
59	Investigation of In-situ Boron-Doped Si Selective Epitaxial Growth by Comparison with Arsenic Doping. <i>Japanese Journal of Applied Physics</i> , <b>2008</b> , 47, 2452-2455	1.4	3
58	Interface reactions at TiN/HfSiON gate stacks: Dependence on the electrode structure and deposition method. <i>Science and Technology of Advanced Materials</i> , <b>2007</b> , 8, 219-224	7.1	3
57	Enhanced Performance of Gate-First p-Channel Metal Insulator Semiconductor Field-Effect Transistors with Polycrystalline Silicon/TiN/HfSiON Stacks Fabricated by Physical Vapor Deposition Based In situ Method. <i>Japanese Journal of Applied Physics</i> , <b>2007</b> , 46, L1111-L1113	1.4	3
56	Formation of epitaxially ordered SiO <sub>2</sub> in oxygen-implanted silicon during thermal annealing. <i>Journal of Crystal Growth</i> , <b>2002</b> , 236, 37-40	1.6	3
55	Characterization of the (0001) surface of ice Ih crystal by crystal truncation rod scattering with the use of a synchrotron radiation source. <i>Journal of Crystal Growth</i> , <b>1992</b> , 121, 360-364	1.6	3
54	Toward the Super Temporal Resolution Image Sensor with a Germanium Photodiode for Visible Light. <i>Sensors</i> , <b>2020</b> , 20,	3.8	3
53	Insight into Channel Conduction Mechanisms of 4H-SiC(0001) MOSFET Based on Temperature-Dependent Hall Effect Measurement. <i>Materials Science Forum</i> , <b>2020</b> , 1004, 620-626	0.4	3
52	SiO <sub>2</sub> /AlON stacked gate dielectrics for AlGaN/GaN MOS heterojunction field-effect transistors. <i>Japanese Journal of Applied Physics</i> , <b>2018</b> , 57, 06KA03	1.4	3



51	Advancement of X-ray radiography using microfocus X-ray source in conjunction with amplitude grating and SOI pixel detector, SOPHIAS. <i>Optics Express</i> , <b>2018</b> , 26, 21044-21053	3.3	3
50	Degradation of SiO <sub>2</sub> /SiC Interface Properties due to Mobile Ions Intrinsically Generated by High-Temperature Hydrogen Annealing. <i>Materials Science Forum</i> , <b>2014</b> , 778-780, 541-544	0.4	2
49	Characterization of SiGe Layer during Ge Condensation Process by X-ray Diffraction Methods. <i>Japanese Journal of Applied Physics</i> , <b>2011</b> , 50, 010112	1.4	2
48	High-quality GeON gate dielectrics formed by plasma nitridation of ultrathin thermal oxides on Ge(100) <b>2010</b> ,		2
47	Dielectric and Interface Properties of TiO <sub>2</sub> /HfSiO/SiO <sub>2</sub> Layered Structures Fabricated by in situ PVD Method. <i>ECS Transactions</i> , <b>2009</b> , 16, 121-129	1	2
46	La Induced Passivation of High- $\kappa$ Bulk and Interface Defects in Polycrystalline Silicon/TiN/HfLaSiO/SiO <sub>2</sub> Stacks. <i>Japanese Journal of Applied Physics</i> , <b>2011</b> , 50, 10PA01	1.4	2
45	Detrimental Hf penetration into TiN gate electrode and subsequent degradation in dielectric properties of HfSiO high-k film. <i>Applied Physics Letters</i> , <b>2011</b> , 99, 142907	3.4	2
44	Synchrotron Radiation Photoelectron Spectroscopy Study of Thermally Grown Oxides on 4H-SiC(0001) Si-Face and (000-1) C-Face Substrates. <i>Materials Science Forum</i> , <b>2012</b> , 717-720, 697-702	0.4	2
43	High Performance Gate-First pMISFET with TiN/HfSiON Gate Stacks Fabricated with PVD-Based In-Situ Method. <i>ECS Transactions</i> , <b>2007</b> , 11, 585-599	1	2
42	Ordered Structure in Buried Oxide Layers of SOI Wafers. <i>Japanese Journal of Applied Physics</i> , <b>1999</b> , 38, 297	1.4	2
41	Improvement of SiO <sub>2</sub> /4H-SiC Interface Quality by Post-Oxidation Annealing in N <sub>2</sub> at High-Temperatures. <i>Materials Science Forum</i> , <b>2016</b> , 858, 627-630	0.4	2
40	Sub-nm-Scale Depth Profiling of Nitrogen in NO- and N <sub>2</sub> -Annealed SiO <sub>2</sub> /4H-SiC(0001) Structures. <i>Materials Science Forum</i> , <b>2019</b> , 963, 226-229	0.4	2
39	Evaluation of the Impact of Al Atoms on SiO <sub>2</sub> /SiC Interface Property by Using 4H-SiC n <sup>+</sup> -Channel Junctionless MOSFET. <i>Materials Science Forum</i> , <b>2019</b> , 963, 171-174	0.4	2
38	Analysis of X-ray diffraction curves of trapezoidal Si nanowires with a strain distribution. <i>Thin Solid Films</i> , <b>2016</b> , 612, 116-121	2.2	1
37	Comparative study on thermal robustness of GaN and AlGaN/GaN MOS devices with thin oxide interlayers. <i>Japanese Journal of Applied Physics</i> , <b>2019</b> , 58, SCCD08	1.4	1
36	Retarded Oxide Growth on 4H-SiC(0001) Substrates due to Sacrificial Oxidation. <i>Materials Science Forum</i> , <b>2014</b> , 778-780, 562-565	0.4	1
35	Oxygen-induced high-k degradation in TiN/HfSiO gate stacks <b>2012</b> ,		1
34	(Invited) Fabrication of High-Quality GOI and SGOI Structures by Rapid Melt Growth Method - Novel Platform for High-Mobility Transistors and Photonic Devices -. <i>ECS Transactions</i> , <b>2013</b> , 50, 261-266	1	1

33	Improved Electrical Properties and Thermal Stability of GeON Gate Dielectrics Formed by Plasma Nitridation of Ultrathin Oxides on Ge(100). <i>Key Engineering Materials</i> , <b>2011</b> , 470, 152-157	0.4	1
32	Observation of Crystalline Imperfections in Supercritical Thickness Strained Silicon on Insulator Wafers by Synchrotron X-ray Topography. <i>ECS Transactions</i> , <b>2009</b> , 16, 539-543	1	1
31	X-ray diffraction profiles of Si nanowires with trapezoidal cross-sections. <i>Physica B: Condensed Matter</i> , <b>2011</b> , 406, 2559-2564	2.8	1
30	Analysis of Lattice Distortion in Multicrystalline Silicon for Photovoltaic Cells by Synchrotron White X-Ray Microbeam Diffraction. <i>Materials Science Forum</i> , <b>2012</b> , 725, 153-156	0.4	1
29	In situ arsenic-doped Si <sub>1-x</sub> Cy selective epitaxial growth under atmospheric pressure. <i>Applied Physics Letters</i> , <b>2008</b> , 92, 042109	3.4	1
28	Selective epitaxial growth of in situ carbon-doped silicon on silicon substrates. <i>Surface and Interface Analysis</i> , <b>2008</b> , 40, 1122-1125	1.5	1
27	Structural optimization of HfTiSiO high-k gate dielectrics by utilizing in-situ PVD-based fabrication method. <i>Applied Surface Science</i> , <b>2008</b> , 254, 6119-6122	6.7	1
26	Characterization of SiGe Layer during Ge Condensation Process by X-ray Diffraction Methods. <i>Japanese Journal of Applied Physics</i> , <b>2011</b> , 50, 010112	1.4	1
25	La Induced Passivation of High-k Bulk and Interface Defects in Polycrystalline Silicon/TiN/HfLaSiO/SiO <sub>2</sub> Stacks. <i>Japanese Journal of Applied Physics</i> , <b>2011</b> , 50, 10PA01	1.4	1
24	A Pixel Design of a Branching Ultra-Highspeed Image Sensor. <i>Sensors</i> , <b>2021</b> , 21,	3.8	1
23	Inhibition of Mg activation in p-type GaN caused by thin AlGaN capping layer and impact of designing hydrogen desorption pathway. <i>Applied Physics Express</i> , <b>2021</b> , 14, 071001	2.4	1
22	Backscattering X-ray imaging using Fresnel zone aperture. <i>Applied Physics Express</i> , <b>2021</b> , 14, 072002	2.4	1
21	Development of a compact compression test stage for synchrotron radiation micro-Laue diffraction measurements of long-period stacking-ordered phases in MgZn alloys. <i>Japanese Journal of Applied Physics</i> , <b>2016</b> , 55, 038002	1.4	1
20	Flatband Voltage Shift Depending on SiO <sub>2</sub> /SiC Interface Charges in 4H-SiC MOS Capacitors with AlON/SiO <sub>2</sub> Stacked Gate Dielectrics. <i>Materials Science Forum</i> , <b>2016</b> , 858, 681-684	0.4	1
19	High-mobility GeSn p-MOSFETs on transparent substrate utilizing nucleation-controlled liquid-phase crystallization <b>2016</b> ,		1
18	Analysis of III-V oxides at high-k/InGaAs interfaces induced by metal electrodes. <i>Japanese Journal of Applied Physics</i> , <b>2019</b> , 58, 051010	1.4	1
17	Improvement of SiO <sub>2</sub> /4H-SiC(0001) Interface Properties by H <sub>2</sub> and Ar Mixture Gas Treatment Prior to SiO <sub>2</sub> Deposition. <i>Materials Science Forum</i> , <b>2018</b> , 924, 461-464	0.4	1
16	Demonstration of 4H-SiC CMOS circuits consisting of well-balanced n- and p-channel MOSFETs fabricated by ultrahigh-temperature gate oxidation. <i>Applied Physics Express</i> , <b>2021</b> , 14, 091006	2.4	1

15	High-temperature CO <sub>2</sub> treatment for improving electrical characteristics of 4H-SiC(0001) metal-oxide-semiconductor devices. <i>Applied Physics Express</i> , <b>2021</b> , 14, 101001	2.4	1
14	Probing the surface potential of SiO <sub>2</sub> /4H-SiC(0001) by terahertz emission spectroscopy. <i>Journal of Applied Physics</i> , <b>2021</b> , 130, 115305	2.5	1
13	Fixed-charge generation in SiO <sub>2</sub> /GaN MOS structures by forming gas annealing and its suppression by controlling Ga-oxide interlayer growth. <i>Japanese Journal of Applied Physics</i> , <b>2022</b> , 61, SC1034	1.4	1
12	Insight into interface electrical properties of metal-oxide-semiconductor structures fabricated on Mg-implanted GaN activated by ultra-high-pressure annealing. <i>Applied Physics Letters</i> , <b>2022</b> , 120, 082103 <sup>3,4</sup>	3.4	1
11	Comprehensive physical and electrical characterizations of NO nitrided SiO <sub>2</sub> /4H-SiC(112 0) interfaces. <i>Japanese Journal of Applied Physics</i> , <b>2022</b> , 61, SC1065	1.4	1
10	Evaluation and mitigation of reactive ion etching-induced damage in AlGaIn/GaN MOS structures fabricated by low-power inductively coupled plasma. <i>Japanese Journal of Applied Physics</i> , <b>2020</b> , 59, SMMA07	1.4	0
9	Impact of nitridation on the reliability of 4H-SiC(112 0) MOS devices. <i>Applied Physics Express</i> , <b>2022</b> , 15, 041002	2.4	0
8	Effective work function control of metal inserted poly-Si electrodes on HfSiO dielectrics by in-situ oxygen treatment of metal surface. <i>Current Applied Physics</i> , <b>2012</b> , 12, S83-S86	2.6	
7	Thermal Stability and Electron Irradiation Damage of Ordered Structure in the Thermal Oxide Layer on Si. <i>Journal of the Electrochemical Society</i> , <b>2010</b> , 157, H977	3.9	
6	Synchrotron X-ray Diffraction Studies of Thermal Oxidation of Si and SiGe. <i>ECS Transactions</i> , <b>2009</b> , 19, 479-493	1	
5	Comprehensive Study of the X-Ray Photoelectron Spectroscopy Peak Shift of La-Incorporated Hf Oxide for Gate Dielectrics. <i>Japanese Journal of Applied Physics</i> , <b>2012</b> , 51, 048005	1.4	
4	Comprehensive Study of the X-Ray Photoelectron Spectroscopy Peak Shift of La-Incorporated Hf Oxide for Gate Dielectrics. <i>Japanese Journal of Applied Physics</i> , <b>2012</b> , 51, 048005	1.4	
3	Cathodoluminescence Study of SiO <sub>2</sub> /4H-SiC Structures Treated with High-Temperature Post-Oxidation Annealing. <i>Materials Science Forum</i> , <b>2016</b> , 858, 445-448	0.4	
2	Toward Super Temporal Resolution by Suppression of Mixing Effects of Electrons. <i>IEEE Transactions on Electron Devices</i> , <b>2022</b> , 1-7	2.9	
1	Toward the Super Temporal Resolution. <i>IEEJ Transactions on Sensors and Micromachines</i> , <b>2022</b> , 142, 97-103	3.2	