

# Tetsuya Suemitsu

## List of Publications by Citations

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121  
papers

1,263  
citations

18  
h-index

30  
g-index

166  
ext. papers

1,637  
ext. citations

2.1  
avg, IF

3.98  
L-index

#	Paper	IF	Citations
121	Ultra-high sensitive sub-terahertz detection by InP-based asymmetric dual-grating-gate high-electron-mobility transistors and their broadband characteristics. <i>Applied Physics Letters</i> , <b>2014</b> , 104, 251114	3.4	84
120	An analysis of the kink phenomena in InAlAs/InGaAs HEMTs using two-dimensional device simulation. <i>IEEE Transactions on Electron Devices</i> , <b>1998</b> , 45, 2390-2399	2.9	75
119	Optical study of high-biased AlGaIn/GaN high-electron-mobility transistors. <i>Journal of Applied Physics</i> , <b>2002</b> , 92, 531-535	2.5	66
118	. <i>IEEE Transactions on Electron Devices</i> , <b>2002</b> , 49, 1694-1700	2.9	56
117	Electroluminescence characterization of AlGaIn/GaN high-electron-mobility transistors. <i>Applied Physics Letters</i> , <b>2001</b> , 79, 1196-1198	3.4	46
116	Improved Recessed-Gate Structure for Sub-0.1- $\mu$ m-Gate InP-Based High Electron Mobility Transistors. <i>Japanese Journal of Applied Physics</i> , <b>1998</b> , 37, 1365-1372	1.4	45
115	30-nm-Gate InP-Based Lattice-Matched High Electron Mobility Transistors with 350 GHz Cutoff Frequency. <i>Japanese Journal of Applied Physics</i> , <b>1999</b> , 38, L154-L156	1.4	43
114	High-performance 0.1- $\mu$ m gate enhancement-mode InAlAs/InGaAs HEMTs using two-step recessed gate technology. <i>IEEE Transactions on Electron Devices</i> , <b>1999</b> , 46, 1074-1080	2.9	43
113	Emission of terahertz radiation from dual grating gate plasmon-resonant emitters fabricated with InGaP/InGaAs/GaAs material systems. <i>Journal of Physics Condensed Matter</i> , <b>2008</b> , 20, 384206	1.8	42
112	Correlation between current-voltage characteristics and dislocations for n-GaN Schottky contacts. <i>Applied Physics Letters</i> , <b>2001</b> , 78, 3636-3638	3.4	37
111	Control of epitaxy of graphene by crystallographic orientation of a Si substrate toward device applications. <i>Journal of Materials Chemistry</i> , <b>2011</b> , 21, 17242		33
110	Current-driven detection of terahertz radiation using a dual-grating-gate plasmonic detector. <i>Applied Physics Letters</i> , <b>2014</b> , 104, 262104	3.4	28
109	Graphene-channel FETs for photonic frequency double-mixing conversion over the sub-THz band. <i>Solid-State Electronics</i> , <b>2015</b> , 103, 216-221	1.7	26
108	Correlation between current-voltage characteristics and dislocations evaluated with submicrometer Schottky contacts on n-GaN grown by metalorganic chemical vapor deposition. <i>Journal of Vacuum Science &amp; Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , <b>2003</b> , 21, 698		22
107	Impact of T-gate stem height on parasitic gate delay time in InGaAs-HEMTs. <i>Solid-State Electronics</i> , <b>2014</b> , 102, 93-97	1.7	21
106	Development of solitons in composite right- and left-handed transmission lines periodically loaded with Schottky varactors. <i>Journal of Applied Physics</i> , <b>2007</b> , 102, 024501	2.5	20
105	Emission of Terahertz Radiation from Two-Dimensional Electron Systems in Semiconductor Nano- and Hetero-Structures. <i>Journal of Infrared, Millimeter, and Terahertz Waves</i> , <b>2011</b> , 32, 629-645	2.2	19

104	Carbonaceous field effect transistor with graphene and diamondlike carbon. <i>Diamond and Related Materials</i> , <b>2012</b> , 22, 118-123	3.5	18
103	30-nm-gate InAlAs/InGaAs HEMTs lattice-matched to InP substrates		18
102	Body contacts in InP-based InAlAs/InGaAs HEMTs and their effects on breakdown voltage and kink suppression. <i>Electronics Letters</i> , <b>1995</b> , 31, 758	1.1	17
101	Room Temperature Logic Inverter on Epitaxial Graphene-on-Silicon Device. <i>Japanese Journal of Applied Physics</i> , <b>2011</b> , 50, 070113	1.4	16
100	An 0.03 $\mu\text{m}$ gate-length enhancement-mode InAlAs/InGaAs/InP MODFETs with 300 GHz FT and 2 S/mm extrinsic transconductance. <i>IEEE Electron Device Letters</i> , <b>1999</b> , 20, 206-208	4.4	16
99	Extraction of Drain Current and Effective Mobility in Epitaxial Graphene Channel Field-Effect Transistors on SiC Layer Grown on Silicon Substrates. <i>Japanese Journal of Applied Physics</i> , <b>2010</b> , 49, 04DF17	1.4	14
98	An Optically Clocked Transistor Array for High-Speed Asynchronous Label Swapping: 40 Gb/s and Beyond. <i>Journal of Lightwave Technology</i> , <b>2008</b> , 26, 692-703	4	14
97	Intrinsic Transit Delay and Effective Electron Velocity of AlGaIn/GaN High Electron Mobility Transistors. <i>Japanese Journal of Applied Physics</i> , <b>2005</b> , 44, L211-L213	1.4	14
96	Site-Selective Epitaxy of Graphene on Si Wafers. <i>Proceedings of the IEEE</i> , <b>2013</b> , 101, 1557-1566	14.3	13
95	High-Performance Graphene Field-Effect Transistors With Extremely Small Access Length Using Self-Aligned Source and Drain Technique. <i>Proceedings of the IEEE</i> , <b>2013</b> , 101, 1603-1608	14.3	13
94	Epitaxial graphene top-gate FETs on silicon substrates. <i>Solid-State Electronics</i> , <b>2010</b> , 54, 1071-1075	1.7	13
93	An intrinsic delay extraction method for Schottky gate field effect transistors. <i>IEEE Electron Device Letters</i> , <b>2004</b> , 25, 669-671	4.4	13
92	Electrical Characteristic of AlGaIn/GaN High-Electron-Mobility Transistors With Recess Gate Structure. <i>IEEE Transactions on Electron Devices</i> , <b>2019</b> , 66, 1694-1698	2.9	12
91	Application of plasmon-resonant microchip emitters to broadband terahertz spectroscopic measurement. <i>Journal of the Optical Society of America B: Optical Physics</i> , <b>2009</b> , 26, A52	1.7	12
90	Device loading effect on nonresonant detection of terahertz radiation in dual grating gate plasmon-resonant structure using InGaP/InGaAs/GaAs material systems. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2011</b> , 8, 346-348		11
89	Ambipolar Behavior in Epitaxial Graphene-Based Field-Effect Transistors on Si Substrate. <i>Japanese Journal of Applied Physics</i> , <b>2010</b> , 49, 06GG01	1.4	11
88	Epitaxial graphene field-effect transistors on silicon substrates. <i>Solid-State Electronics</i> , <b>2010</b> , 54, 1010-1014	1.4	11
87	N-polar GaN/AlGaIn/GaN metal-insulator- $\mu$ semiconductor high-electron-mobility transistor formed on sapphire substrate with minimal step bunching. <i>Applied Physics Express</i> , <b>2018</b> , 11, 015503	2.4	10

86	Current collapse suppression in AlGaIn/GaN HEMTs by means of slant field plates fabricated by multi-layer SiCN. <i>Solid-State Electronics</i> , <b>2014</b> , 101, 63-69	1.7	10
85	Impact of two-step-recessed gate structure on RF performance of InP-based HEMTs. <i>Electronics Letters</i> , <b>1998</b> , 34, 220	1.1	10
84	InP and GaN high electron mobility transistors for millimeter-wave applications. <i>IEICE Electronics Express</i> , <b>2015</b> , 12, 20152005-20152005	0.5	9
83	SAW Filters Composed of Interdigital Schottky and Ohmic Contacts on AlGaIn/GaN Heterostructures. <i>IEEE Electron Device Letters</i> , <b>2007</b> , 28, 90-92	4.4	9
82	A new process approach for slant field plates in GaN-based high-electron-mobility transistors. <i>Japanese Journal of Applied Physics</i> , <b>2016</b> , 55, 01AD02	1.4	8
81	Analysis of Fringing Effect on Resonant Plasma Frequency in Plasma Wave Devices. <i>Japanese Journal of Applied Physics</i> , <b>2009</b> , 48, 04C096	1.4	8
80	Room Temperature Intense Terahertz Emission from a Dual Grating Gate Plasmon-Resonant Emitter Using InAlAs/InGaAs/InP Material Systems. <i>IEICE Transactions on Electronics</i> , <b>2010</b> , E93-C, 1286-1289	0.4	8
79	Mechanism and structural dependence of kink phenomena in InAlAs/InGaAs HEMTs		8
78	Interdigital transducers with control gates on AlGaIn/GaN heterostructures. <i>Applied Physics Letters</i> , <b>2006</b> , 89, 033501	3.4	8
77	Bias-stress-induced increase in parasitic resistance of InP-based InAlAs/InGaAs HEMTs. <i>Microelectronics Reliability</i> , <b>2002</b> , 42, 47-52	1.2	8
76	. <i>IEEE Transactions on Electron Devices</i> , <b>2000</b> , 47, 33-43	2.9	8
75	Spectral narrowing of terahertz emission from super-grating dual-gate plasmon-resonant high-electron mobility transistors. <i>Journal of Physics: Conference Series</i> , <b>2009</b> , 193, 012068	0.3	7
74	Emission of terahertz radiation from two-dimensional electron systems in semiconductor nano-heterostructures. <i>Comptes Rendus Physique</i> , <b>2010</b> , 11, 421-432	1.4	7
73	Effect of Epitaxial Layer Crystal Quality on DC and RF Characteristics of AlGaIn/GaN Short-Gate High-Electron-Mobility Transistors on Sapphire Substrates. <i>Japanese Journal of Applied Physics</i> , <b>2005</b> , 44, 8435-8440	1.4	7
72	Kink modification using body contact bias in InP based InAlAs/InGaAs HEMTs. <i>Electronics Letters</i> , <b>1996</b> , 32, 1143	1.1	7
71	Effective Schottky Barrier Height Model for N-Polar and Ga-Polar GaN by Polarization-Induced Surface Charges with Finite Thickness. <i>Physica Status Solidi (B): Basic Research</i> , <b>2020</b> , 257, 1900528	1.3	7
70	Neutral beam process in AlGaIn/GaN HEMTs: Impact on current collapse. <i>Solid-State Electronics</i> , <b>2017</b> , 137, 1-5	1.7	6
69	Graphene/SiC/Si FETs with SiCN Gate Stack. <i>ECS Transactions</i> , <b>2011</b> , 41, 249-254	1	6

68	Recent achievements in the reliability of InP-based HEMTs. <i>Thin Solid Films</i> , <b>2007</b> , 515, 4378-4383	2.2	6
67	Parasitic effects and long term stability of InP-based HEMTs. <i>Microelectronics Reliability</i> , <b>2000</b> , 40, 1715-1720		6
66	Modulation-doped field-effect transistors with an 8-nm InGaAs/InAs/InGaAs quantum well. <i>IEEE Electron Device Letters</i> , <b>1999</b> , 20, 109-112	4.4	6
65	Photonic Frequency Double-Mixing Conversion Over the 120-GHz Band Using InP- and Graphene-Based Transistors. <i>Journal of Lightwave Technology</i> , <b>2016</b> , 34, 2011-2019	4	5
64	Nonresonant detection of terahertz radiation in high-electron-mobility transistor structure using InAlAs/InGaAs/InP material systems at room temperature. <i>Journal of Nanoscience and Nanotechnology</i> , <b>2012</b> , 12, 6737-40	1.3	5
63	Impact of T-gate electrode on gate capacitance in In <sub>0.7</sub> Ga <sub>0.3</sub> As HEMTs. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2011</b> , 8, 300-302		5
62	EMISSION AND INTENSITY MODULATION OF TERAHERTZ ELECTROMAGNETIC RADIATION UTILIZING 2-DIMENSIONAL PLASMONS IN DUAL-GRATING-GATE HEMTs. <i>International Journal of High Speed Electronics and Systems</i> , <b>2009</b> , 19, 33-53	0.5	5
61	Effect of epitaxial layer crystal quality on DC and RF characteristics of AlGaIn/GaN short-gate HEMTs. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2006</b> , 3, 2360-2363		5
60	Self-compensation of short-channel effects in sub-0.1- $\mu$ m InAlAs/InGaAs MODFETs by electrochemical etching. <i>IEEE Electron Device Letters</i> , <b>1998</b> , 19, 484-486	4.4	5
59	InP HEMT Technology for High-Speed Logic and Communications. <i>IEICE Transactions on Electronics</i> , <b>2007</b> , E90-C, 917-922	0.4	5
58	Improved breakdown voltage and RF characteristics in AlGaIn/GaN high-electron-mobility transistors achieved by slant field plates. <i>Applied Physics Express</i> , <b>2014</b> , 7, 096501	2.4	4
57	Neutral beam etching for device isolation in AlGaIn/GaN HEMTs. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2017</b> , 214, 1600617	1.6	4
56	Room temperature terahertz detection in high-electron-mobility transistor structure using InAlAs/InGaAs/InP material systems <b>2010</b> ,		4
55	Epitaxial graphene top-gate FETs on silicon substrates <b>2009</b> ,		4
54	Frequency Dispersion in Drain Conductance of InAlAs/InGaAs High-Electron Mobility Transistors (HEMTs) and Its Relationship with Impact Ionization. <i>Japanese Journal of Applied Physics</i> , <b>2001</b> , 40, 2725-2727	1.4	4
53	InGaAs HEMTs with T-gate electrodes formed by multi-layer SiCN molds. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2013</b> , 10, 773-776		3
52	Investigation of Graphene Field Effect Transistors with Al <sub>2</sub> O <sub>3</sub> Gate Dielectrics Formed by Metal Oxidation. <i>Japanese Journal of Applied Physics</i> , <b>2011</b> , 50, 070111	1.4	3
51	Analysis of Gate Delay Scaling in In <sub>0.7</sub> Ga <sub>0.3</sub> As-Channel High Electron Mobility Transistors. <i>Japanese Journal of Applied Physics</i> , <b>2009</b> , 48, 04C086	1.4	3

50	Plasmon-resonant microchip emitters and detectors for terahertz sensing and spectroscopic applications <b>2010</b> ,		3
49	Novel Plasmon-Resonant Terahertz-Wave Emitter Using a Double-Decked HEMT Structure. <i>Device Research Conference, IEEE Annual</i> , <b>2007</b> ,		3
48	An optically clocked transistor array (OCTA) for 40-Gb/s, bidirectional serial-to-parallel conversion of asynchronous burst optical packets. <i>IEICE Electronics Express</i> , <b>2006</b> , 3, 129-135	0.5	3
47	Influence of Hole Accumulation on Source Resistance, Kink Effect and On-State Breakdown of InP-Based High Electron Mobility Transistors: Light Irradiation Study. <i>Japanese Journal of Applied Physics</i> , <b>2002</b> , 41, 1104-1107	1.4	3
46	Optical Characterization of Impact Ionization in Flip-Chip-Bonded InP-Based High Electron Mobility Transistors. <i>Japanese Journal of Applied Physics</i> , <b>1999</b> , 38, 5823-5828	1.4	3
45	Graphene-based plasmonic metamaterial for terahertz laser transistors. <i>Nanophotonics</i> , <b>2022</b> ,	6.3	3
44	Room Temperature Logic Inverter on Epitaxial Graphene-on-Silicon Device. <i>Japanese Journal of Applied Physics</i> , <b>2011</b> , 50, 070113	1.4	3
43	Impact of nonlinear drain resistance in bias-stressed InAlAs/InGaAs HEMTs. <i>Electronics Letters</i> , <b>1999</b> , 35, 2141	1.1	3
42	Solution-processed Al <sub>2</sub> O <sub>3</sub> gate dielectrics for graphene field-effect transistors. <i>Japanese Journal of Applied Physics</i> , <b>2016</b> , 55, 091502	1.4	3
41	Mapping of damage induced by neutral beam etching on GaN surfaces using scanning internal photoemission microscopy. <i>Japanese Journal of Applied Physics</i> , <b>2019</b> , 58, SCCD13	1.4	2
40	InGaAs HEMTs with T-gate electrodes fabricated using HMDS SiN mold. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2012</b> , 9, 354-356		2
39	Plasmonic Terahertz Monochromatic Coherent Emission from an Asymmetric Chirped Dual-Grating-Gate InP-HEMT with a Photonic Vertical Cavity <b>2013</b> ,		2
38	Analysis of Intrinsic and Parasitic Gate Delay of InGaAs HEMTs. <i>ECS Transactions</i> , <b>2009</b> , 16, 65-72	1	2
37	A 40-Gb/s Self-Clocked Bidirectional Serial/Parallel Converter for Asynchronous Label Swapping. <i>IEEE Photonics Technology Letters</i> , <b>2007</b> , 19, 294-296	2.2	2
36	Enhanced Gate Swing in InP HEMTs With High Threshold Voltage by Means of InAlAsSb Barrier. <i>IEEE Electron Device Letters</i> , <b>2007</b> , 28, 669-671	4.4	2
35	AlGaIn/GaN Dual-Gate HEMT Mixers for 24 GHz Pulse-Modulation <b>2006</b> ,		2
34	Improved stability in wide-recess InP HEMTs by means of a fully passivated two-step-recess gate. <i>IEICE Electronics Express</i> , <b>2006</b> , 3, 310-315	0.5	2
33	Growth of InP high electron mobility transistor structures with Te doping. <i>Journal of Crystal Growth</i> , <b>2005</b> , 278, 596-599	1.6	2

32	Hydrogen sensitivity of InP HEMTs with WSiN-based gate stack. <i>IEEE Transactions on Electron Devices</i> , <b>2005</b> , 52, 305-310	2.9	2
31	Impact of subchannel design on DC and RF performance of 0.1 [micro sign]m MODFETs with InAs-inserted channel. <i>Electronics Letters</i> , <b>1998</b> , 34, 1976	1.1	2
30	Improving threshold-voltage uniformity of 0.1 [micro sign]m InP-based MODFETs with different gate layouts. <i>Electronics Letters</i> , <b>1998</b> , 34, 1614	1.1	2
29	Highly Stable Device Characteristics of InP-Based Enhancement-Mode High Electron Mobility Transistors with Two-Step-Recessed Gates. <i>Japanese Journal of Applied Physics</i> , <b>1999</b> , 38, 1174-1177	1.4	2
28	Impact-ionization-induced noise in InGaAs-based 0.1- $\mu$ m-gate HEMTs. <i>Physica B: Condensed Matter</i> , <b>1999</b> , 272, 562-564	2.8	2
27	Array configuration and silicon-lens integration of asymmetric dual-grating-gate plasmonic THz detectors <b>2016</b> ,		2
26	Coupling of 2D Plasmons in Grating-Gate Plasmonic THz Detector to THz Wave with Lateral Polarization <b>2018</b> ,		2
25	InGaAs channel HEMTs for photonic frequency double mixing conversion over the sub-THz band <b>2015</b> ,		1
24	Graphene-channel FETs for photonic frequency double-mixing conversion over the sub-THz band <b>2013</b> ,		1
23	Solution-based formation of high-quality gate dielectrics on epitaxial graphene by microwave-assisted annealing. <i>Japanese Journal of Applied Physics</i> , <b>2017</b> , 56, 06GF09	1.4	1
22	Detection of terahertz and mid-infrared radiations by InP-based asymmetric dual-grating-gate HEMTs <b>2014</b> ,		1
21	AlGaIn/GaN MIS-gate HEMTs with SiCN gate stacks. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2013</b> , 10, 790-793		1
20	Plasmonic terahertz monochromatic coherent emission from an asymmetric chirped dual-grating-gate InP-HEMT with a photonic vertical cavity <b>2013</b> ,		1
19	Polymer Material as a Gate Dielectric for Graphene Field-Effect-Transistor Applications. <i>Japanese Journal of Applied Physics</i> , <b>2011</b> , 50, 070107	1.4	1
18	Optoelectronic application of multi-layer epitaxial graphene on a Si substrate <b>2010</b> ,		1
17	Terahertz plasmon-resonant microchip emitters and their possible sensing and spectroscopic applications <b>2009</b> ,		1
16	Asymmetric dual-grating gate InGaAs/InAlAs/InP HEMTs for ultrafast and ultrahigh sensitive terahertz detection <b>2012</b> ,		1
15	Epitaxial graphene field effect transistors on silicon substrates <b>2009</b> ,		1

14	Electrochemically induced asymmetrical etching in InAlAs/InGaAs heterostructures for MODFET gate-groove fabrication. <i>Journal of Electronic Materials</i> , <b>1998</b> , 27, L51-L53	1.9	1
13	Error-free label swapping of asynchronous optical packets with multifunctional optically clocked transistor array. <i>Electronics Letters</i> , <b>2007</b> , 43, 359	1.1	1
12	AlGaN/GaN Field-Effect Surface Acoustic Wave Filters with >40-dB Isolation for Monolithic Integration with HEMTs <b>2006</b> ,		1
11	Short gate-length InAlAs/InGaAs MODFETs with asymmetry gate-recess grooves: electrochemical fabrication and performance. <i>Solid-State Electronics</i> , <b>1999</b> , 43, 1527-1533	1.7	1
10	Graphene-based 2D-heterostructures for terahertz lasers and amplifiers <b>2019</b> ,		1
9	Unitraveling-Carrier-Photodiode-Integrated High-Electron-Mobility Transistor for Photonic Double-Mixing. <i>Journal of Lightwave Technology</i> , <b>2021</b> , 39, 3341-3349	4	1
8	Achievement of balanced high frequency and high breakdown by InGaAs-based high-electron-mobility transistors with slant field plates. <i>Applied Physics Express</i> , <b>2016</b> , 9, 114101	2.4	1
7	High-performance self-aligned graphene transistors fabricated using contamination- and defect-free process. <i>Japanese Journal of Applied Physics</i> , <b>2016</b> , 55, 06GF11	1.4	1
6	Efficiency enhancement of emission of terahertz radiation by optical excitation from dual grating gate HEMT. <i>Journal of Nanophotonics</i> , <b>2009</b> , 3, 031980	1.1	
5	GaAs- and InP-Based High-Electron-Mobility Transistors <b>2011</b> , 84-113		
4	Dielectric-Tuned Diamondlike Carbon Materials for an Ultrahigh-Speed Self-Aligned Graphene Channel Field Effect Transistor. <i>Advances in Science and Technology</i> , <b>2012</b> , 77, 270-275	0.1	
3	Enhancement of terahertz radiation by CW infrared laser excitation in a doubly interdigitated grating gates transistors. <i>Journal of Physics: Conference Series</i> , <b>2009</b> , 193, 012071	0.3	
2	Tunable room temperature terahertz sources based on two dimensional plasma instability in GaN HEMTs. <i>Journal of Physics: Conference Series</i> , <b>2009</b> , 193, 012072	0.3	
1	Dual-gate AlGaIn/GaN high-electron-mobility transistors with short gate length for high-power mixers. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2006</b> , 3, 469-472		