Kazuhide Kumakura

List of Publications by Year
in descending order

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101 papers	2,207 citations	257450 24 h-index	243625 44 g-index
102 all docs	102 docs citations	102 times ranked	2123 citing authors

#	Article	IF	Citations
1	High-Temperature Performance of AlN MESFETs With Epitaxially Grown n-Type AlN Channel Layers. IEEE Electron Device Letters, 2022, 43, 350-353.	3.9	14
2	High blocking temperature of Fe nanoparticles embedded in diamond thin films. AIP Advances, 2022, 12, .	1.3	1
3	Control of n-type electrical conductivity for cubic boron nitride (c-BN) epitaxial layers by Si doping. Applied Physics Letters, 2020, 116, 162104.	3.3	15
4	Ohmic contact to AlN:Si using graded AlGaN contact layer. Applied Physics Letters, 2019, 115, .	3.3	11
5	Plasmon Control Driven by Spatial Carrier Density Modulation in Graphene. ACS Photonics, 2019, 6, 947-952.	6.6	7
6	Structural analysis of cubic boron nitride (111) films heteroepitaxially grown on diamond (111) substrates. Journal of Applied Physics, 2019, 125, .	2.5	14
7	Wurtzite GaP nanowire grown by using tertiarybutylchloride and used to fabricate solar cell. Japanese Journal of Applied Physics, 2019, 58, 015004.	1.5	1
8	High hole concentration in Mg-doped AlN/AlGaN superlattices with high Al content. Japanese Journal of Applied Physics, 2018, 57, 04FH09.	1.5	35
9	Surface structures of graphene covered Cu(103). Japanese Journal of Applied Physics, 2018, 57, 100301.	1.5	1
10	N-face $(000ar{1})$ GaN/InN/GaN double heterostructures emitting near-infrared photoluminescence grown by metalorganic vapor phase epitaxy. Applied Physics Express, 2018, 11, 081001.	2.4	4
11	Infinite-layer phase formation in the Ca1â€"<i>x</i>Sr<i>x</i>CuO2 system by reactive molecular beam epitaxy. Journal of Applied Physics, 2018, 124, .	2.5	11
12	Heteroepitaxial growth of single-domain cubic boron nitride films by ion-beam-assisted MBE. Applied Physics Express, 2017, 10, 035501.	2.4	14
13	Efficient heat dissipation in AlGaN/GaN high electron mobility transistors by substrate-transfer technique. Physica Status Solidi (A) Applications and Materials Science, 2017, 214, .	1.8	8
14	Surface morphology control of nonpolar <i>m</i>â€plane AlN homoepitaxial layers by flowâ€rate modulation epitaxy. Physica Status Solidi (B): Basic Research, 2017, 254, 1600545.	1.5	4
15	Terahertz spectroscopy of graphene complementary split ring resonators with gate tunability. Japanese Journal of Applied Physics, 2017, 56, 095102.	1.5	2
16	Molecular beam epitaxy of Nd2PdO4 thin films. AIP Advances, 2017, 7, 075006.	1.3	3
17	Initial stage of hexagonal boron nitride growth in diffusion and precipitation method. Japanese Journal of Applied Physics, 2017, 56, 06GE06.	1.5	2
18	Surface supersaturation in flow-rate modulation epitaxy of GaN. Journal of Crystal Growth, 2017, 468, 821-826.	1.5	5

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19	Epitaxial growth of monolayer MoSe₂ on GaAs. Applied Physics Express, 2016, 9, 115501.	2.4	17
20	Enhancement of performance of AlGaN/GaN high-electron-mobility transistors by transfer from sapphire to a copper plate. Japanese Journal of Applied Physics, 2016, 55, 05FH07.	1.5	7
21	Flow-rate modulation epitaxy of nonpolar m-plane AlN homoepitaxial layers grown on AlN bulk substrates. , 2016, , .		0
22	A new AlON buffer layer for RF-MBE growth of AlN on a sapphire substrate. Journal of Crystal Growth, 2015, 425, 138-140.	1.5	3
23	Suppression of self-heating effect in AlGaN/GaN high electron mobility transistors by substrate-transfer technology using h-BN. Applied Physics Letters, 2014, 105, .	3.3	53
24	Layered boron nitride as a release layer for mechanical transfer of GaN-based devices. , 2014, , .		0
25	GaN on h-BN technology for release and transfer of nitride devices. , 2014, , .		1
26	Unintentional Ga incorporation in metalorganic vapor phase epitaxy of In-containing III-nitride semiconductors. Journal of Crystal Growth, 2013, 382, 36-40.	1.5	36
27	Influence of Metalorganic Vapor Phase Epitaxy Regrowth on Characteristics of InAlN/AlGaN/GaN High Electron Mobility Transistors. Japanese Journal of Applied Physics, 2013, 52, 04CF02.	1.5	7
28	A Vertical InGaN/GaN Light-Emitting Diode Fabricated on a Flexible Substrate by a Mechanical Transfer Method Using BN. Applied Physics Express, 2012, 5, 072102.	2.4	39
29	Layered boron nitride as a release layer for mechanical transfer of GaN-based devices. Nature, 2012, 484, 223-227.	27.8	359
30	Long-range order and thermal stability of thin Co2FeSi films on GaAs(1â€‰1â€‰1)B. Journal Physics D: Applied Physics, 2010, 43, 285404.	2.8	6
31	Epitaxial Heusler alloy Co₂FeSi films on Si(1â€‰1â€‰1) substrates grown by molecular beam epitaxy. Journal Physics D: Applied Physics, 2010, 43, 305004.	2.8	12
32	High-temperature characteristics up to 590â€‰Â°C of a pnp AlGaN/GaN heterojunction bipolar transistor. Applied Physics Letters, 2009, 94, .	3.3	11
33	Low-temperature characteristics of the current gain of GaN/InGaN double-heterojunction bipolar transistors. Journal of Crystal Growth, 2009, 311, 3000-3002.	1.5	2
34	High-temperature (300 Â°C) operation ofnpn-type GaN/InGaN double heterojunction bipolar transistors. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 2957-2959.	0.8	1
35	High-Temperature Characteristics of Al_xGa_{1-x}N-Based Vertical Conducting Diodes. Japanese Journal of Applied Physics, 2008, 47, 2838.	1.5	2
36	High performance pnpâ€ˆAlGaNâˆ•GaN heterojunction bipolar transistors on GaN substrates. Applied Physics Letters, 2008, 92, .	3.3	10

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37	Carrier transport mechanisms of Pnp AlGaNâˆ•GaN heterojunction bipolar transistors. Applied Physics Letters, 2008, 92, 093504.	3.3	4
38	Temperature dependence of current-voltage characteristics of npn-type GaNâˆ•InGaN double heterojunction bipolar transistors. Applied Physics Letters, 2007, 91, 133514.	3.3	7
39	Pnp AlGaN/InGaN/GaN Double Heterojunction Bipolar Transistors With Low-Base-Resistance (<100) Tj ETQq1 1 0.784314 rgBT /Overlock	1.5	1
40	High Critical Electric Field Exceeding 8 MV/cm Measured Using an AlGaNpâ€“iâ€“nVertical Conducting Diode onn-SiC Substrate. Japanese Journal of Applied Physics, 2007, 46, 2316-2319.	1.5	32
41	Oxygen Ion Implantation Isolation Planar Process for AlGaN/GaN HEMTs. IEEE Electron Device Letters, 2007, 28, 476-478.	3.9	44
42	DC and microwave performance of AlGaN/GaN HEMTs passivated with sputtered SiNx. Semiconductor Science and Technology, 2007, 22, 717-721.	2.0	16
43	Minority carrier diffusion lengths in MOVPE-grown n- and p-InGaN and performance of AlGaN/InGaN/GaN double heterojunction bipolar transistors. Journal of Crystal Growth, 2007, 298, 787-790.	1.5	19
44	Low-resistance graded AlxGa1âˆ’xN buffer layers for vertical conducting devices on n-SiC substrates. Journal of Crystal Growth, 2007, 298, 819-821.	1.5	2
45	Low on-resistance of GaNp-i-n vertical conducting diodes grown on 4H-SiC substrates. Physica Status Solidi C: Current Topics in Solid State Physics, 2007, 4, 2662-2665.	0.8	4
46	High breakdown field of pnp GaN/InGaN/AlGaN DHBTs with AlGaN collector. Physica Status Solidi (A) Applications and Materials Science, 2007, 204, 2037-2041.	1.8	3
47	Growth of GaN on sapphire substrates using novel buffer layers of ECR-plasma-sputtered Al2O3/graded-AlON/AlN/Al2O3. Journal of Crystal Growth, 2006, 292, 155-158.	1.5	13
48	Critical electric fields of AlGaN in AlGaN-based vertical conducting diodes on -SiC substrates. Superlattices and Microstructures, 2006, 40, 332-337.	3.1	9
49	Growth of nitride semiconductors and its application to heterojunction bipolar transistors. Electronics and Communications in Japan, 2006, 89, 20-25.	0.2	0
50	p-InGaN/n-GaN Vertical Conducting Diodes onn+-SiC Substrate for High Power Electronic Device Applications. Japanese Journal of Applied Physics, 2006, 45, 3387-3390.	1.5	2
51	High critical electric field of AlxGa1âˆ’xN p-i-n vertical conducting diodes on n-SiC substrates. Applied Physics Letters, 2006, 88, 173508.	3.3	29
52	High breakdown voltage with low on-state resistance of p-InGaNâˆ•n-GaN vertical conducting diodes on n-GaN substrates. Applied Physics Letters, 2006, 89, 153509.	3.3	4
53	Influence of Lattice Constants of GaN and InGaN on npn-Type GaN/InGaN Heterojunction Bipolar Transistors. Japanese Journal of Applied Physics, 2006, 45, 3395-3397.	1.5	4
54	High power operation of Pnp AlGaN/GaN heterojunction bipolar transistors. Physica Status Solidi C: Current Topics in Solid State Physics, 2005, 2, 2589-2592.	0.8	11

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55	Strained Thick p-InGaN Layers for GaN/InGaN Heterojunction Bipolar Transistors on Sapphire Substrates. Japanese Journal of Applied Physics, 2005, 44, 2722-2725.	1.5	6
56	High-voltage operation with high current gain of pnp AlGaNâˆ•GaN heterojunction bipolar transistors with thin n-type GaN base. Applied Physics Letters, 2005, 86, 023506.	3.3	11
57	Current-voltage characteristics of pâ€•InGaNâˆ•nâ€•GaN vertical conducting diodes on n+â€•SiC substrates. Applied Physics Letters, 2005, 87, 233505.	3.3	11
58	Minority carrier diffusion length in GaN: Dislocation density and doping concentration dependence. Applied Physics Letters, 2005, 86, 052105.	3.3	198
59	High-power characteristics of GaN/InGaN double heterojunction bipolar transistors. Applied Physics Letters, 2004, 84, 1964-1966.	3.3	53
60	Al2O3Insulated-Gate Structure for AlGaN/GaN Heterostructure Field Effect Transistors Having Thin AlGaN Barrier Layers. Japanese Journal of Applied Physics, 2004, 43, L777-L779.	1.5	79
61	Fabrication of GaN/Alumina/GaN Structure to Reduce Dislocations in GaN. Japanese Journal of Applied Physics, 2004, 43, 1930-1933.	1.5	1
62	Extrinsic Base Regrowth of p-InGaN for Npn-Type GaN/InGaN Heterojunction Bipolar Transistors. Japanese Journal of Applied Physics, 2004, 43, 1922-1924.	1.5	18
63	High electron concentrations in Si-doped AlN/AlGaN superlattices with high average Al content of 80%. Physica Status Solidi A, 2003, 200, 40-43.	1.7	8
64	Schottky barrier heights of Au, Pd and Ni on n-GaN evaluated using mesa-structure diodes. Physica Status Solidi C: Current Topics in Solid State Physics, 2003, 0, 2393-2395.	0.8	4
65	N-AlGaN/p-InGaN/n-GaN Heterojunction Bipolar Transistors for High Power Operation. Physica Status Solidi C: Current Topics in Solid State Physics, 2003, 0, 95-98.	0.8	11
66	High-Power Characteristics of GaN/InGaN Double Heterojunction Bipolar Transistors with a Regrown p-InGaN Base Layer. Materials Research Society Symposia Proceedings, 2003, 798, 707.	0.1	0
67	Mg-acceptor activation mechanism and transport characteristics in p-type InGaN grown by metalorganic vapor phase epitaxy. Journal of Applied Physics, 2003, 93, 3370-3375.	2.5	124
68	High current gain (>2000) of GaN/InGaN double heterojunction bipolar transistors using base regrowth of p-InGaN. Applied Physics Letters, 2003, 83, 1035-1037.	3.3	41
69	Ohmic Contact top-GaN Using a Strained InGaN Contact Layer and Its Thermal Stability. Japanese Journal of Applied Physics, 2003, 42, 2254-2256.	1.5	21
70	Common-emitter currentâ€"voltage characteristics of a pnp GaN bipolar junction transistor. Applied Physics Letters, 2002, 80, 1225-1227.	3.3	14
71	Common-emitter currentâ€"voltage characteristics of a Pnp AlGaN/GaN heterojunction bipolar transistor with a low-resistance base layer. Applied Physics Letters, 2002, 80, 3841-3843.	3.3	9
72	Pnp AlGaN/GaN Heterojunction Bipolar Transistors Operating at 300 ï¿½C. Physica Status Solidi A, 2002, 194, 443-446.	1.7	2

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73	Valence-band discontinuities between InGaN and GaN evaluated by capacitance-voltage characteristics of p-InGaN/n-GaN diodes. Journal of Electronic Materials, 2002, 31, 313-315.	2.2	24
74	Low-resistance nonalloyed ohmic contact to p-type GaN using strained InGaN contact layer. Applied Physics Letters, 2001, 79, 2588-2590.	3.3	55
75	High common-emitter current gains obtained by pnp GaN bipolar junction transistors. Materials Research Society Symposia Proceedings, 2001, 693, 265.	0.1	0
76	High Current Gains Obtained by InGaN/GaN Double Heterojunction Bipolar Transistors. Physica Status Solidi A, 2001, 188, 183-186.	1.7	11
77	Low Resistance Non-Alloy Ohmic Contact to p-Type GaN Using Mg-Doped InGaN Contact Layer. Physica Status Solidi A, 2001, 188, 363-366.	1.7	7
78	High current gains obtained by InGaN/GaN double heterojunction bipolar transistors with p-InGaN base. Applied Physics Letters, 2001, 79, 380-381.	3.3	66
79	High Current Gains Obtained by InGaN/GaN Double Heterojunction Bipolar Transistors. Physica Status Solidi A, 2001, 188, 183-186.	1.7	0
80	Low Resistance Non-Alloy Ohmic Contact to p-Type GaN Using Mg-Doped InGaN Contact Layer. Physica Status Solidi A, 2001, 188, 363-366.	1.7	0
81	High Room-Temperature Hole Concentrations above 10¹⁹ cm^{âˆ’3} in Mg-Doped InGaN/GaN Superlattices. Materials Research Society Symposia Proceedings, 2000, 622, 5111.	0.1	4
82	p-InGaN/n-GaN Heterojunction Diodes and their Application to Heterojunction Bipolar Transistors. Materials Research Society Symposia Proceedings, 2000, 639, 13101.	0.1	0
83	High hole concentrations in Mg-doped InGaN grown by MOVPE. Journal of Crystal Growth, 2000, 221, 267-270.	1.5	53
84	Reduced damage of electron cyclotron resonance etching by In doping into p-GaN. Journal of Crystal Growth, 2000, 221, 350-355.	1.5	32
85	Enhanced Hole Generation in Mg-Doped AlGaN/GaN Superlattices Due to Piezoelectric Field. Japanese Journal of Applied Physics, 2000, 39, 2428-2430.	1.5	39
86	Efficient Hole Generation above 10¹⁹ cm⁻³ in Mg-Doped InGaN/GaN Superlattices at Room Temperature. Japanese Journal of Applied Physics, 2000, 39, L195.	1.5	44
87	Activation Energy and Electrical Activity of Mg in Mg-Doped InxGa1-xN (x<0.2). Japanese Journal of Applied Physics, 2000, 39, L337-L339.	1.5	94
88	Increased Electrical Activity of Mg-Acceptors in AlxGa1-xN/GaN Superlattices. Japanese Journal of Applied Physics, 1999, 38, L1012-L1014.	1.5	60
89	GaAs Single Electron Transistors Fabricated by Selective Area Metalorganic Vapor Phase Epitaxy and Their Application to Single Electron Logic Circuits. Japanese Journal of Applied Physics, 1999, 38, 415-417.	1.5	14
90	Quantum dots fabricated by selective area MOVPE and their application to single electron devices. Bulletin of Materials Science, 1999, 22, 531-535.	1.7	0

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91	Transport characterization of GaAs quantum dots connected with quantum wires fabricated by selective area metalorganic vapor phase epitaxy. Solid-State Electronics, 1998, 42, 1227-1231.	1.4	5
92	InAs quantum dot formation on GaAs pyramids by selective area MOVPE. Physica E: Low-Dimensional Systems and Nanostructures, 1998, 2, 714-719.	2.7	29
93	Fabrication and transport characterization of GaAs quantum dots connected with quantum wires fabricated by selective area metalorganic vapor phase epitaxy. Physica E: Low-Dimensional Systems and Nanostructures, 1998, 2, 809-814.	2.7	9
94	Formation and characterization of coupled quantum dots (CQDs) by selective area metalorganic vapor phase epitaxy. Journal of Crystal Growth, 1997, 170, 700-704.	1.5	44
95	Selective growth of MOVPE on AlGaAs/GaAs patterned substrates for quantum nano-structures. Materials Research Society Symposia Proceedings, 1996, 448, 259.	0.1	0
96	Pyramidal quantum dot structures by self-limited selective area metalorganic vapor phase epitaxy. Solid-State Electronics, 1996, 40, 799-802.	1.4	7
97	Novel Formation Method of Quantum Dot Structures by Self-Limited Selective Area Metalorganic Vapor Phase Epitaxy. Japanese Journal of Applied Physics, 1995, 34, 4387-4389.	1.5	51
98	Fabrication of GaAs/AlGaAs Quantum Dots by Metalorganic Vapor Phase Epitaxy on Patterned GaAs Substrates. Japanese Journal of Applied Physics, 1995, 34, 1098-1101.	1.5	12
99	Dynamics of selective metalorganic vapor phase epitaxy growth for GaAs/AlGaAs micro-pyramids. Journal of Crystal Growth, 1994, 145, 308-313.	1.5	12
100	High current gain (<2000) and reduced common-emitter offset voltage of GaN/InGaN double heterojunction bipolar transistors. , 0, , .		0
101	Systematic investigation of minority carrier diffusion length in n-and p-GaN for nitride heterojunction bipolar transistors. , 0, , .		2