

Hiroshi Yano

List of Publications by Year in descending order

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53
papers

1,506
citations

394421

19
h-index

345221

36
g-index

53
all docs

53
docs citations

53
times ranked

873
citing authors

#	ARTICLE	IF	CITATIONS
1	Impact of Negative Gate Bias and Inductive Load on the Single-Pulse Avalanche Capability of 1200-V SiC Trench MOSFETs. IEEE Transactions on Electron Devices, 2022, 69, 637-643.	3.0	9
2	Investigation of the Short-circuit Failure Mechanisms in 1.2-kV SiC Trench MOSFETs with Thin N+ Substrates Using Electro-thermal-mechanical Analysis. , 2022, , .		2
3	Enhanced Short-circuit Capability for 1.2 kV SiC SBD-integrated Trench MOSFETs Using Cu Blocks Sintered on the Source Pad. , 2022, , .		2
4	Demonstration of the Surge Current Capability of Embedded SBDs in SiC SBD-Integrated Trench MOSFETs with a Thick Cu Block. , 2022, , .		7
5	Investigations of UIS Failure Mechanism in 1.2 kV Trench SiC MOSFETs Using Electro-Thermal-Mechanical Stress Analysis. , 2021, , .		7
6	Accurate determination of threshold voltage shift during negative gate bias stress in 4H-SiC MOSFETs by fast on-the-fly method. Japanese Journal of Applied Physics, 2021, 60, 060901.	1.5	2
7	Experimental and Numerical Demonstration of Superior RBSOAs in 1.2 kV SiC Trench and SBD-integrated Trench MOSFETs. , 2021, , .		4
8	Comprehensive Study on Electrical Characteristics in 1.2 kV SiC SBD-integrated Trench and Planar MOSFETs. , 2021, , .		10
9	Investigations of short-circuit failure in double trench SiC MOSFETs through three-dimensional electro-thermal-mechanical stress analysis. Microelectronics Reliability, 2021, 122, 114163.	1.7	10
10	Simple method to estimate the shallow interface trap density near the conduction band edge of MOSFETs using Hall effect measurements. Japanese Journal of Applied Physics, 2021, 60, 016505.	1.5	1
11	Investigations of SiC MOSFET Short-Circuit Failure Mechanisms Using Electrical, Thermal, and Mechanical Stress Analyses. IEEE Transactions on Electron Devices, 2020, 67, 4328-4334.	3.0	43
12	Demonstration of Superior Electrical Characteristics for 1.2 kV SiC Schottky Barrier Diode-Wall Integrated Trench MOSFET With Higher Schottky Barrier Height Metal. IEEE Electron Device Letters, 2020, 41, 1810-1813.	3.9	23
13	Analysis of 1.2 kV SiC SWITCH-MOS after Short-circuit Stress. , 2020, , .		8
14	Carbon dangling-bond center (carbon $\langle i \rangle P \langle /i \rangle b$ center) at 4H-SiC(0001)/SiO ₂ interface. Applied Physics Letters, 2020, 116, .	3.3	20
15	Electrically detected magnetic resonance study on interface defects at nitrated Si-face, $\langle i \rangle a \langle /i \rangle$-face, and $\langle i \rangle m \langle /i \rangle$-face 4H-SiC/SiO ₂ interfaces. Applied Physics Letters, 2020, 116, .	3.3	10
16	Experimental and Numerical Investigations of Short-Circuit Failure Mechanisms for State-of-the-Art 1.2kV SiC Trench MOSFETs. , 2019, , .		11
17	Experimental Demonstration on Superior Switching Characteristics of 1.2 kV SiC SWITCH-MOS. , 2019, , .		28
18	Investigation of UIS Capability for $\hat{v} \sim 600\text{V}$ Class Vertical SiC p-channel MOSFET. , 2019, , .		3

#	ARTICLE	IF	CITATIONS
19	Ideal phonon-scattering-limited mobility in inversion channels of 4H-SiC(0001) MOSFETs with ultralow net doping concentrations. Applied Physics Letters, 2019, 115, .	3.3	22
20	Impact of crystal faces of 4H-SiC in SiO ₂ /4H-SiC structures on interface trap densities and mobilities. Applied Physics Express, 2019, 12, 021003.	2.4	21
21	First Demonstration of Short-Circuit Capability for a 1.2 kV SiC SWITCH-MOS. IEEE Journal of the Electron Devices Society, 2019, 7, 613-620.	2.1	23
22	Anomalous carbon clusters in 4H-SiC/SiO ₂ interfaces. Journal of Applied Physics, 2019, 125, .	2.5	20
23	Hole trapping in SiC-MOS devices evaluated by fast-capacitance voltage method. Japanese Journal of Applied Physics, 2018, 57, 04FR15.	1.5	8
24	Accurate evaluation of fast threshold voltage shift for SiC MOS devices under various gate bias stress conditions. Japanese Journal of Applied Physics, 2018, 57, 04FA07.	1.5	10
25	Investigation of short-circuit failure mechanisms of SiC MOSFETs by varying DC bus voltage. Japanese Journal of Applied Physics, 2018, 57, 074102.	1.5	31
26	Insight into enhanced field-effect mobility of 4H-SiC MOSFET with Ba incorporation studied by Hall effect measurements. AIP Advances, 2018, 8, .	1.3	16
27	Methodology for enhanced short-circuit capability of SiC MOSFETs. , 2018, , .		17
28	Effect of boron incorporation on slow interface traps in SiO ₂ /4H-SiC structures. Applied Physics A: Materials Science and Processing, 2017, 123, 1.	2.3	16
29	Characterization of near-interface traps at 4H-SiC metal oxide semiconductor interfaces using modified distributed circuit model. Applied Physics Express, 2017, 10, 064101.	2.4	19
30	Characterization of traps at nitrided SiO ₂ /SiC interfaces near the conduction band edge by using Hall effect measurements. Applied Physics Express, 2017, 10, 046601.	2.4	96
31	Investigation of Robustness Capability of ~730 V P-Channel Vertical SiC Power MOSFET for Complementary Inverter Applications. IEEE Transactions on Electron Devices, 2017, 64, 4219-4225.	3.0	27
32	Investigation of Maximum Junction Temperature for 4H-SiC MOSFET during Unclamped Inductive Switching Test. IEEJ Transactions on Electronics, Information and Systems, 2017, 137, 216-221.	0.2	1
33	Photoelectron yield spectroscopy and inverse photoemission spectroscopy evaluations of p-type amorphous silicon carbide films prepared using liquid materials. AIP Advances, 2016, 6, 055021.	1.3	2
34	Experimental demonstration of ~730V vertical SiC p-MOSFET with high short circuit withstand capability for complementary inverter applications. , 2016, , .		4
35	Threshold Voltage Instability in 4H-SiC MOSFETs With Phosphorus-Doped and Nitrided Gate Oxides. IEEE Transactions on Electron Devices, 2015, 62, 324-332.	3.0	87
36	Improved Channel Mobility in 4H-SiC MOSFETs by Boron Passivation. IEEE Electron Device Letters, 2014, 35, 1176-1178.	3.9	98

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37	Reduction of SiC-MOS Interface Traps and Improved MOSFET Performance by Phosphorus Incorporation into Gate Oxides. Hyomen Kagaku, 2014, 35, 90-95.	0.0	1
38	Photoconductivity in inverse silicon opals enhanced by slow photon effect: Yet another step towards optically amplified silicon photonic crystal solar cells. Applied Physics Letters, 2011, 98, 072106.	3.3	17
39	Improved Inversion Channel Mobility in Si-face 4H-SiC MOSFETs by Phosphorus Incorporation Technique. Materials Research Society Symposia Proceedings, 2010, 1246, 1.	0.1	6
40	Classification of defects in polycrystalline Si by temperature dependence of Electroluminescence under forward and reverse-biases. , 2010, , .		0
41	Removal of near-interface traps at SiO ₂ /4H-SiC (0001) interfaces by phosphorus incorporation. Applied Physics Letters, 2010, 96, .	3.3	133
42	Comprehensive study of electroluminescence in multicrystalline silicon solar cells. Journal of Applied Physics, 2009, 106, .	2.5	26
43	Analysis of Anomalous Charge-Pumping Characteristics on 4H-SiC MOSFETs. IEEE Transactions on Electron Devices, 2008, 55, 2013-2020.	3.0	34
44	Hot carrier analysis in low-temperature poly-Si thin-film transistors using pico-second time-resolved emission microscope. IEEE Electron Device Letters, 2003, 24, 236-238.	3.9	9
45	Shallow states at SiO ₂ /4H-SiC interface on (112̄,0) and (0001) faces. Applied Physics Letters, 2002, 81, 301-303.	3.3	64
46	SiO ₂ /SiC Interface Properties on Various Surface Orientations. Materials Research Society Symposia Proceedings, 2002, 742, 451.	0.1	1
47	A cause for highly improved channel mobility of 4H-SiC metal-oxide-semiconductor field-effect transistors on the (112̄,0) face. Applied Physics Letters, 2001, 78, 374-376.	3.3	87
48	Chemical vapor deposition and deep level analyses of 4H-SiC(112̄,0). Journal of Applied Physics, 2001, 89, 6105-6109.	2.5	22
49	Traps at the SiC/SiO ₂ -Interface. Materials Research Society Symposia Proceedings, 2000, 640, 1.	0.1	41
50	Epitaxial Growth of SiC on Non-Typical Orientations and MOS Interfaces. Materials Research Society Symposia Proceedings, 2000, 640, 1.	0.1	2
51	Effects of wet oxidation/anneal on interface properties of thermally oxidized SiO ₂ /SiC MOS system and MOSFET's. IEEE Transactions on Electron Devices, 1999, 46, 504-510.	3.0	143
52	High channel mobility in inversion layers of 4H-SiC MOSFETs by utilizing (112̄-0) face. IEEE Electron Device Letters, 1999, 20, 611-613.	3.9	195
53	Dynamic Characterization of the Threshold Voltage Instability under the Pulsed Gate Bias Stress in 4H-SiC MOSFET. Materials Science Forum, 0, 897, 549-552.	0.3	7