Hiroshi Yano

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/1072795/publications.pdf

Version: 2024-02-01

53	1,506	394421	345221
papers	citations	19 h-index	36 g-index

53	53	53	873
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	High channel mobility in inversion layers of 4H-SiC MOSFETs by utilizing (112~0) face. IEEE Electron Device Letters, 1999, 20, 611-613.	3.9	195
2	Effects of wet oxidation/anneal on interface properties of thermally oxidized SiO/sub 2//SiC MOS system and MOSFET's. IEEE Transactions on Electron Devices, 1999, 46, 504-510.	3.0	143
3	Removal of near-interface traps at SiO2/4Hâ€“SiC (0001) interfaces by phosphorus incorporation. Applied Physics Letters, 2010, 96, .	3.3	133
4	Improved Channel Mobility in 4H-SiC MOSFETs by Boron Passivation. IEEE Electron Device Letters, 2014, 35, 1176-1178.	3.9	98
5	Characterization of traps at nitrided SiO₂/SiC interfaces near the conduction band edge by using Hall effect measurements. Applied Physics Express, 2017, 10, 046601.	2.4	96
6	A cause for highly improved channel mobility of 4H-SiC metalâ€“oxideâ€“semiconductor field-effect transistors on the (112Ì„0) face. Applied Physics Letters, 2001, 78, 374-376.	3.3	87
7	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
8	Shallow states at SiO2/4H-SiC interface on (112Ì„0) and (0001) faces. Applied Physics Letters, 2002, 81, 301-303.	3.3	64
9	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
10	Traps at the SiC/SiO₂-Interface. Materials Research Society Symposia Proceedings, 2000, 640, 1.	0.1	41
11	Analysis of Anomalous Charge-Pumping Characteristics on 4H-SiC MOSFETs. IEEE Transactions on Electron Devices, 2008, 55, 2013-2020.	3.0	34
12	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
13	Experimental Demonstration on Superior Switching Characteristics of 1.2 kV SiC SWITCH-MOS. , 2019, , .		28
14	Investigation of Robustness Capability of â^'730 V P-Channel Vertical SiC Power MOSFET for Complementary Inverter Applications. IEEE Transactions on Electron Devices, 2017, 64, 4219-4225.	3.0	27
15	Comprehensive study of electroluminescence in multicrystalline silicon solar cells. Journal of Applied Physics, 2009, 106, .	2.5	26
16	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
17	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
18	Chemical vapor deposition and deep level analyses of 4H-SiC(112Ì„0). Journal of Applied Physics, 2001, 89, 6105-6109.	2.5	22

#	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 SiO₂/4H-SiC structures on interface trap densities and mobilities. Applied Physics Express, 2019, 12, 021003.	2.4	21
21	Anomalous carbon clusters in 4H-SiC/SiO2 interfaces. Journal of Applied Physics, 2019, 125, .	2.5	20
22	Carbon dangling-bond center (carbon Pb center) at 4H-SiC(0001)/SiO2 interface. Applied Physics Letters, 2020, 116, .	3.3	20
23	Characterization of near-interface traps at 4H-SiC metalâ€“oxideâ€“semiconductor interfaces using modified distributed circuit model. Applied Physics Express, 2017, 10, 064101.	2.4	19
24	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
25	Methodology for enhanced short-circuit capability of SiC MOSFETs. , 2018, , .		17
26	Effect of boron incorporation on slow interface traps in SiO2/4H-SiC structures. Applied Physics A: Materials Science and Processing, 2017, 123, 1.	2.3	16
27	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
28	Experimental and Numerical Investigations of Short-Circuit Failure Mechanisms for State-of-the-Art 1.2kV SiC Trench MOSFETs. , 2019, , .		11
29	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
30	Electrically detected magnetic resonance study on interface defects at nitrided Si-face, a-face, and m-face 4H-SiC/SiO2 interfaces. Applied Physics Letters, 2020, 116, .	3.3	10
31	Comprehensive Study on Electrical Characteristics in 1.2 kV SiC SBD-integrated Trench and Planar MOSFETs. , 2021, , .		10
32	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
33	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
34	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
35	Hole trapping in SiC-MOS devices evaluated by fast-capacitanceâ€“voltage method. Japanese Journal of Applied Physics, 2018, 57, 04FR15.	1.5	8
36	Analysis of 1.2 kV SiC SWITCH-MOS after Short-circuit Stress. , 2020, , .		8

#	Article	IF	Citations
37	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
38	Investigations of UIS Failure Mechanism in 1.2 kV Trench SiC MOSFETs Using Electro-Thermal-Mechanical Stress Analysis. , 2021, , .		7
39	Demonstration of the Surge Current Capability of Embedded SBDs in SiC SBD-Integrated Trench MOSFETs with a Thick Cu Block. , 2022, , .		7
40	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
41	Experimental demonstration of â^'730V vertical SiC p-MOSFET with high short circuit withstand capability for complementary inverter applications. , 2016, , .		4
42	Experimental and Numerical Demonstration of Superior RBSOAs in 1.2 kV SiC Trench and SBD-integrated Trench MOSFETs. , 2021, , .		4
43	Investigation of UIS Capability for â^'600V Class Vertical SiC p-channel MOSFET. , 2019, , .		3
44	Epitaxial Growth of SiC on Non-Typical Orientations and MOS Interfaces. Materials Research Society Symposia Proceedings, 2000, 640, 1.	0.1	2
45	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
46	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
47	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
48	Enhanced Short-circuit Capability for 1.2 kV SiC SBD-integrated Trench MOSFETs Using Cu Blocks Sintered on the Source Pad. , 2022, , .		2
49	SiO2/SiC Interface Properties on Various Surface Orientations. Materials Research Society Symposia Proceedings, 2002, 742, 451.	0.1	1
50	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
51	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
52	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
53	Classification of defects in polycrystalline Si by temperature dependence of Electroluminescence under forward and reverse-biases. , 2010, , .		0