Jianwu Sun

List of Publications by Year
in descending order

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73 papers	1,428 citations	331259 21 h-index	360668 35 g-index
74 all docs	74 docs citations	74 times ranked	2009 citing authors

#	Article	IF	Citations
1	Honeycomb-inspired design of ultrafine SnO2@C nanospheres embedded in carbon film as anode materials for high performance lithium- and sodium-ion battery. Journal of Power Sources, 2017, 359, 340-348.	4.0	125
2	Progress of Ultra-Wide Bandgap Ga₂O₃ Semiconductor Materials in Power MOSFETs. IEEE Transactions on Power Electronics, 2020, 35, 5157-5179.	5.4	106
3	Self-powered MSM deep-ultraviolet Î²-Ga₂O₃ photodetector realized by an asymmetrical pair of Schottky contacts. Optical Materials Express, 2019, 9, 1191.	1.6	79
4	Local chemical states and thermal stabilities of nitrogen dopants in ZnO film studied by temperature-dependent x-ray photoelectron spectroscopy. Applied Physics Letters, 2009, 95, .	1.5	78
5	Nitrogen-related recombination mechanisms in p-type ZnO films grown by plasma-assisted molecular beam epitaxy. Journal of Applied Physics, 2007, 102, .	1.1	59
6	Advances in wide bandgap SiC for optoelectronics. European Physical Journal B, 2014, 87, 1.	0.6	58
7	A nanostructured NiO/cubic SiC pâ€“n heterojunction photoanode for enhanced solar water splitting. Journal of Materials Chemistry A, 2019, 7, 4721-4728.	5.2	50
8	A Review of Recent Progress on Silicon Carbide for Photoelectrochemical Water Splitting. Solar Rrl, 2020, 4, 2000111.	3.1	48
9	Cubic silicon carbide as a potential photovoltaic material. Solar Energy Materials and Solar Cells, 2016, 145, 104-108.	3.0	41
10	Cu₂O/ZnO pâ€“n Junction Decorated with NiO_x as a Protective Layer and Cocatalyst for Enhanced Photoelectrochemical Water Splitting. ACS Applied Energy Materials, 2020, 3, 10408-10414.	2.5	40
11	Photocatalytic removal of NO by intercalated carbon nitride: The effect of group IIA element ions. Applied Catalysis B: Environmental, 2020, 273, 119007.	10.8	40
12	Single Domain 3C-SiC Growth on Off-Oriented 4H-SiC Substrates. Crystal Growth and Design, 2015, 15, 2940-2947.	1.4	38
13	Excitonic electroluminescence from ZnO-based heterojunction light emitting diodes. Journal Physics D: Applied Physics, 2008, 41, 155103.	1.3	34
14	Fluorescent SiC as a new material for white LEDs. Physica Scripta, 2012, T148, 014002.	1.2	34
15	Enhancing Photocatalytic Activity of NO Removal through an In Situ Control of Oxygen Vacancies in Growth of TiO₂. Advanced Materials Interfaces, 2019, 6, 1901032.	1.9	34
16	Nanoporous Cubic Silicon Carbide Photoanodes for Enhanced Solar Water Splitting. ACS Nano, 2021, 15, 5502-5512.	7.3	34
17	Atomic-Scale Tuning of Graphene/Cubic SiC Schottky Junction for Stable Low-Bias Photoelectrochemical Solar-to-Fuel Conversion. ACS Nano, 2020, 14, 4905-4915.	7.3	31
18	Ultimate nano-electronics: New materials and device concepts for scaling nano-electronics beyond the Si roadmap. Microelectronic Engineering, 2015, 132, 218-225.	1.1	30

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19	Considerably long carrier lifetimes in high-quality 3C-SiC(111). Applied Physics Letters, 2012, 100, .	1.5	29
20	The activation energy of the nitrogen acceptor in p-type ZnO film grown by plasma-assisted molecular beam epitaxy. Solid State Communications, 2006, 140, 345-348.	0.9	28
21	Strained germanium quantum well p-FinFETs fabricated on 45nm Fin pitch using replacement channel, replacement metal gate and germanide-free local interconnect. , 2015, , .		28
22	Hole transport in p-type ZnO films grown by plasma-assisted molecular beam epitaxy. Applied Physics Letters, 2006, 89, 232101.	1.5	25
23	Highly Selective Photocatalytic CO₂ Reduction to CH₄ by Ball-Milled Cubic Silicon Carbide Nanoparticles under Visible-Light Irradiation. ACS Applied Materials & Interfaces, 2021, 13, 5073-5078.	4.0	24
24	Substantial photo-response of InGaN pâ€“iâ€“n homojunction solar cells. Semiconductor Science and Technology, 2009, 24, 055009.	1.0	20
25	Flat-Band Electronic Structure and Interlayer Spacing Influence in Rhombohedral Four-Layer Graphene. Nano Letters, 2018, 18, 5862-5866.	4.5	20
26	Atomically manipulated proton transfer energizes water oxidation on silicon carbide photoanodes. Journal of Materials Chemistry A, 2018, 6, 24358-24366.	5.2	17
27	Nanoporous 6H-SiC Photoanodes with a Conformal Coating of Niâ€“FeOOH Nanorods for Zero-Onset-Potential Water Splitting. ACS Applied Materials & Interfaces, 2020, 12, 7038-7046.	4.0	17
28	A comparative study of high-quality C-face and Si-face 3C-SiC(1â€‰1â€‰1) grown on off-oriented 4H-SiC substrates. Journal Physics D: Applied Physics, 2019, 52, 345103.	1.3	16
29	Stress-induced charge trapping and electrical properties of atomic-layer-deposited HfAlO/Ga₂O₃ metalâ€“oxideâ€“semiconductor capacitors. Journal Physics D: Applied Physics, 2019, 52, 215104.	1.3	16
30	Cubic SiC Photoanode Coupling with Ni:FeOOH Oxygenâ€Evolution Cocatalyst for Sustainable Photoelectrochemical Water Oxidation. Solar Rrl, 2020, 4, 1900364.	3.1	16
31	Room temperature excitonic spontaneous and stimulated emission properties in ZnO/MgZnO multiple quantum wells grown on sapphire substrate. Journal Physics D: Applied Physics, 2007, 40, 6541-6544.	1.3	15
32	Well-width dependence of excitonâ€“longitudinal-optical-phonon coupling in MgZnO/ZnO single quantum wells. Nanotechnology, 2008, 19, 485401.	1.3	14
33	Elimination of step bunching in the growth of large-area monolayer and multilayer graphene on off-axis 3C SiC (111). Carbon, 2018, 140, 533-542.	5.4	14
34	Effects of source material on epitaxial growth of fluorescent SiC. Thin Solid Films, 2012, 522, 7-10.	0.8	13
35	Solar Driven Energy Conversion Applications Based on 3C-SiC. Materials Science Forum, 0, 858, 1028-1031.	0.3	13
36	Enhanced Interface Charge Transfer of Zâ€Scheme Photocatalyst by Br Substitution at the Bay Position in Perylene Tetracarboxylic Diimide. Solar Rrl, 2020, 4, 2000303.	3.1	12

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37	Combined effects of Ga, N, and Al codoping in solution grown 3Câ€“SiC. Journal of Applied Physics, 2010, 108, 013503.	1.1	11
38	Room temperature luminescence properties of fluorescent SiC as white light emitting diode medium. Thin Solid Films, 2012, 522, 33-35.	0.8	10
39	Influence of Metal Gate Electrodes on Electrical Properties of Atomic-Layer-Deposited Al-Rich HfAlO/Ga₂O₃ MOSCAPs. IEEE Transactions on Electron Devices, 2020, 67, 1730-1736.	1.6	10
40	Incorporation of group III, IV and V elements in 3Câ€“SiC(111) layers grown by the vapourâ€“liquidâ€“solid mechanism. Journal of Crystal Growth, 2010, 312, 3443-3450.	0.7	9
41	Fluorescent silicon carbide as an ultraviolet-to-visible light converter by control of donor to acceptor recombinations. Journal Physics D: Applied Physics, 2012, 45, 235107.	1.3	9
42	High mobility organic semiconductor for constructing high efficiency carbon nitride heterojunction photocatalysts. Journal of Materials Chemistry C, 2020, 8, 17157-17161.	2.7	7
43	Splitting of type-I (N-B, P-Al) and type-II (N-Al, N-Ga) donor-acceptor pair spectra in 3C-SiC. Physical Review B, 2011, 83, .	1.1	6
44	Shockley-Frank stacking faults in 6H-SiC. Journal of Applied Physics, 2012, 111, 113527.	1.1	6
45	Fast Growth Rate Epitaxy on 4Â° Off-Cut 4-Inch Diameter 4H-SiC Wafers. Materials Science Forum, 0, 778-780, 179-182.	0.3	6
46	Strained Ge FinFET structures fabricated by selective epitaxial growth. , 2014, , .		6
47	Boron-Implanted 3C-SiC for Intermediate Band Solar Cells. Materials Science Forum, 2016, 858, 291-294.	0.3	6
48	Growth optimization and applicability of thick on-axis SiC layers using sublimation epitaxy in vacuum. Journal of Crystal Growth, 2016, 448, 51-57.	0.7	4
49	LTPL Investigation of N-Ga and N-Al Donor-Acceptor Pair Spectra in 3C-SiC Layers Grown by VLS on 6H-SiC Substrates. Materials Science Forum, 0, 645-648, 415-418.	0.3	3
50	Step-Flow Growth of Fluorescent 4H-SiC Layers on 4 Degree Off-Axis Substrates. Materials Science Forum, 0, 740-742, 185-188.	0.3	3
51	Examination of Photoluminescence Temperature Dependencies in N-B Co-doped 6H-SiC. IOP Conference Series: Materials Science and Engineering, 2014, 56, 012003.	0.3	3
52	The role of defects in fluorescent silicon carbide layers grown by sublimation epitaxy. IOP Conference Series: Materials Science and Engineering, 2014, 56, 012002.	0.3	3
53	Carrier Lifetimes and Influence of In-Grown Defects in N-B Co-Doped 6H-SiC. IOP Conference Series: Materials Science and Engineering, 2014, 56, 012004.	0.3	3
54	Boron-doping of cubic SiC for intermediate band solar cells: a scanning transmission electron microscopy study. SciPost Physics, 2018, 5, .	1.5	3

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55	Influence of Post-Growth Annealing on the Defects Nature and Distribution in VLS Grown (111) 3C-SiC Layers. Materials Science Forum, 2011, 679-680, 241-244.	0.3	2
56	Seeding Layer Influence on the Low Temperature Photoluminescence Intensity of 3C-SiC Grown on 6H-SiC by Sublimation Epitaxy. Materials Science Forum, 2012, 711, 149-153.	0.3	2
57	Comparative micro-photoluminescence investigation of ZnO hexagonal nanopillars and the seeding layer grown on 4H-SiC. Journal of Luminescence, 2012, 132, 122-127.	1.5	2
58	Characterization of B-Implanted 3C-SiC for Intermediate Band Solar Cells. Materials Science Forum, 2017, 897, 299-302.	0.3	2
59	A patterning-free approach for growth of free-standing graphene nanoribbons using step-bunched facets of off-oriented 4H-SiC(0â€‰0â€‰0â€‰1) epilayers. Journal Physics D: Applied Physics, 2020, 53, 115102.	1.3	2
60	Silver nanoparticle array on weakly interacting epitaxial graphene substrate as catalyst for hydrogen evolution reaction under neutral conditions. Applied Physics Letters, 2021, 119, 153902.	1.5	2
61	Investigation of Low Doped n-Type and p-Type 3C-SiC Layers Grown on 6H-SiC Substrates by Sublimation Epitaxy. Materials Science Forum, 0, 645-648, 179-182.	0.3	1
62	Structural and Optical Investigation of VLS Grown (111) 3C-SiC Layers on 6H-SiC Substrates in Sn-Based Melts. Materials Science Forum, 0, 679-680, 165-168.	0.3	1
63	Low Temperature Photoluminescence Investigation of 3-Inch SiC Wafers for Power Device Applications. Materials Science Forum, 0, 711, 164-168.	0.3	1
64	Effect of Surface and Interface Recombination on Carrier Lifetime in 6H-SiC Layers. Materials Science Forum, 0, 740-742, 490-493.	0.3	1
65	Optical and Microstructural Investigation of Heavy B-Doping Effects in Sublimation-Grown 3C-SiC. Materials Science Forum, 2018, 924, 221-224.	0.3	1
66	Epitaxial Graphene Growth on the Stepâ€Structured Surface of Offâ€Axis Câ€Face 3Câ€SiC(1Â¯1Â¯1Â¯). Physica Status Solidi (B): Basic Research, 2020, 257, 1900718.	0.7	1
67	Effects of Growth Conditions on the Low Temperature Photoluminescence Spectra of (111) 3C-SiC Layers Grown by Chemical Vapor Deposition on 3C-SiC Seeds grown by the Vapor-Liquid-Solid Technique. , 2010, , .		0
68	Splitting of close N-Al donor-acceptor-pair spectra in 3C-SiC. , 2010, , .		0
69	Optical Investigation of Defect Filtering Effects in Bulk 3C-SiC Crystals Grown by the CF-PVT Method Using a Necking Technique. Materials Science Forum, 2011, 679-680, 169-172.	0.3	0
70	Low Temperature Photoluminescence Signature of Stacking Faults in 6H-SiC Epilayers Grown on Low Angle Off-Axis Substrates. Materials Science Forum, 0, 717-720, 407-410.	0.3	0
71	Microsecond Carrier Lifetimes in Bulk-Like 3C-SiC Grown by Sublimation Epitaxy. Materials Science Forum, 0, 740-742, 315-318.	0.3	0
72	Optical Investigation of 3C-SiC Hetero-Epitaxial Layers Grown by Sublimation Epitaxy under Gas Atmosphere. Materials Science Forum, 0, 778-780, 243-246.	0.3	0

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73	Materials for Energy Harvesting. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1800645.	0.8	0