

# Xiaolong Du

## List of Publications by Year in descending order

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126  
papers

3,700  
citations

156536

32  
h-index

175968

55  
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130  
all docs

130  
docs citations

130  
times ranked

4735  
citing authors

#	ARTICLE	IF	CITATIONS
1	Influence of different-sized inverted-pyramids of silicon texture by Ag manipulation on solar cell performance. <i>Applied Surface Science</i> , 2020, 506, 144778.	3.1	10
2	Acceptor complex signatures in oxygen-rich ZnO thin films implanted with chlorine ions. <i>Journal of Applied Physics</i> , 2020, 128, .	1.1	5
3	Boosted UV Photodetection Performance in Chemically Etched Amorphous Ga <sub>2</sub> O <sub>3</sub> Thin-Film Transistors. <i>Advanced Optical Materials</i> , 2020, 8, 1901833.	3.6	71
4	Room-Temperature Ozone Sensing Capability of IGZO-Decorated Amorphous Ga <sub>2</sub> O <sub>3</sub> Films. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 8929-8934.	4.0	40
5	Dual-source device architecture for self-diagnosis and correction of gate bias-stress instability in flexible transparent ZnO thin-film transistors. <i>Journal of Alloys and Compounds</i> , 2020, 823, 153834.	2.8	9
6	Regulation of surface texturization through copper-assisted chemical etching for silicon solar cells. <i>Solar Energy</i> , 2020, 201, 461-468.	2.9	34
7	Optical properties of chain inverted pyramids on silicon. <i>Applied Optics</i> , 2020, 59, 2065.	0.9	2
8	Effects of active layer thickness on performance and stability of dual-active-layer amorphous InGaZnO thin-film transistors. <i>Chinese Physics B</i> , 2019, 28, 087302.	0.7	6
9	Dynamic Analysis of the Negative OFF-State Current in Thin-film Transistors. <i>IEEE Transactions on Electron Devices</i> , 2019, 66, 5162-5165.	1.6	2
10	Broadband omnidirectional anti-reflection property of V-groove textured silicon. <i>Solar Energy</i> , 2019, 193, 132-138.	2.9	9
11	Extremely large $d_{001}$ magnetism in krypton implanted polar ZnO films. <i>Journal of Materials Chemistry C</i> , 2019, 7, 1138-1145.	2.7	25
12	Optical properties of a random inverted pyramid textured silicon surface studied by the ray tracing method. <i>Solar Energy</i> , 2019, 186, 392-397.	2.9	23
13	Flexible Transparent InGaZnO Thin-Film Transistors on Muscovite Mica. <i>IEEE Transactions on Electron Devices</i> , 2019, 66, 2198-2201.	1.6	12
14	High-Efficient Solar Cells Textured by Cu/Ag-Cocatalyzed Chemical Etching on Diamond Wire Sawing Multicrystalline Silicon. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 10052-10058.	4.0	28
15	Optical Design of Inverted Pyramid Textured PERC Solar Cells. <i>ACS Applied Electronic Materials</i> , 2019, 1, 2684-2691.	2.0	7
16	Flexible X-ray Detectors Based on Amorphous Ga <sub>2</sub> O <sub>3</sub> Thin Films. <i>ACS Photonics</i> , 2019, 6, 351-359.	3.2	123
17	Difference in anisotropic etching characteristics of alkaline and copper based acid solutions for single-crystalline Si. <i>Scientific Reports</i> , 2018, 8, 3408.	1.6	39
18	Suppression of Na interstitials in Na-F codoped ZnO. <i>Journal of Applied Physics</i> , 2018, 123, .	1.1	3

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19	Surface Plasmon Enhanced Emission From Defects in Gallium Doped ZnO. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1800037.	0.8	5
20	Self-aligned photolithography for the fabrication of fully transparent high-voltage devices. Journal Physics D: Applied Physics, 2018, 51, 175102.	1.3	6
21	ZnO flexible high voltage thin film transistors for power management in wearable electronics. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2018, 36, .	0.6	2
22	Surface plasmon enhanced solar-blind photoresponse of Ga <sub>2</sub> O <sub>3</sub> film with Ga nanospheres. Science China: Physics, Mechanics and Astronomy, 2018, 61, 1.	2.0	14
23	Self-aligned photolithography for the fabrication of flexible transparent high-voltage thin film transistors, diodes and inverters. Microelectronic Engineering, 2018, 199, 92-95.	1.1	6
24	Flexible ZnO Thin-Film Transistors on Thin Copper Substrate. IEEE Transactions on Electron Devices, 2018, 65, 3791-3795.	1.6	15
25	Self-diffusion measurements in In <sub>2</sub> O <sub>3</sub> isotopic heterostructures: Oxygen vacancy energetics. Science China: Physics, Mechanics and Astronomy, 2018, 61, 1.	2.0	2
26	The orientation and optical properties of inverted-pyramid-like structures on multi-crystalline silicon textured by Cu-assisted chemical etching. Solar Energy, 2018, 171, 675-680.	2.9	25
27	GaZn-VZn acceptor complex defect in Ga-doped ZnO. Science China: Physics, Mechanics and Astronomy, 2018, 61, 1.	2.0	6
28	Surface plasmon enhanced solar-blind photoresponse of Ga <sub>2</sub> O <sub>3</sub> film with Ga nanospheres. , 2018, 61, 1.		1
29	Self-compensation induced high-resistivity in MgZnO. Journal Physics D: Applied Physics, 2017, 50, 065102.	1.3	3
30	Limitation of Na-H codoping in achieving device-quality p-type ZnO. Materials Science in Semiconductor Processing, 2017, 69, 28-31.	1.9	6
31	Micro-structured inverted pyramid texturization of Si inspired by self-assembled Cu nanoparticles. Nanoscale, 2017, 9, 907-914.	2.8	59
32	18.87%-efficient inverted pyramid structured silicon solar cell by one-step Cu-assisted texturization technique. Solar Energy Materials and Solar Cells, 2017, 166, 121-126.	3.0	76
33	MgZnO based ultraviolet photodetector with high photoresponsivity achieved by fluorine doping. Thin Solid Films, 2017, 634, 165-168.	0.8	12
34	Dual-functional crystalline BeO layer in enhancement-mode ZnO/Si thin film transistors. Physica Status Solidi - Rapid Research Letters, 2017, 11, 1600443.	1.2	3
35	Flexible transparent high-voltage diodes for energy management in wearable electronics. Nano Energy, 2017, 40, 289-299.	8.2	41
36	Room-temperature Fabricated Amorphous Ga <sub>2</sub> O <sub>3</sub> High-response-speed Solar-blind Photodetector on Rigid and Flexible Substrates. Advanced Optical Materials, 2017, 5, 1700454.	3.6	236

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37	Flexible Transparent Field-Effect Diodes Fabricated at Low-Temperature with All-Oxide Materials. <i>Advanced Electronic Materials</i> , 2016, 2, 1500486.	2.6	30
38	A three-terminal ultraviolet photodetector constructed on a barrier-modulated triple-layer architecture. <i>Scientific Reports</i> , 2016, 6, 26169.	1.6	12
39	Self-diffusion measurements in isotopic heterostructures of undoped and in situ doped ZnO: Zinc vacancy energetics. <i>Physical Review B</i> , 2016, 94, .	1.1	17
40	Oxygen vacancies: The origin of $n$ -type conductivity in ZnO. <i>Physical Review B</i> , 2016, 93, .	1.1	244
41	The structure, optical and magnetic properties of arsenic implanted ZnO films prepared by molecular beam epitaxy. <i>Materials Letters</i> , 2016, 171, 121-124.	1.3	25
42	Interface Engineering of High Efficiency Organic-Silicon Heterojunction Solar Cells. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 26-30.	4.0	35
43	Maskless inverted pyramid texturization of silicon. <i>Scientific Reports</i> , 2015, 5, 10843.	1.6	87
44	Fluorine doping: a feasible solution to enhancing the conductivity of high-resistance wide bandgap Mg <sub>0.51</sub> Zn <sub>0.49</sub> O active components. <i>Scientific Reports</i> , 2015, 5, 15516.	1.6	16
45	Dynamic defect annealing in wurtzite MgZnO implanted with Ar ions. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , 2015, 358, 16-20.	0.6	1
46	ZnO gap states investigated using magnetic circular dichroism. <i>Journal Physics D: Applied Physics</i> , 2015, 48, 255502.	1.3	3
47	High-index Cu <sub>2</sub> O (113) film on faceted MgO (110) by molecular beam epitaxy. <i>Journal of Crystal Growth</i> , 2015, 420, 32-36.	0.7	3
48	Surface-polarity-dependent ferromagnetism in arsenic-implanted ZnO films prepared by MBE. <i>Materials Letters</i> , 2015, 144, 12-14.	1.3	16
49	Beryllium sites in MBE-grown BeZnO alloy films. <i>Journal Physics D: Applied Physics</i> , 2014, 47, 175102.	1.3	17
50	Monolithic color-selective ultraviolet (266–315 nm) photodetector based on a wurtzite Mg <sub>x</sub> Zn <sub>1-x</sub> O film. <i>Applied Physics Letters</i> , 2014, 105, .	1.5	18
51	Enhancement-mode ZnO/Mg <sub>0.5</sub> Zn <sub>0.5</sub> O HFET on Si. <i>Journal Physics D: Applied Physics</i> , 2014, 47, 255101.	1.3	16
52	Effect of implanted species on thermal evolution of ion-induced defects in ZnO. <i>Journal of Applied Physics</i> , 2014, 115, .	1.1	43
53	Polarity-manipulation based on nanoscale structural transformation on strained 2D MgO. <i>Journal Physics D: Applied Physics</i> , 2014, 47, 105303.	1.3	8
54	Semiconductor ultraviolet photodetectors based on ZnO and Mg <sub>1-x</sub> Zn <sub>x</sub> O. <i>Journal Physics D: Applied Physics</i> , 2014, 47, 283001.	1.3	88

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55	Optimization of silicon pyramidal emitter by self-selective Ag-assisted chemical etching. RSC Advances, 2014, 4, 24458.	1.7	12
56	Probing Defects in Nitrogen-Doped Cu <sub>2</sub> O. Scientific Reports, 2014, 4, 7240.	1.6	96
57	Realization of MgZnO epitaxial growth on BeO-buffered ZnO for UV-B photodetectors. Journal of Crystal Growth, 2013, 381, 6-9.	0.7	14
58	Electrochemical performances and volume variation of nano-textured silicon thin films as anodes for lithium-ion batteries. Nanotechnology, 2013, 24, 424011.	1.3	21
59	Selective nano-emitter fabricated by silver assisted chemical etch-back for multicrystalline solar cells. RSC Advances, 2013, 3, 15483.	1.7	16
60	Annealing Effects of Ti/Au Contact on n-MgZnO/p-Si Ultraviolet-B Photodetectors. IEEE Transactions on Electron Devices, 2013, 60, 3474-3477.	1.6	36
61	Broadband antireflection on the silicon surface realized by Ag nanoparticle-patterned black silicon. Physical Chemistry Chemical Physics, 2013, 15, 2345.	1.3	38
62	Oxygen polarity and interfacial atomic arrangement in an Mg <sub>x</sub> Zn <sub>1-x</sub> O/C-MgO/sapphire heterostructure. Journal Physics D: Applied Physics, 2013, 46, 145303.	1.3	3
63	Dual-band MgZnO ultraviolet photodetector integrated with Si. Applied Physics Letters, 2013, 102, .	1.5	87
64	Engineering of optically defect free Cu <sub>2</sub> O enabling exciton luminescence at room temperature. Optical Materials Express, 2013, 3, 2072.	1.6	38
65	Temperature dependence of Cu <sub>2</sub> O orientations in the oxidation of Cu (111)/ZnO (0001) by oxygen plasma. Chinese Physics B, 2012, 21, 076401.	0.7	8
66	Growth of single-crystalline Cu <sub>2</sub> O (111) film on ultrathin MgO modified Al <sub>2</sub> O <sub>3</sub> (0001) substrate by molecular beam epitaxy. Journal of Crystal Growth, 2012, 353, 63-67.	0.7	18
67	Modulation of electrical and optical properties of gallium-doped ZnO films by radio frequency magnetron sputtering. Chinese Physics B, 2012, 21, 067306.	0.7	13
68	Nanostructure Formation and Passivation of Large Area Black Silicon for Solar Cell Applications. Small, 2012, 8, 1392-1397.	5.2	137
69	Damage accumulation and annealing behavior in high fluence implanted MgZnO. Nuclear Instruments & Methods in Physics Research B, 2012, 272, 426-429.	0.6	2
70	Growth of single-phase Mg <sub>0.3</sub> Zn <sub>0.7</sub> O films suitable for solar-blind optical devices on RS-MgO substrates. Thin Solid Films, 2012, 520, 1705-1708.	0.8	16
71	Temperature dependence of surface plasmon mediated near band-edge emission from Ag/ZnO nanorods. Journal of Optics (United Kingdom), 2011, 13, 075003.	1.0	1
72	Fabrication and characterization of high quality n-ZnO/p-GaN heterojunction light emission diodes. Thin Solid Films, 2011, 520, 445-447.	0.8	17

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73	Realization of non-polar ZnO (112̄ <sub>0</sub> ) homoepitaxial films with atomically smooth surface by molecular beam epitaxy. Journal of Crystal Growth, 2011, 325, 93-95.	0.7	6
74	Thermally induced surface instability in ion-implanted Mg $\times$ Zn films. Physical Review B, 2011, 84, .	1.1	10
75	Interface engineering of high-Mg-content MgZnO/BeO/Si for p-n heterojunction solar-blind ultraviolet photodetectors. Applied Physics Letters, 2011, 98, .	1.5	40
76	Sb complexes and Zn interstitials in Sb-implanted ZnO epitaxial films. Chinese Physics B, 2011, 20, 066104.	0.7	1
77	Mg <sub>0.55</sub> Zn <sub>0.45</sub> O solar-blind ultraviolet detector with high photoresponse performance and large internal gain. Applied Physics Letters, 2011, 98, 103506.	1.5	119
78	Comparative study of n-MgZnO/p-Si ultraviolet-B photodetector performance with different device structures. Applied Physics Letters, 2011, 98, .	1.5	53
79	Effect of composition on damage accumulation in ternary ZnO-based oxides implanted with heavy ions. Journal of Applied Physics, 2010, 108, 033509.	1.1	17
80	Metastable rocksalt ZnO interfacial layer and its influence on polarity selection of Zn-polar ZnO films. Journal of Crystal Growth, 2010, 312, 263-266.	0.7	7
81	Van der Pauw Hall Measurement on Intended Doped ZnO Films for p-Type Conductivity. Chinese Physics Letters, 2010, 27, 067203.	1.3	6
82	Controlled growth of Zn-polar ZnO film on MgAl <sub>2</sub> O <sub>4</sub> (110̄) substrate using MgO buffer layer. Journal Physics D: Applied Physics, 2010, 43, 085301.	1.3	1
83	Alloy-fluctuation-induced exciton localization in high-Mg-content (0.27 $\times$ 0.55) wurtzite Mg <sub>x</sub> Zn <sub>1-x</sub> O epilayers. Journal Physics D: Applied Physics, 2010, 43, 285402.	1.3	15
84	Hole spin quantum beats in bulk ZnO. Physical Review B, 2009, 79, .	1.1	7
85	Visible-blind ultraviolet photodetector based on double heterojunction of n-ZnO/insulator-MgO-p-Si. Applied Physics Letters, 2009, 94, .	1.5	90
86	Controlled Growth of High-Quality ZnO-Based Films and Fabrication of Visible-Blind and Solar-Blind Ultraviolet Detectors. Advanced Materials, 2009, 21, 4625-4630.	11.1	239
87	Formation of metastable MgO structures on type-III oxide surfaces: Effect of periodic out-of-plane electric dipole moment of substrates. Journal of Crystal Growth, 2009, 311, 425-428.	0.7	9
88	Solar-blind 4.55eV band gap Mg <sub>0.55</sub> Zn <sub>0.45</sub> O components fabricated using quasi-homo buffers. Journal of Crystal Growth, 2009, 311, 4356-4359.	0.7	49
89	Interaction between Na and Li in ZnO. Applied Physics Letters, 2009, 95, 242111.	1.5	17
90	Influence of growth temperature on formation of continuous Ag thin film on ZnO surface by ultra-high vacuum deposition. Journal Physics D: Applied Physics, 2009, 42, 065303.	1.3	15

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91	Growth of single-crystalline ZnO film with two-dimensional periodic structure on Si(111) substrate by molecular beam epitaxy. Journal of Crystal Growth, 2008, 310, 5428-5431.	0.7	6
92	Large Scale Fabrication of Periodical Bowl-like Micropatterns of Single Crystal ZnO. Crystal Growth and Design, 2008, 8, 2912-2916.	1.4	15
93	Exciton and hole spin dynamics in ZnO investigated by time-resolved photoluminescence experiments. Physical Review B, 2008, 78, .	1.1	21
94	ZnO Metal-Semiconductor-Metal Ultraviolet Photodiodes with Au Contacts. Journal of the Electrochemical Society, 2007, 154, H26.	1.3	31
95	Surfactant effects of lithium dopant during molecular beam epitaxy of ZnO films. Journal of Physics Condensed Matter, 2007, 19, 482001.	0.7	8
96	ZnO metal-semiconductor-metal ultraviolet photodetectors with Iridium contact electrodes. IET Optoelectronics, 2007, 1, 135.	1.8	12
97	Structure stability of epitaxial MgO-CaO solid-solution films: effect of diffusion. Journal of Applied Physics, 2007, 101, 106102.	1.1	8
98	Surface modification of MgAl <sub>2</sub> O <sub>4</sub> (111) for growth of high-quality ZnO epitaxial films. Applied Physics Letters, 2007, 90, 081911.	1.5	24
99	Low-temperature interface engineering for high-quality ZnO epitaxy on Si(111) substrate. Applied Physics Letters, 2007, 90, 151912.	1.5	46
100	Epitaxial growth of CaO films on MgO(001) surface: Strain relaxation at the CaO/MgO heterointerface. Journal of Applied Physics, 2007, 102, .	1.1	12
101	Epitaxial orientation of Mg <sub>2</sub> Si(110) thin film on Si(111) substrate. Journal of Applied Physics, 2007, 102, 126102.	1.1	20
102	Inversion domain boundary in a ZnO film. Philosophical Magazine Letters, 2007, 87, 687-693.	0.5	13
103	Wet chemical etching of ZnO film using aqueous acidic salt. Thin Solid Films, 2007, 515, 3967-3970.	0.8	32
104	Effect of MgO in ZnO films grown on nitrated sapphires. Journal of Crystal Growth, 2007, 305, 74-77.	0.7	6
105	Tri-Buffer Process: A New Approach to Obtain High-Quality ZnO Epitaxial Films on Sapphire Substrates. Journal of Electronic Materials, 2007, 36, 452-456.	1.0	3
106	ZnO-based MIS photodetectors. Sensors and Actuators A: Physical, 2007, 135, 529-533.	2.0	47
107	Growth of In <sub>2</sub> O <sub>3</sub> single-crystalline film on sapphire (0001) substrate by molecular beam epitaxy. Journal of Crystal Growth, 2006, 289, 686-689.	0.7	53
108	The 30° rotation domains in wurtzite ZnO films. Journal of Crystal Growth, 2006, 290, 631-636.	0.7	9

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109	Characterization of ZnO metal-“semiconductor”-metal ultraviolet photodiodes with palladium contact electrodes. <i>Semiconductor Science and Technology</i> , 2006, 21, 1507-1511.	1.0	26
110	Microstructure and polarity of epitaxial ZnO films grown on LSAT(111) substrate studied by transmission electron microscopy. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2005, 339, 497-502.	0.9	8
111	Interface engineering for lattice-matched epitaxy of ZnO on (La,Sr)(Al,Ta)O <sub>3</sub> (111) substrate. <i>Applied Physics Letters</i> , 2005, 87, 202107.	1.5	20
112	Controlled growth of Zn-polar ZnO epitaxial film by nitridation of sapphire substrate. <i>Applied Physics Letters</i> , 2005, 86, 112111.	1.5	56
113	Cubic nitridation layers on sapphire substrate and their role in polarity selection of ZnO films. <i>Applied Physics Letters</i> , 2005, 87, 051901.	1.5	41
114	Controlled growth of O-polar ZnO epitaxial film by oxygen radical preconditioning of sapphire substrate. <i>Journal of Applied Physics</i> , 2004, 96, 7108-7111.	1.1	39
115	Microstructure and crystal defects in epitaxial ZnO film grown on Ga modified (0001) sapphire surface. <i>Applied Physics Letters</i> , 2004, 85, 4385.	1.5	33
116	Role of gallium wetting layer in high-quality ZnO growth on sapphire (0001) substrates. <i>Science in China Series G: Physics, Mechanics and Astronomy</i> , 2004, 47, 612.	0.2	1
117	Defect characteristics of ZnO film grown on sapphire with an ultrathin gallium wetting layer. <i>Journal of Crystal Growth</i> , 2004, 273, 100-105.	0.7	11
118	Determination of the polarity of ZnO thin films by electron energy-loss spectroscopy. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2004, 320, 322-326.	0.9	24
119	Polarity determination of ZnO thin films by electron holography. <i>Applied Physics Letters</i> , 2004, 84, 2067-2069.	1.5	21
120	Effect of sapphire substrate nitridation on the elimination of rotation domains in ZnO epitaxial films. <i>Journal Physics D: Applied Physics</i> , 2004, 37, 3058-3062.	1.3	32
121	Molecular Beam Epitaxy Growth of Single-Domain and High-Quality ZnO Layers on Nitrided (0001) Sapphire Surface. <i>Japanese Journal of Applied Physics</i> , 2003, 42, L99-L101.	0.8	39
122	Effects of Sapphire (0001) Surface Modification by Gallium Pre-Exposure on the Growth of High-Quality Epitaxial ZnO Film. <i>Japanese Journal of Applied Physics</i> , 2002, 41, L1043-L1045.	0.8	28
123	Cathodoluminescence properties of blue-emitting SrGa <sub>2</sub> S <sub>4</sub> :Ce thin-films grown by low-temperature process. <i>Journal of Applied Physics</i> , 2002, 92, 834-837.	1.1	15
124	Complete Elimination of Multi-angle Rotation Domains in ZnO Epilayers Grown on (0001) Sapphire Substrate. <i>Physica Status Solidi A</i> , 2002, 192, 183-188.	1.7	14
125	Effect of Pits in InGaN/GaN Multi-Quantum Wells on the Strain and In Composition Segregation. <i>Physica Status Solidi A</i> , 2000, 180, 81-84.	1.7	3
126	Application of Electron Cyclotron Resonance Assisted Plasma in GaN Deposition. <i>Chinese Physics Letters</i> , 1998, 15, 761-763.	1.3	1