

Yong Zhang

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124
papers

4,853
citations

30
h-index

67
g-index

139
ext. papers

5,363
ext. citations

4.8
avg, IF

5.47
L-index

#	Paper	IF	Citations
124	Controlled scalable synthesis of uniform, high-quality monolayer and few-layer MoS ₂ films. <i>Scientific Reports</i> , 2013 , 3, 1866	4.9	651
123	Direct Growth of Highly Mismatched Type II ZnO/ZnSe Core/Shell Nanowire Arrays on Transparent Conducting Oxide Substrates for Solar Cell Applications. <i>Advanced Materials</i> , 2008 , 20, 3248-3253	24	286
122	Electronic properties of semiconductor nanowires. <i>Journal of Nanoscience and Nanotechnology</i> , 2008 , 8, 1-26	1.3	285
121	Equally efficient interlayer exciton relaxation and improved absorption in epitaxial and nonepitaxial MoS ₂ /WS ₂ heterostructures. <i>Nano Letters</i> , 2015 , 15, 486-91	11.5	282
120	Surface-energy-assisted perfect transfer of centimeter-scale monolayer and few-layer MoS ₂ films onto arbitrary substrates. <i>ACS Nano</i> , 2014 , 8, 11522-8	16.7	281
119	From 1D chain to 3D network: tuning hybrid II-VI nanostructures and their optical properties. <i>Journal of the American Chemical Society</i> , 2003 , 125, 7049-55	16.4	204
118	Piezo-phototronic Effect Enhanced UV/Visible Photodetector Based on Fully Wide Band Gap Type-II ZnO/ZnS Core/Shell Nanowire Array. <i>ACS Nano</i> , 2015 , 9, 6419-27	16.7	199
117	Band-gap reduction and valence-band splitting of ordered GaInP ₂ . <i>Applied Physics Letters</i> , 1995 , 67, 2347-2349	175	
116	Similar and dissimilar aspects of III-V semiconductors containing Bi versus N. <i>Physical Review B</i> , 2005 , 71,	3.3	159
115	Composition dependence of photoluminescence of GaAs _{1-x} Bi _x alloys. <i>Applied Physics Letters</i> , 2009 , 95, 041903	3.4	152
114	Total negative refraction in real crystals for ballistic electrons and light. <i>Physical Review Letters</i> , 2003 , 91, 157404	7.4	137
113	Synthesis and photovoltaic effect of vertically aligned ZnO/ZnS core/shell nanowire arrays. <i>Applied Physics Letters</i> , 2010 , 96, 123105	3.4	123
112	Engineering Substrate Interactions for High Luminescence Efficiency of Transition-Metal Dichalcogenide Monolayers. <i>Advanced Functional Materials</i> , 2016 , 26, 4733-4739	15.6	112
111	An all-inorganic type-II heterojunction array with nearly full solar spectral response based on ZnO/ZnSe core/shell nanowires. <i>Journal of Materials Chemistry</i> , 2011 , 21, 6020		111
110	Effects of substrate type and material-substrate bonding on high-temperature behavior of monolayer WS ₂ . <i>Nano Research</i> , 2015 , 8, 2686-2697	10	86
109	Dependence of coupling of quasi 2-D MoS ₂ with substrates on substrate types, probed by temperature dependent Raman scattering. <i>Nanoscale</i> , 2014 , 6, 4920-7	7.7	78
108	Lateral composition modulation in AlAs/InAs short period superlattices grown on InP(001). <i>Applied Physics Letters</i> , 1997 , 70, 1402-1404	3.4	57

107	Enhanced Broad Band Photodetection through Piezo-Phototronic Effect in CdSe/ZnTe Core/Shell Nanowire Array. <i>Advanced Electronic Materials</i> , 2015 , 1, 1400050	6.4	49
106	Adsorption of formaldehyde molecule on the pristine and transition metal doped graphene: First-principles study. <i>Applied Surface Science</i> , 2017 , 396, 1020-1025	6.7	48
105	An UV photochromic memory effect in proton-based WO ₃ electrochromic devices. <i>Applied Physics Letters</i> , 2008 , 93, 203508	3.4	46
104	Novel approach to tuning the physical properties of organic-inorganic hybrid semiconductors. <i>Physical Review Letters</i> , 2006 , 96, 026405	7.4	46
103	Multiexciton absorption and multiple exciton generation in CdSe quantum dots. <i>Physical Review Letters</i> , 2008 , 100, 136805	7.4	43
102	Temperature coefficients of phonon frequencies and thermal conductivity in thin black phosphorus layers. <i>Applied Physics Letters</i> , 2015 , 107, 071905	3.4	41
101	ZnO/ZnSe type II core-shell nanowire array solar cell. <i>Solar Energy Materials and Solar Cells</i> , 2012 , 102, 15-18	6.4	40
100	Study of temperature sensitive optical parameters and junction temperature determination of light-emitting diodes. <i>Applied Physics Letters</i> , 2012 , 100, 202108	3.4	32
99	Zero thermal expansion in a nanostructured inorganic-organic hybrid crystal. <i>Physical Review Letters</i> , 2007 , 99, 215901	7.4	32
98	High density GaN/AlN quantum dots for deep UV LED with high quantum efficiency and temperature stability. <i>Scientific Reports</i> , 2014 , 4, 5166	4.9	31
97	Nearly lattice matched all wurtzite CdSe/ZnTe type II core-shell nanowires with epitaxial interfaces for photovoltaics. <i>Nanoscale</i> , 2014 , 6, 3679-85	7.7	31
96	Study of Phase Selectivity of Organic-Inorganic Hybrid Semiconductors. <i>Chemistry of Materials</i> , 2006 , 18, 2805-2809	9.6	31
95	Effects of strain, substrate misorientation, and excitonic transition on the optical polarization of ordered zinc-blende semiconductor alloys. <i>Journal of Applied Physics</i> , 1997 , 81, 6365-6373	2.5	30
94	Oxygen vacancy in cubic WO ₃ studied by first-principles pseudopotential calculation. <i>Solid State Ionics</i> , 2003 , 165, 43-49	3.3	29
93	Designing and tuning properties of a three-dimensional porous quaternary chalcogenide built on a bimetallic tetrahedral cluster [M ₄ Sn ₃ S ₁₃] ₅ [M=Zn/Sn]. <i>Journal of Solid State Chemistry</i> , 2008 , 181, 415-422	3.3	28
92	Spatially resolved study of quantum efficiency droop in InGaN light-emitting diodes. <i>Applied Physics Letters</i> , 2012 , 101, 252103	3.4	27
91	Magnetoluminescence study on the effective mass anisotropy of CuPtB-ordered GaInP ₂ alloys. <i>Journal of Applied Physics</i> , 1997 , 81, 2814-2817	2.5	27
90	Overcoming limitations in semiconductor alloy design. <i>Superlattices and Microstructures</i> , 2001 , 29, 395-404	4.8	27

89	An extended defect as a sensor for free carrier diffusion in a semiconductor. <i>Applied Physics Letters</i> , 2013 , 102, 012114	3.4	25
88	Effects of heavy nitrogen doping in III-V semiconductors [How well does the conventional wisdom hold for the dilute nitrogen [III]-N alloys]. <i>Physica Status Solidi (B): Basic Research</i> , 2003 , 240, 396-403	1.3	25
87	Binding graphene sheets together using silicon: graphene/silicon superlattice. <i>Nanoscale Research Letters</i> , 2010 , 5, 805-8	5	23
86	Evolution of the electron localization in a nonconventional alloy system GaAs _{1-x} N _x probed by high-magnetic-field photoluminescence. <i>Applied Physics Letters</i> , 2003 , 82, 4453-4455	3.4	23
85	Alloy states in dilute GaAs _{1-x} N _x alloys (x. <i>Applied Physics Letters</i> , 2003 , 82, 1697-1699	3.4	23
84	Two-dimensional electron gas at the metastable twisted interfaces of CdTe/PbTe (111) single heterojunctions. <i>Physical Review B</i> , 2013 , 87,	3.3	22
83	Magnetoexcitons in anisotropic semiconductors. <i>Journal of Applied Physics</i> , 1998 , 83, 448-454	2.5	21
82	Interplay of point defects, extended defects, and carrier localization in the efficiency droop of InGaN quantum wells light-emitting diodes investigated using spatially resolved electroluminescence and photoluminescence. <i>Journal of Applied Physics</i> , 2014 , 115, 023103	2.5	20
81	Quantum Oscillations in a Two-Dimensional Electron Gas at the Rocksalt/Zincblende Interface of PbTe/CdTe (111) Heterostructures. <i>Nano Letters</i> , 2015 , 15, 4381-6	11.5	20
80	CuPt ordering in high bandgap Ga _x In _{1-x} P alloys on relaxed GaAsP step grades. <i>Journal of Applied Physics</i> , 2009 , 106, 063525	2.5	20
79	Rational design of type-II nano-heterojunctions for nanoscale optoelectronics. <i>Materials Today Physics</i> , 2020 , 15, 100262	8	20
78	Impurity Resonant States p-type Doping in Wide-Band-Gap Nitrides. <i>Scientific Reports</i> , 2016 , 6, 19537	4.9	19
77	In Situ Monitoring of the Thermal-Annealing Effect in a Monolayer of MoS ₂ . <i>Physical Review Applied</i> , 2017 , 7,	4.3	18
76	Theory of the color change of Na _x WO ₃ as a function of Na-charge doping. <i>Physical Review B</i> , 2009 , 79,	3.3	18
75	Spontaneous lateral composition modulation in AlAs/InAs short period superlattices via the growth front. <i>Journal of Electronic Materials</i> , 1997 , 26, 1048-1052	1.9	17
74	Elastic, electronic and optical properties of stable pentagonal ZnO ₂ . <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2017 , 91, 82-87	3	16
73	TOTAL AND NEGATIVE REFRACTION OF ELECTROMAGNETIC WAVES. <i>Modern Physics Letters B</i> , 2005 , 19, 21-33	1.6	16
72	Designable luminescence with quantum dot-silver plasmon coupler. <i>Small</i> , 2014 , 10, 3099-109	11	14

71	Rare earth chalcogenide Ce ₃ Te ₄ as high efficiency high temperature thermoelectric material. <i>Applied Physics Letters</i> , 2011 , 98, 222110	3.4	14
70	Band alignment between GaAs and partially ordered GaInP. <i>Applied Physics Letters</i> , 2002 , 80, 3111-3113	3.4	14
69	Spatial resolution versus data acquisition efficiency in mapping an inhomogeneous system with species diffusion. <i>Scientific Reports</i> , 2015 , 5, 10542	4.9	13
68	Oriental superlattices in ordered GaInP ₂ . <i>Solid State Communications</i> , 1996 , 100, 47-51	1.6	13
67	Biexciton Dynamics in Single Colloidal CdSe Quantum Dots. <i>Journal of Physical Chemistry Letters</i> , 2020 , 11, 10425-10432	6.4	13
66	Applications of Huang-Rhys theory in semiconductor optical spectroscopy. <i>Journal of Semiconductors</i> , 2019 , 40, 091102	2.3	12
65	Twisted ZrTe ₂ /RbTe (111) heterojunction as a metastable interface structure. <i>New Journal of Physics</i> , 2012 , 14, 113021	2.9	12
64	Spontaneous lateral composition modulation in InAlAs and InGaAs short-period superlattices. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 1998 , 2, 325-329	3	12
63	Non-Bloch nature of alloy states in a conventional semiconductor alloy: GaIn _{1-x} P as an example. <i>Physical Review Letters</i> , 2008 , 101, 036403	7.4	12
62	Analysis of Photoluminescence Thermal Quenching: Guidance for the Design of Highly Effective p-type Doping of Nitrides. <i>Scientific Reports</i> , 2016 , 6, 32033	4.9	12
61	Overcoming diffusion-related limitations in semiconductor defect imaging with phonon-plasmon-coupled mode Raman scattering. <i>Light: Science and Applications</i> , 2018 , 7, 23	16.7	12
60	Van der Waals epitaxy of nearly single-crystalline nitride films on amorphous graphene-glass wafer. <i>Science Advances</i> , 2021 , 7,	14.3	12
59	Defects dynamics during ageing cycles of InGaN blue light-emitting diodes revealed by evolution of external quantum efficiency--current dependence. <i>Optics Express</i> , 2015 , 23, A979-86	3.3	11
58	Comparison of the dilute bismide and nitride alloys GaAsBi and GaAsN. <i>Physica Status Solidi (B): Basic Research</i> , 2009 , 246, 504-507	1.3	11
57	Ordering-induced band structure effects in GaInP ₂ studied by ballistic electron emission microscopy. <i>Applied Physics Letters</i> , 1999 , 75, 1128-1130	3.4	11
56	Light-Effect Transistor (LET) with Multiple Independent Gating Controls for Optical Logic Gates and Optical Amplification. <i>Frontiers in Physics</i> , 2016 , 4,	3.9	11
55	Multiple-Stage Structure Transformation of Organic-Inorganic Hybrid Perovskite CH ₃ NH ₃ PbI ₃ . <i>Physical Review X</i> , 2016 , 6,	9.1	11
54	Global electronic structure of semiconductor alloys through direct large-scale computations for III-V alloys GaIn _{1-x} P. <i>Physical Review B</i> , 2011 , 83,	3.3	10

53	Interplay of alloying and ordering on the electronic structure of GaIn _{1-x} P alloys. <i>Physical Review B</i> , 2008 , 78,	3.3	10
52	Systematic approach to distinguishing a perturbed host state from an impurity state in a supercell calculation for a doped semiconductor: Using GaP:N as an example. <i>Physical Review B</i> , 2006 , 74,	3.3	10
51	Effects of excitons on solar cells. <i>Journal of Applied Physics</i> , 1998 , 84, 3966-3971	2.5	10
50	Band-gap corrected density functional theory calculations for InAs/GaSb type II superlattices. <i>Journal of Applied Physics</i> , 2014 , 116, 214301	2.5	9
49	Growth of ultra-long sodium tungsten oxide and tungsten oxide nanowires: Effects of impurity and residue deposition. <i>Journal of Crystal Growth</i> , 2014 , 395, 61-67	1.6	9
48	Optical properties of spontaneous lateral composition modulation in AlAs/InAs short-period superlattices. <i>Applied Physics Letters</i> , 2000 , 77, 1765	3.4	9
47	The effect of excitons on CdTe solar cells. <i>Journal of Applied Physics</i> , 2000 , 87, 8786-8792	2.5	9
46	Bound exciton model for an acceptor in a semiconductor. <i>Physical Review B</i> , 2014 , 90,	3.3	8
45	Topologic connection between 2-D layered structures and 3-D diamond structures for conventional semiconductors. <i>Scientific Reports</i> , 2016 , 6, 24660	4.9	8
44	DFT study on the oxygen titanium porphyrin as sustainable cyclic catalyst for water splitting. <i>International Journal of Hydrogen Energy</i> , 2019 , 44, 19920-19928	6.7	7
43	Growth of oxidation-resistive silicene-like thin flakes and Si nanostructures on graphene. <i>Journal of Semiconductors</i> , 2019 , 40, 062001	2.3	7
42	The reversal of the laser-beam-induced-current contrast with varying illumination density in a Cu ₂ ZnSnSe ₄ thin-film solar cell. <i>Applied Physics Letters</i> , 2013 , 103, 242104	3.4	7
41	Spatially Resolved Laser-Induced Modification Raman Spectroscopy for Probing the Microscopic Structural Variations in the Quaternary Alloy Cu ₂ ZnSnSe ₄ . <i>Physical Review Applied</i> , 2017 , 8,	4.3	7
40	Lattice vibration modes in type-II superlattice InAs/GaSb with no-common-atom interface and overlapping vibration spectra. <i>Physical Review B</i> , 2015 , 91,	3.3	7
39	Systematic approach for simultaneously correcting the band-gap and p ₀ separation errors of common cation III-V or II-VI binaries in density functional theory calculations within a local density approximation. <i>Physical Review B</i> , 2015 , 92,	3.3	7
38	Dynamic nano-pulling effect of the boron-functionalized graphene monovacancy for molecule dissociation. <i>Journal Physics D: Applied Physics</i> , 2013 , 46, 385302	3	7
37	Temperature dependent time-resolved exciton luminescence in GaAs/AlGaAs quantum wires and dots. <i>Superlattices and Microstructures</i> , 1995 , 17, 201-212	2.8	7
36	Ambient condition laser writing of graphene structures on polycrystalline SiC thin film deposited on Si wafer. <i>Applied Physics Letters</i> , 2013 , 102, 071912	3.4	6

35	Low-temperature birefringence in ordered GaInP alloy studied by polarized transmission spectroscopy. <i>Solid State Communications</i> , 1997 , 104, 577-580	1.6	6
34	Detection of lateral composition modulation by magnetoexciton spectroscopy. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 1998 , 2, 44-48	3	6
33	Resonant Raman scattering with the E+ band in a dilute GaAs _{1-x} N _x alloy (x=0.1%). <i>Applied Physics Letters</i> , 2006 , 89, 101912	3.4	6
32	Electroreflectance measurements of electric fields in ordered GaInP ₂ . <i>Journal of Applied Physics</i> , 1998 , 84, 4502-4508	2.5	6
31	The phonon sidebands of NNi pair emission in GaP:N. <i>Solid State Communications</i> , 1988 , 68, 707-710	1.6	6
30	Si(bzimpy) - a hexacoordinate silicon pincer complex for electron transport and electroluminescence. <i>Chemical Communications</i> , 2018 , 54, 14073-14076	5.8	6
29	In Operando Micro-Raman Three-Dimensional Thermometry with Diffraction-Limit Spatial Resolution for GaN-based Light-Emitting Diodes. <i>Physical Review Applied</i> , 2018 , 10,	4.3	6
28	Raman Scattering Study of Lattice Vibrations in the Type-II Superlattice InAs/InAs _{1-x} Sb _x . <i>Physical Review Applied</i> , 2017 , 8,	4.3	5
27	Precise Surface State Control of Carbon Quantum Dots to Enhance Charge Extraction for Solar Cells. <i>Nanomaterials</i> , 2020 , 10,	5.4	5
26	Determination of the order parameter of CuPt-B ordered GaInP ₂ films by x-ray diffraction. <i>Journal of Applied Physics</i> , 2002 , 91, 9039-9042	2.5	5
25	Electronic structures of impurities and point defects in semiconductors. <i>Chinese Physics B</i> , 2018 , 27, 1171103	1.8	5
24	New growth modes of molybdenum oxide layered 1D structures using alternative catalysts: transverse mode vs. axial mode. <i>CrystEngComm</i> , 2015 , 17, 1139-1150	3.3	4
23	Effects of the orientational superlattice on the electronic and vibrational properties of CuPt ordered GaInP alloys. <i>Journal of Raman Spectroscopy</i> , 2001 , 32, 831-834	2.3	4
22	Transient photoluminescence of GaAs/AlGaAs quantum wires. <i>Journal of Luminescence</i> , 1994 , 60-61, 400-403	3.8	4
21	II-VI Organic-Inorganic Hybrid Nanostructures with Greatly Enhanced Optoelectronic Properties, Perfectly Ordered Structures, and Shelf Stability of Over 15 Years. <i>ACS Nano</i> , 2021 , 15, 10565-10576	16.7	4
20	Kinetic energy dependence of carrier diffusion in a GaAs epilayer studied by wavelength selective PL imaging. <i>Journal of Luminescence</i> , 2017 , 185, 200-204	3.8	3
19	Impact of superlinear defect-related recombination on LED performance at low injection. <i>Journal of Applied Physics</i> , 2019 , 125, 204502	2.5	3
18	Impurity resonant state p-doping layer for high-efficiency nitride-based light-emitting diodes. <i>Semiconductor Science and Technology</i> , 2018 , 33, 114004	1.8	3

17	Confocal Micro-PL Mapping of Defects in CdTe Epilayers Grown on Si (211) Substrates with Different Annealing Cycles. <i>Journal of Electronic Materials</i> , 2014 , 43, 2854-2859	1.9	3
16	Tailoring the electronic properties of GaIn N_x P beyond simply varying alloy composition. <i>Applied Physics Letters</i> , 2009 , 94, 091113	3.4	3
15	Photoluminescence studies of lateral composition modulated short-period AlAs/InAs superlattices. <i>Thin Solid Films</i> , 1999 , 357, 31-34	2.2	3
14	Impact of Individual Structural Defects in GaAs Solar Cells: A Correlative and In Operando Investigation of Signatures, Structures, and Effects. <i>Advanced Optical Materials</i> , 2021 , 9, 2001487	8.1	3
13	The Role of Nano-crystallites on Conduction Mechanisms of Current Through Ag Gridlines of Si Solar Cells. <i>MRS Advances</i> , 2019 , 4, 311-318	0.7	2
12	Intrinsic Exciton-Phonon Coupling and Tuning in ZnTe Nanowires Probed by Resonant Raman Scattering. <i>Physical Review Applied</i> , 2020 , 13,	4.3	2
11	Selective Formation of Graphene on a Si Wafer. <i>Materials Research Society Symposia Proceedings</i> , 2012 , 1407, 141		2
10	Theoretical investigations into self-organized ordered metallic semi-clusters arrays on metallic substrate. <i>Nanoscale Research Letters</i> , 2010 , 5, 1020-6	5	2
9	Lifetime study of N impurity states in GaAs $_{1-x}$ N $_x$ (x=0.1%) under hydrostatic pressure. <i>Applied Physics Letters</i> , 2006 , 88, 201917	3.4	2
8	A Perspective of GaAs $_{1-x}$ N $_x$ and GaP $_x$ N $_{1-x}$ as Heavily Doped Semiconductors. <i>Physica Status Solidi (B): Basic Research</i> , 2001 , 228, 243-252	1.3	2
7	Surface-enhanced Raman scattering of monolayer transition metal dichalcogenides on Ag nanorod arrays. <i>Optics Letters</i> , 2019 , 44, 5493-5496	3	2
6	The impact of semimetal nanoparticles on the conduction of thick glass layer at Ag/Si contact interface. <i>Journal of Applied Physics</i> , 2020 , 127, 225302	2.5	1
5	Comparison of atomistic simulations and statistical theories for variable degree of long-range order in semiconductor alloys. <i>Physical Review B</i> , 2009 , 80,	3.3	1
4	II-VI based organic-inorganic hybrid structures: Brief review and perspective. <i>Journal of Luminescence</i> , 2022 , 248, 118936	3.8	0
3	An all optical approach for comprehensive in-operando analysis of radiative and nonradiative recombination processes in GaAs double heterostructures.. <i>Light: Science and Applications</i> , 2022 , 11, 137	16.7	0
2	Tuning of the periodicity of stable self-organized metallic templates. <i>Chinese Physics B</i> , 2011 , 20, 020513 _{1,2}		
1	Nondestructive High-Power-High-Temperature Raman Spectroscopy for Probing Microscopic Structural Variations in CZTSe Alloys. <i>MRS Advances</i> , 2017 , 2, 3187-3193	0.7	