

# Gang Xiang

## List of Publications by Year in descending order

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117  
papers

1,775  
citations

304368

22  
h-index

329751

37  
g-index

117  
all docs

117  
docs citations

117  
times ranked

2086  
citing authors

#	ARTICLE	IF	CITATIONS
1	Current-Induced Polarization and the Spin Hall Effect at Room Temperature. <i>Physical Review Letters</i> , 2006, 97, 126603.	2.9	205
2	A Fascinating Metallo-Supramolecular Polymer Network with Thermal/Magnetic/Light-Responsive Shape-Memory Effects Anchored by Fe <sub>3</sub> O <sub>4</sub> Nanoparticles. <i>Macromolecules</i> , 2018, 51, 705-715.	2.2	109
3	Photocatalytic activity of nanostructured TiO <sub>2</sub> thin films prepared by dc magnetron sputtering method. <i>Vacuum</i> , 2001, 62, 361-366.	1.6	95
4	Nanoscale scanning probe ferromagnetic resonance imaging using localized modes. <i>Nature</i> , 2010, 466, 845-848.	13.7	95
5	Enhanced Valley Zeeman Splitting in Fe-Doped Monolayer MoS <sub>2</sub> . <i>ACS Nano</i> , 2020, 14, 4636-4645.	7.3	69
6	A magnetic Fe <sub>2</sub> O <sub>3</sub> @PANI@TiO <sub>2</sub> core-shell nanocomposite for arsenic removal via a coupled visible-light-induced photocatalytic oxidation-adsorption process. <i>Nanoscale Advances</i> , 2020, 2, 2018-2024.	2.2	51
7	Removal of Trace Arsenite through Simultaneous Photocatalytic Oxidation and Adsorption by Magnetic Fe <sub>3</sub> O <sub>4</sub> @PpPDA@TiO <sub>2</sub> Core-Shell Nanoparticles. <i>ACS Applied Nano Materials</i> , 2020, 3, 8495-8504.	2.4	47
8	Magnetoresistance anomalies in (Ga,Mn)As epilayers with perpendicular magnetic anisotropy. <i>Physical Review B</i> , 2005, 71, .	1.1	42
9	Electronic Structures and Lattice Dynamics of Layered BiOCl Single Crystals. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 1038-1044.	2.1	39
10	Core-Shell Structured Magnetic Fe <sub>2</sub> O <sub>3</sub> @PANI Nanocomposites for Enhanced As(V) Adsorption. <i>Industrial &amp; Engineering Chemistry Research</i> , 2020, 59, 7554-7563.	1.8	38
11	Fabrication of cm scale buckypapers of horizontally aligned multiwalled carbon nanotubes highly filled with Fe <sub>3</sub> C: the key roles of Cl and Ar-flow rates. <i>Chemical Communications</i> , 2016, 52, 4195-4198.	2.2	36
12	Anti-rumor dynamics and emergence of the timing threshold on complex network. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2014, 411, 87-94.	1.2	34
13	One-Pot Synthesis of a Magnetic TiO <sub>2</sub> /PTh/Fe <sub>2</sub> O <sub>3</sub> Heterojunction Nanocomposite for Removing Trace Arsenite via Simultaneous Photocatalytic Oxidation and Adsorption. <i>Industrial &amp; Engineering Chemistry Research</i> , 2021, 60, 528-540.	1.8	32
14	Magnetism in transition-metal-doped ZnO: A first-principles study. <i>Journal of Applied Physics</i> , 2012, 112, .	1.1	31
15	Photocatalytic activity studies of TiO <sub>2</sub> thin films prepared by r.f. magnetron reactive sputtering. <i>Vacuum</i> , 2003, 72, 79-84.	1.6	29
16	Enhanced saturation magnetization in buckypaper-films of thin walled carbon nanostructures filled with Fe <sub>3</sub> C, FeCo, FeNi, CoNi, Co and Ni crystals: the key role of Cl. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 18159-18166.	1.3	29
17	Tunable Anomalous Hall Effect in a Nonferromagnetic System. <i>Physical Review Letters</i> , 2006, 96, 196404.	2.9	28
18	Enhancement of ferromagnetism of ZnO:Co nanocrystals by post-annealing treatment: The role of oxygen interstitials and zinc vacancies. <i>Materials Letters</i> , 2014, 122, 256-260.	1.3	28

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19	Homostructured negative differential resistance device based on zigzag phosphorene nanoribbons. RSC Advances, 2015, 5, 40358-40362.	1.7	27
20	Photocatalytic activity study of TiO <sub>2</sub> thin films with and without Fe ion implantation. Nuclear Instruments & Methods in Physics Research B, 2002, 187, 479-484.	0.6	26
21	The static and dynamic magnetic properties of monolayer iron dioxide and iron dichalcogenides. RSC Advances, 2016, 6, 31758-31761.	1.7	26
22	Controlling the quantity of Fe inside multiwall carbon nanotubes filled with Fe-based crystals: The key role of vapor flow-rate. Applied Physics Letters, 2014, 105, .	1.5	25
23	Theoretical analysis of the influence of magnetic domain walls on longitudinal and transverse magnetoresistance in tensile strained (Ga,Mn)As epilayers. Physical Review B, 2007, 76, .	1.1	24
24	Noncollinear spin valve effect in ferromagnetic semiconductor trilayers. Physical Review B, 2007, 76, .	1.1	24
25	Cm-size free-standing self-organized buckypaper of bucky-onions filled with ferromagnetic Fe <sub>3</sub> C. RSC Advances, 2017, 7, 845-850.	1.7	22
26	Magnetic nickel chrysotile nanotubes tethered with pH-sensitive poly(methacrylic acid) brushes for Cu(II) adsorption. Journal of Molecular Liquids, 2019, 276, 611-623.	2.3	20
27	High Curie Temperature Ferromagnetism and High Hole Mobility in Tensile Strained Mn-Doped SiGe Thin Films. Advanced Functional Materials, 2020, 30, 2002513.	7.8	20
28	Highly efficient ratiometric extracellular oxygen sensors through physical incorporation of a conjugated polymer and PtTFPP in graft copolymers. Sensors and Actuators B: Chemical, 2018, 273, 242-252.	4.0	18
29	Vacancy dependent structural, electronic, and magnetic properties of zigzag silicene nanoribbons:Co. Journal of Applied Physics, 2013, 114, .	1.1	17
30	Poly(methacrylic acid)-graft-Ni <sub>3</sub> Si <sub>2</sub> O <sub>5</sub> (OH) <sub>4</sub> multiwalled nanotubes as a novel nanosorbent for effective removal of copper(II) ions. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2016, 502, 89-101.	2.3	17
31	Rapid synthesis of thermoelectric SnSe thin films by MPCVD. RSC Advances, 2020, 10, 11990-11993.	1.7	17
32	Optical properties and quantum confinement in ultrafine single crystal silicon nanowires synthesized by thermal evaporation without catalyst. RSC Advances, 2013, 3, 15982.	1.7	16
33	Electronic structures and magnetic stabilities of 2D Mn-doped GaAs nanosheets: The role of long-range exchange interactions and doping strategies. Journal of Applied Physics, 2014, 116, .	1.1	16
34	A Skyrmion Diode Based on Skyrmion Hall Effect. IEEE Transactions on Electron Devices, 2022, 69, 1293-1297.	1.6	15
35	Phase transition and elastic properties of TiN under pressure from first-principles calculations. Computational Materials Science, 2014, 86, 200-205.	1.4	14
36	The structures and diffusion behaviors of point defects and their influences on the electronic properties of 2D stanene. RSC Advances, 2017, 7, 9840-9846.	1.7	14

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37	Web buckle-mediated room-temperature ferromagnetism in strained MoS <sub>2</sub> thin films. Applied Physics Letters, 2020, 116, .	1.5	14
38	Zinc Vacancy-Induced Room-Temperature Ferromagnetism in Undoped ZnO Thin Films. Journal of Nanomaterials, 2012, 2012, 1-5.	1.5	13
39	Nonlinear Concentration-Dependent Electronic and Optical Properties of Si <sub>1-x</sub> Ge <sub>x</sub> Alloy Nanowires. Journal of Physical Chemistry C, 2012, 116, 17934-17938.	1.5	13
40	Asperomagnetic order in diluted magnetic semiconductor (Ba,Na)(Zn,Mn) <sub>2</sub> As <sub>2</sub> . Applied Physics Letters, 2018, 112, .	1.5	13
41	Electronic and Magnetic Tunability of SnSe Monolayer via Doping of Transition-Metal Atoms. Journal of Electronic Materials, 2020, 49, 290-296.	1.0	13
42	The electric and magnetic properties of novel two-dimensional MnBr <sub>2</sub> and MnI <sub>2</sub> from first-principles calculations. Journal of Applied Physics, 2020, 128, .	1.1	13
43	Tuning high magnetizations in foam-like carbon-based films completely filled with $\hat{\pm}$ -Fe. Carbon, 2016, 101, 28-36.	5.4	12
44	Micrometre-length continuous single-crystalline nm-thin Fe <sub>3</sub> C-nanowires with unusual 010 preferred orientation inside radial few-wall carbon nanotube structures: the key role of sulfur in viscous boundary layer CVS of ferrocene. RSC Advances, 2017, 7, 13272-13280.	1.7	12
45	Engineering of electronic and optical properties of ZnO thin films via Cu doping. Chinese Physics B, 2013, 22, 047803.	0.7	11
46	Morphology-Dependent Room-Temperature Ferromagnetism in Undoped ZnO Nanostructures. Nanomaterials, 2021, 11, 3199.	1.9	11
47	Biaxial Strain-Mediated Room Temperature Ferromagnetism of ReS <sub>2</sub> Web Buckles. Advanced Electronic Materials, 2019, 5, 1900814.	2.6	10
48	High performance photoresponse of transparent $\hat{I}^2$ -Ga <sub>2</sub> O <sub>3</sub> film prepared by polymer-assisted deposition. Materials Letters, 2021, 284, 128912.	1.3	10
49	Strain-Modulated Magnetism in MoS <sub>2</sub> . Nanomaterials, 2022, 12, 1929.	1.9	10
50	Quantitative magnetic force microscopy on permalloy dots using an iron filled carbon nanotube probe. Ultramicroscopy, 2011, 111, 1360-1365.	0.8	8
51	Exchange bias coupling in NiO/Ni bilayer tubular nanostructures synthesized by electrodeposition and thermal oxidation. Journal of Magnetism and Magnetic Materials, 2017, 429, 74-78.	1.0	8
52	Vibrational properties of layered BiTeCl single crystal. Journal of Raman Spectroscopy, 2017, 48, 1783-1788.	1.2	8
53	Enhancement of Curie temperature in Ga <sub>1-x</sub> Mn <sub>x</sub> As epilayers grown on cross-hatched In <sub>y</sub> Ga <sub>1-y</sub> As buffer layers. Journal of Crystal Growth, 2004, 269, 298-303.	0.7	7
54	Homoepitaxy of Ge on ozone-treated Ge (1 $\hat{e}$ 0 $\hat{e}$ 0) substrate by ultra-high vacuum chemical vapor deposition. Journal of Crystal Growth, 2019, 507, 113-117.	0.7	7

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55	Synthesis and photoluminescence of high density GeSe triangular nanoplate arrays on Si substrates. <i>Nanotechnology</i> , 2020, 31, 285702.	1.3	7
56	Synthesis and thermoelectric properties of Bi-doped SnSe thin films*. <i>Chinese Physics B</i> , 2021, 30, 116302.	0.7	7
57	Random telegraph noise from magnetic nanoclusters in the ferromagnetic semiconductor $\text{GaMnAs}$ . <i>Physical Review B</i> , 2007, 76, .	1.1	6
58	Substrate orientation dependence of ferromagnetism in (Ga,Mn)As. <i>Applied Physics Letters</i> , 2008, 93, .	1.5	6
59	Magnetic force microscopy in the presence of a strong probe field. <i>Applied Physics Letters</i> , 2011, 99, 162514.	1.5	6
60	Phase transition, elastic and thermodynamical properties of TcC under high pressure from first-principles calculations. <i>Physica Status Solidi (B): Basic Research</i> , 2014, 251, 1372-1379.	0.7	6
61	Synthesis of planar-graphite structures with embedded Fe(x)Pd(x) or CoPd $\rightarrow$ CoPd <sub>2</sub> phases and of carbon nanotubes filled with Fe(x)Pd(x) with variable filling ratio. <i>Carbon</i> , 2015, 95, 634-639.	5.4	6
62	Direct catalyst-free self-assembly of large area of horizontal ferromagnetic ZnO nanowire arrays. <i>Materials Letters</i> , 2019, 234, 384-387.	1.3	6
63	Two-dimensional Si $\rightarrow$ Ge monolayers: Stabilities, structures, and electronic properties. <i>Journal of Applied Physics</i> , 2020, 127, .	1.1	6
64	The effect of vacancy defects on the conductive properties of SiGe. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2021, 386, 126993.	0.9	6
65	Electric field tunable bandgap and anisotropic high carrier mobility in SiAs <sub>2</sub> /GeAs <sub>2</sub> lateral heterostructure. <i>Computational Materials Science</i> , 2021, 198, 110697.	1.4	6
66	Mn-doped SiGe thin films grown by UHV/CVD with room-temperature ferromagnetism and high hole mobility. <i>Science China Materials</i> , 2022, 65, 2826-2832.	3.5	6
67	Growth of tapered silica nanowires with a shallow U-shaped vapor chamber: Growth mechanism and structural and optical properties. <i>Journal of Applied Physics</i> , 2015, 117, 164303.	1.1	5
68	Observation of large coercivities in radial carbon nanotube structures filled with Fe <sub>3</sub> C and FeCo single-crystals by viscous boundary layer pyrolysis of ferrocene and cobaltocene. <i>RSC Advances</i> , 2017, 7, 4753-4758.	1.7	5
69	Highly conductive and transparent electrospun indium tin oxide nanofibers calcined by microwave plasma. <i>Nanotechnology</i> , 2021, 32, 325602.	1.3	5
70	Internal magnetic field in thin ZnSe epilayers. <i>Applied Physics Letters</i> , 2006, 89, 242116.	1.5	4
71	Uniaxial strain-dependent magnetic and electronic properties of (Ga,Mn)As nanowires. <i>Chinese Physics B</i> , 2014, 23, 096103.	0.7	4
72	Theoretical study of the structural phase transition and elastic properties of HfN under high pressures. <i>Journal of Physics and Chemistry of Solids</i> , 2014, 75, 1295-1300.	1.9	4

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73	Uniform annealing effect of electron irradiation on ferromagnetic GaMnAs thin films. <i>Journal of Magnetism and Magnetic Materials</i> , 2017, 422, 124-127.	1.0	4
74	The electronic structures and optical properties of light-element atom adsorbed SnSe monolayers. <i>Materials Research Express</i> , 2018, 5, 035013.	0.8	4
75	Impact of side passivation on the electronic structures and optical properties of GeSe nanobelts. <i>Superlattices and Microstructures</i> , 2019, 125, 365-370.	1.4	4
76	Structural, electronic, and magnetic properties of transition-metal atom adsorbed two-dimensional GaAs nanosheet. <i>Chinese Physics B</i> , 2016, 25, 097305.	0.7	3
77	Cl-assisted highly efficient synthesis of FePd <sub>3</sub> alloys encapsulated in graphite papers: a two stage CVD approach. <i>RSC Advances</i> , 2016, 6, 40676-40682.	1.7	3
78	In situ encapsulation of Pd crystals inside foam-like carbon films continuously filled with $\hat{1}\pm$ -Fe: investigating the nucleation of FePd <sub>3</sub> alloys. <i>RSC Advances</i> , 2016, 6, 54189-54192.	1.7	3
79	Peeling off effects in vertically aligned Fe <sub>3</sub> C filled carbon nanotubes films grown by pyrolysis of ferrocene. <i>Journal of Applied Physics</i> , 2017, 121, 244302.	1.1	3
80	The composition dependence of magnetic, electronic and optical properties of Mn-doped SixGe1-x nanowires. <i>Semiconductor Science and Technology</i> , 2017, 32, 075005.	1.0	3
81	Chlorine-assisted synthesis of Fe <sub>3</sub> C-filled mm-long vertically aligned arrays of multiwall carbon nanotubes. <i>Materials Research Express</i> , 2019, 6, 015040.	0.8	3
82	Hole mobility enhancement in strained nanocrystalline architecture of group IV semiconductors. <i>Journal of Alloys and Compounds</i> , 2020, 821, 153212.	2.8	3
83	Fabrication of vertically aligned ferromagnetic ZnO nanopillar arrays on sapphire substrates by polymer-assisted deposition. <i>AIP Advances</i> , 2020, 10, 015337.	0.6	3
84	Tuning electronic structure and optical properties of monolayer GeAs and GeAs <sub>2</sub> by alloying with nitrogen and phosphorus elements. <i>Physica B: Condensed Matter</i> , 2021, 614, 413033.	1.3	3
85	BiOCl/group-IV Xene bilayer heterojunctions: stability and electronic and photocatalytic properties. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 13323-13330.	1.3	3
86	Facile fabrication of highly porous nylon-11 layer for flexible high-performance triboelectric nanogenerator. <i>Journal of Applied Physics</i> , 2022, 131, .	1.1	3
87	Structural, magnetic and Magneto-transport properties of Mn-doped SiGe thin films. <i>Journal of Magnetism and Magnetic Materials</i> , 2022, 560, 169630.	1.0	3
88	Polymer-assisted deposition and room-temperature ferromagnetism of amorphous Mn-doped gallium oxide films. <i>Scripta Materialia</i> , 2022, 220, 114919.	2.6	3
89	Electric-field-induced magnetism of first-row $d^0$ semiconductor nanowires and nanotubes. <i>Physica Status Solidi (B): Basic Research</i> , 2015, 252, 484-489.	0.7	2
90	Electric-field-induced Spontaneous Magnetization and Phase Transitions in Zigzag Boron Nitride Nanotubes. <i>Scientific Reports</i> , 2015, 5, 12416.	1.6	2

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91	The structural, electronic and magnetic properties of Ga <sub>8</sub> MnAs <sub>8</sub> clusters. Journal of Magnetism and Magnetic Materials, 2015, 384, 155-159.	1.0	2
92	Impact of Surface Passivation on the Electronic Structure and Optical Properties of the Si <sub>1-x</sub> Ge <sub>x</sub> Nanowires. Chinese Physics Letters, 2015, 32, 027301.	1.3	2
93	Observation of lamellar like fringes and Barkhausen effects in iron-carbon filled vertically aligned carbon nanotubes. Journal of Applied Physics, 2018, 124, 214303.	1.1	2
94	Observation of curling effects in tubular and planar graphene-like structures by pyrolysis of ferrocene/dichlorobenzene mixtures. Materials Today Chemistry, 2018, 10, 120-127.	1.7	2
95	Synthesis and growth mechanism of Mn-doped nanodot embedded silica nanowires. Physica B: Condensed Matter, 2019, 571, 10-17.	1.3	2
96	Defect dependence of electronic transport of multiwall carbon nanotube buckypaper filled with iron-based nanowires. Journal of Applied Physics, 2019, 126, 075105.	1.1	2
97	Probing electrical properties of individual carbon nanotubes filled with Fe <sub>3</sub> C nanowires. Nanotechnology, 2020, 31, 475706.	1.3	2
98	Spark plasma sintering-assisted synthesis and high-T ferromagnetism of Mn-doped SiGe alloys. Scripta Materialia, 2022, 218, 114802.	2.6	2
99	Comparison of electrical properties of aluminum oxide thin films on silicon and gallium arsenide substrates grown by atomic layer deposition. Surface and Coatings Technology, 2013, 228, S246-S248.	2.2	1
100	Nanostructured Magnetic Materials. Journal of Nanomaterials, 2013, 2013, 1-2.	1.5	1
101	The effects of B and P impurities on the electronic and optical properties of Si <sub>1-x</sub> Ge <sub>x</sub> nanowires. Semiconductor Science and Technology, 2014, 29, 075023.	1.0	1
102	Orientation effect on the electronic transport properties of C <sub>6</sub> cluster. Computational and Theoretical Chemistry, 2014, 1029, 79-83.	1.1	1
103	The role of Br in the selective synthesis of thin-walled carbon-nanotubes with micrometre-length Fe <sub>3</sub> C-filling, Fe <sub>3</sub> C tip-filled carbon nanotubes or empty carbon nanotubes by pyrolysis of ferrocene and (6-bromohexyl)ferrocene mixtures. RSC Advances, 2015, 5, 53956-53962.	1.7	1
104	cm-Length free-standing Fe <sub>3</sub> C-filled thin graphite-like films and buckypaper-like films with high smoothness. RSC Advances, 2016, 6, 99960-99968.	1.7	1
105	Spin-dependent transport in GaAs nanowire-based devices. Journal of Magnetism and Magnetic Materials, 2017, 441, 678-682.	1.0	1
106	Anisotropy of magnetic interactions and spin filter behavior in hexagonal (Ga,Mn)As nanoribbons. Physica E: Low-Dimensional Systems and Nanostructures, 2017, 93, 291-294.	1.3	1
107	The Effect of U Atom Adsorption on the Structural, Electronic and Magnetic Properties of Single-Walled Carbon Nanotubes. Journal of Electronic Materials, 2018, 47, 5810-5815.	1.0	1
108	The structure and property characteristics of Mn-doped SiGe alloy nanowires prepared by catalyst-free growth. Physica B: Condensed Matter, 2019, 575, 411696.	1.3	1

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109	Structure and electrical transport properties of $\hat{I}\pm$ -Fe filled carbon-foam. <i>Physica B: Condensed Matter</i> , 2020, 594, 412335.	1.3	1
110	Anomalous stepped-hysteresis and T-induced unit-cell-volume reduction in carbon nanotubes continuously filled with faceted Fe <sub>3</sub> C nanowires. <i>Nano Express</i> , 2021, 2, 010027.	1.2	1
111	The gate length effect of high-performance monolayer SiAs <sub>2</sub> FETs. <i>Semiconductor Science and Technology</i> , 2021, 36, 085006.	1.0	1
112	2D multifunctional SiAs <sub>2</sub> /GeAs <sub>2</sub> van der waals heterostructure. <i>Nanotechnology</i> , 2021, , .	1.3	1
113	Adsorption of Noble Gases on Hydrogenated Group IV Monolayers: Stability and Electronic Properties. <i>Journal of Electronic Materials</i> , 2022, 51, 4073-4078.	1.0	1
114	Electric field induced magnetism of first row $d$ semiconductor nanowires and nanotubes (Phys. Status Solidi B 3/2015). <i>Physica Status Solidi (B): Basic Research</i> , 2015, 252, .	0.7	0
115	External electric field induced band dispersion engineering in Si <sub>1-x</sub> Ge <sub>x</sub> nanowires. <i>Computational Materials Science</i> , 2015, 102, 51-56.	1.4	0
116	Encapsulation of FePt and FePt <sub>3</sub> alloys inside carbon-foam materials. <i>Materials Research Express</i> , 2019, 6, 065613.	0.8	0
117	Investigating student understanding of a heat engine: a case study of a Stirling engine. <i>Physics Education</i> , 2022, 57, 015011.	0.3	0