

# Xiaoqin Li

## List of Publications by Year in descending order

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142  
papers

9,880  
citations

43973

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35952

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g-index

144  
all docs

144  
docs citations

144  
times ranked

11012  
citing authors

#	ARTICLE	IF	CITATIONS
1	Excitons in semiconductor moiré superlattices. Nature Nanotechnology, 2022, 17, 227-238.	15.6	105
2	Twisted 2D electronic and photonic materials and devices. Applied Physics Letters, 2022, 120, 130401.	1.5	0
3	Magnons and magnetic fluctuations in atomically thin MnBi <sub>2</sub> Te <sub>4</sub> . Nature Communications, 2022, 13, 2527.	5.8	10
4	Accurate Atomic-Scale Imaging of Two-Dimensional Lattices Using Atomic Force Microscopy in Ambient Conditions. Nanomaterials, 2022, 12, 1542.	1.9	6
5	Critical role of orbital hybridization in the Dzyaloshinskii-Moriya interaction of magnetic interfaces. Communications Physics, 2022, 5, .	2.0	8
6	Phonon Dephasing Dynamics in MoS <sub>2</sub> . Nano Letters, 2021, 21, 1434-1439.	4.5	5
7	Phonon renormalization in reconstructed MoS <sub>2</sub> moiré superlattices. Nature Materials, 2021, 20, 1100-1105.	13.3	121
8	Directional Modulation of Exciton Emission Using Single Dielectric Nanospheres. Advanced Materials, 2021, 33, e2007236.	11.1	15
9	Experimental measurement of the intrinsic excitonic wave function. Science Advances, 2021, 7, .	4.7	49
10	Dielectric Nanospheres: Directional Modulation of Exciton Emission Using Single Dielectric Nanospheres (Adv. Mater. 20/2021). Advanced Materials, 2021, 33, 2170153.	11.1	1
11	Spin-phonon interaction in yttrium iron garnet. Physical Review B, 2021, 104, .	1.1	1
12	Electron-Phonon and Spin-Lattice Coupling in Atomically Thin Layers of MnBi <sub>2</sub> Te <sub>4</sub> . Nano Letters, 2021, 21, 6139-6145.	4.5	25
13	Superior photo-carrier diffusion dynamics in organic-inorganic hybrid perovskites revealed by spatiotemporal conductivity imaging. Nature Communications, 2021, 12, 5009.	5.8	10
14	Time-resolved ARPES Determination of a Quasi-Particle Band Gap and Hot Electron Dynamics in Monolayer MoS <sub>2</sub> . Nano Letters, 2021, 21, 7363-7370.	4.5	28
15	Twist Angle-Dependent Interlayer Exciton Lifetimes in van der Waals Heterostructures. Physical Review Letters, 2021, 126, 047401.	2.9	88
16	Chiral Symmetry Breaking for Deterministic Switching of Perpendicular Magnetization by Spin-Orbit Torque. Nano Letters, 2021, 21, 515-521.	4.5	64
17	Phonon-Assisted Intervalley Scattering Determines Ultrafast Exciton Dynamics in $\text{MoSe}_2$ Bilayers. Physical Review Letters, 2021, 127, 157403.	2.9	15
18	Optimizing exciton transport in semiconductors. Light: Science and Applications, 2021, 10, 229.	7.7	0

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19	3D Hybrid Trilayer Heterostructure: Tunable Au Nanorods and Optical Properties. ACS Applied Materials & Interfaces, 2020, 12, 45015-45022.	4.0	9
20	Ferrimagnetic Skyrmions in Topological Insulator/Ferrimagnet Heterostructures. Advanced Materials, 2020, 32, e2003380.	11.1	41
21	Directly visualizing the momentum-forbidden dark excitons and their dynamics in atomically thin semiconductors. Science, 2020, 370, 1199-1204.	6.0	149
22	Strain-dependent luminescence and piezoelectricity in monolayer transition metal dichalcogenides. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2020, 38, 042205.	0.6	4
23	Dimensional crossover in spin Hall oscillators. Physical Review B, 2020, 102, .	1.1	10
24	Moiré potential impedes interlayer exciton diffusion in van der Waals heterostructures. Science Advances, 2020, 6, .	4.7	83
25	Pure Spin Current and Magnon Chemical Potential in a Nonequilibrium Magnetic Insulator. Physical Review X, 2020, 10, .	2.8	11
26	Unveiling defect-mediated carrier dynamics in monolayer semiconductors by spatiotemporal microwave imaging. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 13908-13913.	3.3	24
27	Study of the perpendicular magnetic anisotropy, spin-orbit torque, and Dzyaloshinskii-Moriya interaction in the heavy metal/CoFeB bilayers with Ir <sub>22</sub> Mn <sub>78</sub> insertion. Applied Physics Letters, 2020, 116, 242407.	1.5	8
28	Spectrally tunable infrared plasmonic F <sub>2</sub> SnIn <sub>2</sub> O <sub>3</sub> nanocrystal cubes. Journal of Chemical Physics, 2020, 152, 014709.	1.2	33
29	Optical dielectric constants of single crystalline silver films in the long wavelength range. Optical Materials Express, 2020, 10, 693.	1.6	13
30	Ultrafast Dephasing and Coherent Exciton Dynamics in Transition Metal Dichalcogenide Bilayers. , 2020, , .		0
31	Addition of Monovalent Silver Cations to CH <sub>3</sub> NH <sub>3</sub> PbBr <sub>3</sub> Produces Crystallographically Oriented Perovskite Thin Films. ACS Applied Energy Materials, 2019, 2, 6087-6096.	2.5	10
32	Modulated interlayer exciton properties in a two-dimensional moiré crystal. Physical Review B, 2019, 100, .	1.1	48
33	Enhancing functionalities of atomically thin semiconductors with plasmonic nanostructures. Nanophotonics, 2019, 8, 577-598.	2.9	26
34	Dielectric impact on exciton binding energy and quasiparticle bandgap in monolayer WS <sub>2</sub> and WSe <sub>2</sub> . 2D Materials, 2019, 6, 025028.	2.0	44
35	Separation of valley excitons in a MoS <sub>2</sub> monolayer using a subwavelength asymmetric groove array. Nature Photonics, 2019, 13, 180-184.	15.6	147
36	Evidence for moiré excitons in van der Waals heterostructures. Nature, 2019, 567, 71-75.	13.7	933

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37	Strong Damping-Like Spin-Orbit Torque and Tunable Dzyaloshinskii-Moriya Interaction Generated by Low-Resistivity Pd <sub>1-x</sub> Pt <sub>x</sub> Alloys. <i>Advanced Functional Materials</i> , 2019, 29, 1805822.	7.8	116
38	Hyperbolic Phonon Polaritons in Suspended Hexagonal Boron Nitride. <i>Nano Letters</i> , 2019, 19, 1009-1014.	4.5	64
39	Epitaxial Growth of Optically Thick, Single Crystalline Silver Films for Plasmonics. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 3189-3195.	4.0	20
40	Single-spin sensing of domain-wall structure and dynamics in a thin-film skyrmion host. <i>Physical Review Materials</i> , 2019, 3, .	0.9	27
41	Sideband pump-probe technique resolves nonlinear modulation response of PbS/CdS quantum dots on a silicon nitride waveguide. <i>APL Photonics</i> , 2018, 3, 016101.	3.0	8
42	Interfacial Dzyaloshinskii-Moriya Interaction: Effect of $\frac{5}{d}$ Band Filling and Correlation with Spin Mixing Conductance. <i>Physical Review Letters</i> , 2018, 120, 157204.	2.9	116
43	Magnon and phonon thermometry with inelastic light scattering. <i>Journal Physics D: Applied Physics</i> , 2018, 51, 133001.	1.3	16
44	Epitaxial Aluminum-on-Sapphire Films as a Plasmonic Material Platform for Ultraviolet and Full Visible Spectral Regions. <i>ACS Photonics</i> , 2018, 5, 2624-2630.	3.2	43
45	Spin Hall-induced auto-oscillations in ultrathin YIG grown on Pt. <i>Scientific Reports</i> , 2018, 8, 1269.	1.6	36
46	Room-Temperature Skyrmions in an Antiferromagnet-Based Heterostructure. <i>Nano Letters</i> , 2018, 18, 980-986.	4.5	98
47	Photophysics of Thermally-Assisted Photobleaching in Giant-Quantum Dots Revealed in Single Nanocrystals. <i>ACS Nano</i> , 2018, 12, 4206-4217.	7.3	31
48	Energy-Resolved Photoconductivity Mapping in a Monolayer-Bilayer WSe <sub>2</sub> Lateral Heterostructure. <i>Nano Letters</i> , 2018, 18, 7200-7206.	4.5	26
49	Correlation between the Dzyaloshinskii-Moriya interaction and spin-mixing conductance at an antiferromagnet/ferromagnet interface. <i>Physical Review B</i> , 2018, 98, .	1.1	13
50	Biexciton fine structure in monolayer transition metal dichalcogenides. <i>Nature Physics</i> , 2018, 14, 1199-1204.	6.5	99
51	Plasmon-enhanced nonlinear yield in the Otto and Kretschmann configurations. <i>Physical Review B</i> , 2018, 98, .	1.1	13
52	Microsecond Valley Lifetime of Defect-Bound Excitons in Monolayer WSe <sub>2</sub> . <i>Physical Review Letters</i> , 2018, 121, 057403.	2.9	114
53	Research Update: Recent progress on 2D materials beyond graphene: From ripples, defects, intercalation, and valley dynamics to straintronics and power dissipation. <i>APL Materials</i> , 2018, 6, .	2.2	30
54	Chirality detection of enantiomers using twisted optical metamaterials. <i>Nature Communications</i> , 2017, 8, 14180.	5.8	375

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55	Photoconductivity: Tailoring Semiconductor Lateral Multijunctions for Giant Photoconductivity Enhancement (Adv. Mater. 41/2017). Advanced Materials, 2017, 29, .	11.1	0
56	Enhancement of Plasmonic Performance in Epitaxial Silver at Low Temperature. Scientific Reports, 2017, 7, 8917.	1.6	9
57	Tailoring Semiconductor Lateral Multijunctions for Giant Photoconductivity Enhancement. Advanced Materials, 2017, 29, 1703680.	11.1	21
58	Disorder-dependent valley properties in monolayer $WS_2$ . Physical Review B, 2017, 96, .	1.1	17
59	Temperature-dependent Brillouin light scattering spectra of magnons in yttrium iron garnet and permalloy. Physical Review B, 2017, 96, .	1.1	16
60	Dzyaloshinskii-Moriya Interaction across an Antiferromagnet-Ferromagnet Interface. Physical Review Letters, 2017, 119, 027202.	2.9	75
61	Cascaded exciton energy transfer in a monolayer semiconductor lateral heterostructure assisted by surface plasmon polariton. Nature Communications, 2017, 8, 35.	5.8	32
62	Neutral and charged inter-valley biexcitons in monolayer MoSe <sub>2</sub> . Nature Communications, 2017, 8, 15552.	5.8	159
63	Stark control. Nature Physics, 2017, 13, 9-10.	6.5	7
64	Impact of grain boundaries on efficiency and stability of organic-inorganic trihalide perovskites. Nature Communications, 2017, 8, 2230.	5.8	220
65	Trion valley dynamics in monolayer WSe <sub>2</sub> . , 2017, , .		0
66	Trion valley coherence in monolayer semiconductors. 2D Materials, 2017, 4, 025105.	2.0	34
67	Trion Valley Coherence in Transition Metal Dichalcogenides. , 2017, , .		0
68	Valley Polarization Dynamics of Inter- and Intra-valley Trions in Monolayer WSe <sub>2</sub> . , 2017, , .		0
69	Long-Lived Valley Polarization of Intravalley Trions in Monolayer $WSe_2$ . Physical Review Letters. 2016. 117. 257402.	2.9	101
70	Semiconductor Quantum Dot Lifetime Near an Atomically Smooth Ag Film Exhibits a Narrow Distribution. ACS Photonics, 2016, 3, 1085-1089.	3.2	13
71	Epitaxial Growth of Atomically Smooth Aluminum on Silicon and Its Intrinsic Optical Properties. ACS Nano, 2016, 10, 9852-9860.	7.3	75
72	Magnons and Phonons Optically Driven out of Local Equilibrium in a Magnetic Insulator. Physical Review Letters, 2016, 117, 107202.	2.9	45

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73	Interfacial control of Dzyaloshinskii-Moriya interaction in heavy metal/ferromagnetic metal thin film heterostructures. <i>Physical Review B</i> , 2016, 94, .	1.1	72
74	Enhanced spin-polarization lifetimes in a two-dimensional electron gas in a gate-controlled GaAs quantum well. <i>Physical Review B</i> , 2016, 94, .	1.1	14
75	Coherent and Incoherent Coupling Dynamics between Neutral and Charged Excitons in Monolayer MoSe <sub>2</sub> . <i>Nano Letters</i> , 2016, 16, 5109-5113.	4.5	78
76	Current control of magnetic anisotropy via stress in a ferromagnetic metal waveguide. <i>Physical Review B</i> , 2016, 93, .	1.1	5
77	Nanomanipulation and controlled self-assembly of metal nanoparticles and nanocrystals for plasmonics. <i>Chemical Society Reviews</i> , 2016, 45, 5672-5716.	18.7	159
78	Trion formation dynamics in monolayer transition metal dichalcogenides. <i>Physical Review B</i> , 2016, 93, .	1.1	159
79	Plasmonic Metasurfaces for Nonlinear Optics and Quantitative SERS. <i>ACS Photonics</i> , 2016, 3, 1371-1384.	3.2	84
80	Interplay Between Optical Bianisotropy and Magnetism in Plasmonic Metamolecules. <i>Nano Letters</i> , 2016, 16, 4322-4328.	4.5	29
81	Coherent quantum dynamics of excitons in monolayer transition metal dichalcogenides. <i>Proceedings of SPIE</i> , 2016, , .	0.8	1
82	Direct measurement of exciton valley coherence in monolayer WSe <sub>2</sub> . <i>Nature Physics</i> , 2016, 12, 677-682.	6.5	223
83	Quantum Beats in Hybrid Metal-Semiconductor Nanostructures. <i>ACS Photonics</i> , 2015, 2, 1341-1347.	3.2	8
84	Giant colloidal silver crystals for low-loss linear and nonlinear plasmonics. <i>Nature Communications</i> , 2015, 6, 7734.	5.8	99
85	Temperature dependence of Brillouin light scattering spectra of acoustic phonons in silicon. <i>Applied Physics Letters</i> , 2015, 106, .	1.5	16
86	Intrinsic homogeneous linewidth and broadening mechanisms of excitons in monolayer transition metal dichalcogenides. <i>Nature Communications</i> , 2015, 6, 8315.	5.8	408
87	Single quantum dot controls a plasmonic cavity's scattering and anisotropy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 12288-12292.	3.3	47
88	Plasmonic Nanostructures with Well-Controlled Geometry Lead to Designed Properties. , 2015, , .		0
89	Coherent Electronic Coupling in Atomically Thin $\text{MoSe}_2$ . <i>Physical Review Letters</i> , 2014, 112, .	2.9	108
90	Intrinsic Optical Properties and Enhanced Plasmonic Response of Epitaxial Silver. <i>Advanced Materials</i> , 2014, 26, 6106-6110.	11.1	122

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91	Control of propagating spin waves via spin transfer torque in a metallic bilayer waveguide. Physical Review B, 2014, 89, .	1.1	48
92	Modular assembly of optical nanocircuits. Nature Communications, 2014, 5, 3896.	5.8	51
93	A subwavelength plasmonic metamolecule exhibiting magnetic-based optical Fano resonance. Nature Nanotechnology, 2013, 8, 95-99.	15.6	317
94	Brillouin light scattering spectra as local temperature sensors for thermal magnons and acoustic phonons. Applied Physics Letters, 2013, 102, 082401.	1.5	22
95	Plasmonic nano-protractor based on polarization spectro-tomography. Nature Photonics, 2013, 7, 367-372.	15.6	34
96	Non-local coherent coupling between excitons in a disordered quantum well. New Journal of Physics, 2013, 15, 075026.	1.2	3
97	Coherent coupling between exciton resonances governed by the disorder potential. Physical Review B, 2013, 88, .	1.1	8
98	Strong optical magnetism and Fano resonances in asymmetric plasmonic metamolecules. , 2013, , .		1
99	A Subwavelength Plasmonic Metamolecule Exhibiting Magnetic-Based Optical Fano Resonance. , 2013, , .		1
100	Deviation from exponential decay for spin waves excited with a coplanar waveguide antenna. Applied Physics Letters, 2012, 101, 252409.	1.5	10
101	Self-Assembled InGaAs Quantum Dot Clusters with Controlled Spatial and Spectral Properties. Nano Letters, 2012, 12, 5169-5174.	4.5	10
102	Polarization Properties of a CdSe/ZnS and Au Nanoparticle Dimer. ChemPhysChem, 2012, 13, 2522-2525.	1.0	2
103	Manipulating Coupling between a Single Semiconductor Quantum Dot and Single Gold Nanoparticle. Nano Letters, 2011, 11, 1049-1054.	4.5	140
104	2d Fourier spectroscopy of disordered quantum wells. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 1141-1144.	0.8	2
105	Controlled AFM manipulation of small nanoparticles and assembly of hybrid nanostructures. Nanotechnology, 2011, 22, 115301.	1.3	66
106	Photoluminescence dynamics of ensemble and individual CdSe/ZnS quantum dots with an alloyed core/shell interface. Journal of Applied Physics, 2011, 109, 103509.	1.1	28
107	Strongly confined excitons in self-assembled InGaAs quantum dot clusters produced by a hybrid growth method. Journal of Applied Physics, 2010, 107, 104302.	1.1	8
108	Radiation of spin waves from the open end of a microscopic magnetic-film waveguide. Physical Review B, 2009, 80, .	1.1	69

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109	Diffraction of spin waves from a submicrometer-size defect in a microwaveguide. <i>Applied Physics Letters</i> , 2009, 95, .	1.5	31
110	Two-Quantum 2D FT Electronic Spectroscopy of Biexcitons in GaAs Quantum Wells. <i>Science</i> , 2009, 324, 1169-1173.	6.0	262
111	Investigation of electronic coupling in semiconductor double quantum wells using coherent optical two-dimensional Fourier transform spectroscopy. <i>Solid State Communications</i> , 2009, 149, 361-366.	0.9	20
112	Propagating Surface Plasmon Induced Photon Emission from Quantum Dots. <i>Nano Letters</i> , 2009, 9, 4168-4171.	4.5	181
113	Atomic Force Microscope Nanomanipulation with Simultaneous Visual Guidance. <i>ACS Nano</i> , 2009, 3, 2989-2994.	7.3	48
114	Polarization-dependent optical 2D Fourier transform spectroscopy of semiconductors. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 14227-14232.	3.3	110
115	Probing Exciton Couplings and Correlations in Semiconductors with Optical Two-Dimensional Fourier Transform Spectroscopy. , 2007, , .		0
116	Polarized Optical Two-dimensional Fourier Transform Spectroscopy of Semiconductors. <i>Springer Series in Chemical Physics</i> , 2007, , 368-370.	0.2	0
117	Many-Body Interactions in Semiconductors Probed by Optical Two-Dimensional Fourier Transform Spectroscopy. <i>Physical Review Letters</i> , 2006, 96, 057406.	2.9	218
118	Transient nonlinear optical spectroscopy studies involving biexciton coherence in single quantum dots. <i>Physical Review B</i> , 2006, 73, .	1.1	6
119	Density Matrix Tomography through Sequential Coherent Optical Rotations of an Exciton Qubit in a Single Quantum Dot. <i>Physical Review Letters</i> , 2006, 96, 087402.	2.9	31
120	Polarized Optical Two-dimensional Fourier Transform Spectroscopy of Semiconductors. , 2006, , .		0
121	Optical two-dimensional Fourier transform spectroscopy of semiconductors. <i>Chemical Physics Letters</i> , 2005, 416, 311-315.	1.2	74
122	Stimulated and Spontaneous Optical Generation of Electron Spin Coherence in Charged GaAs Quantum Dots. <i>Physical Review Letters</i> , 2005, 94, 227403.	2.9	249
123	Semiconductor Quantum Dots for Quantum Information Processing: An Optical Approach. <i>AIP Conference Proceedings</i> , 2005, , .	0.3	0
124	Characterization of carrier-envelope phase-sensitive photocurrent injection in a semiconductor. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2005, 22, 362.	0.9	13
125	Optical two-dimensional Fourier transform spectroscopy with active interferometric stabilization. <i>Optics Express</i> , 2005, 13, 7432.	1.7	117
126	Solid-state carrier-envelope phase stabilization via quantum interference control of injected photocurrents. <i>Optics Letters</i> , 2005, 30, 735.	1.7	35



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127	Optically Driven Quantum Computing Devices Based on Semiconductor Quantum Dots. , 2005, , 147-161.		0
128	Raman coherence beats from the entangled state involving polarized excitons in single quantum dots. Physical Review B, 2004, 70, .	1.1	17
129	Optically Driven Quantum Computing Devices Based on Semiconductor Quantum Dots. Quantum Information Processing, 2004, 3, 147-161.	1.0	1
130	Coherent optical control of semiconductor quantum dots for quantum information processing. Physica E: Low-Dimensional Systems and Nanostructures, 2004, 25, 242-248.	1.3	18
131	Solid-state carrier-envelope-phase noise measurements with intrinsically balanced detection. Optics Express, 2004, 12, 4255.	1.7	10
132	An All-Optical Quantum Gate in a Semiconductor Quantum Dot. Science, 2003, 301, 809-811.	6.0	816
133	Qubit rotation with multiple phase-locked pulses in single quantum dots. , 2003, , .		1
134	Measurement of relaxation between polarization eigenstates in single quantum dots. Applied Physics Letters, 2002, 81, 4251-4253.	1.5	34
135	Transient nonlinear spectroscopy of excitons and biexcitons in single quantum dots. Physical Review B, 2002, 65, .	1.1	30
136	Wavelength modulation spectroscopy of single quantum dots. Applied Physics Letters, 2002, 80, 1876-1878.	1.5	12
137	Biexciton Quantum Coherence in a Single Quantum Dot. Physical Review Letters, 2002, 88, 117901.	2.9	135
138	Measurement of optical absorption by a single quantum dot exciton. Physical Review B, 2002, 65, .	1.1	115
139	Direct Probing of Quantum Dots through Linear and Nonlinear Nano-Optics. Physica Status Solidi (B): Basic Research, 2002, 234, 435-442.	0.7	1
140	Rabi Oscillations of Excitons in Single Quantum Dots. Physical Review Letters, 2001, 87, 133603.	2.9	627
141	Optical quantum control in a single quantum dot: toward a prototype semiconductor quantum computer. , 0, , .		0
142	Transient nonlinear spectroscopy of biexcitons in single quantum dots. , 0, , .		0