Xiaoqin Li

List of Publications by Year
in descending order

142 papers	9,880 citations	44069 48 h-index	36028 97 g-index
144 all docs	144 docs citations	144 times ranked	11012 citing authors

#	Article	IF	Citations
1	Evidence for moirÃ© excitons in van der Waals heterostructures. Nature, 2019, 567, 71-75.	27.8	933
2	An All-Optical Quantum Gate in a Semiconductor Quantum Dot. Science, 2003, 301, 809-811.	12.6	816
3	Rabi Oscillations of Excitons in Single Quantum Dots. Physical Review Letters, 2001, 87, 133603.	7.8	627
4	Intrinsic homogeneous linewidth and broadening mechanisms of excitons in monolayer transition metal dichalcogenides. Nature Communications, 2015, 6, 8315.	12.8	408
5	Chirality detection of enantiomers using twisted optical metamaterials. Nature Communications, 2017, 8, 14180.	12.8	375
6	A subwavelength plasmonic metamolecule exhibiting magnetic-based optical Fano resonance. Nature Nanotechnology, 2013, 8, 95-99.	31.5	317
7	Two-Quantum 2D FT Electronic Spectroscopy of Biexcitons in GaAs Quantum Wells. Science, 2009, 324, 1169-1173.	12.6	262
8	Stimulated and Spontaneous Optical Generation of Electron Spin Coherence in Charged GaAs Quantum Dots. Physical Review Letters, 2005, 94, 227403.	7.8	249
9	Direct measurement of exciton valley coherence in monolayer WSe2. Nature Physics, 2016, 12, 677-682.	16.7	223
10	Impact of grain boundaries on efficiency and stability of organic-inorganic trihalide perovskites. Nature Communications, 2017, 8, 2230.	12.8	220
11	Many-Body Interactions in Semiconductors Probed by Optical Two-Dimensional Fourier Transform Spectroscopy. Physical Review Letters, 2006, 96, 057406.	7.8	218
12	Propagating Surface Plasmon Induced Photon Emission from Quantum Dots. Nano Letters, 2009, 9, 4168-4171.	9.1	181
13	Nanomanipulation and controlled self-assembly of metal nanoparticles and nanocrystals for plasmonics. Chemical Society Reviews, 2016, 45, 5672-5716.	38.1	159
14	Trion formation dynamics in monolayer transition metal dichalcogenides. Physical Review B, 2016, 93, .	3.2	159
15	Neutral and charged inter-valley biexcitons in monolayer MoSe2. Nature Communications, 2017, 8, 15552.	12.8	159
16	Directly visualizing the momentum-forbidden dark excitons and their dynamics in atomically thin semiconductors. Science, 2020, 370, 1199-1204.	12.6	149
17	Separation of valley excitons in a MoS2 monolayer using a subwavelength asymmetric groove array. Nature Photonics, 2019, 13, 180-184.	31.4	147
18	Manipulating Coupling between a Single Semiconductor Quantum Dot and Single Gold Nanoparticle. Nano Letters, 2011, 11, 1049-1054.	9.1	140

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19	Biexciton Quantum Coherence in a Single Quantum Dot. Physical Review Letters, 2002, 88, 117901.	7.8	135
20	Intrinsic Optical Properties and Enhanced Plasmonic Response of Epitaxial Silver. Advanced Materials, 2014, 26, 6106-6110.	21.0	122
21	Phonon renormalization in reconstructed MoS2 moirÃ© superlattices. Nature Materials, 2021, 20, 1100-1105.	27.5	121
22	Optical two-dimensional Fourier transform spectroscopy with active interferometric stabilization. Optics Express, 2005, 13, 7432.	3.4	117
23	Interfacial Dzyaloshinskii-Moriya Interaction: Effect of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>5</mml:mn><mml:mi>d</mml:mi></mml:mrow></mml:math> Band Filling and Correlation with Spin Mixing Conductance. Physical Review Letters, 2018, 120, 157204.	7.8	116
24	Strong Dampingâ€Like Spinâ€Orbit Torque and Tunable Dzyaloshinskiiâ€“Moriya Interaction Generated by Lowâ€Resistivity Pd_{1âˆ’}_xPt_x Alloys. Advanced Functional Materials, 2019, 29, 1805822.	14.9	116
25	Measurement of optical absorption by a single quantum dot exciton. Physical Review B, 2002, 65, .	3.2	115
26	Microsecond Valley Lifetime of Defect-Bound Excitons in Monolayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>WSe</mml:mi></mml:mrow><mml:mn>2</mml:mn></mml:msub></ Physical Review Letters, 2018, 121, 057403.	7.8	114
27	Polarization-dependent optical 2D Fourier transform spectroscopy of semiconductors. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 14227-14232.	7.1	110
28	Coherent Electronic Coupling in Atomically Thin<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>MoSe</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></ Physical Review Letters, 2014, 112, .	7.8	108
29	Excitons in semiconductor moirÃ© superlattices. Nature Nanotechnology, 2022, 17, 227-238.	31.5	105
30	Long-Lived Valley Polarization of Intravalley Trions in Monolayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>WSe</mml:mi></mml:mrow><mml:mn>2</mml:mn></mml:msub></ Physical Review Letters, 2016, 117, 257402.	7.8	101
31	Giant colloidal silver crystals for low-loss linear and nonlinear plasmonics. Nature Communications, 2015, 6, 7734.	12.8	99
32	Biexciton fine structure in monolayer transition metal dichalcogenides. Nature Physics, 2018, 14, 1199-1204.	16.7	99
33	Room-Temperature Skyrmions in an Antiferromagnet-Based Heterostructure. Nano Letters, 2018, 18, 980-986.	9.1	98
34	Twist Angle-Dependent Interlayer Exciton Lifetimes in van der Waals Heterostructures. Physical Review Letters, 2021, 126, 047401.	7.8	88
35	Plasmonic Metasurfaces for Nonlinear Optics and Quantitative SERS. ACS Photonics, 2016, 3, 1371-1384.	6.6	84
36	MoirÃ© potential impedes interlayer exciton diffusion in van der Waals heterostructures. Science Advances, 2020, 6, .	10.3	83

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37	Coherent and Incoherent Coupling Dynamics between Neutral and Charged Excitons in Monolayer MoSe₂. Nano Letters, 2016, 16, 5109-5113.	9.1	78
38	Epitaxial Growth of Atomically Smooth Aluminum on Silicon and Its Intrinsic Optical Properties. ACS Nano, 2016, 10, 9852-9860.	14.6	75
39	Dzyaloshinskii-Moriya Interaction across an Antiferromagnet-Ferromagnet Interface. Physical Review Letters, 2017, 119, 027202.	7.8	75
40	Optical two-dimensional Fourier transform spectroscopy of semiconductors. Chemical Physics Letters, 2005, 416, 311-315.	2.6	74
41	Interfacial control of Dzyaloshinskii-Moriya interaction in heavy metal/ferromagnetic metal thin film heterostructures. Physical Review B, 2016, 94, .	3.2	72
42	Radiation of spin waves from the open end of a microscopic magnetic-film waveguide. Physical Review B, 2009, 80, .	3.2	69
43	Controlled AFM manipulation of small nanoparticles and assembly of hybrid nanostructures. Nanotechnology, 2011, 22, 115301.	2.6	66
44	Hyperbolic Phonon Polaritons in Suspended Hexagonal Boron Nitride. Nano Letters, 2019, 19, 1009-1014.	9.1	64
45	Chiral Symmetry Breaking for Deterministic Switching of Perpendicular Magnetization by Spinâ€“Orbit Torque. Nano Letters, 2021, 21, 515-521.	9.1	64
46	Modular assembly of optical nanocircuits. Nature Communications, 2014, 5, 3896.	12.8	51
47	Experimental measurement of the intrinsic excitonic wave function. Science Advances, 2021, 7, .	10.3	49
48	Atomic Force Microscope Nanomanipulation with Simultaneous Visual Guidance. ACS Nano, 2009, 3, 2989-2994.	14.6	48
49	Control of propagating spin waves via spin transfer torque in a metallic bilayer waveguide. Physical Review B, 2014, 89, .	3.2	48
50	Modulated interlayer exciton properties in a two-dimensional moirÃ© crystal. Physical Review B, 2019, 100, .	3.2	48
51	Single quantum dot controls a plasmonic cavityâ€™s scattering and anisotropy. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 12288-12292.	7.1	47
52	Magnons and Phonons Optically Driven out of Local Equilibrium in a Magnetic Insulator. Physical Review Letters, 2016, 117, 107202.	7.8	45
53	Dielectric impact on exciton binding energy and quasiparticle bandgap in monolayer WS ₂ and WSe ₂. 2D Materials, 2019, 6, 025028.	4.4	44
54	Epitaxial Aluminum-on-Sapphire Films as a Plasmonic Material Platform for Ultraviolet and Full Visible Spectral Regions. ACS Photonics, 2018, 5, 2624-2630.	6.6	43

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55	Ferrimagnetic Skyrmions in Topological Insulator/Ferrimagnet Heterostructures. Advanced Materials, 2020, 32, e2003380.	21.0	41
56	Spin Hall-induced auto-oscillations in ultrathin YIG grown on Pt. Scientific Reports, 2018, 8, 1269.	3.3	36
57	Solid-state carrier-envelope phase stabilization via quantum interference control of injected photocurrents. Optics Letters, 2005, 30, 735.	3.3	35
58	Measurement of relaxation between polarization eigenstates in single quantum dots. Applied Physics Letters, 2002, 81, 4251-4253.	3.3	34
59	Plasmonic nano-protractor based on polarization spectro-tomography. Nature Photonics, 2013, 7, 367-372.	31.4	34
60	Trion valley coherence in monolayer semiconductors. 2D Materials, 2017, 4, 025105.	4.4	34
61	Spectrally tunable infrared plasmonic F,Sn:In2O3 nanocrystal cubes. Journal of Chemical Physics, 2020, 152, 014709.	3.0	33
62	Cascaded exciton energy transfer in a monolayer semiconductor lateral heterostructure assisted by surface plasmon polariton. Nature Communications, 2017, 8, 35.	12.8	32
63	Density Matrix Tomography through Sequential Coherent Optical Rotations of an Exciton Qubit in a Single Quantum Dot. Physical Review Letters, 2006, 96, 087402.	7.8	31
64	Diffraction of spin waves from a submicrometer-size defect in a microwaveguide. Applied Physics Letters, 2009, 95, .	3.3	31
65	Photophysics of Thermally-Assisted Photobleaching in â€œGiantâ€•Quantum Dots Revealed in Single Nanocrystals. ACS Nano, 2018, 12, 4206-4217.	14.6	31
66	Transient nonlinear spectroscopy of excitons and biexcitons in single quantum dots. Physical Review B, 2002, 65, .	3.2	30
67	Research Update: Recent progress on 2D materials beyond graphene: From ripples, defects, intercalation, and valley dynamics to straintronics and power dissipation. APL Materials, 2018, 6, .	5.1	30
68	Interplay Between Optical Bianisotropy and Magnetism in Plasmonic Metamolecules. Nano Letters, 2016, 16, 4322-4328.	9.1	29
69	Photoluminescence dynamics of ensemble and individual CdSe/ZnS quantum dots with an alloyed core/shell interface. Journal of Applied Physics, 2011, 109, 103509.	2.5	28
70	Time-resolved ARPES Determination of a Quasi-Particle Band Gap and Hot Electron Dynamics in Monolayer MoS₂. Nano Letters, 2021, 21, 7363-7370.	9.1	28
71	Single-spin sensing of domain-wall structure and dynamics in a thin-film skyrmion host. Physical Review Materials, 2019, 3, .	2.4	27
72	Energy-Resolved Photoconductivity Mapping in a Monolayerâ€“Bilayer WSe2 Lateral Heterostructure. Nano Letters, 2018, 18, 7200-7206.	9.1	26

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73	Enhancing functionalities of atomically thin semiconductors with plasmonic nanostructures. Nanophotonics, 2019, 8, 577-598.	6.0	26
74	Electronâ€“Phonon and Spinâ€“Lattice Coupling in Atomically Thin Layers of MnBi₂Te₄. Nano Letters, 2021, 21, 6139-6145.	9.1	25
75	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.	7.1	24
76	Brillouin light scattering spectra as local temperature sensors for thermal magnons and acoustic phonons. Applied Physics Letters, 2013, 102, 082401.	3.3	22
77	Tailoring Semiconductor Lateral Multijunctions for Giant Photoconductivity Enhancement. Advanced Materials, 2017, 29, 1703680.	21.0	21
78	Investigation of electronic coupling in semiconductor double quantum wells using coherent optical two-dimensional Fourier transform spectroscopy. Solid State Communications, 2009, 149, 361-366.	1.9	20
79	Epitaxial Growth of Optically Thick, Single Crystalline Silver Films for Plasmonics. ACS Applied Materials & Interfaces, 2019, 11, 3189-3195.	8.0	20
80	Coherent optical control of semiconductor quantum dots for quantum information processing. Physica E: Low-Dimensional Systems and Nanostructures, 2004, 25, 242-248.	2.7	18
81	Raman coherence beats from the entangled state involving polarized excitons in single quantum dots. Physical Review B, 2004, 70, .	3.2	17
82	Disorder-dependent valley properties in monolayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>WS</mml:mi><mml:msub><mml:mi mathvariant="normal">e</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2017, 96, .	3.2	17
83	Temperature dependence of Brillouin light scattering spectra of acoustic phonons in silicon. Applied Physics Letters, 2015, 106, .	3.3	16
84	Temperature-dependent Brillouin light scattering spectra of magnons in yttrium iron garnet and permalloy. Physical Review B, 2017, 96, .	3.2	16
85	Magnon and phonon thermometry with inelastic light scattering. Journal Physics D: Applied Physics, 2018, 51, 133001.	2.8	16
86	Directional Modulation of Exciton Emission Using Single Dielectric Nanospheres. Advanced Materials, 2021, 33, e2007236.	21.0	15
87	Phonon-Assisted Intervalley Scattering Determines Ultrafast Exciton Dynamics in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>MoSe</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math> Bilayers. Physical Review Letters, 2021, 127, 157403.	7.8	15
88	Enhanced spin-polarization lifetimes in a two-dimensional electron gas in a gate-controlled GaAs quantum well. Physical Review B, 2016, 94, .	3.2	14
89	Characterization of carrier-envelope phase-sensitive photocurrent injection in a semiconductor. Journal of the Optical Society of America B: Optical Physics, 2005, 22, 362.	2.1	13
90	Semiconductor Quantum Dot Lifetime Near an Atomically Smooth Ag Film Exhibits a Narrow Distribution. ACS Photonics, 2016, 3, 1085-1089.	6.6	13

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91	Correlation between the Dzyaloshinskii-Moriya interaction and spin-mixing conductance at an antiferromagnet/ferromagnet interface. Physical Review B, 2018, 98, .	3.2	13
92	Plasmon-enhanced nonlinear yield in the Otto and Kretschmann configurations. Physical Review B, 2018, 98, .	3.2	13
93	Optical dielectric constants of single crystalline silver films in the long wavelength range. Optical Materials Express, 2020, 10, 693.	3.0	13
94	Wavelength modulation spectroscopy of single quantum dots. Applied Physics Letters, 2002, 80, 1876-1878.	3.3	12
95	Pure Spin Current and Magnon Chemical Potential in a Nonequilibrium Magnetic Insulator. Physical Review X, 2020, 10, .	8.9	11
96	Solid-state carrier-envelope-phase noise measurements with intrinsically balanced detection. Optics Express, 2004, 12, 4255.	3.4	10
97	Deviation from exponential decay for spin waves excited with a coplanar waveguide antenna. Applied Physics Letters, 2012, 101, 252409.	3.3	10
98	Self-Assembled InGaAs Quantum Dot Clusters with Controlled Spatial and Spectral Properties. Nano Letters, 2012, 12, 5169-5174.	9.1	10
99	Addition of Monovalent Silver Cations to CH₃NH₃PbBr₃ Produces Crystallographically Oriented Perovskite Thin Films. ACS Applied Energy Materials, 2019, 2, 6087-6096.	5.1	10
100	Dimensional crossover in spin Hall oscillators. Physical Review B, 2020, 102, .	3.2	10
101	Superior photo-carrier diffusion dynamics in organic-inorganic hybrid perovskites revealed by spatiotemporal conductivity imaging. Nature Communications, 2021, 12, 5009.	12.8	10
102	Magnons and magnetic fluctuations in atomically thin MnBi2Te4. Nature Communications, 2022, 13, 2527.	12.8	10
103	Enhancement of Plasmonic Performance in Epitaxial Silver at Low Temperature. Scientific Reports, 2017, 7, 8917.	3.3	9
104	3D Hybrid Trilayer Heterostructure: Tunable Au Nanorods and Optical Properties. ACS Applied Materials & Interfaces, 2020, 12, 45015-45022.	8.0	9
105	Strongly confined excitons in self-assembled InGaAs quantum dot clusters produced by a hybrid growth method. Journal of Applied Physics, 2010, 107, 104302.	2.5	8
106	Coherent coupling between exciton resonances governed by the disorder potential. Physical Review B, 2013, 88, .	3.2	8
107	Quantum Beats in Hybrid Metalâ€“Semiconductor Nanostructures. ACS Photonics, 2015, 2, 1341-1347.	6.6	8
108	Sideband pump-probe technique resolves nonlinear modulation response of PbS/CdS quantum dots on a silicon nitride waveguide. APL Photonics, 2018, 3, 016101.	5.7	8

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109	Study of the perpendicular magnetic anisotropy, spinâ€“orbit torque, and Dzyaloshinskiiâ€“Moriya interaction in the heavy metal/CoFeB bilayers with Ir22Mn78 insertion. Applied Physics Letters, 2020, 116, 242407.	3.3	8
110	Critical role of orbital hybridization in the Dzyaloshinskii-Moriya interaction of magnetic interfaces. Communications Physics, 2022, 5, .	5.3	8
111	Stark control. Nature Physics, 2017, 13, 9-10.	16.7	7
112	Transient nonlinear optical spectroscopy studies involving biexciton coherence in single quantum dots. Physical Review B, 2006, 73, .	3.2	6
113	Accurate Atomic-Scale Imaging of Two-Dimensional Lattices Using Atomic Force Microscopy in Ambient Conditions. Nanomaterials, 2022, 12, 1542.	4.1	6
114	Current control of magnetic anisotropy via stress in a ferromagnetic metal waveguide. Physical Review B, 2016, 93, .	3.2	5
115	Phonon Dephasing Dynamics in MoS₂. Nano Letters, 2021, 21, 1434-1439.	9.1	5
116	Strain-dependent luminescence and piezoelectricity in monolayer transition metal dichalcogenides. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2020, 38, 042205.	1.2	4
117	Non-local coherent coupling between excitons in a disordered quantum well. New Journal of Physics, 2013, 15, 075026.	2.9	3
118	2d Fourier spectroscopy of disordered quantum wells. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 1141-1144.	0.8	2
119	Polarization Properties of a CdSe/ZnS and Au Nanoparticle Dimer. ChemPhysChem, 2012, 13, 2522-2525.	2.1	2
120	Direct Probing of Quantum Dots through Linear and Nonlinear Nano-Optics. Physica Status Solidi (B): Basic Research, 2002, 234, 435-442.	1.5	1
121	Qubit rotation with multiple phase-locked pulses in single quantum dots. , 2003, , .		1
122	Optically Driven Quantum Computing Devices Based on Semiconductor Quantum Dots. Quantum Information Processing, 2004, 3, 147-161.	2.2	1
123	Strong optical magnetism and Fano resonances in asymmetric plasmonic metamolecules. , 2013, , .		1
124	Coherent quantum dynamics of excitons in monolayer transition metal dichalcogenides. Proceedings of SPIE, 2016, , .	0.8	1
125	Dielectric Nanospheres: Directional Modulation of Exciton Emission Using Single Dielectric Nanospheres (Adv. Mater. 20/2021). Advanced Materials, 2021, 33, 2170153.	21.0	1
126	Spin-phonon interaction in yttrium iron garnet. Physical Review B, 2021, 104, .	3.2	1

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127	A Subwavelength Plasmonic Metamolecule Exhibiting Magnetic-Based Optical Fano Resonance. , 2013, , .		1
128	Optical quantum control in a single quantum dot: toward a prototype semiconductor quantum computer. , 0, , .		0
129	Transient nonlinear spectroscopy of biexcitons in single quantum dots. , 0, , .		0
130	Semiconductor Quantum Dots for Quantum Information Processing: An Optical Approach. AIP Conference Proceedings, 2005, , .	0.4	0
131	Photoconductivity: Tailoring Semiconductor Lateral Multijunctions for Giant Photoconductivity Enhancement (Adv. Mater. 41/2017). Advanced Materials, 2017, 29, .	21.0	0
132	Trion valley dynamics in monolayer WSez. , 2017, , .		0
133	Polarized Optical Two-dimensional Fourier Transform Spectroscopy of Semiconductors. , 2006, , .		0
134	Probing Exciton Couplings and Correlations in Semiconductors with Optical Two-Dimensional Fourier Transform Spectroscopy. , 2007, , .		0
135	Polarized Optical Two-dimensional Fourier Transform Spectroscopy of Semiconductors. Springer Series in Chemical Physics, 2007, , 368-370.	0.2	0
136	Plasmonic Nanostructures with Well-Controlled Geometry Lead to Designed Properties. , 2015, , .		0
137	Trion Valley Coherence in Transition Metal Dichalcogenides. , 2017, , .		0
138	Valley Polarization Dynamics of Inter- and Intra-valley Trions in Monolayer WSe2. , 2017, , .		0
139	Ultrafast Dephasing and Coherent Exciton Dynamics in Transition Metal Dichalcogenide Bilayers. , 2020, , .		0
140	Optimizing exciton transport in semiconductors. Light: Science and Applications, 2021, 10, 229.	16.6	0
141	Optically Driven Quantum Computing Devices Based on Semiconductor Quantum Dots. , 2005, , 147-161.		0
142	Twisted 2D electronic and photonic materials and devices. Applied Physics Letters, 2022, 120, 130401.	3.3	0