

# Di Xiao

## List of Publications by Year in descending order

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98  
papers

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docs citations

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times ranked

21391  
citing authors

| #  | ARTICLE   | IF   | CITATIONS |
|----|---|------|-----------|
| 1  | Layer-dependent ferromagnetism in a van der Waals crystal down to the monolayer limit. <i>Nature</i> , 2017, 546, 270-273.  | 27.8 | 3,824     |
| 2  | Berry phase effects on electronic properties. <i>Reviews of Modern Physics</i> , 2010, 82, 1959-2007.   | 45.6 | 3,479     |
| 3  | Two-dimensional material nanophotonics. <i>Nature Photonics</i> , 2014, 8, 899-907.   | 31.4 | 2,362     |
| 4  | Spin and pseudospins in layered transition metal dichalcogenides. <i>Nature Physics</i> , 2014, 10, 343-350.  | 16.7 | 2,204     |
| 5  | Recent Advances in Two-Dimensional Materials beyond Graphene. <i>ACS Nano</i> , 2015, 9, 11509-11539.   | 14.6 | 2,069     |
| 6  | Two-dimensional itinerant ferromagnetism in atomically thin Fe <sub>3</sub> GeTe <sub>2</sub> . <i>Nature Materials</i> , 2018, 17, 778-782.  | 27.5 | 995       |
| 7  | Electrical control of 2D magnetism in bilayer CrI <sub>3</sub> . <i>Nature Nanotechnology</i> , 2018, 13, 544-548.  | 31.5 | 975       |
| 8  | Giant tunneling magnetoresistance in spin-filter van der Waals heterostructures. <i>Science</i> , 2018, 360, 1214-1218.   | 12.6 | 871       |
| 9  | Prediction of intrinsic two-dimensional ferroelectrics in In <sub>2</sub> Se <sub>3</sub> and other III <sub>2</sub> -VI <sub>3</sub> van der Waals materials. <i>Nature Communications</i> , 2017, 8, 14956. | 12.8 | 830       |
| 10 | Three-band tight-binding model for monolayers of group-VIB transition metal dichalcogenides. <i>Physical Review B</i> , 2013, 88, .   | 3.2  | 715       |
| 11 | Van der Waals engineering of ferromagnetic semiconductor heterostructures for spin and valleytronics. <i>Science Advances</i> , 2017, 3, e1603113.  | 10.3 | 635       |
| 12 | Stacking-Dependent Magnetism in Bilayer CrI <sub>3</sub> . <i>Nano Letters</i> , 2018, 18, 7658-7664.   | 9.1  | 475       |
| 13 | Switching 2D magnetic states via pressure tuning of layer stacking. <i>Nature Materials</i> , 2019, 18, 1298-1302.  | 27.5 | 358       |
| 14 | Magnetic ground state of semiconducting transition-metal trichalcogenide monolayers. <i>Physical Review B</i> , 2015, 91, .   | 3.2  | 352       |
| 15 | Light-valley interactions in 2D semiconductors. <i>Nature Photonics</i> , 2018, 12, 451-460.  | 31.4 | 316       |
| 16 | Giant nonreciprocal second-harmonic generation from antiferromagnetic bilayer CrI <sub>3</sub> . <i>Nature</i> , 2019, 572, 497-501.  | 27.8 | 309       |
| 17 | Gate-tunable topological valley transport in bilayer graphene. <i>Nature Physics</i> , 2015, 11, 1027-1031.   | 16.7 | 301       |
| 18 | Valley Manipulation by Optically Tuning the Magnetic Proximity Effect in WSe <sub>2</sub> /CrI <sub>3</sub> Heterostructures. <i>Nano Letters</i> , 2018, 18, 3823-3828.                                      | 9.1  | 281       |

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|----|--|------|-----------|
| 19 | Ligand-field helical luminescence in a 2D ferromagnetic insulator. <i>Nature Physics</i> , 2018, 14, 277-281.  | 16.7 | 275       |
| 20 | Realization of the Axion Insulator State in Quantum Anomalous Hall Sandwich Heterostructures. <i>Physical Review Letters</i> , 2018, 120, 056801.                    | 7.8  | 254       |
| 21 | Atomically Thin CrCl <sub>3</sub> : An In-Plane Layered Antiferromagnetic Insulator. <i>Nano Letters</i> , 2019, 19, 3993-3998.                                      | 9.1  | 240       |
| 22 | Tuning Ising superconductivity with layer and spin-orbit coupling in two-dimensional transition-metal dichalcogenides. <i>Nature Communications</i> , 2018, 9, 1427. | 12.8 | 230       |
| 23 | Valleytronics: Opportunities, Challenges, and Paths Forward. <i>Small</i> , 2018, 14, e1801483.  | 10.0 | 221       |
| 24 | Terahertz Antiferromagnetic Spin Hall Nano-Oscillator. <i>Physical Review Letters</i> , 2016, 116, 207603.   | 7.8  | 216       |
| 25 | Emergent phenomena and proximity effects in two-dimensional magnets and heterostructures. <i>Nature Materials</i> , 2020, 19, 1276-1289.                             | 27.5 | 213       |
| 26 | Semimetals for high-performance photodetection. <i>Nature Materials</i> , 2020, 19, 830-837.   | 27.5 | 181       |
| 27 | Spin Nernst Effect of Magnons in Collinear Antiferromagnets. <i>Physical Review Letters</i> , 2016, 117, 217202.   | 7.8  | 171       |
| 28 | Layer-resolved magnetic proximity effect in van der Waals heterostructures. <i>Nature Nanotechnology</i> , 2020, 15, 187-191.  | 31.5 | 169       |
| 29 | Correlated insulating states at fractional fillings of the WS <sub>2</sub> /WSe <sub>2</sub> moiré lattice. <i>Nature Physics</i> , 2021, 17, 715-719.               | 16.7 | 157       |
| 30 | Generation and transport of valley-polarized current in transition-metal dichalcogenides. <i>Physical Review B</i> , 2014, 90, .                                     | 3.2  | 147       |
| 31 | Direct visualization of magnetic domains and moiré magnetism in twisted 2D magnets. <i>Science</i> , 2021, 374, 1140-1144.   | 12.6 | 144       |
| 32 | Voltage Control of a van der Waals Spin-Filter Magnetic Tunnel Junction. <i>Nano Letters</i> , 2019, 19, 915-920.  | 9.1  | 129       |
| 33 | Topological classification of crystalline insulators with space group symmetry. <i>Physical Review B</i> , 2013, 88, .   | 3.2  | 128       |
| 34 | Plasmon mode as a detection of the chiral anomaly in Weyl semimetals. <i>Physical Review B</i> , 2015, 91, .   | 3.2  | 121       |
| 35 | Direct observation of two-dimensional magnons in atomically thin CrI <sub>3</sub> . <i>Nature Physics</i> , 2021, 17, 20-25.   | 16.7 | 106       |
| 36 | RKKY interaction of magnetic impurities in Dirac and Weyl semimetals. <i>Physical Review B</i> , 2015, 92, .   | 3.2  | 96        |

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|----|--|------|-----------|
| 37 | Berry Phase Modification to the Energy Spectrum of Excitons. <i>Physical Review Letters</i> , 2015, 115, 166803.   | 7.8  | 93        |
| 38 | Gate-Controllable Magneto-optic Kerr Effect in Layered Collinear Antiferromagnets. <i>Physical Review Letters</i> , 2016, 117, 267203.                                       | 7.8  | 93        |
| 39 | Absence of evidence for chiral Majorana modes in quantum anomalous Hall-superconductor devices. <i>Science</i> , 2020, 367, 64-67.   | 12.6 | 93        |
| 40 | Reversible strain-induced magnetic phase transition in a van der Waals magnet. <i>Nature Nanotechnology</i> , 2022, 17, 256-261.   | 31.5 | 93        |
| 41 | Antiferromagnetic Spin Wave Field-Effect Transistor. <i>Scientific Reports</i> , 2016, 6, 24223.   | 3.3  | 92        |
| 42 | Intertwined Topological and Magnetic Orders in Atomically Thin Chern Insulator $\text{MnBi}_2\text{Te}_4$ . <i>Nano Letters</i> , 2021, 21, 2544-2550.                       | 9.1  | 92        |
| 43 | Tuning inelastic light scattering via symmetry control in the two-dimensional magnet $\text{CrI}_3$ . <i>Nature Nanotechnology</i> , 2020, 15, 212-216.                      | 31.5 | 90        |
| 44 | Spin chirality fluctuation in two-dimensional ferromagnets with perpendicular magnetic anisotropy. <i>Nature Materials</i> , 2019, 18, 1054-1059.                            | 27.5 | 85        |
| 45 | Spontaneous gyrotropic electronic order in a transition-metal dichalcogenide. <i>Nature</i> , 2020, 578, 545-549.  | 27.8 | 80        |
| 46 | Ultrafast switching of antiferromagnets via spin-transfer torque. <i>Physical Review B</i> , 2015, 91, .   | 3.2  | 78        |
| 47 | Thermal Hall Effect Induced by Magnon-Phonon Interactions. <i>Physical Review Letters</i> , 2019, 123, 167202.   | 7.8  | 75        |
| 48 | Highly anisotropic excitons and multiple phonon bound states in a van der Waals antiferromagnetic insulator. <i>Nature Nanotechnology</i> , 2021, 16, 655-660.               | 31.5 | 72        |
| 49 | Concurrence of quantum anomalous Hall and topological Hall effects in magnetic topological insulator sandwich heterostructures. <i>Nature Materials</i> , 2020, 19, 732-737. | 27.5 | 72        |
| 50 | Spin Hall effect in spin-valley coupled monolayers of transition metal dichalcogenides. <i>Physical Review B</i> , 2013, 88, .   | 3.2  | 65        |
| 51 | Correlation effects in (111) bilayers of perovskite transition-metal oxides. <i>Physical Review B</i> , 2014, 89, .  | 3.2  | 63        |
| 52 | Strong interaction between interlayer excitons and correlated electrons in $\text{WSe}_2/\text{WS}_2$ moiré superlattice. <i>Nature Communications</i> , 2021, 12, 3608.     | 12.8 | 63        |
| 53 | Light-induced ferromagnetism in moiré superlattices. <i>Nature</i> , 2022, 604, 468-473.   | 27.8 | 61        |
| 54 | Spin-orbit-coupled quantum wires and Majorana fermions on zigzag edges of monolayer transition-metal dichalcogenides. <i>Physical Review B</i> , 2014, 89, .                 | 3.2  | 60        |

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|----|--|------|-----------|
| 55 | Intrinsic Nonlinear Hall Effect in Antiferromagnetic Tetragonal CuMnAs. <i>Physical Review Letters</i> , 2021, 127, 277201.  | 7.8  | 59        |
| 56 | Stacking Domain Wall Magnons in Twisted van der Waals Magnets. <i>Physical Review Letters</i> , 2020, 125, 247201.   | 7.8  | 58        |
| 57 | Effect of doping and strain modulations on electron transport in monolayer MoS <sub>2</sub> . <i>Physical Review B</i> , 2014, 90, .                                 | 3.2  | 56        |
| 58 | Magnetic domain wall skyrmions. <i>Physical Review B</i> , 2019, 99, .   | 3.2  | 51        |
| 59 | Tunable Layer Circular Photogalvanic Effect in Twisted Bilayers. <i>Physical Review Letters</i> , 2020, 124, 077401.   | 7.8  | 51        |
| 60 | Nonreciprocal Directional Dichroism Induced by the Quantum Metric Dipole. <i>Physical Review Letters</i> , 2019, 122, 227402.  | 7.8  | 48        |
| 61 | Microscopic theory of spin toroidization in periodic crystals. <i>Physical Review B</i> , 2018, 97, .  | 3.2  | 47        |
| 62 | Optical Selection Rule of Excitons in Gapped Chiral Fermion Systems. <i>Physical Review Letters</i> , 2018, 120, 077401.   | 7.8  | 44        |
| 63 | Multiple hot-carrier collection in photo-excited graphene Moiré superlattices. <i>Science Advances</i> , 2016, 2, e1600002.  | 10.3 | 42        |
| 64 | Direct measurement of ferroelectric polarization in a tunable semimetal. <i>Nature Communications</i> , 2021, 12, 5298.  | 12.8 | 42        |
| 65 | Raman scattering and anomalous Stokes-anti-Stokes ratio in MoTe <sub>2</sub> atomic layers. <i>Scientific Reports</i> , 2016, 6, 28024.                              | 3.3  | 41        |
| 66 | Topological spin Hall effects and tunable skyrmion Hall effects in uniaxial antiferromagnetic insulators. <i>Physical Review B</i> , 2019, 99, .                     | 3.2  | 39        |
| 67 | Nonabelian magnonics in antiferromagnets. <i>Physical Review B</i> , 2018, 98, .   | 3.2  | 38        |
| 68 | Flat Bands and Mechanical Deformation Effects in the Moiré Superlattice of MoS <sub>2</sub> -WSe <sub>2</sub> Heterobilayers. <i>ACS Nano</i> , 2020, 14, 7564-7573. | 14.6 | 38        |
| 69 | Observation of Giant Optical Linear Dichroism in a Zigzag Antiferromagnet FePS <sub>3</sub> . <i>Nano Letters</i> , 2021, 21, 6938-6945.                             | 9.1  | 37        |
| 70 | Electric control of a canted-antiferromagnetic Chern insulator. <i>Nature Communications</i> , 2022, 13, 1668.   | 12.8 | 37        |
| 71 | Interface-induced sign reversal of the anomalous Hall effect in magnetic topological insulator heterostructures. <i>Nature Communications</i> , 2021, 12, 79.        | 12.8 | 31        |
| 72 | Anomalous Thermal Hall Effect in an Insulating van der Waals Magnet. <i>Physical Review Letters</i> , 2021, 127, 247202.   | 7.8  | 31        |

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|----|--|------|-----------|
| 73 | Magnetism and Its Structural Coupling Effects in 2D Ising Ferromagnetic Insulator $V_2O_3$ . Nano Letters, 2021, 21, 9180-9186.                                  | 9.1  | 28        |
| 74 | Linear magnetoresistance induced by intra-scattering semiclassics of Bloch electrons. Physical Review B, 2020, 101, .  | 3.2  | 24        |
| 75 | Observation of Interfacial Antiferromagnetic Coupling between Magnetic Topological Insulator and Antiferromagnetic Insulator. Nano Letters, 2019, 19, 2945-2952. | 9.1  | 23        |
| 76 | Oxygen vacancies on SrO-terminated $SrTi_3O_{10}$ studied by scanning tunneling spectroscopy. Physical Review B, 2015, 91, .                                     | 3.2  | 22        |
| 77 | Spin-Nernst effect in the paramagnetic regime of an antiferromagnetic insulator. Physical Review B, 2018, 98, .  | 3.2  | 21        |
| 78 | Thickness-dependent carrier density at the surface of $SrTiO_3$ slabs. Physical Review B, 2014, 89, .  | 3.2  | 20        |
| 79 | Transition-Metal Oxide (111) Bilayers. Journal of the Physical Society of Japan, 2018, 87, 041006.   | 1.6  | 20        |
| 80 | Anomalous Quantum Oscillations of Interacting Electron-Hole Gases in Inverted Type-II InAs/GaSb Quantum Wells. Physical Review Letters, 2019, 122, 186802.       | 7.8  | 20        |
| 81 | Scaling behavior of the quantum phase transition from a quantum-anomalous-Hall insulator to an axion insulator. Nature Communications, 2020, 11, 4532.           | 12.8 | 20        |
| 82 | Manipulating anomalous Hall antiferromagnets with magnetic fields. Physical Review B, 2020, 101, .   | 3.2  | 19        |
| 83 | Dynamic Feedback in Ferromagnetic "Spin Hall Metal Heterostructures. Physical Review Letters, 2016, 117, 097202.   | 7.8  | 17        |
| 84 | Tunable Intrinsic Plasmons due to Band Inversion in Topological Materials. Physical Review Letters, 2017, 119, 266804.   | 7.8  | 15        |
| 85 | Antiferromagnet-based magnonic spin-transfer torque. Physical Review B, 2018, 98, .  | 3.2  | 15        |
| 86 | Chiral-Bubble-Induced Topological Hall Effect in Ferromagnetic Topological Insulator Heterostructures. Nano Letters, 2021, 21, 1108-1114.                        | 9.1  | 15        |
| 87 | Quantum oscillations in the field-induced ferromagnetic state of $MnBi_2$ . Physical Review B, 2021, 103, .  | 3.2  | 15        |
| 88 | Spin photovoltaic effect in magnetic van der Waals heterostructures. Science Advances, 2021, 7, eabg8094.  | 10.3 | 15        |
| 89 | Nonlinear nanoelectrodynamics of a Weyl metal. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .                     | 7.1  | 15        |
| 90 | Disorder-induced topological phase transitions in two-dimensional spin-orbit coupled superconductors. Scientific Reports, 2016, 6, 39188.                        | 3.3  | 14        |

