Kin Fai Mak

List of Publications by Year
in descending order

93 papers	41,841 citations	23879 60 h-index	54771 88 g-index
100 all docs	100 docs citations	100 times ranked	35742 citing authors

#	Article	IF	Citations
1	Coexisting ferromagneticâ€“antiferromagnetic state in twisted bilayer CrI3. Nature Nanotechnology, 2022, 17, 143-147.	15.6	115
2	Valley-Polarized Quantum Anomalous Hall State in MoirÃ© <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>MoTe</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></ Heterobilayers. Physical Review Letters, 2022, 128, 026402.	2.9	48
3	Reproducibility in the fabrication and physics of moirÃ© materials. Nature, 2022, 602, 41-50.	13.7	97
4	Dipolar excitonic insulator in a moirÃ© lattice. Nature Physics, 2022, 18, 395-400.	6.5	65
5	Strong interlayer interactions in bilayer and trilayer moirÃ© superlattices. Science Advances, 2022, 8, eabk1911.	4.7	9
6	van der Waals Ï€ Josephson Junctions. Nano Letters, 2022, 22, 5510-5515.	4.5	9
7	Semiconductor moirÃ© materials. Nature Nanotechnology, 2022, 17, 686-695.	15.6	129
8	Tuning layer-hybridized moirÃ© excitons by the quantum-confined Stark effect. Nature Nanotechnology, 2021, 16, 52-57.	15.6	60
9	Site-Controlled and Optically Accessible Single Spins in van der Waals Heterostructures. , 2021, , .		0
10	The marvels of moirÃ© materials. Nature Reviews Materials, 2021, 6, 201-206.	23.3	262
11	Tunable Exciton-Optomechanical Coupling in Suspended Monolayer MoSe₂. Nano Letters, 2021, 21, 2538-2543.	4.5	25
12	Stripe phases in WSe2/WS2 moirÃ© superlattices. Nature Materials, 2021, 20, 940-944.	13.3	137
13	Two-fold symmetric superconductivity in few-layer NbSe2. Nature Physics, 2021, 17, 949-954.	6.5	65
14	Spin Dynamics Slowdown near the Antiferromagnetic Critical Point in Atomically Thin FePS₃. Nano Letters, 2021, 21, 5045-5052.	4.5	21
15	Charge-order-enhanced capacitance in semiconductor moirÃ© superlattices. Nature Nanotechnology, 2021, 16, 1068-1072.	15.6	40
16	Continuous Mott transition in semiconductor moireÌ•superlattices. Nature, 2021, 597, 350-354.	13.7	174
17	Creation of moireÌ•bands in a monolayer semiconductor by spatially periodic dielectric screening. Nature Materials, 2021, 20, 645-649.	13.3	45
18	Air-Stable and Layer-Dependent Ferromagnetism in Atomically Thin van der Waals CrPS₄. ACS Nano, 2021, 15, 16904-16912.	7.3	34

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19	Strongly correlated excitonic insulator in atomic double layers. Nature, 2021, 598, 585-589.	13.7	105
20	Quantum anomalous Hall effect from intertwined moirÃ© bands. Nature, 2021, 600, 641-646.	13.7	181
21	Quantum Oscillations in Two-Dimensional Insulators Induced by Graphite Gates. Physical Review Letters, 2021, 127, 247702.	2.9	12
22	Magnetoâ€Memristive Switching in a 2D Layer Antiferromagnet. Advanced Materials, 2020, 32, e1905433.	11.1	21
23	Correlated insulating states at fractional fillings of moirÃ© superlattices. Nature, 2020, 587, 214-218.	13.7	315
24	Strain relaxation induced transverse resistivity anomalies in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Sr</mml:mi><mml:mi>Ru</mml:mi><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math> thin films. Physical Review B, 2020, 102, .	1.1	15
25	Spectral and spatial isolation of single tungsten diselenide quantum emitters using hexagonal boron nitride wrinkles. APL Photonics, 2020, 5, 096105.	3.0	7
26	Observation of site-controlled localized charged excitons in CrI3/WSe2 heterostructures. Nature Communications, 2020, 11, 5502.	5.8	23
27	Manipulation of the van der Waals Magnet Cr₂Ge₂Te₆ by Spinâ€"Orbit Torques. Nano Letters, 2020, 20, 7482-7488.	4.5	59
28	Gate-tunable spin waves in antiferromagnetic atomic bilayers. Nature Materials, 2020, 19, 838-842.	13.3	90
29	Imaging and control of critical fluctuations in two-dimensional magnets. Nature Materials, 2020, 19, 1290-1294.	13.3	28
30	Simulation of Hubbard model physics in WSe2/WS2 moirÃ© superlattices. Nature, 2020, 579, 353-358.	13.7	511
31	Exchange magnetostriction in two-dimensional antiferromagnets. Nature Materials, 2020, 19, 1295-1299.	13.3	69
32	Memristive Switching: Magnetoâ€Memristive Switching in a 2D Layer Antiferromagnet (Adv. Mater.) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	11.1	0
33	Electrical switching of valley polarization in monolayer semiconductors. Physical Review Materials, 2020, 4, .	0.9	19
34	Layer-dependent spin-orbit torques generated by the centrosymmetric transition metal dichalcogenide <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Î²</mml:mi><mml:mo>â^'</mml:mo><mml:msub><mml:m Physical Review B, 2019, 100, .	1.1	61
35	Pressure-controlled interlayer magnetism in atomically thin CrI3. Nature Materials, 2019, 18, 1303-1308.	13.3	364
36	Long valley lifetime of dark excitons in single-layer WSe2. Nature Communications, 2019, 10, 4047.	5.8	53

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37	Probing and controlling magnetic states in 2D layered magnetic materials. Nature Reviews Physics, 2019, 1, 646-661.	11.9	290
38	Probing many-body interactions in monolayer transition-metal dichalcogenides. Physical Review B, 2019, 99, .	1.1	56
39	Evolution of interlayer and intralayer magnetism in three atomically thin chromium trihalides. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 11131-11136.	3.3	223
40	Spin tunnel field-effect transistors based on two-dimensional van der Waals heterostructures. Nature Electronics, 2019, 2, 159-163.	13.1	198
41	Nonlinear anomalous Hall effect in few-layer WTe2. Nature Materials, 2019, 18, 324-328.	13.3	281
42	Evidence of high-temperature exciton condensation in two-dimensional atomic double layers. Nature, 2019, 574, 76-80.	13.7	331
43	Valley-Selective Exciton Bistability in a Suspended Monolayer Semiconductor. Nano Letters, 2018, 18, 3213-3220.	4.5	10
44	Strongly Interaction-Enhanced Valley Magnetic Response 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, 120, 066402.	2.9	45
45	An unusual continuous paramagnetic-limited superconducting phase transition in 2D NbSe 2. Nature Materials, 2018, 17, 504-508.	13.3	98
46	Electric-field switching of two-dimensional van der Waals magnets. Nature Materials, 2018, 17, 406-410.	13.3	671
47	Electrical Tuning of Interlayer Exciton Gases in WSe₂ Bilayers. Nano Letters, 2018, 18, 137-143.	4.5	106
48	Opportunities and challenges of interlayer exciton control and manipulation. Nature Nanotechnology, 2018, 13, 974-976.	15.6	60
49	Lightâ€“valley interactions in 2D semiconductors. Nature Photonics, 2018, 12, 451-460.	15.6	316
50	Controlling magnetism in 2D CrI3 by electrostatic doping. Nature Nanotechnology, 2018, 13, 549-553.	15.6	836
51	Mirrors made of a single atomic layer. Nature, 2018, 556, 177-178.	13.7	5
52	Probing the Spin-Polarized Electronic Band Structure in Monolayer Transition Metal Dichalcogenides by Optical Spectroscopy. Nano Letters, 2017, 17, 740-746.	4.5	108
53	2D materials for silicon photonics. Nature Nanotechnology, 2017, 12, 1121-1122.	15.6	22
54	Valley magnetoelectricity in single-layer MoS2. Nature Materials, 2017, 16, 887-891.	13.3	150

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55	Valley- and spin-polarized Landau levels in monolayer WSe2. Nature Nanotechnology, 2017, 12, 144-149.	15.6	150
56	Photonics and optoelectronics of 2D semiconductor transition metal dichalcogenides. Nature Photonics, 2016, 10, 216-226.	15.6	2,779
57	Gate Tuning of Electronic Phase Transitions in Two-Dimensional<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>NbSe</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></ Physical Review Letters, 2016, 117, 106801.	2.9	151
58	Electrical control of the valley Hall effect in bilayer MoS2 transistors. Nature Nanotechnology, 2016, 11, 421-425.	15.6	342
59	Ising pairing in superconducting NbSe2 atomicÂlayers. Nature Physics, 2016, 12, 139-143.	6.5	806
60	Breaking of Valley Degeneracy by Magnetic Field in Monolayer<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, 2015, 114, 037401.	2.9	566
61	Strongly enhanced charge-density-wave order in monolayer NbSe2. Nature Nanotechnology, 2015, 10, 765-769.	15.6	643
62	Effect of Surface States on Terahertz Emission from the Bi2Se3 Surface. Scientific Reports, 2015, 5, 10308.	1.6	34
63	High-mobility three-atom-thick semiconducting films with wafer-scale homogeneity. Nature, 2015, 520, 656-660.	13.7	1,562
64	Possible Topological Superconducting Phases of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>MoS</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></ Physical Review Letters, 2014, 113, 097001.	2.9	133
65	Tightly 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:mrow><mml:mn>2</mml:mn></ Physical Review Letters, 2014, 113, 026803.	2.9	964
66	Tuning Many-Body Interactions in Graphene: The Effects of Doping on Excitons and Carrier Lifetimes. Physical Review Letters, 2014, 112, .	2.9	74
67	Observation of intra- and inter-band transitions in the transient optical response of graphene. New Journal of Physics, 2013, 15, 015009.	1.2	87
68	Electro-optical Modulation in Graphene Integrated Photonic Crystal Nanocavities. , 2013, , .		0
69	Real-Time Observation of Interlayer Vibrations in Bilayer and Few-Layer Graphene. Nano Letters, 2013, 13, 4620-4623.	4.5	54
70	THz-emission probe of surface-electronic transitions in a topological insulator. , 2013, , .		0
71	High-Contrast Electrooptic Modulation of a Photonic Crystal Nanocavity by Electrical Gating of Graphene. Nano Letters, 2013, 13, 691-696.	4.5	177
72	Tightly bound trions in monolayer MoS2. Nature Materials, 2013, 12, 207-211.	13.3	2,329

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73	Experimental Demonstration of Continuous Electronic Structure Tuning via Strain in Atomically Thin MoS₂. Nano Letters, 2013, 13, 2931-2936.	4.5	808
74	Probing Symmetry Properties of Few-Layer MoS₂ and h-BN by Optical Second-Harmonic Generation. Nano Letters, 2013, 13, 3329-3333.	4.5	848
75	Observation of intense second harmonic generation from MoS<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>atomic crystals. Physical Review B, 2013, 87, .	1.1	566
76	Imaging the crystal structure of few-layer two-dimensional crystals by optical nonlinearity. , 2013, , .		0
77	Controlling the spontaneous emission rate of monolayer MoS₂ in a photonic crystal nanocavity. Applied Physics Letters, 2013, 103, 181119.	1.5	194
78	Optical spectroscopy of graphene: From the far infrared to the ultraviolet. Solid State Communications, 2012, 152, 1341-1349.	0.9	601
79	Strong Enhancement of Lightâ€“Matter Interaction in Graphene Coupled to a Photonic Crystal Nanocavity. Nano Letters, 2012, 12, 5626-5631.	4.5	248
80	Structure-Dependent Fano Resonances in the Infrared Spectra of Phonons in Few-Layer Graphene. Physical Review Letters, 2012, 108, 156801.	2.9	59
81	Control of valley polarization in monolayer MoS2 by optical helicity. Nature Nanotechnology, 2012, 7, 494-498.	15.6	3,280
82	Seeing Many-Body Effects in Single- and Few-Layer Graphene: Observation of Two-Dimensional Saddle-Point Excitons. Physical Review Letters, 2011, 106, 046401.	2.9	358
83	Observation of an electrically tunable band gap in trilayer graphene. Nature Physics, 2011, 7, 944-947.	6.5	488
84	Atomically Thin<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>MoS</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math>: A New Direct-Gap Semiconductor. Physical Review Letters, 2010, 105, 136805.	2.9	12,565
85	Measurement of the thermal conductance of the graphene/SiO2 interface. Applied Physics Letters, 2010, 97, .	1.5	161
86	Ultrafast Photoluminescence from Graphene. Physical Review Letters, 2010, 105, 127404.	2.9	403
87	Electronic Structure of Few-Layer Graphene: Experimental Demonstration of Strong Dependence on Stacking Sequence. Physical Review Letters, 2010, 104, 176404.	2.9	257
88	The evolution of electronic structure in few-layer graphene revealed by optical spectroscopy. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 14999-15004.	3.3	189
89	Electron and Optical Phonon Temperatures in Electrically Biased Graphene. Physical Review Letters, 2010, 104, 227401.	2.9	190
90	Ultraflat graphene. Nature, 2009, 462, 339-341.	13.7	619

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91	Time-resolved Raman spectroscopy of optical phonons in graphite: Phonon anharmonic coupling and anomalous stiffening. Physical Review B, 2009, 80, .	1.1	121
92	Observation of an Electric-Field-Induced Band Gap in Bilayer Graphene by Infrared Spectroscopy. Physical Review Letters, 2009, 102, 256405.	2.9	555
93	Measurement of the Optical Conductivity of Graphene. Physical Review Letters, 2008, 101, 196405.	2.9	1,398