Kin Fai Mak

List of Publications by Year
in descending order

93 papers	41,841 citations	20759 60 h-index	48187 88 g-index
100 all docs	100 docs citations	100 times ranked	30898 citing authors

#	Article	IF	Citations
1	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
2	Control of valley polarization in monolayer MoS2 by optical helicity. Nature Nanotechnology, 2012, 7, 494-498.	15.6	3,280
3	Photonics and optoelectronics of 2D semiconductor transition metal dichalcogenides. Nature Photonics, 2016, 10, 216-226.	15.6	2,779
4	Tightly bound trions in monolayer MoS2. Nature Materials, 2013, 12, 207-211.	13.3	2,329
5	High-mobility three-atom-thick semiconducting films with wafer-scale homogeneity. Nature, 2015, 520, 656-660.	13.7	1,562
6	Measurement of the Optical Conductivity of Graphene. Physical Review Letters, 2008, 101, 196405.	2.9	1,398
7	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
8	Probing Symmetry Properties of Few-Layer MoS₂ and h-BN by Optical Second-Harmonic Generation. Nano Letters, 2013, 13, 3329-3333.	4.5	848
9	Controlling magnetism in 2D CrI3 by electrostatic doping. Nature Nanotechnology, 2018, 13, 549-553.	15.6	836
10	Experimental Demonstration of Continuous Electronic Structure Tuning via Strain in Atomically Thin MoS₂. Nano Letters, 2013, 13, 2931-2936.	4.5	808
11	Ising pairing in superconducting NbSe2 atomicÂlayers. Nature Physics, 2016, 12, 139-143.	6.5	806
12	Electric-field switching of two-dimensional van der Waals magnets. Nature Materials, 2018, 17, 406-410.	13.3	671
13	Strongly enhanced charge-density-wave order in monolayer NbSe2. Nature Nanotechnology, 2015, 10, 765-769.	15.6	643
14	Ultraflat graphene. Nature, 2009, 462, 339-341.	13.7	619
15	Optical spectroscopy of graphene: From the far infrared to the ultraviolet. Solid State Communications, 2012, 152, 1341-1349.	0.9	601
16	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
17	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
18	Observation of an Electric-Field-Induced Band Gap in Bilayer Graphene by Infrared Spectroscopy. Physical Review Letters, 2009, 102, 256405.	2.9	555

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19	Simulation of Hubbard model physics in WSe2/WS2 moirÃ© superlattices. Nature, 2020, 579, 353-358.	13.7	511
20	Observation of an electrically tunable band gap in trilayer graphene. Nature Physics, 2011, 7, 944-947.	6.5	488
21	Ultrafast Photoluminescence from Graphene. Physical Review Letters, 2010, 105, 127404.	2.9	403
22	Pressure-controlled interlayer magnetism in atomically thin CrI3. Nature Materials, 2019, 18, 1303-1308.	13.3	364
23	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
24	Electrical control of the valley Hall effect in bilayer MoS2 transistors. Nature Nanotechnology, 2016, 11, 421-425.	15.6	342
25	Evidence of high-temperature exciton condensation in two-dimensional atomic double layers. Nature, 2019, 574, 76-80.	13.7	331
26	Lightâ€"valley interactions in 2D semiconductors. Nature Photonics, 2018, 12, 451-460.	15.6	316
27	Correlated insulating states at fractional fillings of moirÃ© superlattices. Nature, 2020, 587, 214-218.	13.7	315
28	Probing and controlling magnetic states in 2D layered magnetic materials. Nature Reviews Physics, 2019, 1, 646-661.	11.9	290
29	Nonlinear anomalous Hall effect in few-layer WTe2. Nature Materials, 2019, 18, 324-328.	13.3	281
30	The marvels of moirÃ© materials. Nature Reviews Materials, 2021, 6, 201-206.	23.3	262
31	Electronic Structure of Few-Layer Graphene: Experimental Demonstration of Strong Dependence on Stacking Sequence. Physical Review Letters, 2010, 104, 176404.	2.9	257
32	Strong Enhancement of Lightâ€"Matter Interaction in Graphene Coupled to a Photonic Crystal Nanocavity. Nano Letters, 2012, 12, 5626-5631.	4.5	248
33	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
34	Spin tunnel field-effect transistors based on two-dimensional van der Waals heterostructures. Nature Electronics, 2019, 2, 159-163.	13.1	198
35	Controlling the spontaneous emission rate of monolayer MoS₂ in a photonic crystal nanocavity. Applied Physics Letters, 2013, 103, 181119.	1.5	194
36	Electron and Optical Phonon Temperatures in Electrically Biased Graphene. Physical Review Letters, 2010, 104, 227401.	2.9	190

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37	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
38	Quantum anomalous Hall effect from intertwined moirÃ© bands. Nature, 2021, 600, 641-646.	13.7	181
39	High-Contrast Electrooptic Modulation of a Photonic Crystal Nanocavity by Electrical Gating of Graphene. Nano Letters, 2013, 13, 691-696.	4.5	177
40	Continuous Mott transition in semiconductor moireÌ•superlattices. Nature, 2021, 597, 350-354.	13.7	174
41	Measurement of the thermal conductance of the graphene/SiO2 interface. Applied Physics Letters, 2010, 97, .	1.5	161
42	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
43	Valley magnetoelectricity in single-layer MoS2. Nature Materials, 2017, 16, 887-891.	13.3	150
44	Valley- and spin-polarized Landau levels in monolayer WSe2. Nature Nanotechnology, 2017, 12, 144-149.	15.6	150
45	Stripe phases in WSe2/WS2 moirÃ© superlattices. Nature Materials, 2021, 20, 940-944.	13.3	137
46	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></r Physical Review Letters, 2014, 113, 097001.	2.9	133
47	Semiconductor moirÃ© materials. Nature Nanotechnology, 2022, 17, 686-695.	15.6	129
48	Time-resolved Raman spectroscopy of optical phonons in graphite: Phonon anharmonic coupling and anomalous stiffening. Physical Review B, 2009, 80, .	1.1	121
49	Coexisting ferromagneticâ€"antiferromagnetic state in twisted bilayer CrI3. Nature Nanotechnology, 2022, 17, 143-147.	15.6	115
50	Probing the Spin-Polarized Electronic Band Structure in Monolayer Transition Metal Dichalcogenides by Optical Spectroscopy. Nano Letters, 2017, 17, 740-746.	4.5	108
51	Electrical Tuning of Interlayer Exciton Gases in WSe₂ Bilayers. Nano Letters, 2018, 18, 137-143.	4.5	106
52	Strongly correlated excitonic insulator in atomic double layers. Nature, 2021, 598, 585-589.	13.7	105
53	An unusual continuous paramagnetic-limited superconducting phase transition in 2D NbSe 2. Nature Materials, 2018, 17, 504-508.	13.3	98
54	Reproducibility in the fabrication and physics of moirÃ© materials. Nature, 2022, 602, 41-50.	13.7	97

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55	Gate-tunable spin waves in antiferromagnetic atomic bilayers. Nature Materials, 2020, 19, 838-842.	13.3	90
56	Observation of intra- and inter-band transitions in the transient optical response of graphene. New Journal of Physics, 2013, 15, 015009.	1.2	87
57	Tuning Many-Body Interactions in Graphene: The Effects of Doping on Excitons and Carrier Lifetimes. Physical Review Letters, 2014, 112, .	2.9	74
58	Exchange magnetostriction in two-dimensional antiferromagnets. Nature Materials, 2020, 19, 1295-1299.	13.3	69
59	Two-fold symmetric superconductivity in few-layer NbSe2. Nature Physics, 2021, 17, 949-954.	6.5	65
60	Dipolar excitonic insulator in a moirÃ© lattice. Nature Physics, 2022, 18, 395-400.	6.5	65
61	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>âˆ’</mml:mo><mml:msub><mm Physical Review B, 2019, 100, .	1.1	61
62	Opportunities and challenges of interlayer exciton control and manipulation. Nature Nanotechnology, 2018, 13, 974-976.	15.6	60
63	Tuning layer-hybridized moirÃ© excitons by the quantum-confined Stark effect. Nature Nanotechnology, 2021, 16, 52-57.	15.6	60
64	Structure-Dependent Fano Resonances in the Infrared Spectra of Phonons in Few-Layer Graphene. Physical Review Letters, 2012, 108, 156801.	2.9	59
65	Manipulation of the van der Waals Magnet Cr₂Ge₂Te₆ by Spinâ€"Orbit Torques. Nano Letters, 2020, 20, 7482-7488.	4.5	59
66	Probing many-body interactions in monolayer transition-metal dichalcogenides. Physical Review B, 2019, 99, .	1.1	56
67	Real-Time Observation of Interlayer Vibrations in Bilayer and Few-Layer Graphene. Nano Letters, 2013, 13, 4620-4623.	4.5	54
68	Long valley lifetime of dark excitons in single-layer WSe2. Nature Communications, 2019, 10, 4047.	5.8	53
69	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
70	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
71	Creation of moirèbands in a monolayer semiconductor by spatially periodic dielectric screening. Nature Materials, 2021, 20, 645-649.	13.3	45
72	Charge-order-enhanced capacitance in semiconductor moirÃ© superlattices. Nature Nanotechnology, 2021, 16, 1068-1072.	15.6	40

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73	Effect of Surface States on Terahertz Emission from the Bi2Se3 Surface. Scientific Reports, 2015, 5, 10308.	1.6	34
74	Air-Stable and Layer-Dependent Ferromagnetism in Atomically Thin van der Waals CrPS₄. ACS Nano, 2021, 15, 16904-16912.	7.3	34
75	Imaging and control of critical fluctuations in two-dimensional magnets. Nature Materials, 2020, 19, 1290-1294.	13.3	28
76	Tunable Exciton-Optomechanical Coupling in Suspended Monolayer MoSe₂. Nano Letters, 2021, 21, 2538-2543.	4.5	25
77	Observation of site-controlled localized charged excitons in CrI3/WSe2 heterostructures. Nature Communications, 2020, 11, 5502.	5.8	23
78	2D materials for silicon photonics. Nature Nanotechnology, 2017, 12, 1121-1122.	15.6	22
79	Magnetoâ€Memristive Switching in a 2D Layer Antiferromagnet. Advanced Materials, 2020, 32, e1905433.	11.1	21
80	Spin Dynamics Slowdown near the Antiferromagnetic Critical Point in Atomically Thin FePS₃. Nano Letters, 2021, 21, 5045-5052.	4.5	21
81	Electrical switching of valley polarization in monolayer semiconductors. Physical Review Materials, 2020, 4, .	0.9	19
82	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
83	Quantum Oscillations in Two-Dimensional Insulators Induced by Graphite Gates. Physical Review Letters, 2021, 127, 247702.	2.9	12
84	Valley-Selective Exciton Bistability in a Suspended Monolayer Semiconductor. Nano Letters, 2018, 18, 3213-3220.	4.5	10
85	Strong interlayer interactions in bilayer and trilayer moirÃ© superlattices. Science Advances, 2022, 8, eabk1911.	4.7	9
86	van der Waals Ï€ Josephson Junctions. Nano Letters, 2022, 22, 5510-5515.	4.5	9
87	Spectral and spatial isolation of single tungsten diselenide quantum emitters using hexagonal boron nitride wrinkles. APL Photonics, 2020, 5, 096105.	3.0	7
88	Mirrors made of a single atomic layer. Nature, 2018, 556, 177-178.	13.7	5
89	Electro-optical Modulation in Graphene Integrated Photonic Crystal Nanocavities. , 2013, , .		0
90	THz-emission probe of surface-electronic transitions in a topological insulator. , 2013, , .		0

#	Article	IF	Citations
91	Imaging the crystal structure of few-layer two-dimensional crystals by optical nonlinearity. , 2013, , .		0
92	Memristive Switching: Magnetoâ€Memristive Switching in a 2D Layer Antiferromagnet (Adv. Mater.) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	11.1	0
93	Site-Controlled and Optically Accessible Single Spins in van der Waals Heterostructures. , 2021, , .		0