Kin Fai Mak

List of Publications by Year in Descending Order

88 papers	31,006 citations	49 h-index	100 g-index
100 ext. papers	36,652 ext. citations	19.7 avg, IF	7.71 L-index

#	Paper	IF	Citations
88	Valley-Polarized Quantum Anomalous Hall State in Moiré MoTe_{2}/WSe_{2} Heterobilayers.. *Physical Review Letters*, **2022**, 128, 026402	7.4	7
87	Reproducibility in the fabrication and physics of moiré materials.. *Nature*, **2022**, 602, 41-50	50.4	11
86	Strong interlayer interactions in bilayer and trilayer moiré superlattices.. *Science Advances*, **2022**, 8, eabk1911	14.1	1
85	Quantum anomalous Hall effect from intertwined moiré bands.. *Nature*, **2021**, 600, 641-646	50.4	18
84	Coexisting ferromagnetic-antiferromagnetic state in twisted bilayer CrI. *Nature Nanotechnology*, **2021**,	28.7	14
83	Air-Stable and Layer-Dependent Ferromagnetism in Atomically Thin van der Waals CrPS. *ACS Nano*, **2021**, 15, 16904-16912	16.7	6
82	Strongly correlated excitonic insulator in atomic double layers. *Nature*, **2021**, 598, 585-589	50.4	18
81	The marvels of moiré materials. *Nature Reviews Materials*, **2021**, 6, 201-206	73.3	41
80	Tunable Exciton-Optomechanical Coupling in Suspended Monolayer MoSe. *Nano Letters*, **2021**, 21, 2538-2543	11.3	7
79	Stripe phases in WSe/WS moiré superlattices. *Nature Materials*, **2021**, 20, 940-944	27	41
78	Two-fold symmetric superconductivity in few-layer NbSe2. *Nature Physics*, **2021**, 17, 949-954	16.2	14
77	Spin Dynamics Slowdown near the Antiferromagnetic Critical Point in Atomically Thin FePS. *Nano Letters*, **2021**, 21, 5045-5052	11.5	3
76	Tuning layer-hybridized moiré excitons by the quantum-confined Stark effect. *Nature Nanotechnology*, **2021**, 16, 52-57	28.7	18
75	Charge-order-enhanced capacitance in semiconductor moiré superlattices. *Nature Nanotechnology*, **2021**, 16, 1068-1072	28.7	9
74	Continuous Mott transition in semiconductor moiré superlattices. *Nature*, **2021**, 597, 350-354	50.4	29
73	Creation of moiré bands in a monolayer semiconductor by spatially periodic dielectric screening. *Nature Materials*, **2021**, 20, 645-649	27	15
72	Quantum Oscillations in Two-Dimensional Insulators Induced by Graphite Gates.. *Physical Review Letters*, **2021**, 127, 247702	7.4	4

71	Gate-tunable spin waves in antiferromagnetic atomic bilayers. *Nature Materials*, **2020**, 19, 838-842	27	35
70	Imaging and control of critical fluctuations in two-dimensional magnets. *Nature Materials*, **2020**, 19, 1290-1294	27	13
69	Simulation of Hubbard model physics in WSe/WS moiré superlattices. *Nature*, **2020**, 579, 353-358	50.4	195
68	Exchange magnetostriction in two-dimensional antiferromagnets. *Nature Materials*, **2020**, 19, 1295-1299	27	31
67	Memristive Switching: Magneto-Memristive Switching in a 2D Layer Antiferromagnet (Adv. Mater. 2/2020). *Advanced Materials*, **2020**, 32, 2070010	24	
66	Electrical switching of valley polarization in monolayer semiconductors. *Physical Review Materials*, **2020**, 4,	3.2	7
65	Correlated insulating states at fractional fillings of moiré superlattices. *Nature*, **2020**, 587, 214-218	50.4	82
64	Strain relaxation induced transverse resistivity anomalies in SrRuO3 thin films. *Physical Review B*, **2020**, 102,	3.3	12
63	Spectral and spatial isolation of single tungsten diselenide quantum emitters using hexagonal boron nitride wrinkles. *APL Photonics*, **2020**, 5, 096105	5.2	0
62	Observation of site-controlled localized charged excitons in CrI/WSe heterostructures. *Nature Communications*, **2020**, 11, 5502	17.4	6
61	Manipulation of the van der Waals Magnet CrGeTe by Spin-Orbit Torques. *Nano Letters*, **2020**, 20, 7482-7488	11.5	16
60	Magneto-Memristive Switching in a 2D Layer Antiferromagnet. *Advanced Materials*, **2020**, 32, e1905433	24	12
59	Long valley lifetime of dark excitons in single-layer WSe. *Nature Communications*, **2019**, 10, 4047	17.4	27
58	Probing and controlling magnetic states in 2D layered magnetic materials. *Nature Reviews Physics*, **2019**, 1, 646-661	23.6	129
57	Probing many-body interactions in monolayer transition-metal dichalcogenides. *Physical Review B*, **2019**, 99,	3.3	34
56	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	11.5	120
55	Spin tunnel field-effect transistors based on two-dimensional van der Waals heterostructures. *Nature Electronics*, **2019**, 2, 159-163	28.4	99
54	Nonlinear anomalous Hall effect in few-layer WTe. *Nature Materials*, **2019**, 18, 324-328	27	117

53	Layer-dependent spin-orbit torques generated by the centrosymmetric transition metal dichalcogenide MoTe2. *Physical Review B*, **2019**, 100,	3.3	36
52	Pressure-controlled interlayer magnetism in atomically thin CrI. *Nature Materials*, **2019**, 18, 1303-1308	27	178
51	Evidence of high-temperature exciton condensation in two-dimensional atomic double layers. *Nature*, **2019**, 574, 76-80	50.4	162
50	Valley-Selective Exciton Bistability in a Suspended Monolayer Semiconductor. *Nano Letters*, **2018**, 18, 3213-3220	11.5	9
49	Strongly Interaction-Enhanced Valley Magnetic Response in Monolayer WSe_{2}. *Physical Review Letters*, **2018**, 120, 066402	7.4	30
48	An unusual continuous paramagnetic-limited superconducting phase transition in 2D NbSe. *Nature Materials*, **2018**, 17, 504-508	27	58
47	Electric-field switching of two-dimensional van der Waals magnets. *Nature Materials*, **2018**, 17, 406-410	27	431
46	Light alley interactions in 2D semiconductors. *Nature Photonics*, **2018**, 12, 451-460	33.9	187
45	Controlling magnetism in 2D CrI by electrostatic doping. *Nature Nanotechnology*, **2018**, 13, 549-553	28.7	525
44	Mirrors made of a single atomic layer. *Nature*, **2018**, 556, 177-178	50.4	4
43	Electrical Tuning of Interlayer Exciton Gases in WSe Bilayers. *Nano Letters*, **2018**, 18, 137-143	11.5	67
42	Opportunities and challenges of interlayer exciton control and manipulation. *Nature Nanotechnology*, **2018**, 13, 974-976	28.7	36
41	Probing the Spin-Polarized Electronic Band Structure in Monolayer Transition Metal Dichalcogenides by Optical Spectroscopy. *Nano Letters*, **2017**, 17, 740-746	11.5	80
40	Nanomaterials: 2D materials for silicon photonics. *Nature Nanotechnology*, **2017**, 12, 1121-1122	28.7	16
39	Valley magnetoelectricity in single-layer MoS. *Nature Materials*, **2017**, 16, 887-891	27	101
38	Valley- and spin-polarized Landau levels in monolayer WSe. *Nature Nanotechnology*, **2017**, 12, 144-149	28.7	121
37	Gate Tuning of Electronic Phase Transitions in Two-Dimensional NbSe_{2}. *Physical Review Letters*, **2016**, 117, 106801	7.4	105
36	Electrical control of the valley Hall effect in bilayer MoS2 transistors. *Nature Nanotechnology*, **2016**, 11, 421-5	28.7	246

35	Ising pairing in superconducting NbSe2 atomic layers. *Nature Physics*, **2016**, 12, 139-143	16.2	534
34	Photonics and optoelectronics of 2D semiconductor transition metal dichalcogenides. *Nature Photonics*, **2016**, 10, 216-226	33.9	1997
33	Strongly enhanced charge-density-wave order in monolayer NbSe2. *Nature Nanotechnology*, **2015**, 10, 765-9	28.7	474
32	Effect of Surface States on Terahertz Emission from the Bi2Se3 Surface. *Scientific Reports*, **2015**, 5, 10308	4.9	30
31	High-mobility three-atom-thick semiconducting films with wafer-scale homogeneity. *Nature*, **2015**, 520, 656-60	50.4	1224
30	Breaking of valley degeneracy by magnetic field in monolayer MoSe2. *Physical Review Letters*, **2015**, 114, 037401	7.4	401
29	Possible topological superconducting phases of MoS2. *Physical Review Letters*, **2014**, 113, 097001	7.4	104
28	Tightly bound excitons in monolayer WSe(2). *Physical Review Letters*, **2014**, 113, 026803	7.4	762
27	Tuning Many-Body Interactions in Graphene: The Effects of Doping on Excitons and Carrier Lifetimes. *Physical Review Letters*, **2014**, 112,	7.4	57
26	Observation of intra- and inter-band transitions in the transient optical response of graphene. *New Journal of Physics*, **2013**, 15, 015009	2.9	66
25	Real-time observation of interlayer vibrations in bilayer and few-layer graphene. *Nano Letters*, **2013** , 13, 4620-3	11.5	44
24	High-contrast electrooptic modulation of a photonic crystal nanocavity by electrical gating of graphene. *Nano Letters*, **2013**, 13, 691-6	11.5	151
23	Tightly bound trions in monolayer MoS2. *Nature Materials*, **2013**, 12, 207-11	27	1878
22	Experimental demonstration of continuous electronic structure tuning via strain in atomically thin MoS2. *Nano Letters*, **2013**, 13, 2931-6	11.5	675
21	Probing symmetry properties of few-layer MoS2 and h-BN by optical second-harmonic generation. *Nano Letters*, **2013**, 13, 3329-33	11.5	649
20	Observation of intense second harmonic generation from MoS2 atomic crystals. *Physical Review B*, **2013**, 87,	3.3	425
19	Controlling the spontaneous emission rate of monolayer MoS in a photonic crystal nanocavity. *Applied Physics Letters*, **2013**, 103, 181119	3.4	155
18	Optical spectroscopy of graphene: From the far infrared to the ultraviolet. *Solid State Communications*, **2012**, 152, 1341-1349	1.6	485

17	Strong enhancement of light-matter interaction in graphene coupled to a photonic crystal nanocavity. *Nano Letters*, **2012**, 12, 5626-31	11.5	204
16	Structure-dependent Fano resonances in the infrared spectra of phonons in few-layer graphene. *Physical Review Letters*, **2012**, 108, 156801	7.4	54
15	Control of valley polarization in monolayer MoS2 by optical helicity. *Nature Nanotechnology*, **2012**, 7, 494-8	28.7	2670
14	Observation of an electrically tunable band gap in trilayer graphene. *Nature Physics*, **2011**, 7, 944-947	16.2	419
13	Seeing many-body effects in single- and few-layer graphene: observation of two-dimensional saddle-point excitons. *Physical Review Letters*, **2011**, 106, 046401	7.4	315
12	Measurement of the thermal conductance of the graphene/SiO2 interface. *Applied Physics Letters*, **2010**, 97, 221904	3.4	148
11	Ultrafast photoluminescence from graphene. *Physical Review Letters*, **2010**, 105, 127404	7.4	332
10	Electronic structure of few-layer graphene: experimental demonstration of strong dependence on stacking sequence. *Physical Review Letters*, **2010**, 104, 176404	7.4	221
9	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, 14999-5004	11.5	161
8	Electron and optical phonon temperatures in electrically biased graphene. *Physical Review Letters*, **2010**, 104, 227401	7.4	162
7	Atomically thin MoS□a new direct-gap semiconductor. *Physical Review Letters*, **2010**, 105, 136805	7.4	10306
6	Ultraflat graphene. *Nature*, **2009**, 462, 339-41	50.4	527
5	Time-resolved Raman spectroscopy of optical phonons in graphite: Phonon anharmonic coupling and anomalous stiffening. *Physical Review B*, **2009**, 80,	3.3	105
4	Observation of an electric-field-induced band gap in bilayer graphene by infrared spectroscopy. *Physical Review Letters*, **2009**, 102, 256405	7.4	485
3	Measurement of the optical conductivity of graphene. *Physical Review Letters*, **2008**, 101, 196405	7.4	1190
2	Emergence of a noncollinear magnetic state in twisted bilayer CrI3		4
1	Dipolar excitonic insulator in a moir□lattice. *Nature Physics*,	16.2	2