Chun Ning Lau

List of Publications by Year
in descending order

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87 papers	21,451 citations	87888 38 h-index	54911 84 g-index
90 all docs	90 docs citations	90 times ranked	26423 citing authors

#	Article	IF	Citations
1	Superior Thermal Conductivity of Single-Layer Graphene. Nano Letters, 2008, 8, 902-907.	9.1	11,726
2	Dimensional crossover of thermal transport in few-layer graphene. Nature Materials, 2010, 9, 555-558.	27.5	1,198
3	Controlled ripple texturing of suspended graphene and ultrathin graphite membranes. Nature Nanotechnology, 2009, 4, 562-566.	31.5	1,186
4	The mechanism of electroforming of metal oxide memristive switches. Nanotechnology, 2009, 20, 215201.	2.6	699
5	Spectroscopy of Covalently Functionalized Graphene. Nano Letters, 2010, 10, 4061-4066.	9.1	507
6	Infrared Nanoscopy of Dirac Plasmons at the Grapheneâ€“SiO₂ Interface. Nano Letters, 2011, 11, 4701-4705.	9.1	500
7	Density relaxation in a vibrated granular material. Physical Review E, 1995, 51, 3957-3963.	2.1	493
8	Anomalous Thermoelectric Transport of Dirac Particles in Graphene. Physical Review Letters, 2009, 102, 166808.	7.8	382
9	Evidence of Topological Nodal-Line Fermions in ZrSiSe and ZrSiTe. Physical Review Letters, 2016, 117, 016602.	7.8	378
10	Graphene-Based Atomic-Scale Switches. Nano Letters, 2008, 8, 3345-3349.	9.1	327
11	Thickness-Dependent Thermal Conductivity of Encased Graphene and Ultrathin Graphite. Nano Letters, 2010, 10, 3909-3913.	9.1	304
12	Direct Observation of Nanoscale Switching Centers in Metal/Molecule/Metal Structures. Nano Letters, 2004, 4, 569-572.	9.1	221
13	The effect of substrates on the Raman spectrum of graphene: Graphene- on-sapphire and graphene-on-glass. Applied Physics Letters, 2007, 91, 201904.	3.3	213
14	Gate tunable quantum oscillations in air-stable and high mobility few-layer phosphorene heterostructures. 2D Materials, 2015, 2, 011001.	4.4	209
15	Graphene: Materially Better Carbon. MRS Bulletin, 2010, 35, 289-295.	3.5	191
16	Wrinkling Hierarchy in Constrained Thin Sheets from Suspended Graphene to Curtains. Physical Review Letters, 2011, 106, 224301.	7.8	171
17	Ultrafast and Nanoscale Plasmonic Phenomena in Exfoliated Graphene Revealed by Infrared Pumpâ€“Probe Nanoscopy. Nano Letters, 2014, 14, 894-900.	9.1	158
18	Correlated insulating and superconducting states in twisted bilayer graphene below the magic angle. Science Advances, 2019, 5, eaaw9770.	10.3	138

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19	Aryl Functionalization as a Route to Band Gap Engineering in Single Layer Graphene Devices. Nano Letters, 2011, 11, 4047-4051.	9.1	136
20	Engineering symmetry breaking in 2D layered materials. Nature Reviews Physics, 2021, 3, 193-206.	26.6	135
21	Raman Spectroscopy, Photocatalytic Degradation, and Stabilization of Atomically Thin Chromium Tri-iodide. Nano Letters, 2018, 18, 4214-4219.	9.1	131
22	Fabrication of graphene p-n-p junctions with contactless top gates. Applied Physics Letters, 2008, 92, .	3.3	122
23	Raman nanometrology of graphene: Temperature and substrate effects. Solid State Communications, 2009, 149, 1132-1135.	1.9	115
24	Raman Spectroscopy of Ripple Formation in Suspended Graphene. Nano Letters, 2009, 9, 4172-4176.	9.1	108
25	Evidence for a spontaneous gapped state in ultraclean bilayer graphene. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 10802-10805.	7.1	107
26	Properties of suspended graphene membranes. Materials Today, 2012, 15, 238-245.	14.2	100
27	Reproducibility in the fabrication and physics of moirÃ© materials. Nature, 2022, 602, 41-50.	27.8	97
28	Lithography-free fabrication of high quality substrate-supported and freestanding graphene devices. Nano Research, 2010, 3, 98-102.	10.4	85
29	Investigation of a model molecular-electronic rectifier with an evaporated Tiâ€“metal top contact. Applied Physics Letters, 2003, 83, 3198-3200.	3.3	83
30	Magnetoconductance Oscillations and Evidence for Fractional Quantum Hall States in Suspended Bilayer and Trilayer Graphene. Physical Review Letters, 2010, 105, 246601.	7.8	71
31	Ionic Liquid Gating of Suspended MoS₂ Field Effect Transistor Devices. Nano Letters, 2015, 15, 5284-5288.	9.1	71
32	Long-distance spin transport through a graphene quantum Hall antiferromagnet. Nature Physics, 2018, 14, 907-911.	16.7	70
33	In Situ Observation of Electrostatic and Thermal Manipulation of Suspended Graphene Membranes. Nano Letters, 2012, 12, 5470-5474.	9.1	69
34	Organometallic Hexahapto Functionalization of Single Layer Graphene as a Route to High Mobility Graphene Devices. Advanced Materials, 2013, 25, 1131-1136.	21.0	59
35	Distinct magneto-Raman signatures of spin-flip phase transitions in CrI3. Nature Communications, 2020, 11, 3879.	12.8	59
36	Electrical transport in high-quality graphene<i>pnp</i>junctions. New Journal of Physics, 2009, 11, 095008.	2.9	55

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37	Quantum Hall Effect Measurement of Spinâ€"Orbit Coupling Strengths in Ultraclean Bilayer Graphene/WSe₂ Heterostructures. Nano Letters, 2019, 19, 7028-7034.	9.1	43
38	Integer and Fractional Quantum Hall effect in Ultrahigh Quality Few-layer Black Phosphorus Transistors. Nano Letters, 2018, 18, 229-234.	9.1	42
39	Local spectroscopy of the electrically tunable band gap in trilayer graphene. Physical Review B, 2013, 87, .	3.2	40
40	Quantum Transport and Field-Induced Insulating States in Bilayer Graphene pnp Junctions. Nano Letters, 2010, 10, 4000-4004.	9.1	39
41	Force modulation of tunnel gaps in metal oxide memristive nanoswitches. Applied Physics Letters, 2009, 95, 113503.	3.3	38
42	Visualizing Electrical Breakdown and ON/OFF States in Electrically Switchable Suspended Graphene Break Junctions. Nano Letters, 2012, 12, 1772-1775.	9.1	38
43	Broken Symmetry Quantum Hall States in Dual-Gated ABA Trilayer Graphene. Nano Letters, 2013, 13, 1627-1631.	9.1	38
44	Probing charging and localization in the quantum Hall regime by graphene<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>p</mml:mi><mml:mo>â€"</mml:mo><mml:mi>n</mml:mi><mml:mo>â€"</mml:mo><mml:mi> Physical Review B, 2010, 81, .	3.2	30
45	Annealing and transport studies of suspended molybdenum disulfide devices. Nanotechnology, 2015, 26, 105709.	2.6	29
46	Surface transport and quantum Hall effect in ambipolar black phosphorus double quantum wells. Science Advances, 2017, 3, e1603179.	10.3	27
47	Raman spectroscopy of substrate-induced compression and substrate doping in thermally cycled graphene. Physical Review B, 2012, 85, .	3.2	26
48	Superior Current Carrying Capacity of Boron Nitride Encapsulated Carbon Nanotubes with Zero-Dimensional Contacts. Nano Letters, 2015, 15, 6836-6840.	9.1	25
49	Tunable Lifshitz Transitions and Multiband Transport in Tetralayer Graphene. Physical Review Letters, 2018, 120, 096802.	7.8	25
50	Premature switching in graphene Josephson transistors. Solid State Communications, 2009, 149, 1046-1049.	1.9	23
51	Transport in suspended monolayer and bilayer graphene under strain: A new platform for material studies. Carbon, 2014, 69, 336-341.	10.3	21
52	Graphene-based quantum Hall effect infrared photodetector operating at liquid Nitrogen temperatures. Applied Physics Letters, 2011, 99, .	3.3	20
53	Topological Winding Number Change and Broken Inversion Symmetry in a Hofstadterâ€™s Butterfly. Nano Letters, 2015, 15, 6395-6399.	9.1	19
54	Tunable Symmetries of Integer and Fractional Quantum Hall Phases in Heterostructures with Multiple Dirac Bands. Physical Review Letters, 2016, 117, 076807.	7.8	19

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55	Gate-Tunable Dissipation and â€œSuperconductor-Insulatorâ€•Transition in Carbon Nanotube Josephson Junctions. Physical Review Letters, 2009, 102, 016803.	7.8	18
56	Energy Gaps and Layer Polarization of Integer and Fractional Quantum Hall States in Bilayer Graphene. Physical Review Letters, 2016, 116, 056601.	7.8	18
57	Quantum Conductance Oscillations in Metal/Molecule/Metal Switches at Room Temperature. Physical Review Letters, 2008, 101, 016802.	7.8	16
58	Layer- and gate-tunable spin-orbit coupling in a high-mobility few-layer semiconductor. Science Advances, 2021, 7, .	10.3	16
59	Weak localization and electronâ€"electron interactions in few layer black phosphorus devices. 2D Materials, 2016, 3, 034003.	4.4	15
60	Emergent quantum materials. MRS Bulletin, 2020, 45, 340-347.	3.5	14
61	Phase diffusion in single-walled carbon nanotube Josephson transistors. Nano Research, 2008, 1, 145-151.	10.4	13
62	Room-Temperature Topological Phase Transition in Quasi-One-Dimensional Material <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi mathvariant="normal">B</mml:mi><mml:mi mathvariant="normal">i</mml:mi></mml:mrow><mml:mrow><mml:mn mathvariant="normal">4</mml:mn></mml:mrow></mml:msub><mml:msub><mml:mrow><mml:mi mathv	8.9	13
63	Gate-Tunable Magnetism and Giant Magnetoresistance in Suspended Rhombohedral-Stacked Few-Layer Graphene. Nano Letters, 2022, 22, 5094-5099.	9.1	12
64	Quantum parity Hall effect in Bernal-stacked trilayer graphene. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 10286-10290.	7.1	9
65	Strange metal behavior of the Hall angle in twisted bilayer graphene. Physical Review B, 2021, 103, .	3.2	9
66	Cr_{<i>x</i>}Pt_{1â€"<i>x</i>}Te₂ (<i>x</i> â‰ 0.45): A Family of Air-Stable and Exfoliatable van der Waals Ferromagnets. ACS Nano, 2022, 16, 3852-3860.	14.6	9
67	Enhancing Perpendicular Magnetic Anisotropy in Garnet Ferrimagnet by Interfacing with Few-Layer WTe₂. Nano Letters, 2022, 22, 1115-1121.	9.1	7
68	Suspension and measurement of graphene and Bi2Se3thin crystals. Nanotechnology, 2011, 22, 285305.	2.6	6
69	Corrigendum on 'The mechanism of electroforming of metal oxide memristive switches'. Nanotechnology, 2010, 21, 339803-339803.	2.6	5
70	Characterization of quantum conducting channels inÂmetal/molecule/metal devices using pressure-modulated conductance microscopy. Applied Physics A: Materials Science and Processing, 2011, 102, 943-948.	2.3	5
71	Spatial Mapping of the Dirac Point in Monolayer and Bilayer Graphene. IEEE Nanotechnology Magazine, 2011, 10, 88-91.	2.0	5
72	Helical Edge States and Quantum Phase Transitions in Tetralayer Graphene. Physical Review Letters, 2020, 125, 036803.	7.8	5

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73	Gate-Tunable Transport in Quasi-One-Dimensional Î±-Bi₄I₄ Field Effect Transistors. Nano Letters, 2022, 22, 1151-1158.	9.1	5
74	Raman nanometrology of graphene on arbitrary substrates and at variable temperature. Proceedings of SPIE, 2008, , .	0.8	4
75	Periodic alignment of Si quantum dots on hafnium oxide coated single wall carbon nanotubes. Applied Physics Letters, 2009, 94, 123109.	3.3	4
76	Band gap and correlated phenomena in bilayer and trilayer graphene. , 2013, , .		3
77	Graphene's topological insulation. Nature Physics, 2013, 9, 135-136.	16.7	3
78	Photoelectric polarization-sensitive broadband photoresponse from interface junction states in graphene. 2D Materials, 2017, 4, 015002.	4.4	3
79	Fractional and Symmetry-Broken Chern Insulators in Tunable MoirÃ© Superlattices. Nano Letters, 2019, 19, 4321-4326.	9.1	3
80	Substrate-Dependent Band Structures in Trilayer Graphene/hâˆ'BN Heterostructures. Physical Review Letters, 2020, 125, 246401.	7.8	3
81	Heat Transfer in Encased Graphene. , 2009, , .		1
82	Electronic Double Slit Interferometers Based on Carbon Nanotubes. Nano Letters, 2011, 11, 4043-4046.	9.1	1
83	Tuning Spin Transport in a Graphene Antiferromagnetic Insulator. Physical Review Applied, 2022, 18, .	3.8	1
84	Thermal Conductivity of Graphene Layers Encased in Oxide. , 2009, , .		0
85	Study of the effects of growth temperature and time on the alignment of Si quantum dots on hafnium oxide coated single wall carbon nanotubes. Thin Solid Films, 2010, 518, S35-S37.	1.8	0
86	Graphene-based quantum hall effect infrared photodetectors. , 2012, , .		0
87	Infrared Pump-Probe Imaging and Spectroscopy with 10nm Resolution. , 2014, , .		0