Rui He

List of Publications by Year in Descending Order

67 papers	2,585 citations	25 h-index	50 g-index
74 ext. papers	3,024 ext. citations	7.4 avg, IF	4.68 L-index

#	Paper	IF	Citations
67	Magnons and magnetic fluctuations in atomically thin MnBiTe.. *Nature Communications*, **2022**, 13, 2527	17.4	1
66	Hexagonal Boron Nitride Crystal Growth from Iron, a Single Component Flux. *ACS Nano*, **2021**, 15, 7032-7039	16.7	11
65	Structural Monoclinicity and Its Coupling to Layered Magnetism in Few-Layer CrI. *ACS Nano*, **2021**, 15, 10444-10450	16.7	2
64	Electron-Phonon and Spin-Lattice Coupling in Atomically Thin Layers of MnBiTe. *Nano Letters*, **2021**, 21, 6139-6145	11.5	5
63	Quantum Engineering With Hybrid Magnonic Systems and Materials (Invited Paper). *IEEE Transactions on Quantum Engineering*, **2021**, 2, 1-36	2.9	13
62	Hexagonal Boron Nitride Single Crystal Growth from Solution with a Temperature Gradient. *Chemistry of Materials*, **2020**, 32, 5066-5072	9.6	8
61	Magnetic-Field-Induced Quantum Phase Transitions in a van der Waals Magnet. *Physical Review X*, **2020**, 10,	9.1	20
60	Single crystal growth of monoisotopic hexagonal boron nitride from a Fe□r flux. *Journal of Materials Chemistry C*, **2020**, 8, 9931-9935	7.1	6
59	Synthesis of large-area MoS2 films by plasma-enhanced chemical film conversion of solution-processed ammonium tetrathiomolybdate. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2020**, 38, 063006	2.9	1
58	Fermion-boson many-body interplay in a frustrated kagome paramagnet. *Nature Communications*, **2020**, 11, 4003	17.4	14
57	Observation of the polaronic character of excitons in a two-dimensional semiconducting magnet CrI. *Nature Communications*, **2020**, 11, 4780	17.4	12
56	Tunable layered-magnetism-assisted magneto-Raman effect in a two-dimensional magnet CrI. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 24664-24669	11.5	8
55	Plasma-Induced Fabrication and Straining of MoS2 Films for the Hydrogen Evolution Reaction. *ACS Applied Energy Materials*, **2019**, 2, 5162-5170	6.1	13
54	Highly tunable Raman scattering and transport in layered magnetic Cr 2 S 3 nanoplates grown by sulfurization. *2D Materials*, **2019**, 6, 035029	5.9	15
53	Strong pseudospin-lattice coupling in Sr3Ir2O7: Coherent phonon anomaly and negative thermal expansion. *Physical Review B*, **2019**, 99,	3.3	11
52	Stacking-dependent interlayer phonons in 3R and 2H MoS 2. *2D Materials*, **2019**, 6, 025022	5.9	19
51	Raman spectroscopy of diesel and gasoline engine-out soot using different laser power. *Journal of Environmental Sciences*, **2019**, 79, 74-80	6.4	13

50	Possible structural transformation and enhanced magnetic fluctuations in exfoliated RuCl3. *Journal of Physics and Chemistry of Solids*, **2019**, 128, 291-295	3.9	33
49	Temperature-driven evolution of critical points, interlayer coupling, and layer polarization in bilayer MoS2. *Physical Review B*, **2018**, 97,	3.3	18
48	Dimensionality-driven orthorhombic MoTe2 at room temperature. *Physical Review B*, **2018**, 97,	3.3	32
47	Robust spin-valley polarization in commensurate MoS2/graphene heterostructures. *Physical Review B*, **2018**, 97,	3.3	20
46	Effects of Moisture-Based Grain Boundary Passivation on Cell Performance and Ionic Migration in Organic-Inorganic Halide Perovskite Solar Cells. *ACS Applied Materials & Interfaces*, **2018**, 10, 30322-30329	9.5	23
45	Room Temperature Formation of Carbon Onions via Ultrasonic Agitation of MoS in Isopropanol. *Journal of Nanoscience and Nanotechnology*, **2018**, 18, 3171-3175	1.3	2
44	Raman fingerprint of two terahertz spin wave branches in a two-dimensional honeycomb Ising ferromagnet. *Nature Communications*, **2018**, 9, 5122	17.4	68
43	MoO3 as a Conductive 2D Oxide: Tunable n-Type Electrical Transport via Oxygen Vacancy and Fluorine Doping. *ACS Applied Nano Materials*, **2018**, 1, 6407-6413	5.6	18
42	Single Crystal Growth of Millimeter-Sized Monoisotopic Hexagonal Boron Nitride. *Chemistry of Materials*, **2018**, 30, 6222-6225	9.6	63
41	Electronic structure-dependent magneto-optical Raman effect in atomically thin WS 2. *2D Materials* , **2018**, 5, 035028	5.9	9
40	Magnetic evolution of itinerant ferromagnetism and interlayer antiferromagnetism in cerium doped LaCo2P2 crystals. *Physica B: Condensed Matter*, **2017**, 512, 75-80	2.8	0
39	Raman spectroscopy of optical phonon and charge density wave modes in 1T-TiSe2 exfoliated flakes. *Solid State Communications*, **2017**, 266, 21-25	1.6	5
38	Large-Scale Growth of High-Quality Hexagonal Boron Nitride Crystals at Atmospheric Pressure from an FeCr Flux. *Crystal Growth and Design*, **2017**, 17, 4932-4935	3.5	29
37	VO: A 2D van der Waals Oxide with Strong In-Plane Electrical and Optical Anisotropy. *ACS Applied Materials & Interfaces*, **2017**, 9, 23949-23956	9.5	23
36	Interlayer breathing and shear modes in NbSe 2 atomic layers. *2D Materials*, **2016**, 3, 031008	5.9	25
35	Distinct surface and bulk charge density waves in ultrathin 1TTaS2. *Physical Review B*, **2016**, 94,	3.3	34
34	Screening limited switching performance of multilayer 2D semiconductor FETs: the case for SnS. *Nanoscale*, **2016**, 8, 19050-19057	7.7	49
33	Coupling and Stacking Order of ReS2 Atomic Layers Revealed by Ultralow-Frequency Raman Spectroscopy. *Nano Letters*, **2016**, 16, 1404-9	11.5	115

32	Raman scattering in superconducting NdO1−xFxBiS2crystals. *Superconductor Science and Technology*, **2016**, 29, 015007	3.1	6
31	Modification of electronic band structure in mL + nL (m = 1, 2; n = 1–5) free-stacking graphene. *Applied Physics Letters*, **2016**, 109, 153111	3.4	1
30	Modification of the G-phonon mode of graphene by nitrogen doping. *Applied Physics Letters*, **2016**, 108, 041907	3.4	4
29	Observation of interlayer phonon modes in van der Waals heterostructures. *Physical Review B*, **2015**, 91,	3.3	147
28	Influence of interface coupling on the electronic properties of the Au/MoS2 junction. *Physical Review B*, **2015**, 92,	3.3	10
27	Optical phonons in twisted bilayer graphene with gate-induced asymmetric doping. *Nano Letters*, **2015**, 15, 1203-10	11.5	18
26	Dopant segregation in polycrystalline monolayer graphene. *Nano Letters*, **2015**, 15, 1428-36	11.5	16
25	Stacking-dependent shear modes in trilayer graphene. *Applied Physics Letters*, **2015**, 106, 041904	3.4	40
24	Laser induced oxidation and optical properties of stoichiometric and non-stoichiometric Bi2Te3 nanoplates. *Nano Research*, **2015**, 8, 851-859	10	12
23	Double charge ordering states and spin ordering state observed in a RFe2O4 system. *Scientific Reports*, **2014**, 4, 6429	4.9	7
22	Resonance Raman scattering in bulk 2H-MX2 (M = Mo, W; X = S, Se) and monolayer MoS2. *Journal of Applied Physics*, **2014**, 115, 053527	2.5	70
21	Temperature-activated layer-breathing vibrations in few-layer graphene. *Nano Letters*, **2014**, 14, 4615-21	11.5	58
20	Universal method for creating optically active nanostructures on layered materials. *Langmuir*, **2014**, 30, 5939-45	4	2
19	Observation of low energy Raman modes in twisted bilayer graphene. *Nano Letters*, **2013**, 13, 3594-601	11.5	111
18	Metal-insulator transition in variably doped (Bi(1-x)Sb(x))2Se3 nanosheets. *Nanoscale*, **2013**, 5, 4337-43	7.7	27
17	Molecular beam growth of graphene nanocrystals on dielectric substrates. *Carbon*, **2012**, 50, 4822-4829	10.4	29
16	Observation of infrared-active modes in Raman scattering from topological insulator nanoplates. *Nanotechnology*, **2012**, 23, 455703	3.4	32
15	Large physisorption strain in chemical vapor deposition of graphene on copper substrates. *Nano Letters*, **2012**, 12, 2408-13	11.5	107

14	Visualizing individual nitrogen dopants in monolayer graphene. *Science*, **2011**, 333, 999-1003	33.3	697
13	Multilayer graphene grown by precipitation upon cooling of nickel on diamond. *Carbon*, **2011**, 49, 1006-1012	10.4	48
12	Influence of copper crystal surface on the CVD growth of large area monolayer graphene. *Solid State Communications*, **2011**, 151, 509-513	1.6	175
11	Franck-Condon processes in pentacene monolayers revealed in resonance Raman scattering. *Physical Review B*, **2011**, 83,	3.3	11
10	Observation of magnetophonon resonance of Dirac fermions in graphite. *Physical Review Letters*, **2010**, 105, 227401	7.4	43
9	Intense photoluminescence from pentacene monolayers. *Applied Physics Letters*, **2010**, 96, 263303	3.4	18
8	Multilayer graphene films grown by molecular beam deposition. *Solid State Communications*, **2010**, 150, 809-811	1.6	30
7	Low-lying lattice modes of highly uniform pentacene monolayers. *Applied Physics Letters*, **2009**, 94, 223311	3.4	11
6	Probing high quality pentacene monolayers by optical methods. *Physica E: Low-Dimensional Systems and Nanostructures*, **2006**, 32, 589-591	3	1
5	Extrinsic optical recombination in pentacene single crystals: Evidence of gap states. *Applied Physics Letters*, **2005**, 87, 211117	3.4	26
4	Fundamental optical recombination in pentacene clusters and ultrathin films. *Applied Physics Letters*, **2005**, 87, 103107	3.4	26
3	Resonant Raman scattering in nanoscale pentacene films. *Applied Physics Letters*, **2004**, 84, 987-989	3.4	44
2	Twist engineering of the two-dimensional magnetism in double bilayer chromium triiodide homostructures. *Nature Physics*,	16.2	6
1	The reinforcement mechanisms of graphene oxide in laser-directed energy deposition fabricated metal and ceramic matrix composites: a comparison study. *International Journal of Advanced Manufacturing Technology*,1	3.2	