Dmitri K Efetov

List of Publications by Year in descending order

46 papers	6,537 citations	136950 32 h-index	233421 45 g-index
48 all docs	48 docs citations	48 times ranked	7847 citing authors

#	Article	IF	Citations
1	Superconductors, orbital magnets and correlated states in magic-angle bilayer graphene. Nature, 2019, 574, 653-657.	27.8	987
2	Controlling Electron-Phonon Interactions in Graphene at Ultrahigh Carrier Densities. Physical Review Letters, 2010, 105, 256805.	7.8	801
3	Superconductivity and strong correlations in moirÃ© flat bands. Nature Physics, 2020, 16, 725-733.	16.7	448
4	Electronic Transport and Quantum Hall Effect in Bipolar Graphene<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>p</mml:mi><mml:mtext mathvariant="normal">â^'</mml:mtext><mml:mi>n</mml:mi><mml:mtext mathvariant="normal">â^'</mml:mtext><mml:mi>p</mml:mi></mml:math>Junctions. Physical Review Letters, 2007, 99, 166804.	7.8	434
5	Tunable and high-purity room temperature single-photon emission from atomic defects in hexagonal boron nitride. Nature Communications, 2017, 8, 705.	12.8	351
6	A MoTe2-based light-emitting diode and photodetector for silicon photonic integrated circuits. Nature Nanotechnology, 2017, 12, 1124-1129.	31.5	344
7	Untying the insulating and superconducting orders in magic-angle graphene. Nature, 2020, 583, 375-378.	27.8	323
8	The marvels of moirÃ© materials. Nature Reviews Materials, 2021, 6, 201-206.	48.7	262
9	Probing the ultimate plasmon confinement limits with a van der Waals heterostructure. Science, 2018, 360, 291-295.	12.6	259
10	High-Responsivity Grapheneâ€“Boron Nitride Photodetector and Autocorrelator in a Silicon Photonic Integrated Circuit. Nano Letters, 2015, 15, 7288-7293.	9.1	185
11	Electronic transport in locally gated graphene nanoconstrictions. Applied Physics Letters, 2007, 91, .	3.3	171
12	Specular interband Andreev reflections at van der Waals interfaces between graphene and NbSe2. Nature Physics, 2016, 12, 328-332.	16.7	159
13	Observation of flat bands in twisted bilayer graphene. Nature Physics, 2021, 17, 189-193.	16.7	144
14	Inducing superconducting correlation in quantum Hall edge states. Nature Physics, 2017, 13, 693-698.	16.7	132
15	Twisted bilayer graphene. IV. Exact insulator ground states and phase diagram. Physical Review B, 2021, 103, .	3.2	123
16	Symmetry-broken Chern insulators and Rashba-like Landau-level crossings in magic-angle bilayer graphene. Nature Physics, 2021, 17, 710-714.	16.7	114
17	Nanocrystalline Graphite Growth on Sapphire by Carbon Molecular Beam Epitaxy. Journal of Physical Chemistry C, 2011, 115, 4491-4494.	3.1	113
18	Ultrafast Graphene Light Emitters. Nano Letters, 2018, 18, 934-940.	9.1	109

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19	Li Intercalation into Graphite: Direct Optical Imaging and Cahnâ€“Hilliard Reaction Dynamics. Journal of Physical Chemistry Letters, 2016, 7, 2151-2156.	4.6	92
20	Graphene-based Josephson junction microwave bolometer. Nature, 2020, 586, 42-46.	27.8	88
21	Competing Zero-Field Chern Insulators in Superconducting Twisted Bilayer Graphene. Physical Review Letters, 2021, 127, 197701.	7.8	80
22	Thermal radiation control from hot graphene electrons coupled to a photonic crystal nanocavity. Nature Communications, 2019, 10, 109.	12.8	79
23	Graphene-Based Josephson-Junction Single-Photon Detector. Physical Review Applied, 2017, 8, .	3.8	74
24	Fast thermal relaxation in cavity-coupled graphene bolometers with a Johnson noise read-out. Nature Nanotechnology, 2018, 13, 797-801.	31.5	66
25	Quantum critical behaviour in magic-angle twisted bilayer graphene. Nature Physics, 2022, 18, 633-638.	16.7	66
26	Controlled Electrochemical Intercalation of Graphene/h-BN van der Waals Heterostructures. Nano Letters, 2018, 18, 460-466.	9.1	49
27	Giant enhancement of third-harmonic generation in grapheneâ€“metal heterostructures. Nature Nanotechnology, 2021, 16, 318-324.	31.5	47
28	Observation of interband collective excitations in twisted bilayer graphene. Nature Physics, 2021, 17, 1162-1168.	16.7	47
29	Josephson junction infrared single-photon detector. Science, 2021, 372, 409-412.	12.6	45
30	Active 2D materials for on-chip nanophotonics and quantum optics. Nanophotonics, 2017, 6, 1329-1342.	6.0	38
31	Chern mosaic and Berry-curvature magnetism in magic-angle graphene. Nature Physics, 2022, 18, 885-892.	16.7	37
32	Multiple flat bands and topological Hofstadter butterfly in twisted bilayer graphene close to the second magic angle. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	35
33	Multiband transport in bilayer graphene at high carrier densities. Physical Review B, 2011, 84, .	3.2	30
34	Magic-Angle Bilayer Graphene Nanocalorimeters: Toward Broadband, Energy-Resolving Single Photon Detection. Nano Letters, 2020, 20, 3459-3464.	9.1	28
35	Crossover from retro to specular Andreev reflections in bilayer graphene. Physical Review B, 2016, 94, .	3.2	25
36	Terahertz Photogalvanics in Twisted Bilayer Graphene Close to the Second Magic Angle. Nano Letters, 2020, 20, 7152-7158.	9.1	25

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37	Nanoscale Imaging and Control of Hexagonal Boron Nitride Single Photon Emitters by a Resonant Nanoantenna. Nano Letters, 2020, 20, 1992-1999.	9.1	23
38	Critical role of device geometry for the phase diagram of twisted bilayer graphene. Physical Review B, 2020, 101, .	3.2	22
39	Observation of Reentrant Correlated Insulators and Interaction-Driven Fermi-Surface Reconstructions at One Magnetic Flux Quantum per MoirÃ© Unit Cell in Magic-Angle Twisted Bilayer Graphene. Physical Review Letters, 2022, 128, .	7.8	17
40	Measuring local moirÃ© lattice heterogeneity of twisted bilayer graphene. Physical Review Research, 2021, 3, .	3.6	16
41	Ambipolar transport and magneto-resistance crossover in a Mott insulator, Sr₂IrO₄. Journal of Physics Condensed Matter, 2016, 28, 505304.	1.8	14
42	A high-T _c van der Waals superconductor based photodetector with ultra-high responsivity and nanosecond relaxation time. 2D Materials, 2021, 8, 035053.	4.4	13
43	Ultrasensitive Calorimetric Measurements of the Electronic Heat Capacity of Graphene. Nano Letters, 2021, 21, 5330-5337.	9.1	10
44	High-order minibands and interband Landau level reconstruction in graphene moirÃ© superlattices. Physical Review B, 2020, 102, .	3.2	7
45	Compact mid-infrared graphene thermopile enabled by a nanopatterning technique of electrolyte gates. New Journal of Physics, 2018, 20, 083050.	2.9	5
46	Towards plasmonic-enhanced optical nonlinearities in graphene metal-heterostructures. , 2021, , .		0