Freddie Withers

List of Publications by Year
in descending order

55 papers	7,923 citations	94269 37 h-index	161609 54 g-index
58 all docs	58 docs citations	58 times ranked	12005 citing authors

#	Article	IF	Citations
1	Light-emitting diodes by band-structure engineering in van der Waals heterostructures. Nature Materials, 2015, 14, 301-306.	13.3	1,397
2	Detecting topological currents in graphene superlattices. Science, 2014, 346, 448-451.	6.0	619
3	Water-based and biocompatible 2D crystal inks for all-inkjet-printed heterostructures. Nature Nanotechnology, 2017, 12, 343-350.	15.6	440
4	Twist-controlled resonant tunnelling in graphene/boron nitride/graphene heterostructures. Nature Nanotechnology, 2014, 9, 808-813.	15.6	435
5	Electronic Properties of Graphene Encapsulated with Different Two-Dimensional Atomic Crystals. Nano Letters, 2014, 14, 3270-3276.	4.5	433
6	Excitonâ€“polaritons in van der Waals heterostructures embedded in tunable microcavities. Nature Communications, 2015, 6, 8579.	5.8	377
7	Electron properties of fluorinated single-layer graphene transistors. Physical Review B, 2010, 82, .	1.1	322
8	Novel Highly Conductive and Transparent Grapheneâ€Based Conductors. Advanced Materials, 2012, 24, 2844-2849.	11.1	289
9	Magnon-assisted tunnelling in van der Waals heterostructures based on CrBr3. Nature Electronics, 2018, 1, 344-349.	13.1	239
10	WSe₂ Light-Emitting Tunneling Transistors with Enhanced Brightness at Room Temperature. Nano Letters, 2015, 15, 8223-8228.	4.5	231
11	Graphene-protected copper and silver plasmonics. Scientific Reports, 2014, 4, 5517.	1.6	217
12	Raman Modes of MoS₂ Used as Fingerprint of van der Waals Interactions in 2-D Crystal-Based Heterostructures. ACS Nano, 2014, 8, 9914-9924.	7.3	201
13	Nanopatterning of Fluorinated Graphene by Electron Beam Irradiation. Nano Letters, 2011, 11, 3912-3916.	4.5	175
14	Valley-addressable polaritons in atomically thin semiconductors. Nature Photonics, 2017, 11, 497-501.	15.6	169
15	Wafer-Scale and Wrinkle-Free Epitaxial Growth of Single-Orientated Multilayer Hexagonal Boron Nitride on Sapphire. Nano Letters, 2016, 16, 3360-3366.	4.5	167
16	Heterostructures Produced from Nanosheet-Based Inks. Nano Letters, 2014, 14, 3987-3992.	4.5	165
17	Hierarchy of Hofstadter states and replica quantum Hall ferromagnetism in graphene superlattices. Nature Physics, 2014, 10, 525-529.	6.5	161
18	Ultrahigh Performance Nanoengineered Grapheneâ€“Concrete Composites for Multifunctional Applications. Advanced Functional Materials, 2018, 28, 1705183.	7.8	161

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19	Two-Dimensional Metalâ€“Chalcogenide Films in Tunable Optical Microcavities. Nano Letters, 2014, 14, 7003-7008.	4.5	129
20	Exciton and trion dynamics in atomically thin<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>MoSe</mml:mi><mml:mn>2</mml:mn></mml:msub></m xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>WSe</mml:mi><mml:mn>2</mml:mn></mml:msub></mr Effect of localization. Physical Review B, 2016, 94, .	1.1	121
21	Macroscopic self-reorientation of interacting two-dimensional crystals. Nature Communications, 2016, 7, 10800.	5.8	108
22	Tuning the electronic transport properties of graphene through functionalisation with fluorine. Nanoscale Research Letters, 2011, 6, 526.	3.1	105
23	All-Graphene Photodetectors. ACS Nano, 2013, 7, 5052-5057.	7.3	102
24	Quantum capacitance measurements of electron-hole asymmetry and next-nearest-neighbor hopping in graphene. Physical Review B, 2013, 88, .	1.1	88
25	Highly nonlinear trion-polaritons in a monolayer semiconductor. Nature Communications, 2020, 11, 3589.	5.8	83
26	Electron transport of WS2 transistors in a hexagonal boron nitride dielectric environment. Scientific Reports, 2014, 4, .	1.6	82
27	Electrically pumped single-defect light emitters in WSe ₂. 2D Materials, 2016, 3, 025038.	2.0	66
28	Valley coherent exciton-polaritons in a monolayer semiconductor. Nature Communications, 2018, 9, 4797.	5.8	66
29	Phonons in potassium-doped graphene: The effects of electron-phonon interactions, dimensionality, and adatom ordering. Physical Review B, 2011, 84, .	1.1	62
30	Electrical tuning of optically active interlayer excitons in bilayer MoS2. Nature Nanotechnology, 2021, 16, 888-893.	15.6	60
31	The valley Zeeman effect in inter- and intra-valley trions in monolayer WSe2. Nature Communications, 2019, 10, 2330.	5.8	55
32	Observing Imperfection in Atomic Interfaces for van der Waals Heterostructures. Nano Letters, 2017, 17, 5222-5228.	4.5	53
33	Interplay between spin proximity effect and charge-dependent exciton dynamics in MoSe2/CrBr3 van der Waals heterostructures. Nature Communications, 2020, 11, 6021.	5.8	52
34	Laser-writable high-k dielectric for van der Waals nanoelectronics. Science Advances, 2019, 5, eaau0906.	4.7	51
35	Upconverted electroluminescence via Auger scattering of interlayer excitons in van der Waals heterostructures. Nature Communications, 2019, 10, 2335.	5.8	51
36	Dielectric nanosheets made by liquid-phase exfoliation in water and their use in graphene-based electronics. 2D Materials, 2014, 1, 011012.	2.0	49

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37	Sub-bandgap Voltage Electroluminescence and Magneto-oscillations in a WSe₂ Light-Emitting van der Waals Heterostructure. Nano Letters, 2017, 17, 1425-1430.	4.5	41
38	Heterostructures formed through abraded van der Waals materials. Nature Communications, 2020, 11, 3047.	5.8	36
39	Electrical transport in suspended and double gated trilayer graphene. Applied Physics Letters, 2012, 100, .	1.5	35
40	Excited State Spectroscopy of Boron Vacancy Defects in Hexagonal Boron Nitride Using Time-Resolved Optically Detected Magnetic Resonance. Nano Letters, 2022, 22, 461-467.	4.5	33
41	Electrochemical doping of graphene with toluene. Carbon, 2011, 49, 3829-3834.	5.4	28
42	Tuning the transport gap of functionalized graphene via electron beam irradiation. New Journal of Physics, 2013, 15, 033024.	1.2	25
43	Strain-Engineering of Twist-Angle in Graphene/hBN Superlattice Devices. Nano Letters, 2018, 18, 7919-7926.	4.5	25
44	Electrically Tuneable Excitonâ€Polaritons through Free Electron Doping in Monolayer WS₂ Microcavities. Advanced Optical Materials, 2019, 7, 1900484.	3.6	17
45	Resonantly excited exciton dynamics in two-dimensional <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>MoSe</mml:mi><mml:mn>2</mml:mn></mml:msub><m monolayers. Physical Review B, 2017, 96, .	3.1	16
46	Electrically pumped WSe2-based light-emitting van der Waals heterostructures embedded in monolithic dielectric microcavities. 2D Materials, 2020, 7, 031006.	2.0	16
47	Engineering Dielectric Screening for Potential-well Arrays of Excitons in 2D Materials. ACS Applied Materials & Interfaces, 2020, 12, 55134-55140.	4.0	15
48	Electrical and optical properties of transition metal dichalcogenides on talc dielectrics. Nanoscale, 2021, 13, 15853-15858.	2.8	14
49	Revealing Excitonic Complexes in Monolayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:msub><mml:mi>WS</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math> on Talc Dielectric. Physical Review Applied, 2021, 16, .	1.5	14
50	Anisotropic magnetoconductance and Coulomb blockade in defect engineered <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Cr</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mr van der Waals heterostructures. Physical Review B, 2019, 100, .	3.2	10
51	Revealing the impact of strain in the optical properties of bubbles in monolayer MoSe₂. Nanoscale, 2022, 14, 5758-5768.	2.8	9
52	Electrically tuneable exciton energy exchange between spatially separated 2-dimensional semiconductors in a microcavity. Applied Physics Letters, 2019, 115, 071103.	1.5	4
53	Cross sectional STEM imaging and analysis of multilayered two dimensional crystal heterostructure devices. Microscopy and Microanalysis, 2015, 21, 107-108.	0.2	1
54	Strong exciton-photon coupling in monolayer heterostructures in tunable microcavities. , 2015, , .		0

#	Article	IF	Citations
55	Photo-oxidized HfS2 - An embeddable and writable high-k dielectric for flexible Van der Waals nano-electronics. , 2018, , .		0