

Freddie Withers

List of Publications by Year in descending order

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55
papers

7,923
citations

108046

37
h-index

182931

54
g-index

58
all docs

58
docs citations

58
times ranked

14013
citing authors

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

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19	Two-Dimensional Metal-Chalcogenide Films in Tunable Optical Microcavities. Nano Letters, 2014, 14, 7003-7008.	4.5	129
20	Exciton and trion dynamics in atomically thin MoSe_2 and WSe_2 . Effect of localization. Physical Review B, 2016, 94, .		
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 WS_2 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 MoS_2 . Nature Nanotechnology, 2021, 16, 888-893.	15.6	60
31	The valley Zeeman effect in inter- and intra-valley trions in monolayer WSe_2 . 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 $\text{MoSe}_2/\text{CrBr}_3$ 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 WSe ₂ 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 Exciton-Polaritons through Free Electron Doping in Monolayer WS ₂ Microcavities. Advanced Optical Materials, 2019, 7, 1900484.	3.6	17
45	Resonantly excited exciton dynamics in two-dimensional MoSe_2 monolayers. Physical Review B, 2017, 96, .	1.5	16
46	Electrically pumped WSe ₂ -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 WS_2 on Talc Dielectric. Physical Review Applied, 2021, 16, .	1.5	14
50	Anisotropic magnetoconductance and Coulomb blockade in defect engineered Cr_2Mo van der Waals heterostructures. Physical Review B, 2019, 100, .	2.1	10
51	Revealing the impact of strain in the optical properties of bubbles in monolayer MoSe ₂ . 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 HfS ₂ - An embeddable and writable high-k dielectric for flexible Van der Waals nano-electronics. , 2018, , .		0