Sefaattin Tongay

List of Publications by Year
in descending order

194 papers	22,154 citations	16411 64 h-index	8835 145 g-index
200 all docs	200 docs citations	200 times ranked	21324 citing authors

#	Article	IF	Citations
1	Ultrafast charge transfer in atomically thin MoS2/WS2 heterostructures. Nature Nanotechnology, 2014, 9, 682-686.	15.6	1,838
2	Band offsets and heterostructures of two-dimensional semiconductors. Applied Physics Letters, 2013, 102, .	1.5	1,361
3	Thermally Driven Crossover from Indirect toward Direct Bandgap in 2D Semiconductors: MoSe₂ versus MoS₂. Nano Letters, 2012, 12, 5576-5580.	4.5	1,206
4	Monolayer behaviour in bulk ReS2 due to electronic and vibrational decoupling. Nature Communications, 2014, 5, 3252.	5.8	906
5	Defects activated photoluminescence in two-dimensional semiconductors: interplay between bound, charged and free excitons. Scientific Reports, 2013, 3, 2657.	1.6	876
6	High Efficiency Graphene Solar Cells by Chemical Doping. Nano Letters, 2012, 12, 2745-2750.	4.5	861
7	Observation of moirÃ© excitons in WSe2/WS2 heterostructure superlattices. Nature, 2019, 567, 76-80.	13.7	791
8	Tuning Interlayer Coupling in Large-Area Heterostructures with CVD-Grown MoS₂ and WS₂ Monolayers. Nano Letters, 2014, 14, 3185-3190.	4.5	683
9	Broad-Range Modulation of Light Emission in Two-Dimensional Semiconductors by Molecular Physisorption Gating. Nano Letters, 2013, 13, 2831-2836.	4.5	674
10	Mott and generalized Wigner crystal states in WSe2/WS2 moirÃ© superlattices. Nature, 2020, 579, 359-363.	13.7	536
11	Elastic Properties of Chemical-Vapor-Deposited Monolayer MoS₂, WS₂, and Their Bilayer Heterostructures. Nano Letters, 2014, 14, 5097-5103.	4.5	512
12	Anomalous Raman spectra and thickness-dependent electronic properties of WSe<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>. Physical Review B, 2013, 87, .	1.1	408
13	Excitonic Linewidth Approaching the Homogeneous Limit in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>MoS</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math> -Based van der Waals Heterostructures. Physical Review X, 2017, 7, .	2.8	389
14	Tuning the Optical, Magnetic, and Electrical Properties of ReSe₂ by Nanoscale Strain Engineering. Nano Letters, 2015, 15, 1660-1666.	4.5	363
15	Enhanced Light Emission from Large-Area Monolayer MoS₂ Using Plasmonic Nanodisc Arrays. Nano Letters, 2015, 15, 2700-2704.	4.5	346
16	Exciton radiative lifetime in transition metal dichalcogenide monolayers. Physical Review B, 2016, 93, .	1.1	335
17	Scalable enhancement of graphene oxide properties by thermally driven phase transformation. Nature Chemistry, 2014, 6, 151-158.	6.6	326
18	Anisotropic in-plane thermal conductivity of black phosphorus nanoribbons at temperatures higher than 100â€‰K. Nature Communications, 2015, 6, 8573.	5.8	311

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19	Magnetic properties of MoS2: Existence of ferromagnetism. Applied Physics Letters, 2012, 101, .	1.5	249
20	Observation of ultralong valley lifetime in WSe ₂ /MoS ₂ heterostructures. Science Advances, 2017, 3, e1700518.	4.7	226
21	Monolayer semiconducting transition metal dichalcogenide alloys: Stability and band bowing. Journal of Applied Physics, 2013, 113, .	1.1	214
22	Layer-dependent electrical and optoelectronic responses of ReSe2 nanosheet transistors. Nanoscale, 2014, 6, 7226.	2.8	205
23	Visualizing nanoscale excitonic relaxation properties of disordered edges and grain boundaries in monolayer molybdenum disulfide. Nature Communications, 2015, 6, 7993.	5.8	204
24	Charge-tuneable biexciton complexes in monolayer WSe2. Nature Communications, 2018, 9, 3721.	5.8	185
25	Spin-orbit engineering in transition metal dichalcogenide alloy monolayers. Nature Communications, 2015, 6, 10110.	5.8	176
26	Interlayer electronâ€“phonon coupling in WSe2/hBN heterostructures. Nature Physics, 2017, 13, 127-131.	6.5	173
27	Environmental Changes in MoTe₂ Excitonic Dynamics by Defects-Activated Molecular Interaction. ACS Nano, 2015, 9, 5326-5332.	7.3	166
28	Stable hole doping of graphene for low electrical resistance and high optical transparency. Nanotechnology, 2011, 22, 425701.	1.3	163
29	Self-Driven Photodetector and Ambipolar Transistor in Atomically Thin GaTe-MoS₂ pâ€“n vdW Heterostructure. ACS Applied Materials & Interfaces, 2016, 8, 2533-2539.	4.0	160
30	Perpendicular Optical Reversal of the Linear Dichroism and Polarized Photodetection in 2D GeAs. ACS Nano, 2018, 12, 12416-12423.	7.3	157
31	Quantum properties and applications of 2D Janus crystals and their superlattices. Applied Physics Reviews, 2020, 7, .	5.5	156
32	Imaging of pure spin-valley diffusion current in WS ₂ -WSe ₂ heterostructures. Science, 2018, 360, 893-896.	6.0	155
33	Two-dimensional semiconductor alloys: Monolayer Mo1â^'xWxSe2. Applied Physics Letters, 2014, 104, .	1.5	154
34	Ab-initioElectron Transport Calculations of Carbon Based String Structures. Physical Review Letters, 2004, 93, 136404.	2.9	151
35	Formation and stability of point defects in monolayer rhenium disulfide. Physical Review B, 2014, 89, .	1.1	151
36	The Magnetic Genome of Two-Dimensional van der Waals Materials. ACS Nano, 2022, 16, 6960-7079.	7.3	149

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37	Imaging two-dimensional generalized Wigner crystals. Nature, 2021, 597, 650-654.	13.7	147
38	Graphite based Schottky diodes formed on Si, GaAs, and 4H-SiC substrates. Applied Physics Letters, 2009, 95, .	1.5	140
39	Roomâ€Temperature Synthesis of 2D Janus Crystals and their Heterostructures. Advanced Materials, 2020, 32, e2006320.	11.1	138
40	Rectification at Graphene-Semiconductor Interfaces: Zero-Gap Semiconductor-Based Diodes. Physical Review X, 2012, 2, .	2.8	137
41	Polarization and time-resolved photoluminescence spectroscopy of excitons in MoSe2 monolayers. Applied Physics Letters, 2015, 106, .	1.5	136
42	Enhanced rectification, transport property and photocurrent generation of multilayer ReSe2/MoS2 pâ€“n heterojunctions. Nano Research, 2016, 9, 507-516.	5.8	132
43	Imaging moirÃ© flat bands in three-dimensional reconstructed WSe2/WS2 superlattices. Nature Materials, 2021, 20, 945-950.	13.3	118
44	Fundamentals of lateral and vertical heterojunctions of atomically thin materials. Nanoscale, 2016, 8, 3870-3887.	2.8	117
45	Electronic structure, spin-orbit coupling, and interlayer interaction in bulk<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mrow><mml:mi mathvariant="normal">MoS</mml:mi></mml:mrow><mml:mn>2</mml:mn></mml:msub></mml:math>and<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mrow><mml:mi mathvariant="normal">WS</mml:mi></mml:mrow><mml:mn>2</mml:mn></mml:msub></mml:math>. Physical Review B, 2015, 91, .	1.1	116
46	Work function engineering of single layer graphene by irradiation-induced defects. Applied Physics Letters, 2013, 103, .	1.5	113
47	Graphene/GaN Schottky diodes: Stability at elevated temperatures. Applied Physics Letters, 2011, 99, 102102.	1.5	111
48	Chemical and physical changes of microplastics during sterilization by chlorination. Water Research, 2019, 163, 114871.	5.3	110
49	Emerging photoluminescence from the dark-exciton phonon replica in monolayer WSe2. Nature Communications, 2019, 10, 2469.	5.8	102
50	Site Selective Doping of Ultrathin Metal Dichalcogenides by Laserâ€Assisted Reaction. Advanced Materials, 2016, 28, 341-346.	11.1	101
51	Tuning Schottky diodes at the many-layer-graphene/semiconductor interface by doping. Carbon, 2011, 49, 2033-2038.	5.4	100
52	A dielectric-defined lateral heterojunction in a monolayer semiconductor. Nature Electronics, 2019, 2, 60-65.	13.1	95
53	MoS2 Heterojunctions by Thickness Modulation. Scientific Reports, 2015, 5, 10990.	1.6	93
54	Identification of spin, valley and moirÃ© quasi-angular momentum of interlayer excitons. Nature Physics, 2019, 15, 1140-1144.	6.5	91

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55	Intensity tunable infrared broadband absorbers based on VO2 phase transition using planar layered thin films. Scientific Reports, 2015, 5, 13384.	1.6	89
56	Optical valley Hall effect for highly valley-coherent exciton-polaritons in an atomically thin semiconductor. Nature Nanotechnology, 2019, 14, 770-775.	15.6	87
57	High-Performance Few-layer Mo-doped ReSe2 Nanosheet Photodetectors. Scientific Reports, 2014, 4, 5442.	1.6	82
58	Domain Architectures and Grain Boundaries in Chemical Vapor Deposited Highly Anisotropic ReS₂ Monolayer Films. Nano Letters, 2016, 16, 5888-5894.	4.5	79
59	Supermetallic conductivity in bromine-intercalated graphite. Physical Review B, 2010, 81, .	1.1	76
60	Optically Discriminating Carrier-Induced Quasiparticle Band Gap and Exciton Energy Renormalization in Monolayer<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>MoS</mml:mi></mml:mrow><mml:mn>2</mml:mn></mml:msub></ Physical Review Letters, 2017, 119, 087401.	2.9	74
61	Optical spectroscopy of excited exciton states in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>MoS</mml:mi><mml:mn>2</mml:mn></mml:msub></ monolayers in van der Waals heterostructures. Physical Review Materials, 2018, 2, .	2.9	74
62	Strain-Tunable Single Photon Sources in WSe₂ Monolayers. Nano Letters, 2019, 19, 6931-6936.	4.5	71
63	Giant Valley-Zeeman Splitting from Spin-Singlet and Spin-Triplet Interlayer Excitons in WSe₂/MoSe₂ Heterostructure. Nano Letters, 2020, 20, 694-700.	4.5	70
64	Unusual lattice vibration characteristics in whiskers of the pseudo-one-dimensional titanium trisulfide TiS3. Nature Communications, 2016, 7, 12952.	5.8	69
65	Angle resolved vibrational properties of anisotropic transition metal trichalcogenide nanosheets. Nanoscale, 2017, 9, 4175-4182.	2.8	64
66	In-Plane Optical Anisotropy and Linear Dichroism in Low-Symmetry Layered TlSe. ACS Nano, 2018, 12, 8798-8807.	7.3	64
67	Strong dichroic emission in the pseudo one dimensional material ZrS₃. Nanoscale, 2016, 8, 16259-16265.	2.8	63
68	Ultra-low power threshold for laser induced changes in optical properties of 2D molybdenum dichalcogenides. 2D Materials, 2016, 3, 045008.	2.0	63
69	Momentum-Dark Intervalley Exciton in Monolayer Tungsten Diselenide Brightened via Chiral Phonon. ACS Nano, 2019, 13, 14107-14113.	7.3	63
70	Strong interaction between interlayer excitons and correlated electrons in WSe2/WS2 moirÃ© superlattice. Nature Communications, 2021, 12, 3608.	5.8	63
71	Raman spectrum of Janus transition metal dichalcogenide monolayers WSSe and MoSSe. Physical Review B, 2021, 103, .	1.1	63
72	Direct Observation of Gate-Tunable Dark Trions in Monolayer WSe₂. Nano Letters, 2019, 19, 6886-6893.	4.5	60

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73	Bandgap Restructuring of the Layered Semiconductor Gallium Telluride in Air. Advanced Materials, 2016, 28, 6465-6470.	11.1	58
74	Synthesis of Highly Anisotropic Semiconducting GaTe Nanomaterials and Emerging Properties Enabled by Epitaxy. Advanced Materials, 2017, 29, 1605551.	11.1	57
75	Pressure coefficients for direct optical transitions in MoS2, MoSe2, WS2, and WSe2 crystals and semiconductor to metal transitions. Scientific Reports, 2016, 6, 26663.	1.6	56
76	Bosonic condensation of excitonâ€“polaritons in an atomically thin crystal. Nature Materials, 2021, 20, 1233-1239.	13.3	56
77	Highly efficient gas molecule-tunable few-layer GaSe phototransistors. Journal of Materials Chemistry C, 2016, 4, 248-253.	2.7	54
78	Quantifying van der Waals Interactions in Layered Transition Metal Dichalcogenides from Pressure-Enhanced Valence Band Splitting. Nano Letters, 2017, 17, 4982-4988.	4.5	53
79	Monolayered MoSe ₂ : a candidate for room temperature polaritonics. 2D Materials, 2017, 4, 015006.	2.0	50
80	Unusual dimensionality effects and surface charge density in 2D Mg(OH)2. Scientific Reports, 2016, 6, 20525.	1.6	49
81	Observation of bosonic condensation in a hybrid monolayer MoSe2-GaAs microcavity. Nature Communications, 2018, 9, 3286.	5.8	49
82	Biexcitonic optical Stark effects in monolayer molybdenum diselenide. Nature Physics, 2018, 14, 1092-1096.	6.5	48
83	Tunable free-electron X-ray radiation from van der Waals materials. Nature Photonics, 2020, 14, 686-692.	15.6	48
84	Near-Unity Light Absorption in a Monolayer WS₂ Van der Waals Heterostructure Cavity. Nano Letters, 2020, 20, 3545-3552.	4.5	48
85	Direct optical transitions at K- and H-point of Brillouin zone in bulk MoS2, MoSe2, WS2, and WSe2. Journal of Applied Physics, 2016, 119, .	1.1	46
86	Dynamic Optical Tuning of Interlayer Interactions in the Transition Metal Dichalcogenides. Nano Letters, 2017, 17, 7761-7766.	4.5	46
87	Highly Polarized Photoelectrical Response in vdW ZrS₃ Nanoribbons. Advanced Electronic Materials, 2019, 5, 1900419.	2.6	45
88	On Optical Dipole Moment and Radiative Recombination Lifetime of Excitons in WSe₂. Advanced Functional Materials, 2017, 27, 1601741.	7.8	44
89	Mechanically modulated tunneling resistance in monolayer MoS2. Applied Physics Letters, 2013, 103, .	1.5	43
90	Electroâ€Optic Modulation in Hybrid Metal Halide Perovskites. Advanced Materials, 2019, 31, e1808336.	11.1	42

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91	Variable range hopping electric and thermoelectric transport in anisotropic black phosphorus. Applied Physics Letters, 2017, 111, .	1.5	41
92	Environmental stability of 2D anisotropic tellurium containing nanomaterials: anisotropic to isotropic transition. Nanoscale, 2017, 9, 12288-12294.	2.8	41
93	Synthesis, engineering, and theory of 2D van der Waals magnets. Applied Physics Reviews, 2021, 8, .	5.5	41
94	2D coordination polymers: Design guidelines and materials perspective. Applied Physics Reviews, 2019, 6, 041311.	5.5	39
95	Reaching the Excitonic Limit in 2D Janus Monolayers by In Situ Deterministic Growth. Advanced Materials, 2022, 34, e2106222.	11.1	39
96	Apparent breakdown of Raman selection rule at valley exciton resonances in monolayer<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Mo</mml:mi><mml:msub><mml:mi mathvariant="normal">S</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2017, 95, .	1.1	38
97	Nanoscale Conductivity Imaging of Correlated Electronic States in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow><mml:mi>WSe</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:math> MoirÃ© Superlattices. Physical Review Letters, 2020, 125, 186803.	2.9	36
98	Anomalous Behavior of 2D Janus Excitonic Layers under Extreme Pressures. Advanced Materials, 2020, 32, e2002401.	11.1	36
99	Purcell-Enhanced Single Photon Source Based on a Deterministically Placed WSe₂ Monolayer Quantum Dot in a Circular Bragg Grating Cavity. Nano Letters, 2021, 21, 4715-4720.	4.5	36
100	Imaging local discharge cascades for correlated electrons in WS2/WSe2 moirÃ© superlattices. Nature Physics, 2021, 17, 1114-1119.	6.5	36
101	Half-metallic properties of atomic chains of carbonâ€“transition-metal compounds. Physical Review B, 2005, 72, .	1.1	35
102	Pressure dependence of direct optical transitions in ReS2 and ReSe2. Npj 2D Materials and Applications, 2019, 3, .	3.9	35
103	Highly Sensitive Polarization Photodetection Using a Pseudo-One-Dimensional Nb_(1â€“x)Ti_xS₃ Alloy. ACS Applied Materials & Interfaces, 2019, 11, 3342-3350.	4.0	35
104	Microscale Silicon Origami. Small, 2016, 12, 5401-5406.	5.2	34
105	Valley-dependent exciton fine structure and Autlerâ€“Townes doublets from Berry phases in monolayer MoSe2. Nature Materials, 2019, 18, 1065-1070.	13.3	34
106	Epitaxial Synthesis of Highly Oriented 2D Janus Rashba Semiconductor BiTeCl and BiTeBr Layers. ACS Nano, 2020, 14, 15626-15632.	7.3	34
107	Deterministic coupling of quantum emitters in WSe₂ monolayers to plasmonic nanocavities. Optics Express, 2018, 26, 25944.	1.7	33
108	Metal to semiconductor transition in metallic transition metal dichalcogenides. Journal of Applied Physics, 2013, 114, 174307.	1.1	31

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109	Atomic strings of group IV, IIIâ€“V, and IIâ€“VI elements. Applied Physics Letters, 2004, 85, 6179-6181.	1.5	30
110	Atomic and electronic structure of carbon strings. Journal of Physics Condensed Matter, 2005, 17, 3823-3836.	0.7	30
111	Vibrational spectrum renormalization by enforced coupling across the van der Waals gap between<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="bold">Mo</mml:mi><mml:msub><mml:mi mathvariant="bold">S</mml:mi><mml:mn mathvariant="bold">2</mml:mn></mml:msub></mml:mrow></mml:math>and<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="bold">W</mml:mi><mml:msub><mml:mi mathvariant="bold">S</mml:mi><mml:mn mathvariant="bold">2</mml:mn></mml:msub></mml:mrow></mml:math>	1.1	30
112	Modulating Photoluminescence of Monolayer Molybdenum Disulfide by Metalâ€“Insulator Phase Transition in Active Substrates. Small, 2016, 12, 3976-3984.	5.2	30
113	Gate-tunable diode-like current rectification and ambipolar transport in multilayer van der Waals ReSe₂/WS₂ pâ€“n heterojunctions. Physical Chemistry Chemical Physics, 2016, 18, 27750-27753.	1.3	30
114	Ultimate Control over Hydrogen Bond Formation and Reaction Rates for Scalable Synthesis of Highly Crystalline vdW MOF Nanosheets with Large Aspect Ratio. Advanced Materials, 2018, 30, e1802497.	11.1	30
115	Excitons in Bilayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>MoS</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow> Displaying a Colossal Electric Field Splitting and Tunable Magnetic Response. Physical Review Letters, 2021, 126, 037401.	2.9	30
116	Anomalous Above-Gap Photoexcitations and Optical Signatures of Localized Charge Puddles in Monolayer Molybdenum Disulfide. ACS Nano, 2017, 11, 2115-2123.	7.3	29
117	Integration of atomically thin layers of transition metal dichalcogenides into high-Q, monolithic Bragg-cavities: an experimental platform for the enhancement of the optical interaction in 2D-materials. Optical Materials Express, 2019, 9, 598.	1.6	29
118	Band Engineering by Controlling vdW Epitaxy Growth Mode in 2D Gallium Chalcogenides. Advanced Materials, 2016, 28, 7375-7382.	11.1	28
119	Valley relaxation of resident electrons and holes in a monolayer semiconductor: Dependence on carrier density and the role of substrate-induced disorder. Physical Review Materials, 2021, 5, .	0.9	28
120	Performance improvement of organic light emitting diode with aluminum oxide buffer layer for anode modification. Journal of Applied Physics, 2013, 114, 074506.	1.1	27
121	Weak Distance Dependence of Hot-Electron-Transfer Rates at the Interface between Monolayer MoS₂ and Gold. ACS Nano, 2021, 15, 819-828.	7.3	27
122	Highly crystalline synthesis of tellurene sheets on two-dimensional surfaces: Control over helical chain direction of tellurene. Physical Review Materials, 2018, 2, .	0.9	27
123	Spatial coherence of room-temperature monolayer WSe2 exciton-polaritons in a trap. Nature Communications, 2021, 12, 6406.	5.8	27
124	Exciton pumping across type-I gallium chalcogenide heterojunctions. Nanotechnology, 2016, 27, 065203.	1.3	26
125	Exciton-Exciton Interaction beyond the Hydrogenic Picture in a <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>MoSe</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn> Monolayer in the Strong Light-Matter Coupling Regime. Physical Review Letters, 2021, 126, 167401.	2.9	26
126	Confinement of long-lived interlayer excitons in WS2/WSe2 heterostructures. Communications Physics, 2021, 4, .	2.0	26

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127	Selfâ€Passivation of Defects: Effects of Highâ€Energy Particle Irradiation on the Elastic Modulus of Multilayer Graphene. Advanced Materials, 2015, 27, 6841-6847.	11.1	24
128	Chemical trends of deep levels in van der Waals semiconductors. Nature Communications, 2020, 11, 5373.	5.8	24
129	Low-Loss Integrated Nanophotonic Circuits with Layered Semiconductor Materials. Nano Letters, 2021, 21, 2709-2718.	4.5	24
130	Visualizing electron localization of WS ₂ /WSe ₂ moirÃ© superlattices in momentum space. Science Advances, 2021, 7, eabf4387.	4.7	24
131	Unusual Pressureâ€Driven Phase Transformation and Band Renormalization in 2D vdW Hybrid Lead Halide Perovskites. Advanced Materials, 2020, 32, e1907364.	11.1	23
132	Environmentally stable/self-powered ultraviolet photodetectors with high sensitivity. Applied Physics Letters, 2013, 103, 143503.	1.5	22
133	Controlling Structural Anisotropy of Anisotropic 2D Layers in Pseudoâ€1D/2D Material Heterojunctions. Advanced Materials, 2017, 29, 1701201.	11.1	22
134	Ultrathin ternary semiconductor TlGaSe ₂ phototransistors with broad-spectral response. 2D Materials, 2017, 4, 035021.	2.0	22
135	Extinction of ferromagnetism in highly ordered pyrolytic graphite by annealing. Carbon, 2012, 50, 1614-1618.	5.4	21
136	Extreme In-Plane Thermal Conductivity Anisotropy in Titanium Trisulfide Caused by Heat-Carrying Optical Phonons. Nano Letters, 2020, 20, 5221-5227.	4.5	21
137	Direct laser patterning of two-dimensional lateral transition metal disulfide-oxide-disulfide heterostructures for ultrasensitive sensors. Nano Research, 2020, 13, 2035-2043.	5.8	21
138	Abnormal band bowing effects in phase instability crossover region of GaSe1-xTe x nanomaterials. Nature Communications, 2018, 9, 1927.	5.8	20
139	Excitonic Complexes and Emerging Interlayer Electronâ€“Phonon Coupling in BN Encapsulated Monolayer Semiconductor Alloy: WS0.6Se1.4. Nano Letters, 2019, 19, 299-307.	4.5	20
140	Ultrafast Zero-Bias Surface Photocurrent in Germanium Selenide: Promise for Terahertz Devices and Photovoltaics. ACS Applied Materials & Interfaces, 2019, 11, 5492-5498.	4.0	20
141	Observation of Quantized Exciton Energies in Monolayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>WSe</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow> under a Strong Magnetic Field. Physical Review X, 2020, 10, .	2.8	20
142	Tunable exciton-polaritons emerging from WS2 monolayer excitons in a photonic lattice at room temperature. Nature Communications, 2021, 12, 4933.	5.8	20
143	Low-temperature, site selective graphitization of SiC via ion implantation and pulsed laser annealing. Applied Physics Letters, 2012, 100, .	1.5	19
144	Multilayer ReS₂ lateral pâ€“n homojunction for photoemission and photodetection. Applied Physics Express, 2016, 9, 055201.	1.1	19

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145	Tuning the optical and electrical properties of MoS2 by selective Ag photo-reduction. Applied Physics Letters, 2018, 113, .	1.5	17
146	The synthesis of competing phase GeSe and GeSe₂ 2D layered materials. RSC Advances, 2020, 10, 38227-38232.	1.7	17
147	Ultrapure multilayer graphene in bromine-intercalated graphite. Physical Review B, 2011, 84, .	1.1	16
148	Giant Valley-Polarized Rydberg Excitons in Monolayer WSe₂ Revealed by Magneto-photocurrent Spectroscopy. Nano Letters, 2020, 20, 7635-7641.	4.5	16
149	Phase Transition across Anisotropic NbS 3 and Direct Gap Semiconductor TiS 3 at Nominal Titanium Alloying Limit. Advanced Materials, 2020, 32, 2000018.	11.1	16
150	Advances in Rareâ€Earth Tritelluride Quantum Materials: Structure, Properties, and Synthesis. Advanced Science, 2021, 8, e2004762.	5.6	16
151	Temperature Dependence of the Indirect Gap and the Direct Optical Transitions at the High-Symmetry Point of the Brillouin Zone and Band Nesting in MoS₂, MoSe₂, MoTe₂, WS₂, and WSe₂ Crystals. Journal of Physical Chemistry C, 2022, 126, 5665-5674.	1.5	16
152	Novel Surface Molecular Functionalization Route To Enhance Environmental Stability of Tellurium-Containing 2D Layers. ACS Applied Materials & Interfaces, 2017, 9, 44625-44631.	4.0	15
153	Passivation of Layered Gallium Telluride by Double Encapsulation with Graphene. ACS Omega, 2019, 4, 18002-18010.	1.6	15
154	Phonon-exciton Interactions in WSe2 under a quantizing magnetic field. Nature Communications, 2020, 11, 3104.	5.8	15
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