

# Sefaattin Tongay

## List of Publications by Citations

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185  
papers

16,092  
citations

54  
h-index

125  
g-index

200  
ext. papers

19,163  
ext. citations

11.3  
avg, IF

6.6  
L-index

#	Paper	IF	Citations
185	Ultrafast charge transfer in atomically thin MoS <sub>2</sub> /WS <sub>2</sub> heterostructures. <i>Nature Nanotechnology</i> , <b>2014</b> , 9, 682-6	28.7	1432
184	Band offsets and heterostructures of two-dimensional semiconductors. <i>Applied Physics Letters</i> , <b>2013</b> , 102, 012111	3.4	1131
183	Thermally driven crossover from indirect toward direct bandgap in 2D semiconductors: MoSe <sub>2</sub> versus MoS <sub>2</sub> . <i>Nano Letters</i> , <b>2012</b> , 12, 5576-80	11.5	989
182	High efficiency graphene solar cells by chemical doping. <i>Nano Letters</i> , <b>2012</b> , 12, 2745-50	11.5	754
181	Monolayer behaviour in bulk ReS <sub>2</sub> due to electronic and vibrational decoupling. <i>Nature Communications</i> , <b>2014</b> , 5, 3252	17.4	728
180	Defects activated photoluminescence in two-dimensional semiconductors: interplay between bound, charged, and free excitons. <i>Scientific Reports</i> , <b>2013</b> , 3, 2657	4.9	726
179	Broad-range modulation of light emission in two-dimensional semiconductors by molecular physisorption gating. <i>Nano Letters</i> , <b>2013</b> , 13, 2831-6	11.5	566
178	Tuning interlayer coupling in large-area heterostructures with CVD-grown MoS <sub>2</sub> and WS <sub>2</sub> monolayers. <i>Nano Letters</i> , <b>2014</b> , 14, 3185-90	11.5	562
177	Observation of moiré excitons in WSe <sub>2</sub> /WS <sub>2</sub> heterostructure superlattices. <i>Nature</i> , <b>2019</b> , 567, 76-80	50.4	459
176	Elastic properties of chemical-vapor-deposited monolayer MoS <sub>2</sub> , WS <sub>2</sub> , and their bilayer heterostructures. <i>Nano Letters</i> , <b>2014</b> , 14, 5097-103	11.5	384
175	Anomalous Raman spectra and thickness-dependent electronic properties of WSe <sub>2</sub> . <i>Physical Review B</i> , <b>2013</b> , 87,	3.3	341
174	Tuning the optical, magnetic, and electrical properties of ReSe <sub>2</sub> by nanoscale strain engineering. <i>Nano Letters</i> , <b>2015</b> , 15, 1660-6	11.5	293
173	Enhanced light emission from large-area monolayer MoS <sub>2</sub> using plasmonic nanodisc arrays. <i>Nano Letters</i> , <b>2015</b> , 15, 2700-4	11.5	272
172	Scalable enhancement of graphene oxide properties by thermally driven phase transformation. <i>Nature Chemistry</i> , <b>2014</b> , 6, 151-8	17.6	261
171	Exciton radiative lifetime in transition metal dichalcogenide monolayers. <i>Physical Review B</i> , <b>2016</b> , 93,	3.3	256
170	Anisotropic in-plane thermal conductivity of black phosphorus nanoribbons at temperatures higher than 100 K. <i>Nature Communications</i> , <b>2015</b> , 6, 8573	17.4	249
169	Excitonic Linewidth Approaching the Homogeneous Limit in MoS <sub>2</sub> -Based van der Waals Heterostructures. <i>Physical Review X</i> , <b>2017</b> , 7,	9.1	237

168	Magnetic properties of MoS <sub>2</sub> : Existence of ferromagnetism. <i>Applied Physics Letters</i> , <b>2012</b> , 101, 123105	3.4	218
167	Mott and generalized Wigner crystal states in WSe/WS moiré superlattices. <i>Nature</i> , <b>2020</b> , 579, 359-363	50.4	212
166	Monolayer semiconducting transition metal dichalcogenide alloys: Stability and band bowing. <i>Journal of Applied Physics</i> , <b>2013</b> , 113, 143703	2.5	175
165	Visualizing nanoscale excitonic relaxation properties of disordered edges and grain boundaries in monolayer molybdenum disulfide. <i>Nature Communications</i> , <b>2015</b> , 6, 7993	17.4	172
164	Layer-dependent electrical and optoelectronic responses of ReSe <sub>2</sub> nanosheet transistors. <i>Nanoscale</i> , <b>2014</b> , 6, 7226-31	7.7	170
163	Observation of ultralong valley lifetime in WSe/MoS heterostructures. <i>Science Advances</i> , <b>2017</b> , 3, e1700518	11.3	160
162	Stable hole doping of graphene for low electrical resistance and high optical transparency. <i>Nanotechnology</i> , <b>2011</b> , 22, 425701	3.4	145
161	Ab-initio electron transport calculations of carbon based string structures. <i>Physical Review Letters</i> , <b>2004</b> , 93, 136404	7.4	145
160	Environmental Changes in MoTe <sub>2</sub> Excitonic Dynamics by Defects-Activated Molecular Interaction. <i>ACS Nano</i> , <b>2015</b> , 9, 5326-32	16.7	144
159	Spin-orbit engineering in transition metal dichalcogenide alloy monolayers. <i>Nature Communications</i> , <b>2015</b> , 6, 10110	17.4	142
158	Interlayer electron-phonon coupling in WSe <sub>2</sub> /hBN heterostructures. <i>Nature Physics</i> , <b>2017</b> , 13, 127-131	16.2	129
157	Self-Driven Photodetector and Ambipolar Transistor in Atomically Thin GaTe-MoS <sub>2</sub> p-n vdW Heterostructure. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 2533-9	9.5	126
156	Graphite based Schottky diodes formed on Si, GaAs, and 4H-SiC substrates. <i>Applied Physics Letters</i> , <b>2009</b> , 95, 222103	3.4	125
155	Two-dimensional semiconductor alloys: Monolayer Mo <sub>1-x</sub> W <sub>x</sub> Se <sub>2</sub> . <i>Applied Physics Letters</i> , <b>2014</b> , 104, 012101	9.1	122
154	Formation and stability of point defects in monolayer rhenium disulfide. <i>Physical Review B</i> , <b>2014</b> , 89,	3.3	118
153	Rectification at Graphene-Semiconductor Interfaces: Zero-Gap Semiconductor-Based Diodes. <i>Physical Review X</i> , <b>2012</b> , 2,	9.1	115
152	Charge-tuneable biexciton complexes in monolayer WSe. <i>Nature Communications</i> , <b>2018</b> , 9, 3721	17.4	113
151	Polarization and time-resolved photoluminescence spectroscopy of excitons in MoSe <sub>2</sub> monolayers. <i>Applied Physics Letters</i> , <b>2015</b> , 106, 112101	3.4	110

150	Enhanced rectification, transport property and photocurrent generation of multilayer ReSe <sub>2</sub> /MoS <sub>2</sub> p-n heterojunctions. <i>Nano Research</i> , <b>2016</b> , 9, 507-516	10	107
149	Perpendicular Optical Reversal of the Linear Dichroism and Polarized Photodetection in 2D GeAs. <i>ACS Nano</i> , <b>2018</b> , 12, 12416-12423	16.7	100
148	Imaging of pure spin-valley diffusion current in WS-WSe heterostructures. <i>Science</i> , <b>2018</b> , 360, 893-896	33.3	100
147	Graphene/GaN Schottky diodes: Stability at elevated temperatures. <i>Applied Physics Letters</i> , <b>2011</b> , 99, 102102	3.4	94
146	Work function engineering of single layer graphene by irradiation-induced defects. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 171604	3.4	92
145	Electronic structure, spin-orbit coupling, and interlayer interaction in bulk MoS <sub>2</sub> and WS <sub>2</sub> . <i>Physical Review B</i> , <b>2015</b> , 91,	3.3	92
144	Fundamentals of lateral and vertical heterojunctions of atomically thin materials. <i>Nanoscale</i> , <b>2016</b> , 8, 3870-87	7.7	90
143	Tuning Schottky diodes at the many-layer-graphene/semiconductor interface by doping. <i>Carbon</i> , <b>2011</b> , 49, 2033-2038	10.4	86
142	Site Selective Doping of Ultrathin Metal Dichalcogenides by Laser-Assisted Reaction. <i>Advanced Materials</i> , <b>2016</b> , 28, 341-6	24	75
141	MoS <sub>2</sub> Heterojunctions by Thickness Modulation. <i>Scientific Reports</i> , <b>2015</b> , 5, 10990	4.9	71
140	High-performance few-layer Mo-doped ReSe <sub>2</sub> nanosheet photodetectors. <i>Scientific Reports</i> , <b>2014</b> , 4, 5442	4.9	71
139	Intensity tunable infrared broadband absorbers based on VO <sub>2</sub> phase transition using planar layered thin films. <i>Scientific Reports</i> , <b>2015</b> , 5, 13384	4.9	71
138	Domain Architectures and Grain Boundaries in Chemical Vapor Deposited Highly Anisotropic ReS <sub>2</sub> Monolayer Films. <i>Nano Letters</i> , <b>2016</b> , 16, 5888-94	11.5	67
137	Quantum properties and applications of 2D Janus crystals and their superlattices. <i>Applied Physics Reviews</i> , <b>2020</b> , 7, 011311	17.3	64
136	Supermetallic conductivity in bromine-intercalated graphite. <i>Physical Review B</i> , <b>2010</b> , 81,	3.3	60
135	Optical spectroscopy of excited exciton states in MoS <sub>2</sub> monolayers in van der Waals heterostructures. <i>Physical Review Materials</i> , <b>2018</b> , 2,	3.2	60
134	Optically Discriminating Carrier-Induced Quasiparticle Band Gap and Exciton Energy Renormalization in Monolayer MoS <sub>2</sub> . <i>Physical Review Letters</i> , <b>2017</b> , 119, 087401	7.4	58
133	Emerging photoluminescence from the dark-exciton phonon replica in monolayer WSe. <i>Nature Communications</i> , <b>2019</b> , 10, 2469	17.4	57

132	Identification of spin, valley and moiré quasi-angular momentum of interlayer excitons. <i>Nature Physics</i> , <b>2019</b> , 15, 1140-1144	16.2	55
131	Unusual lattice vibration characteristics in whiskers of the pseudo-one-dimensional titanium trisulfide TiS. <i>Nature Communications</i> , <b>2016</b> , 7, 12952	17.4	54
130	Ultra-low power threshold for laser induced changes in optical properties of 2D molybdenum dichalcogenides. <i>2D Materials</i> , <b>2016</b> , 3, 045008	5.9	54
129	Optical valley Hall effect for highly valley-coherent exciton-polaritons in an atomically thin semiconductor. <i>Nature Nanotechnology</i> , <b>2019</b> , 14, 770-775	28.7	54
128	A dielectric-defined lateral heterojunction in a monolayer semiconductor. <i>Nature Electronics</i> , <b>2019</b> , 2, 60-65	28.4	53
127	Angle resolved vibrational properties of anisotropic transition metal trichalcogenide nanosheets. <i>Nanoscale</i> , <b>2017</b> , 9, 4175-4182	7.7	49
126	Room-Temperature Synthesis of 2D Janus Crystals and their Heterostructures. <i>Advanced Materials</i> , <b>2020</b> , 32, e2006320	24	48
125	Strong dichroic emission in the pseudo one dimensional material ZrS. <i>Nanoscale</i> , <b>2016</b> , 8, 16259-16265	7.7	48
124	Highly efficient gas molecule-tunable few-layer GaSe phototransistors. <i>Journal of Materials Chemistry C</i> , <b>2016</b> , 4, 248-253	7.1	48
123	Synthesis of Highly Anisotropic Semiconducting GaTe Nanomaterials and Emerging Properties Enabled by Epitaxy. <i>Advanced Materials</i> , <b>2017</b> , 29, 1605551	24	45
122	Pressure coefficients for direct optical transitions in MoS <sub>2</sub> , MoSe <sub>2</sub> , WS <sub>2</sub> , and WSe <sub>2</sub> crystals and semiconductor to metal transitions. <i>Scientific Reports</i> , <b>2016</b> , 6, 26663	4.9	44
121	Chemical and physical changes of microplastics during sterilization by chlorination. <i>Water Research</i> , <b>2019</b> , 163, 114871	12.5	44
120	In-Plane Optical Anisotropy and Linear Dichroism in Low-Symmetry Layered TlSe. <i>ACS Nano</i> , <b>2018</b> , 12, 8798-8807	16.7	43
119	Bandgap Restructuring of the Layered Semiconductor Gallium Telluride in Air. <i>Advanced Materials</i> , <b>2016</b> , 28, 6465-70	24	42
118	Imaging moiré flat bands in three-dimensional reconstructed WSe/WS superlattices. <i>Nature Materials</i> , <b>2021</b> , 20, 945-950	27	41
117	Unusual dimensionality effects and surface charge density in 2D Mg(OH) <sub>2</sub> . <i>Scientific Reports</i> , <b>2016</b> , 6, 20525	4.9	38
116	Mechanically modulated tunneling resistance in monolayer MoS <sub>2</sub> . <i>Applied Physics Letters</i> , <b>2013</b> , 103, 183105	3.4	36
115	Giant Valley-Zeeman Splitting from Spin-Singlet and Spin-Triplet Interlayer Excitons in WSe/MoSe Heterostructure. <i>Nano Letters</i> , <b>2020</b> , 20, 694-700	11.5	35

114	Observation of bosonic condensation in a hybrid monolayer MoSe-GaAs microcavity. <i>Nature Communications</i> , <b>2018</b> , 9, 3286	17.4	34
113	Quantifying van der Waals Interactions in Layered Transition Metal Dichalcogenides from Pressure-Enhanced Valence Band Splitting. <i>Nano Letters</i> , <b>2017</b> , 17, 4982-4988	11.5	34
112	Half-metallic properties of atomic chains of carbon-transition-metal compounds. <i>Physical Review B</i> , <b>2005</b> , 72,	3.3	34
111	Direct Observation of Gate-Tunable Dark Trions in Monolayer WSe. <i>Nano Letters</i> , <b>2019</b> , 19, 6886-6893	11.5	33
110	Strain-Tunable Single Photon Sources in WSe Monolayers. <i>Nano Letters</i> , <b>2019</b> , 19, 6931-6936	11.5	33
109	Direct optical transitions at K- and H-point of Brillouin zone in bulk MoS <sub>2</sub> , MoSe <sub>2</sub> , WS <sub>2</sub> , and WSe <sub>2</sub> . <i>Journal of Applied Physics</i> , <b>2016</b> , 119, 235705	2.5	33
108	Environmental stability of 2D anisotropic tellurium containing nanomaterials: anisotropic to isotropic transition. <i>Nanoscale</i> , <b>2017</b> , 9, 12288-12294	7.7	31
107	On Optical Dipole Moment and Radiative Recombination Lifetime of Excitons in WSe <sub>2</sub> . <i>Advanced Functional Materials</i> , <b>2017</b> , 27, 1601741	15.6	31
106	Microscale Silicon Origami. <i>Small</i> , <b>2016</b> , 12, 5401-5406	11	30
105	Monolayered MoSe <sub>2</sub> : a candidate for room temperature polaritonics. <i>2D Materials</i> , <b>2017</b> , 4, 015006	5.9	30
104	Highly Polarized Photoelectrical Response in vdW ZrS <sub>3</sub> Nanoribbons. <i>Advanced Electronic Materials</i> , <b>2019</b> , 5, 1900419	6.4	29
103	Dynamic Optical Tuning of Interlayer Interactions in the Transition Metal Dichalcogenides. <i>Nano Letters</i> , <b>2017</b> , 17, 7761-7766	11.5	29
102	Atomic strings of group IV, IIIIV, and IIIV elements. <i>Applied Physics Letters</i> , <b>2004</b> , 85, 6179-6181	3.4	29
101	Atomic and electronic structure of carbon strings. <i>Journal of Physics Condensed Matter</i> , <b>2005</b> , 17, 3823-36.8		29
100	Variable range hopping electric and thermoelectric transport in anisotropic black phosphorus. <i>Applied Physics Letters</i> , <b>2017</b> , 111, 102101	3.4	28
99	Electro-Optic Modulation in Hybrid Metal Halide Perovskites. <i>Advanced Materials</i> , <b>2019</b> , 31, e1808336	24	26
98	Apparent breakdown of Raman selection rule at valley exciton resonances in monolayer MoS <sub>2</sub> . <i>Physical Review B</i> , <b>2017</b> , 95,	3.3	26
97	Highly Sensitive Polarization Photodetection Using a Pseudo-One-Dimensional NbTiS Alloy. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 3342-3350	9.5	26

96	Anomalous Above-Gap Photoexcitations and Optical Signatures of Localized Charge Puddles in Monolayer Molybdenum Disulfide. <i>ACS Nano</i> , <b>2017</b> , 11, 2115-2123	16.7	25
95	Momentum-Dark Intervalley Exciton in Monolayer Tungsten Diselenide Brightened Chiral Phonon. <i>ACS Nano</i> , <b>2019</b> , 13, 14107-14113	16.7	25
94	Pressure dependence of direct optical transitions in ReS <sub>2</sub> and ReSe <sub>2</sub> . <i>Npj 2D Materials and Applications</i> , <b>2019</b> , 3,	8.8	24
93	Biexcitonic optical Stark effects in monolayer molybdenum diselenide. <i>Nature Physics</i> , <b>2018</b> , 14, 1092-1096	16.2	24
92	Metal to semiconductor transition in metallic transition metal dichalcogenides. <i>Journal of Applied Physics</i> , <b>2013</b> , 114, 174307	2.5	24
91	Modulating Photoluminescence of Monolayer Molybdenum Disulfide by Metal-Insulator Phase Transition in Active Substrates. <i>Small</i> , <b>2016</b> , 12, 3976-84	11	24
90	Ultimate Control over Hydrogen Bond Formation and Reaction Rates for Scalable Synthesis of Highly Crystalline vdW MOF Nanosheets with Large Aspect Ratio. <i>Advanced Materials</i> , <b>2018</b> , 30, e1802497	24	24
89	Anomalous Behavior of 2D Janus Excitonic Layers under Extreme Pressures. <i>Advanced Materials</i> , <b>2020</b> , 32, e2002401	24	23
88	Gate-tunable diode-like current rectification and ambipolar transport in multilayer van der Waals ReSe/WS p-n heterojunctions. <i>Physical Chemistry Chemical Physics</i> , <b>2016</b> , 18, 27750-27753	3.6	23
87	Performance improvement of organic light emitting diode with aluminum oxide buffer layer for anode modification. <i>Journal of Applied Physics</i> , <b>2013</b> , 114, 074506	2.5	23
86	Band Engineering by Controlling vdW Epitaxy Growth Mode in 2D Gallium Chalcogenides. <i>Advanced Materials</i> , <b>2016</b> , 28, 7375-82	24	23
85	Near-Unity Light Absorption in a Monolayer WS Van der Waals Heterostructure Cavity. <i>Nano Letters</i> , <b>2020</b> , 20, 3545-3552	11.5	22
84	Deterministic coupling of quantum emitters in WSe monolayers to plasmonic nanocavities. <i>Optics Express</i> , <b>2018</b> , 26, 25944-25951	3.3	22
83	Self-Passivation of Defects: Effects of High-Energy Particle Irradiation on the Elastic Modulus of Multilayer Graphene. <i>Advanced Materials</i> , <b>2015</b> , 27, 6841-7	24	21
82	Highly crystalline synthesis of tellurene sheets on two-dimensional surfaces: Control over helical chain direction of tellurene. <i>Physical Review Materials</i> , <b>2018</b> , 2,	3.2	21
81	Environmentally stable/self-powered ultraviolet photodetectors with high sensitivity. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 143503	3.4	20
80	Raman spectrum of Janus transition metal dichalcogenide monolayers WSe and MoSe. <i>Physical Review B</i> , <b>2021</b> , 103,	3.3	20
79	Exciton pumping across type-I gallium chalcogenide heterojunctions. <i>Nanotechnology</i> , <b>2016</b> , 27, 065203	3.4	19



78	Controlling Structural Anisotropy of Anisotropic 2D Layers in Pseudo-1D/2D Material Heterojunctions. <i>Advanced Materials</i> , <b>2017</b> , 29, 1701201	24	19
77	Vibrational spectrum renormalization by enforced coupling across the van der Waals gap between MoS <sub>2</sub> and WS <sub>2</sub> monolayers. <i>Physical Review B</i> , <b>2015</b> , 92,	3.3	19
76	2D coordination polymers: Design guidelines and materials perspective. <i>Applied Physics Reviews</i> , <b>2019</b> , 6, 041311	17.3	19
75	Imaging two-dimensional generalized Wigner crystals. <i>Nature</i> , <b>2021</b> , 597, 650-654	50.4	19
74	Valley-dependent exciton fine structure and Autler-Townes doublets from Berry phases in monolayer MoSe. <i>Nature Materials</i> , <b>2019</b> , 18, 1065-1070	27	18
73	Low-temperature, site selective graphitization of SiC via ion implantation and pulsed laser annealing. <i>Applied Physics Letters</i> , <b>2012</b> , 100, 193105	3.4	18
72	Extinction of ferromagnetism in highly ordered pyrolytic graphite by annealing. <i>Carbon</i> , <b>2012</b> , 50, 1614-1618	16.8	18
71	Multilayer ReS <sub>2</sub> lateral p-n homojunction for photoemission and photodetection. <i>Applied Physics Express</i> , <b>2016</b> , 9, 055201	2.4	17
70	Abnormal band bowing effects in phase instability crossover region of GaSeTe nanomaterials. <i>Nature Communications</i> , <b>2018</b> , 9, 1927	17.4	16
69	Ultrathin ternary semiconductor TlGaSe <sub>2</sub> phototransistors with broad-spectral response. <i>2D Materials</i> , <b>2017</b> , 4, 035021	5.9	15
68	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. <i>Optical Materials Express</i> , <b>2019</b> , 9, 598	2.6	15
67	Epitaxial Synthesis of Highly Oriented 2D Janus Rashba Semiconductor BiTeCl and BiTeBr Layers. <i>ACS Nano</i> , <b>2020</b> , 14, 15626-15632	16.7	15
66	Ultrapure multilayer graphene in bromine-intercalated graphite. <i>Physical Review B</i> , <b>2011</b> , 84,	3.3	14
65	Nanoscale Conductivity Imaging of Correlated Electronic States in WSe <sub>2</sub> /WS <sub>2</sub> Moiré Superlattices. <i>Physical Review Letters</i> , <b>2020</b> , 125, 186803	7.4	14
64	Excitonic Complexes and Emerging Interlayer Electron-Phonon Coupling in BN Encapsulated Monolayer Semiconductor Alloy: WSSe. <i>Nano Letters</i> , <b>2019</b> , 19, 299-307	11.5	14
63	Tunable free-electron X-ray radiation from van der Waals materials. <i>Nature Photonics</i> , <b>2020</b> , 14, 686-692	33.9	13
62	Engineering excitonic dynamics and environmental stability of post-transition metal chalcogenides by pyridine functionalization technique. <i>Nanoscale</i> , <b>2015</b> , 7, 17109-15	7.7	12
61	Ultrafast Zero-Bias Surface Photocurrent in Germanium Selenide: Promise for Terahertz Devices and Photovoltaics. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 5492-5498	9.5	12



60	Novel Surface Molecular Functionalization Route To Enhance Environmental Stability of Tellurium-Containing 2D Layers. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 44625-44631	9.5	11
59	Phase Transition across Anisotropic NbS and Direct Gap Semiconductor TiS at Nominal Titanium Alloying Limit. <i>Advanced Materials</i> , <b>2020</b> , 32, e2000018	24	10
58	Unusual Pressure-Driven Phase Transformation and Band Renormalization in 2D vdW Hybrid Lead Halide Perovskites. <i>Advanced Materials</i> , <b>2020</b> , 32, e1907364	24	10
57	Enhancing light emission efficiency without color change in post-transition metal chalcogenides. <i>Nanoscale</i> , <b>2016</b> , 8, 5820-5	7.7	10
56	Low-Loss Integrated Nanophotonic Circuits with Layered Semiconductor Materials. <i>Nano Letters</i> , <b>2021</b> , 21, 2709-2718	11.5	10
55	Bosonic condensation of exciton-polaritons in an atomically thin crystal. <i>Nature Materials</i> , <b>2021</b> , 20, 1233-1239	12.3	10
54	Purcell-Enhanced Single Photon Source Based on a Deterministically Placed WSe Monolayer Quantum Dot in a Circular Bragg Grating Cavity. <i>Nano Letters</i> , <b>2021</b> , 21, 4715-4720	11.5	10
53	Synthesis, engineering, and theory of 2D van der Waals magnets. <i>Applied Physics Reviews</i> , <b>2021</b> , 8, 021301	7.3	10
52	Strong interaction between interlayer excitons and correlated electrons in WSe/WS moiré superlattice. <i>Nature Communications</i> , <b>2021</b> , 12, 3608	17.4	10
51	Tuning the optical and electrical properties of MoS <sub>2</sub> by selective Ag photo-reduction. <i>Applied Physics Letters</i> , <b>2018</b> , 113, 013105	3.4	9
50	Magnetodielectric coupling in nonmagnetic Au/GaAs:Si Schottky barriers. <i>Physical Review B</i> , <b>2009</b> , 80,	3.3	9
49	Valley relaxation of resident electrons and holes in a monolayer semiconductor: Dependence on carrier density and the role of substrate-induced disorder. <i>Physical Review Materials</i> , <b>2021</b> , 5,	3.2	9
48	Weak Distance Dependence of Hot-Electron-Transfer Rates at the Interface between Monolayer MoS and Gold. <i>ACS Nano</i> , <b>2021</b> , 15, 819-828	16.7	9
47	Extreme In-Plane Thermal Conductivity Anisotropy in Titanium Trisulfide Caused by Heat-Carrying Optical Phonons. <i>Nano Letters</i> , <b>2020</b> , 20, 5221-5227	11.5	8
46	Direct laser patterning of two-dimensional lateral transition metal disulfide-oxide-disulfide heterostructures for ultrasensitive sensors. <i>Nano Research</i> , <b>2020</b> , 13, 2035-2043	10	8
45	Exciton-Exciton Interaction beyond the Hydrogenic Picture in a MoSe <sub>2</sub> Monolayer in the Strong Light-Matter Coupling Regime. <i>Physical Review Letters</i> , <b>2021</b> , 126, 167401	7.4	8
44	Passivation of Layered Gallium Telluride by Double Encapsulation with Graphene. <i>ACS Omega</i> , <b>2019</b> , 4, 18002-18010	3.9	7
43	Spatial coherence of room-temperature monolayer WSe exciton-polaritons in a trap. <i>Nature Communications</i> , <b>2021</b> , 12, 6406	17.4	7

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41	Imaging local discharge cascades for correlated electrons in WS <sub>2</sub> /WSe <sub>2</sub> moiré superlattices. <i>Nature Physics</i> ,	16.2	7
40	Magnetic-field-induced splitting and polarization of monolayer-based valley exciton polaritons. <i>Physical Review B</i> , <b>2019</b> , 100,	3.3	6
39	Manipulation of room-temperature valley-coherent exciton-polaritons in atomically thin crystals by real and artificial magnetic fields. <i>2D Materials</i> , <b>2020</b> , 7, 035025	5.9	6
38	Phonon-exciton Interactions in WSe under a quantizing magnetic field. <i>Nature Communications</i> , <b>2020</b> , 11, 3104	17.4	6
37	Tuned polarity and enhanced optoelectronic performances of few-layer Nb <sub>0.125</sub> Re <sub>0.875</sub> Se <sub>2</sub> flakes. <i>Applied Physics Letters</i> , <b>2016</b> , 109, 112102	3.4	6
36	Observation of Quantized Exciton Energies in Monolayer WSe <sub>2</sub> under a Strong Magnetic Field. <i>Physical Review X</i> , <b>2020</b> , 10,	9.1	5
35	Strain-induced suppression of weak localization in CVD-grown graphene. <i>Journal of Physics Condensed Matter</i> , <b>2012</b> , 24, 475304	1.8	5
34	Graphite in the bilayer regime: In-plane transport. <i>Physical Review B</i> , <b>2009</b> , 80,	3.3	5
33	Reaching Excitonic Limit in 2D Janus Monolayers by In-situ Deterministic Growth. <i>Advanced Materials</i> , <b>2021</b> , e2106222	24	5
32	Tunable electronic structure in gallium chalcogenide van der Waals compounds. <i>Physical Review B</i> , <b>2019</b> , 100,	3.3	4
31	Anomalous isoelectronic chalcogen rejection in 2D anisotropic vdW TiSSe trichalcogenides. <i>Nanoscale</i> , <b>2018</b> , 10, 15654-15660	7.7	4
30	Unusual Pressure Response of Vibrational Modes in Anisotropic TaS <sub>3</sub> . <i>Journal of Physical Chemistry C</i> , <b>2017</b> , 121, 28187-28193	3.8	4
29	Demonstration of a polariton step potential by local variation of light-matter coupling in a van-der-Waals heterostructure. <i>Optics Express</i> , <b>2020</b> , 28, 18649-18657	3.3	4
28	The synthesis of competing phase GeSe and GeSe <sub>2</sub> 2D layered materials.. <i>RSC Advances</i> , <b>2020</b> , 10, 38227-38232	3.7	4
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26	Confinement of long-lived interlayer excitons in WS <sub>2</sub> /WSe <sub>2</sub> heterostructures. <i>Communications Physics</i> , <b>2021</b> , 4,	5.4	4
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20	Multi-Ion Beam Lithography and Processing Studies. <i>Materials Research Society Symposia Proceedings</i> , <b>2011</b> , 1354, 47		3
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17	Harnessing biological applications of quantum materials: opportunities and precautions. <i>Journal of Materials Chemistry C</i> , <b>2020</b> , 8, 10498-10525	7.1	2
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15	Dynamic Tuning of Moiré Excitons in a WSe/WS Heterostructure via Mechanical Deformation. <i>Nano Letters</i> , <b>2021</b> , 21, 8910-8916	11.5	2
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11	Probing Defects in MoS <sub>2</sub> Van der Waals Crystal through Deep-Level Transient Spectroscopy. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2020</b> , 14, 2000381	2.5	1
10	Anisotropic band structure of TiS <sub>3</sub> nanoribbon revealed by polarized photocurrent spectroscopy. <i>Applied Physics Letters</i> , <b>2020</b> , 117, 073101	3.4	1
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