

Interlayer couplings, MoirÃ© patterns, and 2D electron /WSe₂ hetero-bilayers

Science Advances

3, e1601459

DOI: 10.1126/sciadv.1601459

Citation Report

#	ARTICLE	IF	CITATIONS
1	Substrate dependent electronic structure variations of van der Waals heterostructures of MoSe ₂ or MoSe ₂ (1 Å) grown by van der Waals epitaxy. <i>2D Materials</i> , 2017, 4, 025094.	2.0	19
2	Interlayer coupling in commensurate and incommensurate bilayer structures of transition-metal dichalcogenides. <i>Physical Review B</i> , 2017, 95, .	1.1	128
3	Inversion Domain Boundary Induced Stacking and Bandstructure Diversity in Bilayer MoSe ₂ . <i>Nano Letters</i> , 2017, 17, 6653-6660.	4.5	51
4	Moiré Superstructure and Dimensional Crossover of 2D Electronic States on Nanoscale Lead Quantum Films. <i>Scientific Reports</i> , 2017, 7, 12735.	1.6	4
5	Long-Lived Direct and Indirect Interlayer Excitons in van der Waals Heterostructures. <i>Nano Letters</i> , 2017, 17, 5229-5237.	4.5	281
6	Van der Waals epitaxial growth and optoelectronics of large-scale WSe ₂ /SnS ₂ vertical bilayer p-n junctions. <i>Nature Communications</i> , 2017, 8, 1906.	5.8	369
7	Disparity in Photoexcitation Dynamics between Vertical and Lateral MoS ₂ /WSe ₂ Heterojunctions: Time-Domain Simulation Emphasizes the Importance of Donor-acceptor Interaction and Band Alignment. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 5771-5778.	2.1	52
8	Moiré excitons: From programmable quantum emitter arrays to spin-orbit-coupled artificial lattices. <i>Science Advances</i> , 2017, 3, e1701696.	4.7	427
9	Twisted MX ₂ /MoS ₂ heterobilayers: effect of van der Waals interaction on the electronic structure. <i>Nanoscale</i> , 2017, 9, 19131-19138.	2.8	43
10	Novel doping alternatives for single-layer transition metal dichalcogenides. <i>Journal of Applied Physics</i> , 2017, 122, .	1.1	61
11	Robust Stacking-Independent Ultrafast Charge Transfer in MoS ₂ /WS ₂ Bilayers. <i>ACS Nano</i> , 2017, 11, 12020-12026.	7.3	130
12	Quasi-freestanding, striped WS ₂ monolayer with an invariable band gap on Au(001). <i>Nano Research</i> , 2017, 10, 3875-3884.	5.8	13
13	Negative circular polarization emissions from WSe ₂ /MoSe ₂ commensurate heterobilayers. <i>Nature Communications</i> , 2018, 9, 1356.	5.8	88
14	Controlling the electronic properties of van der Waals heterostructures by applying electrostatic design. <i>2D Materials</i> , 2018, 5, 035019.	2.0	18
15	Interlayer Excitons with Large Optical Amplitudes in Layered van der Waals Materials. <i>Nano Letters</i> , 2018, 18, 2984-2989.	4.5	71
16	Controllable Chemical Vapor Deposition Growth of Two-Dimensional Heterostructures. <i>Chem</i> , 2018, 4, 671-689.	5.8	84
17	Magnitude of the current in 2D interlayer tunneling devices. <i>Journal of Physics Condensed Matter</i> , 2018, 30, 055703.	0.7	2
18	Quantum-Confinement Electronic States Arising from the Moiré Pattern of MoS ₂ -WSe ₂ Heterobilayers. <i>Nano Letters</i> , 2018, 18, 1849-1855.	4.5	91

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19	Theory of optical absorption by interlayer excitons in transition metal dichalcogenide heterobilayers. <i>Physical Review B</i> , 2018, 97, .	1.1	199
20	Strain distributions and their influence on electronic structures of WSe ₂ -MoS ₂ laterally strained heterojunctions. <i>Nature Nanotechnology</i> , 2018, 13, 152-158.	15.6	206
21	Novel Optoelectronic Devices: Transition-Metal-Dichalcogenide-Based 2D Heterostructures. <i>Advanced Electronic Materials</i> , 2018, 4, 1700335.	2.6	91
22	Brightened spin-triplet interlayer excitons and optical selection rules in van der Waals heterobilayers. <i>2D Materials</i> , 2018, 5, 035021.	2.0	107
23	One-Step Synthesis of Metal/Semiconductor Heterostructure NbS ₂ /MoS ₂ . <i>Chemistry of Materials</i> , 2018, 30, 4001-4007.	3.2	85
24	Epitaxial Growth of Two-Dimensional Layered Transition-Metal Dichalcogenides: Growth Mechanism, Controllability, and Scalability. <i>Chemical Reviews</i> , 2018, 118, 6134-6150.	23.0	285
25	Electrical Tuning of Interlayer Exciton Gases in WSe ₂ Bilayers. <i>Nano Letters</i> , 2018, 18, 137-143.	4.5	106
26	Moiré-templated strain patterning in transition-metal dichalcogenides and application in twisted bilayer MoS ₂ . <i>Nanoscale</i> , 2018, 10, 20689-20701.	2.8	27
27	Moiré Intralayer Excitons in a MoSe ₂ /MoS ₂ Heterostructure. <i>Nano Letters</i> , 2018, 18, 7651-7657.	4.5	113
28	Relaxation and domain formation in incommensurate two-dimensional heterostructures. <i>Physical Review B</i> , 2018, 98, .	1.1	177
29	Skyrmions in the Moiré of van der Waals 2D Magnets. <i>Nano Letters</i> , 2018, 18, 7194-7199.	4.5	168
30	Negative Differential Resistance in van der Waals Heterostructures Due to Moiré-Induced Spectral Reconstruction. <i>Physical Review Applied</i> , 2018, 10, .	1.5	4
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32	Intervalley Scattering of Interlayer Excitons in a MoS ₂ /MoSe ₂ /MoS ₂ Heterostructure in High Magnetic Field. <i>Nano Letters</i> , 2018, 18, 3994-4000.	4.5	27
33	First-principles study of electronic and sodium-ion transport properties of transition-metal dichalcogenides. <i>International Journal of Modern Physics B</i> , 2018, 32, 1850215.	1.0	4
34	Interface Characterization and Control of 2D Materials and Heterostructures. <i>Advanced Materials</i> , 2018, 30, e1801586.	11.1	134
35	Electrothermal Local Annealing via Graphite Joule Heating on Two-Dimensional Layered Transistors. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 25638-25643.	4.0	3
36	Hubbard Model Physics in Transition Metal Dichalcogenide Moiré Bands. <i>Physical Review Letters</i> , 2018, 121, 026402.	2.9	413

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37	Semiconducting van der Waals Interfaces as Artificial Semiconductors. <i>Nano Letters</i> , 2018, 18, 5146-5152.	4.5	25
38	Tuning Band Gap and Work Function Modulations in Monolayer hBN/Cu(111) Heterostructures with Moiré Patterns. <i>ACS Nano</i> , 2018, 12, 9355-9362.	7.3	33
39	Interlayer valley excitons in heterobilayers of transition metal dichalcogenides. <i>Nature Nanotechnology</i> , 2018, 13, 1004-1015.	15.6	373
40	Impact of photodoping on inter- and intralayer exciton emission in a MoS ₂ /MoSe ₂ /MoS ₂ heterostructure. <i>Applied Physics Letters</i> , 2018, 113, 062107.	1.5	12
41	New Pathway for Hot Electron Relaxation in Two-Dimensional Heterostructures. <i>Nano Letters</i> , 2018, 18, 6057-6063.	4.5	49
42	Strategies on Phase Control in Transition Metal Dichalcogenides. <i>Advanced Functional Materials</i> , 2018, 28, 1802473.	7.8	90
43	Layer and doping tunable ferromagnetic order in two-dimensional $\text{Cr}_{\text{2}}\text{S}_{\text{2}}$ layers. <i>Physical Review B</i> , 2018, 97, .	1.1	96
44	Piezoelectricity in WSe ₂ /MoS ₂ heterostructure atomic layers. <i>Nanoscale</i> , 2018, 10, 12472-12479.	2.8	24
45	Origins of Moiré Patterns in CVD-grown MoS ₂ Bilayer Structures at the Atomic Scales. <i>Scientific Reports</i> , 2018, 8, 9439.	1.6	2
46	Valleytronics in transition metal dichalcogenides materials. <i>Nano Research</i> , 2019, 12, 2695-2711.	5.8	155
47	Superlattices based on van der Waals 2D materials. <i>Chemical Communications</i> , 2019, 55, 11498-11510.	2.2	48
48	Cavity-control of interlayer excitons in van der Waals heterostructures. <i>Nature Communications</i> , 2019, 10, 3697.	5.8	58
49	Magnetic Proximity Effect in a van der Waals Moiré Superlattice. <i>Physical Review Applied</i> , 2019, 12, .	1.5	26
50	Evidence of a purely electronic two-dimensional lattice at the interface of TMD/Bi ₂ Se ₃ heterostructures. <i>Nanoscale</i> , 2019, 11, 15929-15938.	2.8	21
51	Strain in van der Waals epitaxy and evidence for a collective macroscopic effect of a negligibly small perturbation. <i>Physical Review B</i> , 2019, 100, .	1.1	3
52	Synthesis and Optoelectronic Applications of a Stable p-type 2D Material: MnS . <i>ACS Nano</i> , 2019, 13, 12662-12670.	7.3	54
53	Spin-Layer and Spin-Valley Locking in CVD-Grown AA'- and AB-Stacked Tungsten-Disulfide Bilayers. <i>Journal of Physical Chemistry C</i> , 2019, 123, 21813-21821.	1.5	27
54	Highly valley-polarized singlet and triplet interlayer excitons in van der Waals heterostructure. <i>Physical Review B</i> , 2019, 100, .	1.1	58

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56	Tunable Moir�� Superlattice of Artificially Twisted Monolayers. <i>Advanced Materials</i> , 2019, 31, 1901077.	11.1	27
57	Layer Rotation-Angle-Dependent Excitonic Absorption in van der Waals Heterostructures Revealed by Electron Energy Loss Spectroscopy. <i>ACS Nano</i> , 2019, 13, 9541-9550.	7.3	25
58	Challenges and recent advancements of functionalization of two-dimensional nanostructured molybdenum trioxide and dichalcogenides. <i>Nanoscale</i> , 2019, 11, 15709-15738.	2.8	27
59	Recent Developments in Graphene-Based Two-Dimensional Heterostructures for Sensing Applications., 2019, , 407-436.		10
60	Effect of interlayer sp ³ bonds and nanopores on mechanical properties of vertically-stacked 2D heterostructures. <i>Materials Research Express</i> , 2019, 6, 105618.	0.8	6
61	Valley-polarized exciton currents in a van der Waals heterostructure. <i>Nature Nanotechnology</i> , 2019, 14, 1104-1109.	15.6	116
62	Interlayer Excitons in Transition-Metal Dichalcogenide Heterobilayers. <i>Physica Status Solidi (B): Basic Research</i> , 2019, 256, 1900308.	0.7	15
63	Boron Phosphide van der Waals <i>p-n</i> Junction via Molecular Adsorption. <i>Physical Review Applied</i> , 2019, 12, .	1.5	10
64	Twisted-Angle-Dependent Optical Behaviors of Intralayer Excitons and Trions in WS ₂ /WSe ₂ Heterostructure. <i>ACS Photonics</i> , 2019, 6, 3082-3091.	3.2	41
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67	Bottom-up growth of homogeneous Moir�� superlattices in bismuth oxychloride spiral nanosheets. <i>Nature Communications</i> , 2019, 10, 4472.	5.8	59
68	Epitaxial Synthesis of Monolayer PtSe ₂ Single Crystal on MoSe ₂ with Strong Interlayer Coupling. <i>ACS Nano</i> , 2019, 13, 10929-10938.	7.3	72
69	Interlayer excitons in bilayer MoS_2 with strong oscillator strength up to room temperature. <i>Physical Review B</i> , 2019, 99, .		
70	Study on electronic and optical properties of the twisted and strained MoS ₂ /PtS ₂ heterogeneous interface. <i>Applied Surface Science</i> , 2019, 476, 308-316.	3.1	23
71	Continuous Heteroepitaxy of Two-Dimensional Heterostructures Based on Layered Chalcogenides. <i>ACS Nano</i> , 2019, 13, 7527-7535.	7.3	48
72	Quasiparticle Levels at Large Interface Systems from Many-Body Perturbation Theory: The XAF-GW Method. <i>Journal of Chemical Theory and Computation</i> , 2019, 15, 3824-3835.	2.3	28

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74	Resonantly hybridized excitons in moiré superlattices in van der Waals heterostructures. <i>Nature</i> , 2019, 567, 81-86.	13.7	621
75	Topological Insulators in Twisted Transition Metal Dichalcogenide Homobilayers. <i>Physical Review Letters</i> , 2019, 122, 086402.	2.9	333
76	Interlayer hybridization and moiré superlattice minibands for electrons and excitons in heterobilayers of transition-metal dichalcogenides. <i>Physical Review B</i> , 2019, 99, .	1.1	116
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78	Probing the interlayer interaction between dissimilar 2D heterostructures by <i>in situ</i> rearrangement of their interface. <i>2D Materials</i> , 2019, 6, 035022.	2.0	9
79	Comprehensive tunneling spectroscopy of quasifree-standing MoS _x on graphene on Ir(111). <i>Physical Review B</i> , 2019, 99, .		
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81	Experimental progress on layered topological semimetals. <i>2D Materials</i> , 2019, 6, 032001.	2.0	26
82	Self-Healing Originated van der Waals Homojunctions with Strong Interlayer Coupling for High-Performance Photodiodes. <i>ACS Nano</i> , 2019, 13, 3280-3291.	7.3	69
83	Evidence for moiré excitons in van der Waals heterostructures. <i>Nature</i> , 2019, 567, 71-75.	13.7	933
84	Observation of moiré excitons in WSe ₂ /WS ₂ heterostructure superlattices. <i>Nature</i> , 2019, 567, 76-80.	13.7	791
85	Signatures of moiré-trapped valley excitons in MoSe ₂ /WSe ₂ heterobilayers. <i>Nature</i> , 2019, 567, 66-70.	13.7	842
86	Negative Friction Coefficients in Superlubric Graphite-Hexagonal Boron Nitride Heterojunctions. <i>Physical Review Letters</i> , 2019, 122, 076102.	2.9	63
87	Interlayer exciton laser of extended spatial coherence in atomically thin heterostructures. <i>Nature</i> , 2019, 576, 80-84.	13.7	120
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89	Self-organized twist-heterostructures via aligned van der Waals epitaxy and solid-state transformations. <i>Nature Communications</i> , 2019, 10, 5528.	5.8	27
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92	Infrared Interlayer Exciton Emission in $\text{MoS}_2/\text{MoSe}_2$ Heterostructures. <i>Physical Review Letters</i> , 2019, 123, 247402.	2.9	119
93	Unusual Electronic States and Superconducting Proximity Effect of Bi Films Modulated by a NbSe ₂ Substrate. <i>ACS Nano</i> , 2019, 13, 1885-1892.	7.3	23
94	Ultralow thermal conductivity of turbostratically disordered MoSe ₂ ultra-thin films and implications for heterostructures. <i>Nanotechnology</i> , 2019, 30, 285401.	1.3	21
95	Heterostructures Based on 2D Materials: A Versatile Platform for Efficient Catalysis. <i>Advanced Materials</i> , 2019, 31, e1804828.	11.1	142
96	A Shallow Acceptor of Phosphorous Doped in MoSe ₂ Monolayer. <i>Advanced Electronic Materials</i> , 2020, 6, 1900830.	2.6	16
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98	A two-dimensional MoS ₂ /WSe ₂ van der Waals heterostructure for enhanced photoelectric performance. <i>Applied Surface Science</i> , 2020, 507, 145082.	3.1	62
99	Atomic-scale Fabrication of In-plane Heterojunctions of Few-layer MoS ₂ via In Situ Scanning Transmission Electron Microscopy. <i>Small</i> , 2020, 16, e1905516.	5.2	29
100	Interlayer exciton valleytronics in bilayer heterostructures interfaced with a phase gradient metasurface. <i>Applied Physics Letters</i> , 2020, 117, .	1.5	11
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103	Emergent flat band lattices in spatially periodic magnetic fields. <i>Physical Review B</i> , 2020, 102, .	1.1	2
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106	Low-frequency Raman scattering in WSe ₂ -MoSe ₂ heterobilayers: Evidence for atomic reconstruction. <i>Applied Physics Letters</i> , 2020, 117, .	1.5	30
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108	Flattening is flattering: The revolutionizing 2D electronic systems*. <i>Chinese Physics B</i> , 2020, 29, 097307.	0.7	6

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113	Valley excitons: From monolayer semiconductors to moiré superlattices. Semiconductors and Semimetals, 2020, 105, 269-303.	0.4	1
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116	Moiré is More: Access to New Properties of Two-Dimensional Layered Materials. Matter, 2020, 3, 1142-1161.	5.0	46
117	Strain-Induced Trapping of Indirect Excitons in MoSe ₂ /WSe ₂ Heterostructures. ACS Photonics, 2020, 7, 2460-2467.	3.2	29
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130	Visualization of moiré superlattices. <i>Nature Nanotechnology</i> , 2020, 15, 580-584.	15.6	187
131	Bond states, moiré patterns, and bandgap modulation of two-dimensional BN/SiC van der Waals heterostructures. <i>Materials Advances</i> , 2020, 1, 1186-1192.	2.6	5
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133	Stochastic many-body perturbation theory for Moiré states in twisted bilayer phosphorene. <i>Journal of Physics Condensed Matter</i> , 2020, 32, 234001.	0.7	20
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135	General synthesis of two-dimensional van der Waals heterostructure arrays. <i>Nature</i> , 2020, 579, 368-374.	13.7	393
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140	Resonant energy transfer between hexagonal boron nitride quantum emitters and atomically layered transition metal dichalcogenides. <i>2D Materials</i> , 2020, 7, 045015.	2.0	6
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146	Giant Thickness-Tunable Bandgap and Robust Air Stability of 2D Palladium Diselenide. <i>Small</i> , 2020, 16, e2000754.	5.2	19
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148	Van der Waals Nanowires with Continuously Variable Interlayer Twist and Twist Homojunctions. <i>Advanced Functional Materials</i> , 2021, 31, 2006412.	7.8	22
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150	Guide to optical spectroscopy of layered semiconductors. <i>Nature Reviews Physics</i> , 2021, 3, 39-54.	11.9	41
151	Opto-valleytronics in the 2D van der Waals heterostructure. <i>Nano Research</i> , 2021, 14, 1901-1911.	5.8	25
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