Citation Report

List of articles citing

Evolution of electronic structure in atomically thin sheets of WS2 and WSe2

DOI: 10.1021/nn305275h
ACS Nano, 2013, 7, 791-7.

#	Paper	IF	Citations
1567	Giant Enhancement of Photoluminescence Emission in WS2Two-Dimensional Perovskite Heterostructures.		
1566	Selective Chemical Modulation of Interlayer Excitons in Atomically Thin Heterostructures.		
1565	Current Rectification through Vertical Heterojunctions between Two Single-Layer Dichalcogenides (WSe2|MoS2 pn-Junctions).		
1564	Emission Control from Transition Metal Dichalcogenide Monolayers by Aggregation-Induced Molecular Rotors.		
1563	Potential Profile of Stabilized Field-Induced Lateral pn Junction in Transition-Metal Dichalcogenides.		
1562	Modification of Optical Properties in Monolayer WS2 on Dielectric Substrates by Coulomb Engineering.		
1561	Probing Charge Carrier Transport and Recombination Pathways in Monolayer MoS2/WS2 Heterojunction Photoelectrodes.		
1560	Photoluminescence Segmentation within Individual Hexagonal Monolayer Tungsten Disulfide Domains Grown by Chemical Vapor Deposition.		
1559	High Sensitivity Hybrid PbS CQD-TMDC Photodetectors up to 2 m.		
1558	Link to hereditary melanoma brightens mood for p16 gene. **1994**, 265, 1364-5		2
1557	Van der Waals heterostructures. **2013**, 499, 419-25		6627
1556	Optical generation of excitonic valley coherence in monolayer WSe2. **2013**, 8, 634-8		1001
1555	Tunable electronic and magnetic properties of WS2 nanoribbons. **2013**, 114, 093710		37
1554	High-performance top-gated monolayer SnS2 field-effect transistors and their integrated logic circuits. **2013**, 5, 9666-70		226
1553	Electronic structures and optical properties of realistic transition metal dichalcogenide heterostructures from first principles. **2013**, 88,		342
1552	Defects activated photoluminescence in two-dimensional semiconductors: interplay between bound, charged, and free excitons. **2013**, 3, 2657		726
1551	Graphene analogues of inorganic layered materials. **2013**, 52, 13162-85		402

1550	Origin of indirect optical transitions in few-layer MoS2, WS2, and WSe2. **2013**, 13, 5627-34		365
1549	Atomic-layer triangular WSe2 sheets: synthesis and layer-dependent photoluminescence property. **2013**, 24, 465705		94
1548	Tunable photoluminescence of monolayer MoS□via chemical doping. **2013**, 13, 5944-8		988
1547	Layer-controlled, wafer-scale, and conformal synthesis of tungsten disulfide nanosheets using atomic layer deposition. *ACS Nano*, **2013**, 7, 11333-40	16.7	272
1546	Nonblinking, intense two-dimensional light emitter: monolayer WS2 triangles. *ACS Nano*, **2013**, 7, 10985-94	16.7	242
1545	Ferromagnetism in exfoliated tungsten disulfide nanosheets. **2013**, 8, 430		74
1544	Lattice dynamics in mono- and few-layer sheets of WS2 and WSe2. **2013**, 5, 9677-83		574
1543	Controlled growth of high-quality monolayer WS2 layers on sapphire and imaging its grain boundary. *ACS Nano*, **2013**, 7, 8963-71	16.7	586
1542	Fabrication of luminescent monolayered tungsten dichalcogenides quantum dots with giant spin-valley coupling. *ACS Nano*, **2013**, 7, 8214-23	16.7	154
1541	Optical manipulation of the exciton charge state in single-layer tungsten disulfide. **2013**, 88,		152
1540	The chemistry of two-dimensional layered transition metal dichalcogenide nanosheets. **2013**, 5, 263-75		6689
1539	Substrate Mediation in Vapor Deposition Growth of Layered Chalcogenide Nanoplates: A Case Study of SnSe2. **2013**, 117, 6469-6475		71
1538	Quasiparticle band structures and optical properties of strained monolayer MoS2 and WS2. **2013**, 87,		662
1537	Anomalous Raman spectra and thickness-dependent electronic properties of WSe2. **2013**, 87,		341
1536	Photosensor Device Based on Few-Layered WS2 Films. **2013**, 23, 5511-5517		480
1535	Two-dimensional crystals: managing light for optoelectronics. *ACS Nano*, **2013**, 7, 5660-5	16.7	327
1534	Effects of lower symmetry and dimensionality on Raman spectra in two-dimensional WSe2. **2013**, 88,		175
1533	Strong ferromagnetism in hydrogenated monolayer MoS2 tuned by strain. **2013**, 88,		113

1532	Graphen-analoge anorganische Schichtmaterialien. **2013**, 125, 13400-13424		40
1531	Superior field emission properties of layered WS2-RGO nanocomposites. **2013**, 3, 3282		182
1530	Metallic Few-Layer Flowerlike VS2 Nanosheets as Field Emitters. **2014**, 2014, 5331-5336		44
1529	Optical detection of a highly localized impurity state in monolayer tungsten disulfide. *ACS Nano*, **2014**, 8, 12777-85	16.7	21
1528	High-performance photocurrent generation from two-dimensional WS2 field-effect transistors. **2014**, 104, 193113		72
1527	Light matter interaction in WS2 nanotube-graphene hybrid devices. **2014**, 105, 223502		11
1526	Optical properties of monolayer transition metal dichalcogenides probed by spectroscopic ellipsometry. **2014**, 105, 201905		250
1525	Ultrashort optical pulse characterization using WS□monolayers. **2014**, 39, 383-5		30
1524	Disorder density of states in supported graphene. **2014**, 116, 074516		1
1523	Scanning photocurrent microscopy reveals electron-hole asymmetry in ionic liquid-gated WS2 transistors. **2014**, 104, 171112		33
1522	Ultraviolet-Light-Induced Reversible and Stable Carrier Modulation in MoS2 Field-Effect Transistors. **2014**, 24, n/a-n/a		14
1521	Scalable synthesis of layer-controlled WS2 and MoS2 sheets by sulfurization of thin metal films. **2014**, 105, 083112		94
1520	Vapor-transport growth of high optical quality WSe2 monolayers a. **2014**, 2, 101101		48
1519	Photoluminescence properties and exciton dynamics in monolayer WSe2. **2014**, 105, 101901		114
1518	Second-order resonant Raman scattering in single-layer tungsten disulfide WS2. **2014**, 89,		49
1517	Rapid, non-destructive evaluation of ultrathin WSe2 using spectroscopic ellipsometry. **2014**, 2, 092508		46
1516	Ultrafast transient terahertz conductivity of monolayer MoS□and WSe□grown by chemical vapor deposition. *ACS Nano*, **2014**, 8, 11147-53	16.7	161
1515	Electron transfer and coupling in graphene-tungsten disulfide van der Waals heterostructures. **2014**, 5, 5622		170

1514	Exciton dynamics in WSe2 bilayers. **2014**, 105, 182105		40
1513	Measurement of the optical dielectric function of monolayer transition-metal dichalcogenides: MoS2, MoSe2, WS2, and WSe2. **2014**, 90,		739
1512	Exciton complexes in low dimensional transition metal dichalcogenides. **2014**, 116, 053523		58
1511	Optoelectronic devices based on electrically tunable p-n diodes in a monolayer dichalcogenide. **2014**, 9, 262-7		1065
1510	Spin□ayer locking effects in optical orientation of exciton spin in bilayer WSe2. **2014**, 10, 130-134		243
1509	Resonance Raman scattering in bulk 2H-MX2 (M = Mo, W; X = S, Se) and monolayer MoS2. **2014**, 115, 053527		70
1508	Synthesis and Optical Properties of Large-Area Single-Crystalline 2D Semiconductor WS2 Monolayer from Chemical Vapor Deposition. **2014**, 2, 131-136		411
1507	Strong interlayer coupling in van der Waals heterostructures built from single-layer chalcogenides. **2014**, 111, 6198-202		803
1506	Spin and pseudospins in layered transition metal dichalcogenides. **2014**, 10, 343-350		1733
1505	Controlled synthesis of transition metal dichalcogenide thin films for electronic applications. **2014**, 297, 139-146		122
1504	Temperature dependent Raman spectroscopy of chemically derived few layer MoS2 and WS2 nanosheets. **2014**, 104, 081911		160
1503	Chemical vapor deposition growth of crystalline monolayer MoSe2. *ACS Nano*, **2014**, 8, 5125-31	16.7	566
1502	Electrically tunable excitonic light-emitting diodes based on monolayer WSe2 p-n junctions. **2014**, 9, 268-72		1202
1501	Tuning interlayer coupling in large-area heterostructures with CVD-grown MoS2 and WS2 monolayers. **2014**, 14, 3185-90		562
1500	Electronic transport in graphene-based heterostructures. **2014**, 104, 183504		58
1499	Large-area synthesis of highly crystalline WSe(2) monolayers and device applications. *ACS Nano*, **2014**, 8, 923-30	16.7	732
1498	Two-Dimensional Nanosheets and Layered Hybrids of MoS2 and WS2 through Exfoliation of Ammoniated MS2 (M = Mo,W). **2014**, 118, 1386-1396		177
1497	Temperature dependent phonon shifts in single-layer WS(2). **2014**, 6, 1158-63		163

1496	Quantum wells formed in transition-metal dichalcogenide nanosheet-superlattices: stability and electronic structures from first principles. **2014**, 16, 1393-8		21
1495	Emerging device applications for semiconducting two-dimensional transition metal dichalcogenides. *ACS Nano*, **2014**, 8, 1102-20	16.7	1909
1494	Monolayer behaviour in bulk ReS2 due to electronic and vibrational decoupling. **2014**, 5, 3252		728
1493	Two-dimensional semiconductor alloys: Monolayer Mo1−WxSe2. **2014**, 104, 012101		122
1492	Evolution of the electronic band structure and efficient photo-detection in atomic layers of InSe. *ACS Nano*, **2014**, 8, 1263-72	16.7	436
1491	Low temperature photoresponse of monolayer tungsten disulphide. **2014**, 2, 116101		9
1490	Metal seed layer thickness-induced transition from vertical to horizontal growth of MoS2 and WS2. **2014**, 14, 6842-9		208
1489	Electronic structure, optical properties, and lattice dynamics in atomically thin indium selenide flakes. **2014**, 7, 1556-1568		132
1488	Superlubricity of two-dimensional fluorographene/MoS2 heterostructure: a first-principles study. **2014**, 25, 385701		75
1487	Raman spectra of monolayer, few-layer, and bulk ReSe2 an anisotropic layered semiconductor. *ACS Nano*, **2014**, 8, 11154-64	16.7	218
1486	Optical properties and band gap of single- and few-layer MoTe2 crystals. **2014**, 14, 6231-6		540
1485	Spin-Orbit Coupling, Quantum Dots, and Qubits in Monolayer Transition Metal Dichalcogenides. **2014**, 4,		183
1484	A WS2 nanosheet based sensing platform for highly sensitive detection of T4 polynucleotide kinase and its inhibitors. **2014**, 6, 6866-72		61
1483	Controlling sulphur precursor addition for large single crystal domains of WS2. **2014**, 6, 12096-103		128
1482	Nonlinear photoluminescence in atomically thin layered WSe2 arising from diffusion-assisted exciton-exciton annihilation. **2014**, 90,		168
1481	MoS2 nanoparticles and h-BN nanosheets from direct exfoliation of bulk powder: one-step synthesis method. **2014**, 1, 035038		15
1480	Chemically driven tunable light emission of charged and neutral excitons in monolayer WS2 *ACS Nano*, **2014**, 8, 11320-9	16.7	188
1479	Development of a highly sensitive sensing platform for T4 polynucleotide kinase phosphatase and its inhibitors based on WS2 nanosheets. **2014**, 6, 7212-7217		17

1478	Air stable p-doping of WSe2 by covalent functionalization. *ACS Nano*, **2014**, 8, 10808-14	16.7	180
1477	Composition-dependent Raman modes of Mo(1-x)W(x)S2 monolayer alloys. **2014**, 6, 2833-9		107
1476	Component-controllable WS(2(1-x))Se(2x) nanotubes for efficient hydrogen evolution reaction. *ACS Nano*, **2014**, 8, 8468-76	16.7	285
1475	Control of two-dimensional excitonic light emission via photonic crystal. **2014**, 1, 011001		124
1474	Photocarrier relaxation pathway in two-dimensional semiconducting transition metal dichalcogenides. **2014**, 5, 4543		294
1473	Photovoltaic and photothermoelectric effect in a double-gated WSe2 device. **2014**, 14, 5846-52		186
1472	Valley dynamics probed through charged and neutral exciton emission in monolayer WSe2. **2014**, 90,		264
1471	Broadband ultrafast nonlinear absorption and nonlinear refraction of layered molybdenum dichalcogenide semiconductors. **2014**, 6, 10530-5		264
1470	Role of metal contacts in high-performance phototransistors based on WSe2 monolayers. *ACS Nano* , **2014**, 8, 8653-61	16.7	317
1469	Transient absorption microscopy of monolayer and bulk WSe2. *ACS Nano*, **2014**, 8, 2970-6	16.7	159
1468	Layer-dependent optical conductivity in atomic thin WS□by reflection contrast spectroscopy. **2014**, 6, 16020-6		28
1467	Edge and confinement effects allow in situ measurement of size and thickness of liquid-exfoliated nanosheets. **2014**, 5, 4576		350
1466	Plasmonic hot electron induced structural phase transition in a MoS2 monolayer. **2014**, 26, 6467-71		429
1465	Enhanced photocurrent and photoluminescence spectra in MoS2 under ionic liquid gating. **2014**, 7, 973-980		35
1464	Direct chemical vapor deposition growth of WS2 atomic layers on hexagonal boron nitride. *ACS Nano*, **2014**, 8, 8273-7	16.7	234
1463	Exciton binding energy and nonhydrogenic Rydberg series in monolayer WS(2). **2014**, 113, 076802		1358
1462	Exciton valley relaxation in a single layer of WS2 measured by ultrafast spectroscopy. **2014**, 90,		102
1461	Large-area single-layer MoSe2 and its van der Waals heterostructures. *ACS Nano*, **2014**, 8, 6655-62	16.7	177

1460	Chemical synthetic strategy for single-layer transition-metal chalcogenides. **2014**, 136, 14670-3		122
1459	Vertical and in-plane heterostructures from WS2/MoS2 monolayers. **2014**, 13, 1135-42		1580
1458	Colloidal synthesis of 1T-WS2 and 2H-WS2 nanosheets: applications for photocatalytic hydrogen evolution. **2014**, 136, 14121-7		527
1457	2D materials: valley currents controlled by light. **2014**, 9, 752-3		7
1456	Excited excitonic states in 1L, 2L, 3L, and bulk WSe2 observed by resonant Raman spectroscopy. *ACS Nano*, **2014**, 8, 9629-35	16.7	154
1455	Strong enhancement of Raman scattering from a bulk-inactive vibrational mode in few-layer MoTe$_2$ *ACS Nano*, **2014**, 8, 3895-903	16.7	223
1454	Lateral epitaxial growth of two-dimensional layered semiconductor heterojunctions. **2014**, 9, 1024-30		858
1453	Electroluminescence and photocurrent generation from atomically sharp WSe2/MoS2 heterojunction p-n diodes. **2014**, 14, 5590-7		782
1452	Facile approach to surface functionalized MoS2 nanosheets. **2014**, 4, 32570		124
1451	Tightly bound excitons in monolayer WSe(2). **2014**, 113, 026803		762
1450	Mono- and bilayer WS2 light-emitting transistors. **2014**, 14, 2019-25		351
1449	Wafer Scale Synthesis and High Resolution Structural Characterization of Atomically Thin MoS2 Layers. **2014**, 24, 7461-7466		87
1448	Photo-catalytic degradation of methyl orange under visible light by MoS2 nanosheets produced by H2SiO3 exfoliation. **2014**, 395, 322-328		25
1447	Photoinduced Separation of Strongly Interacting 2-D Layered TiS2 Nanodiscs in Solution. **2014**, 118, 12568-12573		13
1446	Preparation and applications of mechanically exfoliated single-layer and multilayer MoS$_2$ and WSe$_2$ nanosheets. **2014**, 47, 1067-75		1089
1445	Two-dimensional layered materials: Structure, properties, and prospects for device applications. **2014**, 29, 348-361		143
1444	Unusual stacking variations in liquid-phase exfoliated transition metal dichalcogenides. *ACS Nano*, **2014**, 8, 3690-9	16.7	36
1443	TEOS-assisted synthesis of porous MoS2 with ultra-small exfoliated sheets and applications in dye-sensitized solar cells. **2014**, 313, 498-503		34

1442	Eco-friendly synthesis of metal dichalcogenides nanosheets and their environmental remediation potential driven by visible light. **2015**, 5, 15718	73
1441	Observation of interlayer phonon modes in van der Waals heterostructures. **2015**, 91,	147
1440	Transport properties of WSe2 nanotube heterojunctions: A first-principles study. **2015**, 91,	10
1439	Double resonant Raman scattering and valley coherence generation in monolayer WSe_{2}. **2015**, 115, 117401	52
1438	Local Spectroscopic Characterization of Spin and Layer Polarization in WSe_{2}. **2015**, 115, 136803	36
1437	Tunable Valley Polarization and Valley Orbital Magnetic Moment Hall Effect in Honeycomb Systems with Broken Inversion Symmetry. **2015**, 5, 13906	14
1436	Growth of centimeter-scale atomically thin MoS2 films by pulsed laser deposition. **2015**, 3, 056103	91
1435	Low-frequency noise in MoSe2 field effect transistors. **2015**, 106, 083507	41
1434	WS□saturable absorber for dissipative soliton mode locking at 1.06 and 1.55 μm. **2015**, 23, 27509-19	156
1433	□hemical Weathering□Exfoliation of Atom-Thick Transition Metal Dichalcogenides and Their Ultrafast Saturable Absorption Properties. **2015**, 25, 5292-5299	60
1432	Synthesis and enhanced electrochemical catalytic performance of monolayer WS2(1-x) Se2x with a tunable band gap. **2015**, 27, 4732-8	173
1431	2D MoS2 PDMS Nanocomposites for NO2 Separation. **2015**, 11, 5035-40	48
1430	Drying-Mediated Self-Assembled Growth of Transition Metal Dichalcogenide Wires and their Heterostructures. **2015**, 27, 4142-9	27
1429	Coupling and Interlayer Exciton in Twist-Stacked WS2 Bilayers. **2015**, 3, 1600-1605	35
1428	Ultrathin two-dimensional □n2S3 nanocrystals: oriented-attachment growth controlled by metal ions and photoelectrochemical properties. **2015**, 3, 11294-11301	53
1427	Effect of WO3 precursor and sulfurization process on WS2 crystals growth by atmospheric pressure CVD. **2015**, 156, 156-160	28
1426	Indirect Band Gap Emission by Hot Electron Injection in Metal/MoS□and Metal/WSe□ Heterojunctions. **2015**, 15, 3977-82	46
1425	Excitonic resonances in thin films of WSe2: from monolayer to bulk material. **2015**, 7, 10421-9	219

1424	Tightly Bound Trions in Transition Metal Dichalcogenide Heterostructures. *ACS Nano*, **2015**, 9, 6459-64	16.7	86
1423	Effects of substrate type and material-substrate bonding on high-temperature behavior of monolayer WS2. **2015**, 8, 2686-2697		86
1422	Colloidal synthesis of single-layer MSe2 (M = Mo, W) nanosheets via anisotropic solution-phase growth approach. **2015**, 137, 7266-9		127
1421	Electrical Control of near-Field Energy Transfer between Quantum Dots and Two-Dimensional Semiconductors. **2015**, 15, 4374-80		81
1420	Two-dimensional transition metal dichalcogenide nanomaterials for solar water splitting. **2015**, 11, 323-335		80
1419	Emerging Energy Applications of Two-Dimensional Layered Materials. **2015**, 118-157		7
1418	Van der Waals solids: properties and device applications. **2015**,		
1417	Synthesis of two-dimensional materials for beyond graphene devices. **2015**,		1
1416	Gate-modulated conductance of few-layer WSe2 field-effect transistors in the subgap regime: Schottky barrier transistor and subgap impurity states. **2015**, 106, 152104		27
1415	Femtosecond Soliton Pulse Generation Using Evanescent Field Interaction Through Tungsten Disulfide (WS 2) Film. **2015**, 33, 3550-3557		40
1414	From Dots to Stripes to Sheets: Shape Control of Lead Sulfide Nanostructures. **2015**, 27, 8248-8254		28
1413	Bandgap-tunable lateral and vertical heterostructures based on monolayer Mo1-x W x S2 alloys. **2015**, 8, 3261-3271		46
1412	Direct epitaxial CVD synthesis of tungsten disulfide on epitaxial and CVD graphene. **2015**, 5, 98700-98708		34
1411	Exciton states in monolayer MoSe 2 : impact on interband transitions. **2015**, 2, 045005		55
1410	Chromium is proposed as an ideal metal to form contacts with monolayer MoS2and WS2. **2015**, 2, 106501		10
1409	Influential Electronic and Magnetic Properties of the Gallium Sulfide Monolayer by Substitutional Doping. **2015**, 119, 29148-29156		32
1408	Optoelectric properties of gate-tunable MoS2/WSe2 heterojunction. **2015**,		
1407	Growth and electronic structure of epitaxial single-layer WS2 on Au(111). **2015**, 92,		53

1406	Optical Properties of Atomically Thin Layered Transition Metal Dichalchogenide. **2015**, 84, 121009		10
1405	Two-Dimensional Monolayer MX2 (M=Mo, W; X=S, Se) Synthesis, Characterization and Device Applications. **2015**,		
1404	High-gain subnanowatt power consumption hybrid complementary logic inverter with WSe2 nanosheet and ZnO nanowire transistors on glass. **2015**, 27, 150-6		36
1403	WS2 mode-locked ultrafast fiber laser. **2015**, 5, 7965		360
1402	Self-limiting layer-by-layer oxidation of atomically thin WSe2. **2015**, 15, 2067-73		153
1401	Environmental instability of few-layer black phosphorus. **2015**, 2, 011002		683
1400	Layer-dependent electronic structure of an atomically heavy two-dimensional dichalcogenide. **2015**, 91,		66
1399	Large-area synthesis of monolayer WSe_2 on a SiO_2/Si substrate and its device applications. **2015**, 7, 4193-8		107
1398	Highly scalable, atomically thin WSe2 grown via metal-organic chemical vapor deposition. *ACS Nano*, **2015**, 9, 2080-7	16.7	273
1397	Controllable synthesis of high quality monolayer WS2 on a SiO2/Si substrate by chemical vapor deposition. **2015**, 5, 15795-15799		52
1396	Defect-induced photoluminescence in monolayer semiconducting transition metal dichalcogenides. *ACS Nano*, **2015**, 9, 1520-7	16.7	295
1395	Modification of electronic structure and thermoelectric properties of hole-doped tungsten dichalcogenides. **2015**, 91,		20
1394	Large-area synthesis of monolayer WS_2 and its ambient-sensitive photo-detecting performance. **2015**, 7, 5974-80		172
1393	Microfiber-based WS_2-film saturable absorber for ultra-fast photonics. **2015**, 5, 479		175
1392	Giant enhancement of the optical second-harmonic emission of WSe(2) monolayers by laser excitation at exciton resonances. **2015**, 114, 097403		365
1391	Layer-dependent modulation of tungsten disulfide photoluminescence by lateral electric fields. *ACS Nano*, **2015**, 9, 2740-8	16.7	39
1390	Measuring the refractive index of highly crystalline monolayer MoS2 with high confidence. **2015**, 5, 8440		119
1389	Phonon and Raman scattering of two-dimensional transition metal dichalcogenides from monolayer, multilayer to bulk material. **2015**, 44, 2757-85		755

1388	Tuning the photoluminescence and ultrasensitive trace detection properties of few-layer MoS2 by decoration with gold nanoparticles. **2015**, 5, 24188-24193		46
1387	Population inversion and giant bandgap renormalization in atomically thin WS2 layers. **2015**, 9, 466-470		260
1386	Optical Investigation of Monolayer and Bulk Tungsten Diselenide (WSe) in High Magnetic Fields. **2015**, 15, 4387-92		81
1385	Modelling of stacked 2D materials and devices. **2015**, 2, 032003		51
1384	Nanoantenna-Enhanced Light Matter Interaction in Atomically Thin WS2. **2015**, 2, 1260-1265		92
1383	Passively mode-locked fiber laser by a cell-type WS2 nanosheets saturable absorber. **2015**, 5, 12587		127
1382	Engineering Optical and Electronic Properties of WS2 by Varying the Number of Layers. *ACS Nano*, **2015**, 9, 6854-60	16.7	73
1381	Direct Observation of Degenerate Two-Photon Absorption and Its Saturation in WS2 and MoS2 Monolayer and Few-Layer Films. *ACS Nano*, **2015**, 9, 7142-50	16.7	254
1380	Exfoliated semiconducting pure 2H-MoS2 and 2H-WS2 assisted by chlorosulfonic acid. **2015**, 51, 12950-3		98
1379	Raman analysis of gold on WSe2 single crystal film. **2015**, 2, 065009		14
1378	Controlled engineering of WS2 nanosheets CdS nanoparticle heterojunction with enhanced photoelectrochemical activity. **2015**, 141, 260-269		47
1377	High-mobility and air-stable single-layer WS2 field-effect transistors sandwiched between chemical vapor deposition-grown hexagonal BN films. **2015**, 5, 10699		187
1376	Chemical vapor deposition of monolayer WS2 nanosheets on Au foils toward direct application in hydrogen evolution. **2015**, 8, 2881-2890		75
1375	Probing Interlayer Interactions in Transition Metal Dichalcogenide Heterostructures by Optical Spectroscopy: MoS2/WS2 and MoSe2/WSe2. **2015**, 15, 5033-8		214
1374	Anomalous lattice vibrations of monolayer MoS2 probed by ultraviolet Raman scattering. **2015**, 17, 14561-8		31
1373	Synthesis, properties and applications of 2D non-graphene materials. **2015**, 26, 292001		82
1372	An optical spectroscopic study on two-dimensional group-VI transition metal dichalcogenides. **2015** , 44, 2629-42		134
1371	Synthesis of atomically thin transition metal disulfides for charge transport layers in optoelectronic devices. *ACS Nano*, **2015**, 9, 4146-55	16.7	76

1370	High-mobility three-atom-thick semiconducting films with wafer-scale homogeneity. **2015**, 520, 656-60		1224
1369	Atomic healing of defects in transition metal dichalcogenides. **2015**, 15, 3524-32		147
1368	Synthesis of centimeter-scale monolayer tungsten disulfide film on gold foils. *ACS Nano*, **2015**, 9, 5510-916.7		143
1367	Exciton binding energy of monolayer WS**2015**, 5, 9218		489
1366	k p theory for two-dimensional transition metal dichalcogenide semiconductors. **2015**, 2, 022001		456
1365	. **2015**, 27, 1581-1584		80
1364	Effects of in-plane stiffness and charge transfer on thermal expansion of monolayer transition metal dichalcogenide. **2015**, 24, 026501		22
1363	Continuously tunable electronic structure of transition metal dichalcogenides superlattices. **2015**, 5, 8356		13
1362	Growth and Optical Properties of High-Quality Monolayer WS2 on Graphite. *ACS Nano*, **2015**, 9, 4056-63	16.7	129
1361	Synthesis, characterization of WS2 nanostructures by vapor phase deposition. **2015**, 117, 064302		6
1360	Magnetoluminescence and valley polarized state of a two-dimensional electron gas in WS2 monolayers. **2015**, 10, 603-7		69
1359	Synthesis and Transfer of Large-Area Monolayer WS2 Crystals: Moving Toward the Recyclable Use of Sapphire Substrates. *ACS Nano*, **2015**, 9, 6178-87	16.7	163
1358	Single photon emitters in exfoliated WSe2 structures. **2015**, 10, 503-6		517
1357	Strain-induced direct indirect bandgap transition and phonon modulation in monolayer WS2. **2015**, 8, 2562-2572		245
1356	Spatiotemporal dynamics of excitons in monolayer and bulk WS2. **2015**, 7, 9526-31		53
1355	Protein Induces Layer-by-Layer Exfoliation of Transition Metal Dichalcogenides. **2015**, 137, 6152-5		303
1354	Exciton dynamics and annihilation in WS2 2D semiconductors. **2015**, 7, 7402-8		278
1353	Observation of Excitonic Rydberg States in Monolayer MoS2 and WS2 by Photoluminescence Excitation Spectroscopy. **2015**, 15, 2992-7		259

1352	Anisotropic Electron–Phonon Coupling in Colloidal Layered TiS2 Nanodiscs Observed via Coherent Acoustic Phonons. **2015**, 119, 7436-7442		11
1351	Indirect-to-direct band gap crossover in few-layer MoTe. **2015**, 15, 2336-42		265
1350	Z-scan measurement of the nonlinear refractive index of monolayer WS(2). **2015**, 23, 15616-23		92
1349	WS as a saturable absorber for ultrafast photonic applications of mode-locked and Q-switched lasers. **2015**, 23, 11453-61		287
1348	Tuning nonlinear optical absorption properties of WS nanosheets. **2015**, 7, 17771-7		46
1347	Atomic layer deposition on 2D transition metal chalcogenides: layer dependent reactivity and seeding with organic ad-layers. **2015**, 51, 16553-6		35
1346	ELECTRONIC AND MAGNETIC PROPERTIES OF MONOLAYER WS2 DOPED WITH MnXm′(m = 0, 3, 6; = N, O, F). **2015**, 22, 1550071		6
1345	Hydrothermal synthesis of WS2/RGO sheet and their application in UV photodetector. **2015**, 653, 298-303		33
1344	Two-dimensional exciton–polariton–light guiding by transition metal dichalcogenide monolayers. **2015**, 2, 740		25
1343	Femtosecond solid-state laser based on tungsten disulfide saturable absorber. **2015**, 23, 27292-8		41
1342	Interlayer interactions in anisotropic atomically thin rhenium diselenide. **2015**, 8, 3651-3661		133
1341	Recent Advances in Two-Dimensional Materials beyond Graphene. *ACS Nano*, **2015**, 9, 11509-39	16.7	1581
1340	Monolayers of WxMo1−xS2 alloy heterostructure with in-plane composition variations. **2015**, 106, 063113		86
1339	Frenkel-like Wannier-Mott excitons in few-layer PbI2. **2015**, 91,		45
1338	Quantum Transport Detected by Strong Proximity Interaction at a Graphene-WS2 van der Waals Interface. **2015**, 15, 5682-8		16
1337	Monolayer excitonic laser. **2015**, 9, 733-737		369
1336	Two-dimensional transition metal dichalcogenides as atomically thin semiconductors: opportunities and challenges. **2015**, 44, 8859-76		719
1335	Thermally Driven (Mo, W)-(S2, Se2) Phonon and Photon Energy Relaxation Dynamics. **2015**, 119, 25071-25076		21

1334	Halide-assisted atmospheric pressure growth of large WSe2 and WS2 monolayer crystals. **2015**, 1, 60-66	294
1333	Probing charge transfer excitons in a MoSe2-WS2 van der Waals heterostructure. **2015**, 7, 17523-8	70
1332	Intrinsic Charge Storage Capability of Transition Metal Dichalcogenides as Pseudocapacitor Electrodes. **2015**, 119, 20864-20870	40
1331	Two-dimensional transition metal dichalcogenides: Clusters, ribbons, sheets and more. **2015**, 10, 559-592	84
1330	Optical constants and dynamic conductivities of single layer MoS2, MoSe2, and WSe2. **2015**, 107, 083103	64
1329	Intrinsic homogeneous linewidth and broadening mechanisms of excitons in monolayer transition metal dichalcogenides. **2015**, 6, 8315	309
1328	Electronic structure and optical signatures of semiconducting transition metal dichalcogenide nanosheets. **2015**, 48, 91-9	115
1327	Band engineering for novel two-dimensional atomic layers. **2015**, 11, 1868-84	79
1326	Measurement of high exciton binding energy in the monolayer transition-metal dichalcogenides WS2 and WSe2. **2015**, 203, 16-20	206
1325	Tailoring the height of ultrathin PbS nanosheets and their application as field-effect transistors. **2015**, 11, 826-33	40
1324	Thermal conductivity determination of suspended mono- and bilayer WS2 by Raman spectroscopy. **2015**, 8, 1210-1221	205
1323	Spectral analysis of the emission current noise exhibited by few layer WS2 nanosheets emitter. **2015**, 149, 51-7	36
1322	Deep-ultraviolet-light-driven reversible doping of WS2 field-effect transistors. **2015**, 7, 747-57	49
1321	Layer-modulated synthesis of uniform tungsten disulfide nanosheet using gas-phase precursors. **2015**, 7, 1308-13	76
1320	Large variations in both dark- and photoconductivity in nanosheet networks as nanomaterial is varied from MoS2 to WTe2. **2015**, 7, 198-208	68
1319	Extraordinary Second Harmonic Generation in tungsten disulfide monolayers. **2014**, 4, 5530	214
1318	Size-dependent nonlinear optical properties of atomically thin transition metal dichalcogenide nanosheets. **2015**, 11, 694-701	132
1317	Mechanical Properties and Applications of Two-Dimensional Materials. **2016**,	5

1316	Optoelectronic Devices Based on Atomically Thin Transition Metal Dichalcogenides. **2016**, 6, 78		74
1315	Direct observation of strong light-exciton coupling in thin WS2 flakes. **2016**, 24, 7151-7		30
1314	Layer Control of WSe2 via Selective Surface Layer Oxidation. *ACS Nano*, **2016**, 10, 6836-42	16.7	55
1313	Electric Field Tunable Interlayer Relaxation Process and Interlayer Coupling in WSe2/Graphene Heterostructures. **2016**, 26, 4319-4328		30
1312	High-Sensitivity Floating-Gate Phototransistors Based on WS2 and MoS2. **2016**, 26, 6084-6090		103
1311	Determining layer number of two-dimensional flakes of transition-metal dichalcogenides by the Raman intensity from substrates. **2016**, 27, 145704		26
1310	Photoluminescence from Liquid-Exfoliated WS2 Monomers in Poly(Vinyl Alcohol) Polymer Composites. **2016**, 26, 1028-1039		62
1309	Distinct photoluminescence and Raman spectroscopy signatures for identifying highly crystalline WS2 monolayers produced by different growth methods. **2016**, 31, 931-944		68
1308	Utilizing photocorrosion-recrystallization to prepare a highly stable and efficient CdS/WS 2 nanocomposite photocatalyst for hydrogen evolution. **2016**, 199, 466-472		106
1307	A Floating Sheet for Efficient Photocatalytic Water Splitting. **2016**, 6, 1600510		54
1306	Highly Flexible and High-Performance Complementary Inverters of Large-Area Transition Metal Dichalcogenide Monolayers. **2016**, 28, 4111-9		90
1305	Influence of the oxide thickness of a SiO2/Si(001) substrate on the optical second harmonic intensity of few-layer MoSe2. **2016**, 55, 085801		4
1304	Growth and optical properties of Nb-doped WS2monolayers. **2016**, 9, 071201		44
1303	Unusual dimensionality effects and surface charge density in 2D Mg(OH)2. **2016**, 6, 20525		38
1302	Recent Progress in Atomic Layer Deposition of Multifunctional Oxides and Two-Dimensional Transition Metal Dichalcogenides. **2016**, 04, 1640010		18
1301	Plasma functionalization for cyclic transition between neutral and charged excitons in monolayer MoS2. **2016**, 6, 21405		42
1300	Distance-dependent energy transfer between CdSe/CdS quantum dots and a two-dimensional semiconductor. **2016**, 108, 021101		42
1299	Absolute deformation potentials of two-dimensional materials. **2016**, 94,		27

1298	Laser energy dependence of valley polarization in transition-metal dichalcogenides. **2016**, 94,		16
1297	Ambipolar transistors based on random networks of WS2nanotubes. **2016**, 9, 075001		10
1296	Band structure characterization of WS2 grown by chemical vapor deposition. **2016**, 108, 252103		31
1295	The enhanced low resistance contacts and boosted mobility in two-dimensional p-type WSe2 transistors through Ar+ ion-beam generated surface defects. **2016**, 6, 105307		19
1294	Second harmonic generation in nanoscale films of transition metal dichalcogenide: Accounting for multipath interference. **2016**, 6, 095306		7
1293	Elastic properties of suspended multilayer WSe2. **2016**, 108, 042104		89
1292	Strong Coulomb scattering effects on low frequency noise in monolayer WS2 field-effect transistors. **2016**, 109, 153102		12
1291	Fabrication of WS/GaN p-n Junction by Wafer-Scale WS Thin Film Transfer. **2016**, 6, 37833		22
1290	Optical modulators with 2D layered materials. **2016**, 10, 227-238		910
1289	A systematic study of the synthesis of monolayer tungsten diselenide films on gold foil. **2016**, 16, 1216-1222		12
1288	Facile Synthesis of Water-Soluble WS2 Quantum Dots for Turn-On Fluorescent Measurement of Lipoic Acid. **2016**, 120, 12170-12177		91
1287	MoS2/WS2/BN-Silver Thin-Film Hybrid Architectures Displaying Enhanced Fluorescence via Surface Plasmon Coupled Emission for Sensing Applications. **2016**, 1, 826-833		17
1286	Optoelectric Properties of Gate-Tunable MoS2/WSe2 Heterojunction. **2016**, 15, 499-505		13
1285	Bandgap Transition of 2H Transition Metal Dichalcogenides: Predictive Tuning via Inherent Interface Coupling and Strain. **2016**, 120, 8927-8935		21
1284	Photoactive WS2 nanosheets bearing plasmonic nanoparticles for visible light-driven reduction of nitrophenol. **2016**, 52, 6150-3		23
1283	Nonradiative Energy Transfer from Individual CdSe/ZnS Quantum Dots to Single-Layer and Few-Layer Tin Disulfide. *ACS Nano*, **2016**, 10, 4790-6	16.7	76
1282	Enhanced absorption with quantum dots, metal nanoparticles, and 2D materials. **2016**,		
1281	Patterning Superatom Dopants on Transition Metal Dichalcogenides. **2016**, 16, 3385-9		44

1280	Efficient exfoliation of bulk MoS2 to nanosheets by mixed-solvent refluxing method. **2016**, 41, 10737-10743		17
1279	Nanoscale mapping of excitonic processes in single-layer MoS2 using tip-enhanced photoluminescence microscopy. **2016**, 8, 10564-9		67
1278	Synthesis and Characterization of ReS2 and ReSe2 Layered Chalcogenide Single Crystals. **2016**, 28, 3352-3359		123
1277	Raman and photoluminescence spectra of two-dimensional nanocrystallites of monolayer WS 2 and WSe 2. **2016**, 3, 025016		91
1276	Coherent Lattice Vibrations in Mono- and Few-Layer WSe2. *ACS Nano*, **2016**, 10, 5560-6	16.7	36
1275	Size-Dependent Properties of Two-Dimensional MoS2 and WS2. **2016**, 120, 10078-10085		115
1274	Experimental study and modeling of atomic-scale friction in zigzag and armchair lattice orientations of MoS. **2016**, 17, 189-199		25
1273	Tailoring photoluminescence of monolayer transition metal dichalcogenides. **2016**, 16, 1159-1174		23
1272	Excitonic Resonant Emission, Absorption of Surface Plasmons in Transition Metal Dichalcogenides for Chip-Level Electronic–Photonic Integrated Circuits. **2016**, 3, 869-874		18
1271	Defect passivation induced strong photoluminescence enhancement of rhombic monolayer MoS2. **2016**, 18, 14001-6		46
1270	Valley Zeeman Splitting and Valley Polarization of Neutral and Charged Excitons in Monolayer MoTe2 at High Magnetic Fields. **2016**, 16, 3624-9		73
1269	Luminescent transition metal dichalcogenide nanosheets through one-step liquid phase exfoliation. **2016**, 3, 035014		32
1268	Indirect-to-Direct Band Gap Crossover in Few-Layer Transition Metal Dichalcogenides: A Theoretical Prediction. **2016**, 120, 21866-21870		66
1267	Excitons in boron nitride single layer. **2016**, 94,		50
1266	Revealing the nature of excitons in liquid exfoliated monolayer tungsten disulphide. **2016**, 27, 425701		10
1265	Significant Exciton Brightening in Monolayer Tungsten Disulfides via Fluorination: n-Type Gas Sensing Semiconductors. **2016**, 26, 7551-7559		25
1264	Two-dimensional van der Waals nanosheet devices for future electronics and photonics. **2016**, 11, 626-643		64
1263	(Invited) Realizing 2D Materials Via MOCVD. **2016**, 75, 725-731		1

1262	Quantum-Transport Characteristics of a p-n Junction on Single-Layer TiS. **2016**, 17, 3985-3991		6
1261	Colloidal Single-Layer Quantum Dots with Lateral Confinement Effects on 2D Exciton. **2016**, 138, 13253-13259		39
1260	Passively Q-switched mid-infrared fluoride fiber laser around 3μm using a tungsten disulfide (WS2) saturable absorber. **2016**, 13, 105108		65
1259	Black phosphorus plasmonics: anisotropic elliptical propagation and nonlocality-induced canalization. **2016**, 18, 104006		71
1258	NaSnAs: An Exfoliatable Layered van der Waals Zintl Phase. *ACS Nano*, **2016**, 10, 9500-9508	16.7	33
1257	Layered crystalline ZnInS nanosheets: CVD synthesis and photo-electrochemical properties. **2016**, 8, 18197-18203		25
1256	Transition metal dichalcogenides based saturable absorbers for pulsed laser technology. **2016**, 60, 601-617		49
1255	Atomically thin lateral p□ junction photodetector with large effective detection area. **2016**, 3, 041001		64
1254	TMDC Heterostructures. **2016**, 447-471		
1253	Luminescence of 2D TMDC. **2016**, 295-320		
1252	WS2 as a saturable absorber for Q-switched 2 micron lasers. **2016**, 41, 3783-6		64
1251	2D WS2/carbon dot hybrids with enhanced photocatalytic activity. **2016**, 4, 13563-13571		99
1250	Tungsten disulfide (WS2) based all-fiber-optic humidity sensor. **2016**, 24, 8956-66		105
1249	Enhanced thermoelectric power in two-dimensional transition metal dichalcogenide monolayers. **2016**, 94,		45
1248	Electronic Band Structure of 2D TMDCs. **2016**, 165-226		1
1247	Raman Scattering of 2D TMDCs. **2016**, 227-294		4
1246	Near-Unity Absorption in van der Waals Semiconductors for Ultrathin Optoelectronics. **2016**, 16, 5482-7		116
1245	Dual functions of 2D WS2and MoS2□WS2monolayers coupled with a Ag3PO4photocatalyst. **2016**, 31, 095013		5

1244	Electronic band gaps and exciton binding energies in monolayer MoxW1−xS2 transition metal dichalcogenide alloys probed by scanning tunneling and optical spectroscopy. **2016**, 94,	61
1243	Direct versus indirect band gap emission and exciton-exciton annihilation in atomically thin molybdenum ditelluride (MoTe2). **2016**, 94,	45
1242	Synthesis, properties and applications of 2D layered MX (M = Ga, In; X = S, Se, Te) materials. **2016**, 8, 16802-16818	180
1241	Condensed phase diagrams for the metal–WS systems and their relevance for contacts to WS2. **2016**, 212, 78-88	5
1240	Ultrafast Self-Limited Growth of Strictly Monolayer WSe Crystals. **2016**, 12, 5741-5749	42
1239	Pulsed laser deposition assisted grown continuous monolayer MoSe2. **2016**, 18, 6992-6996	23
1238	Magnetic-Field-Induced Rotation of Polarized Light Emission from Monolayer WS_{2}. **2016**, 117, 077402	63
1237	Growth and characterization of WSe2 single crystals using TeCl4 as transport agent. **2016**, 453, 111-118	8
1236	Surface-enhanced Raman scattering for 2-D WSe2 hybridized with functionalized gold nanoparticles. **2016**, 24, 27546-27553	10
1235	Metallic impurities induced electronic transport in WSe2: First-principle calculations. **2016**, 658, 83-87	12
1234	Strain-Robust and Electric Field Tunable Band Alignments in van der Waals WSe2–Graphene Heterojunctions. **2016**, 120, 22702-22709	27
1233	Gate-Tunable Hole and Electron Carrier Transport in Atomically Thin Dual-Channel WSe /MoS Heterostructure for Ambipolar Field-Effect Transistors. **2016**, 28, 9519-9525	49
1232	Layer-modulated, wafer scale and continuous ultra-thin WS2 films grown by RF sputtering via post-deposition annealing. **2016**, 4, 7846-7852	19
1231	Theoretical Study of Transition Metal Dichalcogenides. **2016**, 157-178	1
1230	High-temperature superfluidity of the two-component Bose gas in a transition metal dichalcogenide bilayer. **2016**, 93,	48
1229	Structural characteristic correlated to the electronic band gap in MoS2. **2016**, 94,	9
1228	Shubnikov-de Haas Oscillations of High-Mobility Holes in Monolayer and Bilayer WSe_{2}: Landau Level Degeneracy, Effective Mass, and Negative Compressibility. **2016**, 116, 086601	118
1227	Colloidal preparation and electrocatalytic hydrogen production of MoS2 and WS2 nanosheets with controllable lateral sizes and layer numbers. **2016**, 8, 15262-72	54

1226	The symmetry-resolved electronic structure of 2H-WSe2(0 0 0 1). **2016**, 28, 345503		5
1225	Van der Waals heterostructures and devices. **2016**, 1,		1262
1224	Atomically thin quantum light-emitting diodes. **2016**, 7, 12978		174
1223	Strong spin-orbit splitting and magnetism of point defect states in monolayer WS2. **2016**, 94,		54
1222	Photonics and optoelectronics of two-dimensional materials beyond graphene. **2016**, 27, 462001		203
1221	Electroluminescence from indirect band gap semiconductor ReS 2. **2016**, 3, 045016		56
1220	Control of Exciton Valley Coherence in Transition Metal Dichalcogenide Monolayers. **2016**, 117, 187401		89
1219	Excitonic properties of semiconducting monolayer and bilayer MoTe2. **2016**, 94,		40
1218	Laterally Stitched Heterostructures of Transition Metal Dichalcogenide: Chemical Vapor Deposition Growth on Lithographically Patterned Area. *ACS Nano*, **2016**, 10, 10516-10523	16.7	41
1217	The Effect of Preparation Conditions on Raman and Photoluminescence of Monolayer WS. **2016**, 6, 35154		82
1216	Partial Oxidized Arsenene: Emerging Tunable Direct Bandgap Semiconductor. **2016**, 6, 24981		30
1215	Surface enhanced Raman scattering of monolayer MX2 with metallic nano particles. **2016**, 6, 30320		27
1214	Room-temperature exciton-polaritons with two-dimensional WS2. **2016**, 6, 33134		120
1213	Mapping of Low-Frequency Raman Modes in CVD-Grown Transition Metal Dichalcogenides: Layer Number, Stacking Orientation and Resonant Effects. **2016**, 6, 19476		88
1212	Two-dimensional hexagonal semiconductors beyond graphene. **2016**, 7, 043001		9
1211	Synthesis of Large-Area WS2 monolayers with Exceptional Photoluminescence. **2016**, 6, 19159		122
1210	Coherent Nonlinear Optical Response Spatial Self-Phase Modulation in MoSe2 Nano-Sheets. **2016**, 6, 22072		33
1209	Modulation of electrical potential and conductivity in an atomic-layer semiconductor heterojunction. **2016**, 6, 31223		32

1208	Lithium Exfoliated Vanadium Dichalcogenides (VS2, VSe2, VTe2) Exhibit Dramatically Different Properties from Their Bulk Counterparts. **2016**, 3, 1600433		70
1207	One-step Synthesis of Few-layer WS2 by Pulsed Laser Deposition. **2015**, 5, 18116		74
1206	Probing thermal expansion coefficients of monolayers using surface enhanced Raman scattering. **2016**, 6, 99053-99059		18
1205	Mobility enhancement and hysteresis phenomenon in WSe2 FETs. **2016**,		1
1204	Spatially Resolved Electronic Properties of Single-Layer WS on Transition Metal Oxides. *ACS Nano*, **2016**, 10, 10058-10067	16.7	25
1203	Exciton-Plasmon Coupling and Electromagnetically Induced Transparency in Monolayer Semiconductors Hybridized with Ag Nanoparticles. **2016**, 28, 2709-15		97
1202	Extraordinarily Strong Interlayer Interaction in 2D Layered PtS2. **2016**, 28, 2399-407		322
1201	Ferroelectrically Gated Atomically Thin Transition-Metal Dichalcogenides as Nonvolatile Memory. **2016**, 28, 2923-30		103
1200	Engineering Bandgaps of Monolayer MoS2 and WS2 on Fluoropolymer Substrates by Electrostatically Tuned Many-Body Effects. **2016**, 28, 6457-64		89
1199	Monolayer Molybdenum Disulfide Nanoribbons with High Optical Anisotropy. **2016**, 4, 756-762		61
1198	Carrier Type Control of WSe2 Field-Effect Transistors by Thickness Modulation and MoO3 Layer Doping. **2016**, 26, 4223-4230		133
1197	Patterned Peeling 2D MoS2 off the Substrate. **2016**, 8, 16546-50		28
1196	Evidence for Fast Interlayer Energy Transfer in MoSe2/WS2 Heterostructures. **2016**, 16, 4087-93		145
1195	Interlayer Coupling in Twisted WSe2/WS2 Bilayer Heterostructures Revealed by Optical Spectroscopy. *ACS Nano*, **2016**, 10, 6612-22	16.7	181
1194	Optical and electrical properties of Al:WS2 films prepared by atomic layer deposition and vulcanization. **2016**, 6, 64879-64884		9
1193	Large area synthesis, characterization, and anisotropic etching of two dimensional tungsten disulfide films. **2016**, 176, 52-57		8
1192	Monolayer transition metal disulfide: Synthesis, characterization and applications. **2016**, 26, 221-231		11
1191	Facile synthesis of two-dimensional WS2 with reverse saturable absorption and nonlinear refraction properties in the PMMA matrix. **2016**, 684, 224-229		17

1190	High Luminescence Efficiency in MoS2 Grown by Chemical Vapor Deposition. *ACS Nano*, **2016**, 10, 6535-41	16.7	115
1189	Band Alignment in MoS2/WS2 Transition Metal Dichalcogenide Heterostructures Probed by Scanning Tunneling Microscopy and Spectroscopy. **2016**, 16, 4831-7		169
1188	Reversible uniaxial strain tuning in atomically thin WSe 2. **2016**, 3, 021011		89
1187	2D Transition-Metal-Dichalcogenide-Nanosheet-Based Composites for Photocatalytic and Electrocatalytic Hydrogen Evolution Reactions. **2016**, 28, 1917-33		977
1186	Theoretical and experimental investigation on structural and electronic properties of Al/O/Al, O-doped WS2. **2016**, 89, 84-88		7
1185	Impurity-induced ferromagnetism and metallicity of WS2 monolayer. **2016**, 42, 2364-2369		17
1184	Enhanced Photoresponse of SnSe-Nanocrystals-Decorated WS2 Monolayer Phototransistor. **2016**, 8, 4781-8		68
1183	Enhanced Catalytic Activities of Surfactant-Assisted Exfoliated WS□ Nanodots for Hydrogen Evolution. *ACS Nano*, **2016**, 10, 2159-66	16.7	227
1182	Highly Transparent Wafer-Scale Synthesis of Crystalline WS2 Nanoparticle Thin Film for Photodetector and Humidity-Sensing Applications. **2016**, 8, 3359-65		181
1181	Uniform, large-area self-limiting layer synthesis of tungsten diselenide. **2016**, 3, 014004		32
1180	Facile synthesis of large-area and highly crystalline WS2 film on dielectric surfaces for SERS. **2016**, 666, 412-418		28
1179	Direct synthesis of large-scale hierarchical MoS2 films nanostructured with orthogonally oriented vertically and horizontally aligned layers. **2016**, 8, 431-9		33
1178	Optical and electrical properties of Al□WS2 films via H2S sulfurization of Al□WOx. **2016**, 92, 129-134		6
1177	Enhanced Raman Scattering of Rhodamine 6G Films on Two-Dimensional Transition Metal Dichalcogenides Correlated to Photoinduced Charge Transfer. **2016**, 28, 180-187		88
1176	Electronic and optical properties of single crystal SnS2: an earth-abundant disulfide photocatalyst. **2016**, 4, 1312-1318		190
1175	Electroluminescence Dynamics across Grain Boundary Regions of Monolayer Tungsten Disulfide. *ACS Nano*, **2016**, 10, 1093-100	16.7	26
1174	Linearly Polarized Excitons in Single- and Few-Layer ReS2 Crystals. **2016**, 3, 96-101		169
1173	Atypical Exciton-Phonon Interactions in WS2 and WSe2 Monolayers Revealed by Resonance Raman Spectroscopy. **2016**, 16, 2363-8		91

1172	Manipulating spin-polarized photocurrents in 2D transition metal dichalcogenides. **2016**, 113, 3746-50		44
1171	Recombination Kinetics and Effects of Superacid Treatment in Sulfur- and Selenium-Based Transition Metal Dichalcogenides. **2016**, 16, 2786-91		187
1170	Visible-Light-Driven Oxidative Coupling Reactions of Amines by Photoactive WS2 Nanosheets. **2016**, 6, 2754-2759		118
1169	Chemically Tailoring Semiconducting Two-Dimensional Transition Metal Dichalcogenides and Black Phosphorus. *ACS Nano*, **2016**, 10, 3900-17	16.7	192
1168	Surface energy and wettability of van der Waals structures. **2016**, 8, 5764-70		112
1167	Exciton and charge carrier dynamics in few-layer WS2. **2016**, 8, 5428-34		47
1166	Excitonic emission and absorption resonances in V0.25W0.75Se2 single crystals grown by direct vapour transport technique. **2016**, 441, 101-106		26
1165	Two-dimensional layered MoS2: rational design, properties and electrochemical applications. **2016**, 9, 1190-1209		432
1164	Large-quantity and continuous preparation of two-dimensional nanosheets. **2016**, 8, 5407-11		39
1163	Electrically Tunable Valley-Light Emitting Diode (vLED) Based on CVD-Grown Monolayer WS2. **2016**, 16, 1560-7		139
1162	Core□shell structured CeO2@MoS2 nanocomposites for high performance symmetric supercapacitors. **2016**, 18, 4158-4164		36
1161	Solution-processable exfoliation and suspension of atomically thin WSe2. **2016**, 468, 247-252		23
1160	Determination of the thickness of two-dimensional transition-metal dichalcogenide by the Raman intensity of the substrate. **2016**, 3, 025007		8
1159	Splitting of Interlayer Shear Modes and Photon Energy Dependent Anisotropic Raman Response in N-Layer ReSe□and ReS□*ACS Nano*, **2016**, 10, 2752-60	16.7	123
1158	Tailoring the electrical and photo-electrical properties of a WS2 field effect transistor by selective n-type chemical doping. **2016**, 6, 24675-24682		34
1157	Enhancement of Thermoelectric Properties of Molybdenum Diselenide Through Combined Mg Intercalation and Nb Doping. **2016**, 45, 2926-2934		12
1156	Passively Q-switched nd:YAG laser via a WS2 saturable absorber. **2016**, 367, 234-238		22
1155	Dimensionality effects on the luminescence properties of hBN. **2016**, 8, 6986-93		39

1154	Assembled 3D electrocatalysts for efficient hydrogen evolution: WSe2 layers anchored on graphene sheets. **2016**, 3, 313-319		45
1153	Modulating Optoelectronic Properties of Two-Dimensional Transition Metal Dichalcogenide Semiconductors by Photoinduced Charge Transfer. *ACS Nano*, **2016**, 10, 1671-80	16.7	113
1152	Probing Spin-Orbit Coupling and Interlayer Coupling in Atomically Thin Molybdenum Disulfide Using Hydrostatic Pressure. *ACS Nano*, **2016**, 10, 1619-24	16.7	36
1151	Vertical heterostructures based on graphene and other 2D materials. **2016**, 50, 66-82		33
1150	DNA-Assisted Exfoliation of Tungsten Dichalcogenides and Their Antibacterial Effect. **2016**, 8, 1943-50		62
1149	Using dark states for exciton storage in transition-metal dichalcogenides. **2016**, 28, 034005		4
1148	Anomalous Raman scattering and lattice dynamics in mono- and few-layer WTe2. **2016**, 8, 2309-16		77
1147	Production of Highly Monolayer Enriched Dispersions of Liquid-Exfoliated Nanosheets by Liquid Cascade Centrifugation. *ACS Nano*, **2016**, 10, 1589-601	16.7	271
1146	Bandgap engineering of different stacking WS2 bilayer under an external electric field. **2016**, 225, 32-37		22
1145	Picosecond photoresponse in van der Waals heterostructures. **2016**, 11, 42-6		392
1144	Optical and Electronic Properties of Two-Dimensional Layered Materials. **2017**, 6, 479-493		86
1143	Brightening of dark excitons in monolayers of semiconducting transition metal dichalcogenides. **2017**, 4, 021003		147
1142	Synthesis of blue photoluminescent WS 2 quantum dots via ultrasonic cavitation. **2017**, 185, 236-240		34
1141	Significantly enhanced optoelectronic performance of tungsten diselenide phototransistor via surface functionalization. **2017**, 10, 1282-1291		22
1140	Study of chemical vapour transport (CVT) grown WSe1.93 single crystals. **2017**, 61, 11-16		7
1139	Strain-engineered optoelectronic properties of 2D transition metal dichalcogenide lateral heterostructures. **2017**, 4, 021016		53
1138	The Role of Electronic and Phononic Excitation in the Optical Response of Monolayer WS after Ultrafast Excitation. **2017**, 17, 644-651		106
1137	Highly responsive and broadband photodetectors based on WS2–graphene van der Waals epitaxial heterostructures. **2017**, 5, 1494-1500		79

1136	Viable route towards large-area 2D MoS2using magnetron sputtering. **2017**, 4, 021002		33
1135	Evaluation of photoluminescence quantum yield of monolayer WSe2 using reference dye of 3-borylbithiophene derivative. **2017**, 254, 1600563		14
1134	Anomalous Above-Gap Photoexcitations and Optical Signatures of Localized Charge Puddles in Monolayer Molybdenum Disulfide. *ACS Nano*, **2017**, 11, 2115-2123	16.7	25
1133	Monolayer WS Nanopores for DNA Translocation with Light-Adjustable Sizes. *ACS Nano*, **2017**, 11, 1937-1945	16.7	70
1132	Micro-reflectance and transmittance spectroscopy: a versatile and powerful tool to characterize 2D materials. **2017**, 50, 074002		80
1131	Experimental and theoretical evidence for the ferromagnetic edge in WSe nanosheets. **2017**, 9, 4898-4906		22
1130	Solution synthesis of few-layer 2H MX2 (M = Mo, W; X = S, Se). **2017**, 5, 2859-2864		25
1129	Valley-Polarized Exciton Dynamics in Exfoliated Monolayer WSe2. **2017**, 121, 6409-6413		21
1128	Size-Tuning of WSe Flakes for High Efficiency Inverted Organic Solar Cells. *ACS Nano*, **2017**, 11, 3517-3531	16.7	72
1127	Epitaxial chemical vapour deposition growth of monolayer hexagonal boron nitride on a Cu(111)/sapphire substrate. **2017**, 19, 8230-8235		26
1126	Recent progress in van der Waals heterojunctions. **2017**, 9, 4324-4365		114
1125	Correlatively Dependent Lattice and Electronic Structural Evolutions in Compressed Monolayer Tungsten Disulfide. **2017**, 8, 941-947		9
1124	Carrier transfer across a 2D-3D semiconductor heterointerface: The role of momentum mismatch. **2017**, 95,		10
1123	Bandgap Extraction and Device Analysis of Ionic Liquid Gated WSe Schottky Barrier Transistors. *ACS Nano*, **2017**, 11, 1626-1632	16.7	37
1122	Current Rectification through Vertical Heterojunctions between Two Single-Layer Dichalcogenides (WSe|MoS pn-Junctions). **2017**, 9, 8248-8254		7
1121	Complex and Noncentrosymmetric Stacking of Layered Metal Dichalcogenide Materials Created by Screw Dislocations. **2017**, 139, 3496-3504		60
1120	Optical properties of atomically thin transition metal dichalcogenides: observations and puzzles. **2017**, 6, 1289-1308		123
1119	On the chemically-assisted excitonic enhancement in environmentally-friendly solution dispersions of two-dimensional MoS2 and WS2. **2017**, 5, 5323-5333		28

1118	Observation of biexcitonic emission at extremely low power density in tungsten disulfide atomic layers grown on hexagonal boron nitride. **2017**, 7, 322		25
1117	A Versatile and Simple Approach to Generate Light Emission in Semiconductors Mediated by Electric Double Layers. **2017**, 29, 1606918		31
1116	Highly Anisotropic in-Plane Excitons in Atomically Thin and Bulklike 1T′-ReSe. **2017**, 17, 3202-3207		86
1115	Fast and Highly Sensitive Ionic-Polymer-Gated WS -Graphene Photodetectors. **2017**, 29, 1700222		80
1114	Dielectric functions and critical points of crystalline WS ultrathin films with tunable thickness. **2017**, 19, 12022-12031		14
1113	Review of ultrafast spectroscopy studies of valley carrier dynamics in two-dimensional semiconducting transition metal dichalcogenides. **2017**, 26, 037801		19
1112	Tungsten Disulfide Nanodispersions for Inkjet Printing and Semiconducting Devices. **2017**, 2, 3691-3696		4
1111	Tuning of Interlayer Coupling in Large-Area Graphene/WSe2 van der Waals Heterostructure via Ion Irradiation: Optical Evidences and Photonic Applications. **2017**, 4, 1531-1538		55
1110	Enhanced Photoluminescence of Monolayer WS2 on Ag Films and Nanowire–WS2–Film Composites. **2017**, 4, 1421-1430		32
1109	Hydrogen Addition for Centimeter-Sized Monolayer Tungsten Disulfide Continuous Films by Ambient Pressure Chemical Vapor Deposition. **2017**, 29, 4904-4911		36
1108	Optically probing the interaction between monolayer MoS2 and single-wall carbon nanotube. **2017**, 49, 1		2
1107	Interfacial Charge Transfer Circumventing Momentum Mismatch at Two-Dimensional van der Waals Heterojunctions. **2017**, 17, 3591-3598		122
1106	Passively Q-Switched Er:LuAG Laser at 1.65 μm Using MoS2 and WS2 Saturable Absorbers. **2017**, 9, 1-7		6
1105	Chalcogenide Nanosheets: Optical Signatures of Many-Body Effects and Electronic Band Structure. **2017**, 133-162		1
1104	Enhanced valley splitting in monolayer WSe due to magnetic exchange field. **2017**, 12, 757-762		220
1103	Renal Clearable Luminescent WSe2 for Radioprotection of Nontargeted Tissues during Radiotherapy. **2017**, 34, 1700035		20
1102	Highly Stable Near-Unity Photoluminescence Yield in Monolayer MoS by Fluoropolymer Encapsulation and Superacid Treatment. *ACS Nano*, **2017**, 11, 5179-5185	16.7	64
1101	Synthesis and fast transfer of monolayer MoS on reusable fused silica. **2017**, 9, 6984-6990		13

1100	Thickness dependent friction on few-layer MoS, WS, and WSe. **2017**, 28, 245703	24
1099	Photoluminescence Segmentation within Individual Hexagonal Monolayer Tungsten Disulfide Domains Grown by Chemical Vapor Deposition. **2017**, 9, 15005-15014	48
1098	Nonlinear photoluminescence in monolayer WS: parabolic emission and excitation fluence-dependent recombination dynamics. **2017**, 9, 7235-7241	30
1097	Characterization methods dedicated to nanometer-thick hBN layers. **2017**, 4, 015028	31
1096	Effect of strain on electronic and magnetic properties of n-type Cr-doped WSe 2 monolayer. **2017**, 87, 6-9	12
1095	Testbeds for Transition Metal Dichalcogenide Photonics: Efficacy of Light Emission Enhancement in Monomer vs Dimer Nanoscale Antennae. **2017**, 4, 1713-1721	20
1094	Heterogeneous modulation of exciton emission in triangular WS2 monolayers by chemical treatment. **2017**, 5, 6820-6827	21
1093	Defect-mediated phonon dynamics in TaS and WSe. **2017**, 4, 044019	26
1092	Exciton center-of-mass localization and dielectric environment effect in monolayer WS2. **2017**, 121, 235702	17
1091	Heterostructures containing dichalcogenides-new materials with predictable nanoarchitectures and novel emergent properties. **2017**, 32, 093004	24
1090	Tetrahedral Transition Metal Chalcogenides as Functional Inorganic Materials. **2017**, 29, 5737-5752	17
1089	MoS2/WS2 Heterojunction for Photoelectrochemical Water Oxidation. **2017**, 7, 4990-4998	144
1088	Fast, multicolor photodetection with graphene-contacted p-GaSe/n-InSe van der Waals heterostructures. **2017**, 28, 27LT01	133
1087	2D Black Phosphorus for Energy Storage and Thermoelectric Applications. **2017**, 13, 1700661	113
1086	Local strain-induced band gap fluctuations and exciton localization in aged WS2 monolayers. **2017**, 7, 065005	19
1085	Synthetic approaches to two-dimensional transition metal dichalcogenide nanosheets. **2017**, 89, 411-478	128
1084	Defect Activated Photoluminescence in WSe2 Monolayer. **2017**, 121, 12294-12299	53
1083	Large-scale quantum-emitter arrays in atomically thin semiconductors. **2017**, 8, 15093	275

1082	Three fundamental devices in one: a reconfigurable multifunctional device in two-dimensional WSe. **2017**, 28, 265203		8
1081	Local Strain Induced Band Gap Modulation and Photoluminescence Enhancement of Multilayer Transition Metal Dichalcogenides. **2017**, 29, 5124-5133		62
1080	Towards full-colour tunable photoluminescence of monolayer MoS2/carbon quantum dot ultra-thin films. **2017**, 5, 6352-6358		10
1079	Tuning the catalytic functionality of transition metal dichalcogenides grown by chemical vapour deposition. **2017**, 5, 14950-14968		31
1078	From two-dimensional materials to their heterostructures: An electrochemist's perspective. **2017**, 8, 68-103		153
1077	Size-dependent optical response of few-layered WS2nanosheets produced by liquid phase exfoliation. **2017**, 77, 30401		3
1076	Semiconductor-to-metal transition in the bulk of WSe upon potassium intercalation. **2017**, 29, 165502		6
1075	Surfactant-Free Polar-to-Nonpolar Phase Transfer of Exfoliated MoS Two-Dimensional Colloids. **2017**, 82, 732-741		8
1074	Impact of Interfacial Defects on the Properties of Monolayer Transition Metal Dichalcogenide Lateral Heterojunctions. **2017**, 8, 1664-1669		22
1073	Two-Dimensional Heterostructure as a Platform for Surface-Enhanced Raman Scattering. **2017**, 17, 2621-2626		97
1072	Probing Evolution of Twist-Angle-Dependent Interlayer Excitons in MoSe/WSe van der Waals Heterostructures. *ACS Nano*, **2017**, 11, 4041-4050	16.7	157
1071	Atomic crystals resistive switching memory. **2017**, 26, 033201		
1070	Enhanced Photoluminescence of Solution-Exfoliated Transition Metal Dichalcogenides by Laser Etching. **2017**, 2, 738-745		11
1069	Growth of Single-Crystalline Cadmium Iodide Nanoplates, CdI/MoS (WS, WSe) van der Waals Heterostructures, and Patterned Arrays. *ACS Nano*, **2017**, 11, 3413-3419	16.7	45
1068	A novel synthesis method for large-area MoS 2 film with improved electrical contact. **2017**, 4, 025051		13
1067	Simple Chemical Treatment to n-Dope Transition-Metal Dichalcogenides and Enhance the Optical and Electrical Characteristics. **2017**, 9, 11950-11958		25
1066	Tuning Coupling Behavior of Stacked Heterostructures Based on MoS, WS, and WSe. **2017**, 7, 44712		43
1065	2H-WS Quantum Dots Produced by Modulating the Dimension and Phase of 1T-Nanosheets for Antibody-Free Optical Sensing of Neurotransmitters. **2017**, 9, 12316-12323		46

1064	Raman-like resonant secondary emission causes valley coherence in CVD-grown monolayer MoS2. **2017**, 95,		7
1063	Anomalous enhancement of valley polarization in multilayer WS at room temperature. **2017**, 9, 5148-5154		17
1062	A Novel Mild Phase-Transition to Prepare Black Phosphorus Nanosheets with Excellent Energy Applications. **2017**, 13, 1602243		75
1061	Influence of fullerene-like tungsten disulfide (IF-WS 2) nanoparticles on thermal and dynamic mechanical properties of PP/EVA blends: Correlation with microstructure. **2017**, 111, 74-82		13
1060	Single Type of Nanocavity Structure Enhances Light Outcouplings from Various Two-Dimensional Materials by over 100-Fold. **2017**, 4, 93-105		16
1059	Large-area tungsten disulfide for ultrafast photonics. **2017**, 9, 1871-1877		104
1058	Redox Exfoliation of Layered Transition Metal Dichalcogenides. *ACS Nano*, **2017**, 11, 635-646	16.7	45
1057	Observation of Charge Transfer in Heterostructures Composed of MoSe2 Quantum Dots and a Monolayer of MoS2 or WSe2. **2017**, 121, 1997-2004		33
1056	Layer-Number Dependent Optical Properties of 2D Materials and Their Application for Thickness Determination. **2017**, 27, 1604468		130
1055	Strain-induced phonon shifts in tungsten disulfide nanoplatelets and nanotubes. **2017**, 4, 015007		57
1054	Tuning contact transport mechanisms in bilayer MoSe 2 transistors up to Fowler□Nordheim regime. **2017**, 4, 015037		20
1053	Effective elastic properties of two dimensional multiplanar hexagonal nanostructures. **2017**, 4, 025006		23
1052	Er-doped mode-locked fiber laser with WS2/fluorine mica (FM) saturable absorber. **2017**, 90, 109-112		11
1051	Highly Luminescent WS Quantum Dots/ZnO Heterojunctions for Light Emitting Devices. **2017**, 9, 558-565		75
1050	All-fiber thulium/holmium-doped mode-locked laser by tungsten disulfide saturable absorber. **2017** , 27, 015102		18
1049	Effects of Direct Solvent-Quantum Dot Interaction on the Optical Properties of Colloidal Monolayer WS Quantum Dots. **2017**, 17, 7471-7477		35
1048	Photodetectors based on sensitized two-dimensional transition metal dichalcogenides□A review. **2017**, 32, 4115-4131		33
1047	Charge carrier transfer in tungsten disulfide-black phosphorus heterostructures. **2017**, 28, 475705		1

1046	Electronic Properties of Bulk and Monolayer TMDs: Theoretical Study Within DFT Framework (GVJ-2e Method). **2017**, 214, 1700218	156
1045	High-Mobility and High-Optical Quality Atomically Thin WS. **2017**, 7, 14911	54
1044	Exciton broadening in WS2/graphene heterostructures. **2017**, 96,	38
1043	Crystal growth, characterization and photo detection properties of 2H□0.75W0.25Se2ternary alloy with 1T□Se2secondary phase. **2017**, 4, 106306	33
1042	Structuring Pd Nanoparticles on 2H-WS Nanosheets Induces Excellent Photocatalytic Activity for Cross-Coupling Reactions under Visible Light. **2017**, 139, 14767-14774	115
1041	Photoluminescent Arrays of Nanopatterned Monolayer MoS2. **2017**, 27, 1703688	28
1040	Superfluidity of dipolar excitons in a transition metal dichalcogenide double layer. **2017**, 96,	26
1039	Ultrafast exciton dynamics in chemical heterogenous WSe2 monolayer. **2017**, 50, 485109	5
1038	Electronic properties of single-layer tungsten disulfide on epitaxial graphene on silicon carbide. **2017**, 9, 16412-16419	30
1037	Microscopic Origin of the Valley Hall Effect in Transition Metal Dichalcogenides Revealed by Wavelength-Dependent Mapping. **2017**, 17, 5719-5725	40
1036	Optically Discriminating Carrier-Induced Quasiparticle Band Gap and Exciton Energy Renormalization in Monolayer MoS_{2}. **2017**, 119, 087401	58
1035	Excitonic resonance effects and Davydov splitting in circularly polarized Raman spectra of few-layer WSe 2. **2017**, 4, 045002	21
1034	First-principles study on the electronic and optical properties of WS2 and MoS2 monolayers. **2017**, 55, 1930-1937	17
1033	A comprehensive comparison study on the vibrational and optical properties of CVD-grown and mechanically exfoliated few-layered WS2. **2017**, 5, 11239-11245	24
1032	Combining ZnS with WS2 nanosheets to fabricate a broad-spectrum composite photocatalyst for hydrogen evolution. **2017**, 41, 12451-12458	18
1031	Enhanced p-type behavior in the hybrid structure of graphene quantum dots/2D-WSe2. **2017**, 111, 111603	5
1030	Enhanced optical absorption of monolayer WS2 using Ag nanograting and distributed Bragg reflector structures. **2017**, 112, 218-223	6
1029	Role of Photoinduced Exciton in the Transient Terahertz Conductivity of Few-Layer WS2 Laminate. **2017**, 121, 20451-20457	31

1028	Controlled Layer Thinning and p-Type Doping of WSe2 by Vapor XeF2. **2017**, 27, 1702455		61
1027	Scalable Synthesis of Highly Crystalline MoSe and Its Ambipolar Behavior. **2017**, 9, 36009-36016		35
1026	Exciton-exciton interaction in transition-metal dichalcogenide monolayers. **2017**, 96,		43
1025	Progress of Large-Scale Synthesis and Electronic Device Application of Two-Dimensional Transition Metal Dichalcogenides. **2017**, 13, 1700098		37
1024	Polytype 1T/2H MoS2 heterostructures for efficient photoelectrocatalytic hydrogen evolution. **2017**, 330, 102-108		73
1023	Controlling Structural Anisotropy of Anisotropic 2D Layers in Pseudo-1D/2D Material Heterojunctions. **2017**, 29, 1701201		19
1022	Low-Temperature Solution Synthesis of Transition Metal Dichalcogenide Alloys with Tunable Optical Properties. **2017**, 139, 11096-11105		54
1021	Understanding Variations in Circularly Polarized Photoluminescence in Monolayer Transition Metal Dichalcogenides. *ACS Nano*, **2017**, 11, 7988-7994	16.7	40
1020	The optical response of monolayer, few-layer and bulk tungsten disulfide. **2017**, 9, 13128-13141		66
1019	Raman Spectroscopy of Suspended MoS2. **2017**, 254, 1700218		13
1018	Nanoscale deformation and friction characteristics of atomically thin WSe 2 and heterostructure using nanoscratch and Raman spectroscopy. **2017**, 4, 045005		17
1017	TMDs Optoelectronic Devices. 329-343		
1016	The effects of exfoliation, organic solvents and anodic activation on the catalytic hydrogen evolution reaction of tungsten disulfide. **2017**, 9, 13515-13526		25
1015	Hydrogenation of monolayer molybdenum diselenide via hydrogen plasma treatment. **2017**, 5, 11294-11300		14
1014	Tunable indirect-direct transition of few-layer SnSe via interface engineering. **2017**, 29, 425501		9
1013	Large-Area WS Film with Big Single Domains Grown by Chemical Vapor Deposition. **2017**, 12, 558		42
1012	Synthesis of uniform single layer WS for tunable photoluminescence. **2017**, 7, 16121		33
1011	Photoacoustic and modulated reflectance studies of indirect and direct band gap in van der Waals crystals. **2017**, 7, 15365		28

1010	Effective mechanical properties of multilayer nano-heterostructures. **2017**, 7, 15818		44
1009	Potential Profile of Stabilized Field-Induced Lateral p-n Junction in Transition-Metal Dichalcogenides. *ACS Nano*, **2017**, 11, 12583-12590	16.7	20
1008	Exciton condensate in bilayer transition metal dichalcogenides: Strong coupling regime. **2017**, 96,		24
1007	Ultrahigh-Gain and Fast Photodetectors Built on Atomically Thin Bilayer Tungsten Disulfide Grown by Chemical Vapor Deposition. **2017**, 9, 42001-42010		17
1006	Robustness of Size Selection and Spectroscopic Size, Thickness and Monolayer Metrics of Liquid-Exfoliated WS2. **2017**, 254, 1700443		20
1005	Low-Frequency Shear and Layer-Breathing Modes in Raman Scattering of Two-Dimensional Materials. *ACS Nano*, **2017**, 11, 11777-11802	16.7	109
1004	Exfoliated WS-Nafion Composite based Electromechanical Actuators. **2017**, 7, 14599		15
1003	Direct-Indirect Nature of the Bandgap in Lead-Free Perovskite Nanocrystals. **2017**, 8, 3173-3177		139
1002	Photoluminescence modulation due to conversion of trions to excitons and plasmonic interaction in MoS2-metal NPs hybrid structures. **2017**, 723, 722-728		13
1001	Exciton dynamics in tungsten dichalcogenide monolayers. **2017**, 19, 17877-17882		10
1000	Excitation-dependent photoluminescence from WS2 nanostructures synthesized via top-down approach. **2017**, 52, 11326-11336		36
999	Long valley relaxation time of free carriers in monolayer WSe2. **2017**, 95,		29
998	Excitation energy dependence of Raman spectra of few-layer WS2. **2017**, 3, 64-70		29
997	Exciton Dynamics, Transport, and Annihilation in Atomically Thin Two-Dimensional Semiconductors. **2017**, 8, 3371-3379		112
996	Room-Temperature Strong Light-Matter Interaction with Active Control in Single Plasmonic Nanorod Coupled with Two-Dimensional Atomic Crystals. **2017**, 17, 4689-4697		164
995	Neutral and charged inter-valley biexcitons in monolayer MoSe. **2017**, 8, 15552		112
994	Field-induced charge separation dynamics in monolayer MoS 2. **2017**, 4, 035017		4
993	Phase conversion of chemically exfoliated molybdenum disulfide. **2017**, 17, 60-65		11

992	Band-gap-matched CdSe QD/WS 2 nanosheet composite: Size-controlled photocatalyst for high-efficiency water splitting. **2017**, 31, 84-89		83
991	A novel aptameric biosensor based on the self-assembled DNA-WS nanosheet architecture. **2017**, 163, 78-84		21
990	Photovoltaics in Van der Waals Heterostructures. **2017**, 23, 106-116		44
989	Deconvoluting the Photonic and Electronic Response of 2D Materials: The Case of MoS. **2017**, 7, 16938		18
988	Dual-wavelength mode-locked fiber laser based on tungsten disulfide saturable absorber. **2017**, 27, 125802		2
987	Large single-domain growth of monolayer WS2 by rapid-cooling chemical vapor deposition. **2017**, 10, 075201		8
986	Promoting the yield and crystallinity of synthetic WS2 via precursor pretreatment. **2017**,		
985	Optical Diagnostics of WSe2 Monolayers. **2017**, 43, 1112-1114		7
984	High peak power sub-nanosecond pulsed Nd:Lu_015Y_085VO_4 laser with WS_2 saturable absorber and EO modulator. **2017**, 7, 1180		12
983	Giant photoluminescence enhancement in monolayer WS_2 by energy transfer from CsPbBr_3 quantum dots. **2017**, 7, 1327		24
982	Sub-nanosecond KTP-OPO pumped by a hybrid Q-switched laser with WS_2 saturable absorber and AOM. **2017**, 7, 3998		8
981	Large-area highly crystalline WSe atomic layers for ultrafast pulsed lasers. **2017**, 25, 30020-30031		44
980	Recent Advances in Electronic and Optoelectronic Devices Based on Two-Dimensional Transition Metal Dichalcogenides. **2017**, 6, 43		46
979	Nanoscale Surface Photovoltage Mapping of 2D Materials and Heterostructures by Illuminated Kelvin Probe Force Microscopy. **2018**, 122, 13564-13571		23
978	Highly Enhanced Photoresponsivity of a Monolayer WSe Photodetector with Nitrogen-Doped Graphene Quantum Dots. **2018**, 10, 10322-10329		80
977	Improved peroxidase mimetic activity of a mixture of WS nanosheets and silver nanoclusters for chemiluminescent quantification of HO and glucose. **2018**, 185, 190		28
976	Hole Transport in Exfoliated Monolayer MoS. *ACS Nano*, **2018**, 12, 2669-2676	16.7	29
975	Tunable K Valley Populations in Hole-Doped Trilayer WSe_{2}. **2018**, 120, 107703		12

974	Chemical hole doping into large-area transition metal dichalcogenide monolayers using boron-based oxidant. **2018**, 57, 02CB15	6
973	Unraveling the Structural and Electronic Properties at the WSe2Graphene Interface for a Rational Design of van der Waals Heterostructures. **2018**, 1, 1131-1140	12
972	Origins of excitation-wavelength-dependent photoluminescence in WS2 quantum dots. **2018**, 112, 092106	13
971	Location of the valence band maximum in the band structure of anisotropic 1T?ReSe2. **2018**, 97,	6
970	Quantitative optical mapping of two-dimensional materials. **2018**, 8, 6381	21
969	Strong room-temperature emission from defect states in CVD-grown WSe2 nanosheets. **2018**, 11, 3922-3930	15
968	Negative circular polarization emissions from WSe/MoSe commensurate heterobilayers. **2018**, 9, 1356	61
967	Investigating the dynamics of excitons in monolayer WSe before and after organic super acid treatment. **2018**, 10, 9346-9352	7
966	Study on the flammability, thermal stability and diffusivity of polyethylene nanocomposites containing few layered tungsten disulfide (WS) functionalized with metal oxides.. **2018**, 8, 12999-13007	6
965	Colloquium: Excitons in atomically thin transition metal dichalcogenides. **2018**, 90,	766
964	Fabrication of novel all-solid-state Z-scheme heterojunctions of 3DOM-WO3/Pt coated by mono-or few-layered WS2 for efficient photocatalytic decomposition performance in Vis-NIR region. **2018**, 232, 481-491	62
963	A semi-floating gate memory based on van der Waals heterostructures for quasi-non-volatile applications. **2018**, 13, 404-410	227
962	Tunable Resonance Coupling in Single Si Nanoparticle-Monolayer WS Structures. **2018**, 10, 16690-16697	54
961	Layer-controlled and atomically thin WS2 films prepared by sulfurization of atomic-layer-deposited WO3 films. **2018**, 745, 834-839	20
960	Probing the shear modulus of two-dimensional multiplanar nanostructures and heterostructures. **2018**, 10, 5280-5294	40
959	WS /Graphitic Carbon Nitride Heterojunction Nanosheets Decorated with CdS Quantum Dots for Photocatalytic Hydrogen Production. **2018**, 11, 1187-1197	95
958	Anomalous behavior of the excited state of the A exciton in bulk WS2. **2018**, 97,	10
957	Determining the Optimized Interlayer Separation Distance in Vertical Stacked 2D WS :hBN:MoS Heterostructures for Exciton Energy Transfer. **2018**, 14, e1703727	40

956	Direct Observation of Semiconductor-Metal Phase Transition in Bilayer Tungsten Diselenide Induced by Potassium Surface Functionalization. *ACS Nano*, **2018**, 12, 2070-2077	16.7	32
955	Laser Tuning in van der Waals Crystals. *ACS Nano*, **2018**, 12, 2001-2007	16.7	28
954	Structural Changes as a Function of Thickness in [(SnSe)]TiSe Heterostructures. *ACS Nano*, **2018**, 12, 1285-1295	16.7	8
953	Large Excitonic Reflectivity of Monolayer MoSe_{2} Encapsulated in Hexagonal Boron Nitride. **2018**, 120, 037402		117
952	Transient SHG Imaging on Ultrafast Carrier Dynamics of MoS Nanosheets. **2018**, 30, e1705190		19
951	Long radiative lifetimes of excitons in monolayer transition-metal dichalcogenidesMX2(M= Mo, W;X= S, Se). **2018**, 11, 015201		17
950	Spectroscopy and Biosensing with Optically Resonant Dielectric Nanostructures. **2018**, 6, 1701094		97
949	High-yield exfoliation of tungsten disulphide nanosheets by rational mixing of low-boiling-point solvents. **2018**, 5, 015045		11
948	Nanoscale chiral valley-photon interface through optical spin-orbit coupling. **2018**, 359, 443-447		141
947	All-fiber 2 μm mode-locked thulium-doped fiber laser with the graphene oxide film. **2018**, 157, 1292-1299		3
946	The ultra-high NO2 response of ultra-thin WS2 nanosheets synthesized by hydrothermal and calcination processes. **2018**, 259, 789-796		80
945	Wafer-scale synthesis of monolayer WS2 for high-performance flexible photodetectors by enhanced chemical vapor deposition. **2018**, 11, 3371-3384		118
944	Antibacterial applications of graphene oxides: structure-activity relationships, molecular initiating events and biosafety. **2018**, 63, 133-142		67
943	Liquid exfoliation of mechanochemically nanostructured tungsten disulfide to a graphene-like state. **2018**, 29, 085704		8
942	Tunable Photoluminescence in WS2/WO3 Monolayer/Nanoparticles Hybrid Structure. **2018**, 12, 1700371		5
941	Highly mobile charge-transfer excitons in two-dimensional WS/tetracene heterostructures. **2018**, 4, eaao3104		81
940	Modification of WS2 nanosheets with controllable layers via oxygen ion irradiation. **2018**, 439, 240-245		11
939	Role of MoSe2 on nanostructures WO3-CNT performance for photocatalytic hydrogen evolution. **2018**, 44, 6686-6690		100

938	THz photonics in two dimensional materials and metamaterials: properties, devices and prospects. **2018**, 6, 1291-1306	81
937	Direct determination of monolayer MoS2and WSe2exciton binding energies on insulating and metallic substrates. **2018**, 5, 025003	100
936	Growth of Wafer-Scale Standing Layers of WS for Self-Biased High-Speed UV-Visible-NIR Optoelectronic Devices. **2018**, 10, 3964-3974	52
935	Superior peroxidase mimetic activity of tungsten disulfide nanosheets/silver nanoclusters composite: Colorimetric, fluorometric and electrochemical studies. **2018**, 515, 39-49	28
934	Structural defects in a nanomesh of bulk MoS using an anodic aluminum oxide template for photoluminescence efficiency enhancement. **2018**, 8, 6648	11
933	Dielectric function, critical points, and Rydberg exciton series of WSe monolayer. **2018**, 30, 235701	3
932	Humidity Sensing Properties of Coexfoliated Heterogeneous WS2/WSe2 Nanohybrids. **2018**, 17, 582-589	11
931	Light Sources and Photodetectors Enabled by 2D Semiconductors. **2018**, 2, 1800019	24
930	Enhanced Hole Injection Into Single Layer WSe2. **2018**, 6, 309-313	2
929	Momentum-space indirect interlayer excitons in transition-metal dichalcogenide van der Waals heterostructures. **2018**, 14, 801-805	145
928	Size-tunable photoluminescence from WS 2 nanostructures. **2018**, 5, 045047	4
927	Optoelectronic response of a WS 2 tubular p - n junction. **2018**, 5, 035002	26
926	Effect of post-annealing on laser-ablation deposited WS 2 thin films. **2018**, 152, 239-242	7
925	Giant Mechano-Optoelectronic Effect in an Atomically Thin Semiconductor. **2018**, 18, 2351-2357	27
924	Probing the Optical Properties and Strain-Tuning of Ultrathin MoW Te. **2018**, 18, 2485-2491	34
923	Excitonic Properties of Chemically Synthesized 2D Organic-Inorganic Hybrid Perovskite Nanosheets. **2018**, 30, e1704055	74
922	600 fs mode-locked solid-state laser based on few-layer WS2 saturable absorber. **2018**, 28, 045003	2
921	Band shift of 2D transition-metal dichalcogenide alloys: size and composition effects. **2018**, 124, 1	6

920	Chemical synthesis of two-dimensional atomic crystals, heterostructures and superlattices. **2018**, 47, 3129-3151	99
919	High-performance multilayer WSe2 field-effect transistors with carrier type control. **2018**, 11, 722-730	70
918	Investigating the photocurrent generation and optoelectronic responsivity of WS2-TiO2 heterostructure. **2018**, 406, 118-123	14
917	Strategies for improving the lithium-storage performance of 2D nanomaterials. **2018**, 5, 389-416	85
916	Density functional theory calculation of monolayer WTe 2 transition metal dichalcogenides doped with H, Li and Be. **2018**, 535, 167-170	1
915	WS2-Clad Microfiber Saturable Absorber for High-Energy Rectangular Pulse Fiber Laser. **2018**, 24, 1-7	9
914	Magnetic properties of Co doped WSe2 by implantation. **2018**, 731, 25-31	26
913	Novel Nanostructures and Materials for Strong Light Matter Interactions. **2018**, 5, 24-42	247
912	Effect of thickness on the photophysics and charge carrier kinetics of graphitic carbon nitride nanoflakes. **2018**, 29, 543-546	4
911	Charge trapping and coalescence dynamics in few layer MoS 2. **2018**, 5, 015011	18
910	Raman-based technique for measuring thermal conductivity of graphene and related materials. **2018**, 49, 106-120	74
909	Electronic and optical properties of black phosphorus doped with Au, Sn and I atoms. **2018**, 98, 155-164	14
908	Effect of UV Irradiation and Heat Treatment on the Surface Potential Distribution of Monolayer WS2 on SiO2/Si and Au Substrates. **2018**, 5, 1701083	5
907	Applications of Phosphorene and Black Phosphorus in Energy Conversion and Storage Devices. **2018**, 8, 1702093	272
906	Multimodal Kelvin Probe Force Microscopy Investigations of a Photovoltaic WSe/MoS Type-II Interface. **2018**, 10, 1363-1373	42
905	A ferroelectric relaxor polymer-enhanced p-type WSe transistor. **2018**, 10, 1727-1734	24
904	Photoexcitation Carrier Kinetics in WSe2 Nanolayers in the Vicinity of the Band Edge. **2018**, 255, 1700259	2
903	Electrical Tuning of Interlayer Exciton Gases in WSe Bilayers. **2018**, 18, 137-143	67

902	Asymmetric Andreev resonant state with a magnetic exchange field in spin-triplet superconducting monolayer MoS 2. **2018**, 97, 69-74	1
901	Van der Waals heterojunction diode composed of WS flake placed on p-type Si substrate. **2018**, 29, 045201	12
900	Group 6 transition metal dichalcogenide nanomaterials: synthesis, applications and future perspectives. **2018**, 3, 90-204	203
899	Valley-Selective Optical Stark Effect in Monolayer WS2. **2018**, 37-57	5
898	Rational and green synthesis of novel two-dimensional WS/MoS heterojunction via direct exfoliation in ethanol-water targeting advanced visible-light-responsive photocatalytic performance. **2018**, 513, 389-399	52
897	Optical Properties of 2D Semiconductor WS2. **2018**, 6, 1700767	161
896	CMOS-Compatible WS2-Based All-Optical Modulator. **2018**, 5, 342-346	31
895	Coherent Light-Matter Interactions in Monolayer Transition-Metal Dichalcogenides. **2018**,	6
894	Size-tunable band alignment and optoelectronic properties of transition metal dichalcogenide van der Waals heterostructures. **2018**, 51, 015111	7
893	Strong Coupling in Si Nanoparticle Core - 2D WS2 Shell Structure. **2018**, 1092, 012077	
892	Ruthenium oxide modified hierarchically porous boron-doped graphene aerogels as oxygen electrodes for lithium-oxygen batteries.. **2018**, 8, 39829-39836	5
891	Two-dimensional black phosphorus: its fabrication, functionalization and applications. **2018**, 10, 21575-21603	54
890	Synthesis of ultrathin WSe nanosheets and their high-performance catalysis for conversion of amines to imines. **2018**, 10, 20266-20271	22
889	Rational design of a triiodide-intercalated dielectric-switching hybrid for visible-light absorption. **2018**, 6, 12170-12174	10
888	Optimization of Absorption in Patterned 2D Transition Metal Dichalcogenides. **2018**,	
887	Effect of Dipole Corrections and Spin Orbit Coupling on Tungsten Dichalcogenides Monolayer: A in Silico First Principles Study. **2018**,	3
886	Environmental Effects on the Electrical Characteristics of Back-Gated WSe Field-Effect Transistors. **2018**, 8,	38
885	Rational Control of Size and Photoluminescence of WS Quantum Dots for White Light-Emitting Diodes. **2018**, 10, 43824-43830	27

884	Ambipolar charge transport in an organic/inorganic van der Waals p□ heterojunction. **2018**, 6, 12976-12980	11
883	Ultrafast charge transfer in dual graphene-WS 2 van der Waals quadrilayer heterostructures. **2018**, 35, 127801	2
882	Multifunctional two-dimensional semiconductors SnP: universal mechanism of layer-dependent electronic phase transition. **2018**, 30, 475702	9
881	Poly(diallydimethylammonium chloride)-Induced Dispersion and Exfoliation of Tungsten Disulfide for the Sensing of Glutathione and Catalytic Hydrogenation of p-Nitrophenol. **2018**, 1, 6808-6817	9
880	A- and B-exciton photoluminescence intensity ratio as a measure of sample quality for transition metal dichalcogenide monolayers. **2018**, 6, 111106	45
879	WSe2/Reduced Graphene Oxide Nanocomposite with Superfast Sodium Ion Storage Ability as Anode for Sodium Ion Capacitors. **2018**, 165, A3642-A3647	18
878	Energy-Resolved Photoconductivity Mapping in a Monolayer-Bilayer WSe Lateral Heterostructure. **2018**, 18, 7200-7206	19
877	Temperature dependent photoluminescence from WS2 nanostructures. **2018**, 29, 20064-20070	4
876	Strain tuning of excitons in monolayer WSe2. **2018**, 98,	70
875	Direct Observation of Perovskite Photodetector Performance Enhancement by Atomically Thin Interface Engineering. **2018**, 10, 36493-36504	14
874	Spin Structure of K Valleys in Single-Layer WS_{2} on Au(111). **2018**, 121, 136402	18
873	Photoluminescence quantum yields for atomically thin-layered ReS2: Identification of indirect-bandgap semiconductors. **2018**, 113, 121112	20
872	Tungsten-Based Materials for Lithium-Ion Batteries. **2018**, 28, 1707500	80
871	Ultrasmall and Monolayered Tungsten Dichalcogenide Quantum Dots with Giant Spin-Valley Coupling and Purple Luminescence. **2018**, 3, 12188-12194	9
870	Photoluminescence quenching in monolayer transition metal dichalcogenides by Al2O3 encapsulation. **2018**, 113, 133104	10
869	2D layered transition metal dichalcogenides (MoS2): Synthesis, applications and theoretical aspects. **2018**, 13, 242-270	75
868	Two-Dimensional Transition Metal Dichalcogenides and Metal Oxide Hybrids for Gas Sensing. **2018**, 3, 2045-2060	202
867	New Properties of Two-Dimensional Materials: Highly Effective Thermal Catalytic Degradation Activity. **2018**, 3, 10133-10138	1

866	Gate-tunable Thermoelectric Effects in a Graphene/WS2 van der Waals Heterostructure. **2018**, 73, 940-944	4
865	In Situ Optical Tracking of Electroablation in Two-Dimensional Transition-Metal Dichalcogenides. **2018**, 10, 40773-40780	5
864	Electronic excitations in transition metal dichalcogenide monolayers from an LDA+GdW approach. **2018**, 98,	25
863	Progressive Micromodulation of Interlayer Coupling in Stacked WS/WSe Heterobilayers Tailored by a Focused Laser Beam. **2018**, 10, 37396-37406	5
862	A photoelectron study of annealing induced changes to workfunction and majority carrier type in pulsed laser deposited few layer WS2 films. **2018**, 29, 20051-20056	3
861	Spatially and Precisely Controlled Large-Scale and Persistent Optical Gating in a TiO -MoS Heterostructure. **2018**, 10, 38319-38325	0
860	Growth of two-dimensional WS2 thin films by pulsed laser deposition technique. **2018**, 668, 69-73	20
859	Colloidal Synthesis Protocol of Shape- and Dimensionally-Controlled Transition-Metal Chalcogenides and Their Hydrodesulfurization Activities. **2018**, 1, 4408-4412	14
858	Stable and Reversible Triphenylphosphine-Based n-Type Doping Technique for Molybdenum Disulfide (MoS). **2018**, 10, 32765-32772	16
857	Thickness-Dependent Differential Reflectance Spectra of Monolayer and Few-Layer MoS□MoSe□ WS□and WSe□**2018**, 8,	106
856	Band offset and an ultra-fast response UV-VIS photodetector in □nSe/p-Si heterojunction heterostructures.. **2018**, 8, 29555-29561	11
855	Decoration of WS2 as an effective noble-metal free cocatalyst on ZnIn2S4 for enhanced visible light photocatalytic hydrogen evolution. **2018**, 43, 18261-18269	39
854	Valley-Selective Response of Nanostructures Coupled to 2D Transition-Metal Dichalcogenides. **2018**, 8, 1157	18
853	Charge-tuneable biexciton complexes in monolayer WSe. **2018**, 9, 3721	113
852	Growth of WS2 flakes on Ti3C2Tx Mxene Using Vapor Transportation Routine. **2018**, 8, 281	10
851	A feasible approach to fabricate two-dimensional WS2 flakes: From monolayer to multilayer. **2018**, 44, 22108-22112	7
850	Controllable one-step growth of bilayer MoS-WS/WS heterostructures by chemical vapor deposition. **2018**, 29, 455707	13
849	Spatial extent of the excited exciton states in WS2 monolayers from diamagnetic shifts. **2018**, 98,	23

848	Sensitive, reproducible, and stable 3D plasmonic hybrids with bilayer WS as nanospacer for SERS analysis. **2018**, 26, 21626-21641	37
847	Long-lived photoluminescence polarization of localized excitons in liquid exfoliated monolayer enriched WS. **2018**, 29, 335703	1
846	Distinct Optoelectronic Signatures for Charge Transfer and Energy Transfer in Quantum Dot–MoS2 Hybrid Photodetectors Revealed by Photocurrent Imaging Microscopy. **2018**, 28, 1707558	44
845	Exciton Diffusion and Halo Effects in Monolayer Semiconductors. **2018**, 120, 207401	116
844	Electronic structure-dependent magneto-optical Raman effect in atomically thin WS 2. **2018**, 5, 035028	9
843	Photoluminescence inhomogeneity and excitons in CVD-grown monolayer WS2. **2018**, 80, 203-208	9
842	Doping with Nb enhances the photoresponsivity of WSe2 thin sheets. **2018**, 8, 055011	10
841	Spin depolarization dynamics of WSe2bilayer. **2018**, 27, 057202	2
840	A One-Dimensional Organic Lead Chloride Hybrid with Excitation-Dependent Broadband Emissions. **2018**, 3, 1443-1449	92
839	Reverse Saturable Absorption Induced by Phonon-Assisted Anti-Stokes Processes. **2018**, 30, e1801638	39
838	Sunlight-driven water-splitting using two-dimensional carbon based semiconductors. **2018**, 6, 12876-12931	159
837	Dynamic tungsten diselenide nanomaterials: supramolecular assembly-induced structural transition over exfoliated two-dimensional nanosheets. **2018**, 9, 5452-5460	16
836	Enhanced exciton emission behavior and tunable band gap of ternary W(SSe) monolayer: temperature dependent optical evidence and first-principles calculations. **2018**, 10, 11553-11563	9
835	Microcavity enhanced single photon emission from two-dimensional WSe2. **2018**, 112, 191105	18
834	Fluorescent 2D WS Nanosheets Bearing Chemical Affinity Elements for the Recognition of Glycated Hemoglobin. **2018**, 7, e1701496	13
833	Recent Advances on Black Phosphorus for Energy Storage, Catalysis, and Sensor Applications. **2018**, 30, e1800295	166
832	MoS2 Synaptic Transistor With Tunable Weight Profile. **2018**, 65, 3543-3547	8
831	Roadmap on finding chiral valleys: screening 2D materials for valleytronics. **2018**, 2, 032001	34

830	Strongly enhanced exciton-phonon coupling in two-dimensional WSe2. **2018**, 97,	21
829	Luminescence in 2-dimensional WS2 nanosheets. **2018**,	2
828	Enhanced Performance of a Monolayer MoS/WSe Heterojunction as a Photoelectrochemical Cathode. **2018**, 10, 60	42
827	Evidence for line width and carrier screening effects on excitonic valley relaxation in 2D semiconductors. **2018**, 9, 2598	33
826	Exploration of exciton behavior in atomically thin WS2 layers by ionic gating. **2018**, 113, 013104	2
825	2D transition metal dichalcogenides with glucan multivalency for antibody-free pathogen recognition. **2018**, 9, 2549	24
824	Deep-ultraviolet Raman scattering spectroscopy of monolayer WS. **2018**, 8, 11398	9
823	Two-dimensional light-emitting materials: preparation, properties and applications. **2018**, 47, 6128-6174	118
822	Synthesis of Ultrathin Metallic MTe (M = V, Nb, Ta) Single-Crystalline Nanoplates. **2018**, 30, e1801043	111
821	The Electronic Structures of SnS, SnS2, and Sn2S3 for Use in PV. **2018**, 175-213	1
820	Fabrication and photoresponse of n-(hbox {WS}_{2}/)p-V(_{0.25})W(_{0.75})Se(_{2}) van der Waals heterojunction. **2018**, 91, 1	7
819	Dynamics and Spin-Valley Locking Effects in Monolayer Transition Metal Dichalcogenides. **2018**, 18, 5709-5715	32
818	Photo-induced excitonic structure renormalization and broadband absorption in monolayer tungsten disulphide. **2018**, 26, 859-869	19
817	Nanophotonics with 2D transition metal dichalcogenides [Invited]. **2018**, 26, 15972-15994	91
816	Study on the optical properties of ReS2 flakes by unpolarized and polarized optical contrast measurements. **2018**, 8, 1107	3
815	2D Group IVB Transition Metal Dichalcogenides. **2018**, 28, 1803305	63
814	Two-dimensional transistors beyond graphene and TMDCs. **2018**, 47, 6388-6409	193
813	Mesoporous reduced graphene oxide/WSe2 composite particles for efficient sodium-ion batteries and hydrogen evolution reactions. **2018**, 459, 309-317	31

812	Interlayer coupling in two-dimensional semiconductor materials. **2018**, 33, 093001	23
811	Nanoscale self-assembly of thermoelectric materials: a review of chemistry-based approaches. **2018**, 29, 432001	36
810	Co6Se8(PEt3)6 superatoms as tunable chemical dopants for two-dimensional semiconductors. **2018**, 4,	15
809	Exploring electric field assisted van der Waals weakening of stratified crystals. **2018**, 12, 359-365	2
808	Effect of Phonons on Valley Depolarization in Monolayer WSe2. **2018**, 14, 766-773	9
807	The Spatially Oriented Charge Flow and Photocatalysis Mechanism on Internal van der Waals Heterostructures Enhanced g-C3N4. **2018**, 8, 8376-8385	174
806	Competition between Free Carriers and Excitons Mediated by Defects Observed in Layered WSe2 Crystal with Time-Resolved Terahertz Spectroscopy. **2018**, 6, 1800290	25
805	The Electronic Properties of O-Doped Pure and Sulfur Vacancy-Defect Monolayer WS□A First-Principles Study. **2018**, 11,	17
804	Synthesis of Large-Scale Single-Crystalline Monolayer WS□Using a Semi-Sealed Method. **2018**, 8,	21
803	A vertical WSe-MoSe p-n heterostructure with tunable gate rectification.. **2018**, 8, 25514-25518	12
802	Synthesis, properties, and optoelectronic applications of two-dimensional MoS and MoS-based heterostructures. **2018**, 47, 6101-6127	189
801	Nano-optical imaging of monolayer MoSe2-WSe2 lateral heterostructure with subwavelength domains. **2018**, 36, 05G502	14
800	The role of momentum-dark excitons in the elementary optical response of bilayer WSe. **2018**, 9, 2586	41
799	Efficient Photocarrier Transfer and Effective Photoluminescence Enhancement in Type I Monolayer MoTe2/WSe2 Heterostructure. **2018**, 28, 1801021	45
798	Understanding Interlayer Coupling in TMD-hBN Heterostructure by Raman Spectroscopy. **2018**, 65, 4059-4067	18
797	Surface enhanced Raman effect on CVD growth of WS2 film. **2018**, 707, 71-74	9
796	Hydrothermal synthesis of rGO□bBi2Se4 composite and investigation of its structural, chemical and field emission properties. **2018**, 29, 10494-10503	1
795	Engineering graphene and TMDs based van der Waals heterostructures for photovoltaic and photoelectrochemical solar energy conversion. **2018**, 47, 4981-5037	226

794	Technique and model for modifying the saturable absorption (SA) properties of 2D nanofilms by considering interband exciton recombination. **2018**, 6, 7501-7511		27
793	Atomic-level insights through spectroscopic and transport measurements into the large-area synthesis of MoS2 thin films. **2018**, 8, 1328-1334		3
792	Photoluminescence evolution in WS2 via optical irradiation and substrate interactions. **2018**, 85, 8-13		3
791	Synthesis and characterization of tungsten disulfide thin films by spray pyrolysis technique for n-WS2/p-Si junction diode application. **2018**, 29, 16815-16823		3
790	Enhancement of Exciton-Phonon Scattering from Monolayer to Bilayer WS. **2018**, 18, 6135-6143		27
789	Nature of Excitons in Bidimensional WSe by Hybrid Density Functional Theory Calculations. **2018**, 8,		5
788	Ultrafast charge transfer in graphene-WS2 Van der Waals heterostructures. **2018**, 174, 62-67		5
787	Exciton emissions in quasi one-dimensional layered KP. **2018**, 10, 16479-16484		2
786	Extrinsic p-type doping of few layered WS2 films with niobium by pulsed laser deposition. **2018**, 113, 062106		12
785	Sub-Monolayer Accuracy in Determining the Number of Atoms per Unit Area in Ultrathin Films Using X-ray Fluorescence. **2018**, 30, 6209-6216		25
784	Electroluminescent Devices Based on 2D Semiconducting Transition Metal Dichalcogenides. **2018**, 30, e1802687		53
783	Moir Phonons in Twisted Bilayer MoS. *ACS Nano*, **2018**, 12, 8770-8780	16.7	85
782	Excitons in few-layer hexagonal boron nitride: Davydov splitting and surface localization. **2018**, 5, 045017		40
781	The Auger process in multilayer WSe crystals. **2018**, 10, 17585-17592		16
780	Ultrafast Spontaneous Emission from a Slot-Antenna Coupled WSe2 Monolayer. **2018**, 5, 2701-2705		12
779	Pressure-Dependent Strong Photoluminescence of Excitons Bound to Defects in WS2 Quantum Dots. **2018**, 5, 1800305		3
778	Monolayer Transition Metal Dichalcogenides as Light Sources. **2018**, 30, e1707627		46
777	Terahertz photoconductivity and photocarrier dynamics in few-layer hBN/WS2 van der Waals heterostructure laminates. **2018**, 33, 084001		4

776	Interband Transitions in Monolayer and Few-Layer WSe Probed Using Photoexcited Charge Collection Spectroscopy. **2018**, 10, 20213-20218		7
775	Incorporation of oxygen atoms as a mechanism for photoluminescence enhancement of chemically treated MoS. **2018**, 20, 16918-16923		12
774	THz-induced thermoelectric and thermal transport in atomic monolayers. **2018**, 473-509		
773	Growth of Centimeter-Scale Monolayer and Few-Layer WSe2 Thin Films on SiO2/Si Substrate via Pulsed Laser Deposition. **2018**, 5, 1800524		20
772	Thick Layered Semiconductor Devices with Water Top-Gates: High On-Off Ratio Field-Effect Transistors and Aqueous Sensors. **2018**, 10, 23198-23207		13
771	Enhancement of direct and indirect exciton emissions in few-layer WSe2 at high temperatures. **2018**, 5, 066209		3
770	Luminescence in 2D Materials and van der Waals Heterostructures. **2018**, 6, 1701296		45
769	Printing of Graphene and Related 2D Materials. **2019**,		18
768	Structures, Properties and Applications of 2D Materials. **2019**, 19-51		2
767	Atomic-registry-dependent electronic structures of sulfur vacancies in ReS2 studied by scanning tunneling microscopy/spectroscopy. **2019**, 19, 224-229		3
766	Ab Initio Calculations on the Electronic Structure and Photocatalytic Properties of Two-Dimensional WS2 (0001) Nanolayers of Varying Thickness. **2019**, 13, 1800253		15
765	Unraveling biexciton and excitonic excited states from defect bound states in monolayer MoS2. **2019**, 463, 52-57		34
764	Multiple-peak resonance of optical second harmonic generation arising from band nesting in monolayer transition metal dichalcogenides TX2 on SiO2/Si(001) substrates (T=Mo,W;X=S,Se). **2019**, 100,		9
763	Third-order optical nonlinearity of tungsten disulfide atomic layer with resonant excitation. **2019**, 96, 109271		3
762	Recent Progress in CVD Growth of 2D Transition Metal Dichalcogenides and Related Heterostructures. **2019**, 31, e1901694		131
761	Controlled Growth of Large-Area Bilayer Tungsten Diselenides with Lateral P-N Junctions. *ACS Nano*, **2019**, 13, 10490-10498	16.7	24
760	Retracted Article: Physics of excitons and their transport in two dimensional transition metal dichalcogenide semiconductors.. **2019**, 9, 25439-25461		16
759	Chemical exfoliation efficacy of semiconducting WS and its use in an additively manufactured heterostructure graphene-WS-graphene photodiode.. **2019**, 9, 25805-25816		16

758	Thickness-Dependent Optical Properties and In-Plane Anisotropic Raman Response of the 2D In2S3. **2019**, 7, 1901085	25
757	Two-Dimensional Transition Metal Dichalcogenides: An Overview. **2019**, 1-27	2
756	Properties of Transition Metal Dichalcogenides. **2019**, 69-106	1
755	Atomically Thin WSe2/CdSe Mixed-Dimensional van der Waals Heterostructures with Enhanced Optoelectrical Properties. **2019**, 6, 2067-2072	6
754	Nanocomposite Synthesis of Nanodiamond and Molybdenum Disulfide. **2019**, 9,	7
753	Defect tolerant and dimension dependent ferromagnetism in MnSe. **2019**, 21, 16718-16725	13
752	Formation of large area WS nanosheets using an oxygen-plasma assisted exfoliation suitable for optical devices. **2019**, 30, 425204	12
751	Oxidation of Monolayer WS in Ambient Is a Photoinduced Process. **2019**, 19, 5205-5215	44
750	Controlled one step thinning and doping of two-dimensional transition metal dichalcogenides. **2019**, 62, 1837-1845	9
749	Synthesis and Properties of (BiSe)0.97MoSe2: A Heterostructure Containing Both 2H-MoSe2 and 1T-MoSe2. **2019**, 31, 5824-5831	11
748	Momentum-forbidden dark excitons in hBN-encapsulated monolayer MoS2. **2019**, 3,	17
747	Mask-free patterning and selective CVD-growth of 2D-TMDCs semiconductors. **2019**, 34, 085010	1
746	Recent Advances in Ambipolar Transistors for Functional Applications. **2019**, 29, 1902105	86
745	Mechanical Exfoliation Assisted by Molecular Tweezers for Production of Sulfur-Based Semiconducting Two-Dimensional Materials. **2019**, 58, 14170-14179	1
744	Synthesis, Characterization, and Properties of Graphene Analogs of 2D Material. **2019**, 91-143	7
743	Material-Selective Doping of 2D TMDC through AlO Encapsulation. **2019**, 11, 42697-42707	26
742	Recent Progress on 2D Noble-Transition-Metal Dichalcogenides. **2019**, 29, 1904932	98
741	Three-Dimensional Rock Microstructure Modeling Using Two-Dimensional SEM Micrographs. **2019**, 25, 2462-2463	

740	Effect of strain on exciton dynamics in monolayer WS2. **2019**, 28, 087201		2
739	Surface Wetting at Macro and Nanoscale. **2019**, 17-39		
738	Total absorption of WO3/WS2 stacked thin films in middle infrared light. **2019**, 103, 103098		0
737	High-Performance WSe Photodetector Based on a Laser-Induced p-n Junction. **2019**, 11, 43330-43336		33
736	Band Structure Modifications in Beyond Graphene Materials. **2019**, 341-372		
735	Metal Nanoclusters Modify the Band Gap and Maintain the Ultrathin Nature of Semiconducting Two-Dimensional Materials. **2019**, 123, 29856-29865		2
734	Exciton routing in the heterostructure of a transition metal dichalcogenide monolayer on a paraelectric substrate. **2019**, 100,		7
733	Three-Dimensional Resonant Exciton in Monolayer Tungsten Diselenide Actuated by Spin-Orbit Coupling. *ACS Nano*, **2019**, 13, 14529-14539	16.7	5
732	NHC-Catalyzed Chemoselective Reactions of Enals and Aminobenzaldehydes for Access to Chiral Dihydroquinolines. **2019**, 58, 18410-18413		20
731	Toward Coupling Color Centers in Single Crystal Diamond to Two-Dimensional Materials. **2019**,		
730	LncRNA LINC01116 Promotes Cancer Cell Proliferation, Migration And Invasion In Gastric Cancer By Positively Interacting With lncRNA CASC11. **2019**, 12, 8117-8123		13
729	Oxidation of WS2 and WSe2 monolayers by ultraviolet-ozone treatment. **2019**, 52, 505105		11
728	1.34 μm Q-Switched Nd:YVO Laser with a Reflective WS Saturable Absorber. **2019**, 9,		6
727	Temperature-dependent phonon dynamics of supported and suspended monolayer tungsten diselenide. **2019**, 9, 085316		14
726	Electronic structure properties of transition metal dichalcogenide nanotubes: a DFT benchmark. **2019**, 25, 290		5
725	Microphotoluminescence (PL) measurements of bidimensional materials in a custom-made setup. **2019**, 1226, 012008		
724	Electronic and optical properties of the ZrS2/HfSe2 van der Waals heterobilayer with native type-II band alignment. **2019**, 734, 136703		3
723	Position and Frequency Control of Strain-Induced Quantum Emitters in WSe Monolayers. **2019**, 19, 7534-7539		20

722	A non-volatile AND gate based on Al2O3/HfO2/Al2O3 charge-trap stack for in-situ storage applications. **2019**, 64, 1518-1524		8
721	Layer-dependent dielectric and optical properties of centimeter-scale 2D WSe: evolution from a single layer to few layers. **2019**, 11, 22762-22771		24
720	A Bilayer 2D-WS/Organic-Based Heterojunction for High-Performance Photodetectors. **2019**, 9,		9
719	Demonstration of the key substrate-dependent charge transfer mechanisms between monolayer MoS2 and molecular dopants. **2019**, 2,		21
718	Graphene‐like tungsten sulphide nanosheets prepared by hydrothermal intercalation/exfoliation route and its application for photodetector. **2019**, 27, 928-933		1
717	Enhancing Nonradiative Energy Transfer between Nitridized Carbon Quantum Dots and Monolayer WS2. **2019**, 123, 25456-25463		1
716	Photovoltaic activity of WSe2/Si hetero junction. **2019**, 120, 110602		23
715	Multifield-resolved phonon spectrometrics: structured crystals and liquids. **2019**, 55, 20-66		14
714	First Principle Study of Temperature-Dependent Magnetoresistance and Spin Filtration Effect in WS Nanoribbon. **2019**, 11, 39248-39253		12
713	Tunable Chemical Coupling in Two-Dimensional van der Waals Electrostatic Heterostructures. *ACS Nano*, **2019**, 13, 11214-11223	16.7	7
712	Single silicon nanostripe gated suspended monolayer and bilayer WS2 to realize abnormal electro-optical modulation. **2019**, 6, 334-342		12
711	CVD growth of monolayer WS2 through controlled seed formation and vapor density. **2019**, 93, 158-163		15
710	First-Principles Evaluation of the Morphology of WS Nanotubes for Application as Visible-Light-Driven Water-Splitting Photocatalysts. **2019**, 4, 1434-1442		16
709	Effects of precursor pre-treatment on the vapor deposition of WS2 monolayers. **2019**, 1, 953-960		7
708	Efficient hole transfer from monolayer WS to ultrathin amorphous black phosphorus. **2019**, 4, 236-242		19
707	Photoluminescence and Raman Spectra Oscillations Induced by Laser Interference in Annealing-Created Monolayer WS2 Bubbles. **2019**, 7, 1801373		14
706	Atypical Defect-Mediated Photoluminescence and Resonance Raman Spectroscopy of Monolayer WS2. **2019**, 123, 3900-3907		24
705	Resonant Raman Spectroscopy of Two Dimensional Materials Beyond Graphene. **2019**, 185-202		1

704	Integrating Water-Soluble Polythiophene with Transition-Metal Dichalcogenides for Managing Photoinduced Processes. **2019**, 11, 5947-5956		8
703	Thermal Redistribution of Exciton Population in Monolayer Transition Metal Dichalcogenides Probed with Plasmon□Exciton Coupling Spectroscopy. **2019**, 6, 411-421		25
702	Unraveling the Defect Emission and Exciton□Lattice Interaction in Bilayer WS2. **2019**, 123, 4433-4440		7
701	Resonance coupling in hybrid gold nanohole□Monolayer WS2 nanostructures. **2019**, 15, 145-152		18
700	Ultrafast Energy Transfer of Both Bright and Dark Excitons in 2D van der Waals Heterostructures Beyond Dipolar Coupling. *ACS Nano*, **2019**, 13, 2341-2348	16.7	28
699	Transition metal dichalcogenides bilayer single crystals by reverse-flow chemical vapor epitaxy. **2019**, 10, 598		69
698	Transition-metal dichalcogenides/Mg(OH) van der Waals heterostructures as promising water-splitting photocatalysts: a first-principles study. **2019**, 21, 1791-1796		84
697	Carrier dynamics and spin-valley-layer effects in bilayer transition metal dichalcogenides. **2019**, 214, 175-188		2
696	Unveiling exceptionally robust valley contrast in AA- and AB-stacked bilayer WS. **2019**, 4, 396-403		19
695	Effect of layer and stacking sequence in simultaneously grown 2H and 3R WS atomic layers. **2019**, 30, 345203		7
694	Transport-map analysis of ionic liquid-gated ambipolar WSe2 field-effect transistors. **2019**, 34, 075022		1
693	Precise Layer Control of MoTe by Ozone Treatment. **2019**, 9,		7
692	Small footprint transistor architecture for photoswitching logic and in situ memory. **2019**, 14, 662-667		102
691	Dielectric screening effect on exciton resonance energy in monolayer WS2 on SiO2/Si substrate. **2019**, 1220, 012035		1
690	Highly in-plane anisotropic 2D semiconductors □AuSe with multiple superior properties: a first-principles investigation. **2019**, 31, 395501		4
689	Trion-Induced Distinct Transient Behavior and Stokes Shift in WS Monolayers. **2019**, 10, 3763-3772		11
688	Giant Enhancement of Photoluminescence Emission in WS-Two-Dimensional Perovskite Heterostructures. **2019**, 19, 4852-4860		41
687	Ultrafast dynamics of bright and dark positive trions for valley polarization in monolayer WSe2. **2019**, 99,		4

686	2D Nanomaterials for Photocatalytic Hydrogen Production. **2019**, 4, 1687-1709	212
685	Cross-dimensional electron-phonon coupling in van der Waals heterostructures. **2019**, 10, 2419	35
684	A strain tunable single-layer MoS2 photodetector. **2019**, 27, 8-13	91
683	Direct Mapping of the Gate Response of a Multilayer WSe/MoS Heterostructure with Locally Different Degrees of Charge Depletion. **2019**, 10, 4010-4016	5
682	van der Waals epitaxial growth of ultrathin metallic NiSe nanosheets on WSe2 as high performance contacts for WSe2 transistors. **2019**, 12, 1683-1689	20
681	WS2 Quantum Dot Graphene Nanocomposite Film for UV Photodetection. **2019**, 2, 3934-3942	26
680	Defect-Mediated Charge-Carrier Trapping and Nonradiative Recombination in WSe Monolayers. **2019**, 141, 10451-10461	48
679	Epitaxial growth of ReS2 nanobelts by chemical vapor deposition. **2019**, 6, 0850e4	1
678	The Role of Oxygen Atoms on Excitons at the Edges of Monolayer WS. **2019**, 19, 4641-4650	28
677	Ultrafast Excitonic Behavior in Two-Dimensional Metal–Semiconductor Heterostructure. **2019**, 6, 1379-1386	17
676	ZnO/WSe2 vdW heterostructure for photocatalytic water splitting. **2019**, 7, 7104-7113	57
675	Double resonance Raman scattering process in 2D materials. **2019**, 34, 1976-1992	14
674	N2 reduction using single transition-metal atom supported on defective WS2 monolayer as promising catalysts: A DFT study. **2019**, 489, 684-692	55
673	Intercalation of Layered Materials from Bulk to 2D. **2019**, 31, e1808213	64
672	Encapsulation of a Monolayer WSe Phototransistor with Hydrothermally Grown ZnO Nanorods. **2019**, 11, 20257-20264	8
671	Machine learning a bond order potential model to study thermal transport in WSe nanostructures. **2019**, 11, 10381-10392	11
670	Quantifying Quasi-Fermi Level Splitting and Mapping its Heterogeneity in Atomically Thin Transition Metal Dichalcogenides. **2019**, 31, e1900522	20
669	Functionalization of 2D Materials with Photosensitive Molecules: From Light-Responsive Hybrid Systems to Multifunctional Devices. **2019**, 7, 1900286	32

668	Charge-Transfer-Induced Photoluminescence Properties of WSe Monolayer-Bilayer Homojunction. **2019**, 11, 20566-20573		11
667	Optical and electronic properties of dichalcogenides WX2 (X=S, Se, and Te) monolayers under biaxial strain. **2019**, 568, 18-24		5
666	Modification of Optical Properties in Monolayer WS2 on Dielectric Substrates by Coulomb Engineering. **2019**, 123, 14097-14102		12
665	Paper-Based Flexible Photodetector Functionalized by WSe2 Nanodots. **2019**, 2, 2758-2766		61
664	A Double Support Layer for Facile Clean Transfer of Two-Dimensional Materials for High-Performance Electronic and Optoelectronic Devices. *ACS Nano*, **2019**, 13, 5513-5522	16.7	18
663	Theoretical investigation of the anchoring and activity of a gold cluster on two-dimensional substrates. **2019**, 6, 075069		1
662	Effects of Acetone Vapor on the Exciton Band Photoluminescence Emission from Single- and Few-Layer WS on Template-Stripped Gold. **2019**, 19,		3
661	Controllable growth of large-area atomically thin ReS2 films and their thickness-dependent optoelectronic properties. **2019**, 114, 153102		14
660	Broadband photodetection in wide temperature range: Layer-by-layer exfoliation monitoring of WS2 bulk using microscopy and spectroscopy. **2019**, 125, 154303		7
659	Two-dimensional WS2 nanosheet based passively Q-switched Nd:GdLaNbO4 laser. **2019**, 115, 104-108		14
658	Ultrafast carrier dynamics in two-dimensional transition metal dichalcogenides. **2019**, 7, 4304-4319		32
657	Electrical control of spatial resolution in mixed-dimensional heterostructured photodetectors. **2019**, 116, 6586-6593		14
656	Chemical vapor deposition of monolayer-thin WS crystals from the WF and HS precursors at low deposition temperature. **2019**, 150, 104703		7
655	Modifying the Band Gap of Semiconducting Two-Dimensional Materials by Polymer Assembly into Different Structures. **2019**, 35, 4956-4965		3
654	Engineering fluorescence intensity and electron concentration of monolayer MoS by forming heterostructures with semiconductor dots. **2019**, 11, 6544-6551		10
653	Tight-binding modeling of excitonic response in van der Waals stacked 2D semiconductors. **2019**, 4, 969-974		9
652	Control of the metal/WS contact properties using 2-dimensional buffer layers. **2019**, 11, 5548-5556		10
651	Sonochemical exfoliation and photodetection properties of MoS2 Nanosheets. **2019**, 98, 13-18		20

650	WS Nanotubes, 2D Nanomeshes, and 2D In-Plane Films through One Single Chemical Vapor Deposition Route. *ACS Nano*, **2019**, 13, 3896-3909	16.7	23
649	Interlayer hybridization and moir superlattice minibands for electrons and excitons in heterobilayers of transition-metal dichalcogenides. **2019**, 99,		59
648	Structural and optical studies of hydrothermally synthesised WS2-WO3 nanorods. **2019**,		
647	2D Atomic Crystals: A Promising Solution for Next-Generation Data Storage. **2019**, 5, 1800944		20
646	Colloidally synthesized defect-rich (hbox {MoSe}_{2}) nanosheets for superior catalytic activity. **2019**, 42, 1		8
645	Low Contact Barrier in 2H/1T' MoTe In-Plane Heterostructure Synthesized by Chemical Vapor Deposition. **2019**, 11, 12777-12785		38
644	Enhanced excitation and emission from 2D transition metal dichalcogenides with all-dielectric nanoantennas. **2019**, 30, 254004		11
643	Strong Single- and Two-Photon Luminescence Enhancement by Nonradiative Energy Transfer across Layered Heterostructure. *ACS Nano*, **2019**, 13, 4795-4803	16.7	13
642	Layer degree of freedom for excitons in transition metal dichalcogenides. **2019**, 99,		13
641	Structural, electronic, and optical properties of Te tubular nanostructures: A first-principles study. **2019**, 7, 031105		6
640	Facile and Controllable Synthesis of Large-Area Monolayer WS Flakes Based on WO Precursor Drop-Casted Substrates by Chemical Vapor Deposition. **2019**, 9,		12
639	A pulsed Nd:GdYNbO4 laser based on transition metal dichalcogenides WS2 and MoS2. **2019**, 117, 1-5		8
638	Fabrication of Stacked MoS Bilayer with Weak Interlayer Coupling by Reduced Graphene Oxide Spacer. **2019**, 9, 5900		2
637	Dielectric impact on exciton binding energy and quasiparticle bandgap in monolayer WS 2 and WSe 2. **2019**, 6, 025028		25
636	Nondestructive hole doping enabled photocurrent enhancement of layered tungsten diselenide. **2019**, 6, 024002		6
635	Transient photoconductivity and free carrier dynamics in a monolayer WS probed by time resolved Terahertz spectroscopy. **2019**, 30, 265706		13
634	Ultrathin transition-metal dichalcogenide nanosheet-based colorimetric sensor for sensitive and label-free detection of DNA. **2019**, 290, 565-572		23
633	Atomic layer deposition of ZnO on MoS2 and WSe2. **2019**, 480, 43-51		16

632	Charge transfer in graphene/WS2 enhancing the saturable absorption in mixed heterostructure films. **2019**, 479, 1161-1168	25
631	Crystalline tungsten sulfide thin films by atomic layer deposition and mild annealing. **2019**, 37, 020921	10
630	Evidence of direct Z-scheme g-C3N4/WS2 nanocomposite under interfacial coupling: First-principles study. **2019**, 788, 1-9	37
629	Recent advancement in the performance of solar cells by incorporating transition metal dichalcogenides as counter electrode and photoabsorber. **2019**, 43, 3058-3079	16
628	Dynamic radiative tailoring based on mid-refractive dielectric nanoantennas. **2019**, 4, 712-719	8
627	Controlled synthesis and photostability of blue emitting Cs3Bi2Br9 perovskite nanocrystals by employing weak polar solvents at room temperature. **2019**, 7, 3688-3695	33
626	Spin Hall effect for polaritons in a transition metal dichalcogenide embedded in a microcavity. **2019**, 99,	1
625	A Self-Limited Atomic Layer Deposition of WS2 Based on the Chemisorption and Reduction of Bis(t-butylimino)bis(dimethylamino) Complexes. **2019**, 31, 1881-1890	14
624	Slow Cooling of High-Energy C Excitons Is Limited by Intervalley-Transfer in Monolayer MoS2. **2019**, 13, 1800270	13
623	Spatially Precise Transfer of Patterned Monolayer WS2 and MoS2 with Features Larger than 104 μm2 Directly from Multilayer Sources. **2019**, 1, 407-416	13
622	Photoelectrochemical application of WS2 nanosheets prepared via a low-temperature CVD method. **2019**, 30, 6342-6349	10
621	Isotope Effect in Bilayer WSe. **2019**, 19, 1527-1533	12
620	Strained 2D Layered Materials and Heterojunctions. **2019**, 531, 1800465	14
619	Rapid Prediction of Anisotropic Lattice Thermal Conductivity: Application to Layered Materials. **2019**, 31, 2048-2057	13
618	Observation of Intralayer and Interlayer Excitons in Monolayered WSe2/WS2 Heterostructure. **2019**, 53, 2140-2146	5
617	Growth of Large-Area, Uniform, Few-Layer Tungsten Disulphide by Thermal Decomposition of Ammonium Tetrathiotungstate. **2019**,	
616	Determination of optimum optoelectronic properties in vertically stacked MoS/h-BN/WSe van der Waals heterostructures. **2019**, 21, 23179-23186	12
615	Low-temperature annihilation rate for quasilocalized excitons in monolayer MoS2. **2019**, 100,	0

614	Chemical bonds in intercalation compounds CuTiCh (Ch = S, Te). **2019**, 151, 234701		1
613	. **2019**, 7, 170185-170191		
612	Tailoring light-matter interaction in WS2□gold nanoparticles hybrid systems. **2019**, 100,		7
611	Length- and Thickness-Dependent Optical Response of Liquid-Exfoliated Transition Metal Dichalcogenides. **2019**, 31, 10049-10062		27
610	Quantum Confinement-Tunable Ultrafast Charge Transfer in a PbS Quantum Dots/WSe 0D-2D Hybrid Structure: Transition from the Weak to Strong Coupling Regime. **2019**, 10, 7665-7671		15
609	Band-Structure Spin-Filtering in Vertical Spin Valves Based on Chemical Vapor Deposited WS. *ACS Nano*, **2019**, 13, 14468-14476	16.7	28
608	Gas-Source CVD Growth of Atomic Layered WS from WF and HS Precursors with High Grain Size Uniformity. **2019**, 9, 17678		21
607	High performance room temperature p-type injection in few-layered tungsten diselenide films from cobalt and palladium contacts. **2019**,		1
606	Methane-Mediated Vapor Transport Growth of Monolayer WSe Crystals. **2019**, 9,		1
605	Fluorometric determination of the activity of alkaline phosphatase based on a system composed of WS quantum dots and MnO nanosheets. **2019**, 186, 839		2
604	A new metal transfer process for van der Waals contacts to vertical Schottky-junction transition metal dichalcogenide photovoltaics. **2019**, 5, eaax6061		40
603	Physical vapor deposition of large-scale PbSe films and its applications in pulsed fiber lasers. **2019**, 9, 2367-2375		8
602	First principles evaluation on photocatalytic suitability of 2H structured and [0001] oriented WS2 nanosheets and nanotubes. **2019**, 503, 012002		2
601	Ultrathin All-2D Lateral Graphene/GaS/Graphene UV Photodetectors by Direct CVD Growth. **2019**, 11, 48172-48178		19
600	Vertical van der Waals Heterostructure of Single Layer InSe and SiGe. **2019**, 123, 31232-31237		11
599	Selective oxidation of the surface layer of bilayer WSe2 by laser heating. **2019**, 58, 120903		5
598	In situ scattering of single gold nanorod coupling with monolayer transition metal dichalcogenides. **2019**, 11, 20734-20740		4
597	CVD controlled growth of large-scale WS monolayers.. **2019**, 9, 29628-29635		8

596	Layer dependence of the photoelectrochemical performance of a WSe photocathode characterized using microscale measurements.. **2019**, 9, 30925-30931		2
595	Tuning the orientation of few-layer MoS films using one-zone sulfurization.. **2019**, 9, 29645-29651		17
594	Biofunctional few-layer metal dichalcogenides and related heterostructures produced by direct aqueous exfoliation using phospholipids.. **2019**, 9, 37061-37066		1
593	Direct Visualization of Grain Boundaries in 2D Monolayer WS2 via Induced Growth of CdS Nanoparticle Chains. **2019**, 3, 1800245		17
592	Enhanced photoresponsivity of the GOQDs decorated WS2 photodetector. **2019**, 6, 045902		8
591	Temporally Resolving Synchronous Degenerate and Nondegenerate Two-Photon Absorption in 2D Semiconducting Monolayers. **2019**, 13, 1800225		13
590	In Situ Functionalized Fluorescent WS2-QDs as Sensitive and Selective Probe for Fe3+ and a Detailed Study of Its Fluorescence Quenching. **2019**, 2, 566-576		25
589	Adsorption of Selected Pharmaceutical and Personal Care Products with Molybdenum Disulfide and Tungsten Disulfide Nanomaterials. **2019**, 36, 305-315		5
588	2 Ðm Passively Q-switched all-solid-state laser based on WSe2 saturable absorber. **2019**, 113, 72-76		14
587	Excitonic effects on layer- and strain-dependent optoelectronic properties of PbI2. **2019**, 470, 143-149		6
586	Suppressing Ambipolar Characteristics of WSe2 Field Effect Transistors Using Graphene Oxide. **2019**, 5, 1800608		6
585	WS2 quantum dots as a sensitive fluorescence probe for the detection of glucose. **2019**, 207, 491-496		17
584	Symmetry-Controlled Electron-Phonon Interactions in van der Waals Heterostructures. *ACS Nano*, **2019**, 13, 552-559	16.7	10
583	Tunable and enhanced light emission in hybrid WS-optical-fiber-nanowire structures. **2019**, 8, 8		29
582	Raman Spectroscopy of van der Waals Heterostructures. **2019**, 81-98		
581	Raman Spectroscopy Study of Two-Dimensional Materials Under Strain. **2019**, 111-129		1
580	van der Waals Epitaxy of High-Mobility Polymorphic Structure of MoTe Nanoplates/MoTe Atomic Layers with Low Schottky Barrier Height. *ACS Nano*, **2019**, 13, 642-648	16.7	16
579	Polarized THz Emission from In-Plane Dipoles in Monolayer Tungsten Disulfide by Linear and Circular Optical Rectification. **2019**, 7, 1801314		17

578	Resonance Coupling in Heterostructures Composed of Silicon Nanosphere and Monolayer WS: A Magnetic-Dipole-Mediated Energy Transfer Process. *ACS Nano*, **2019**, 13, 1739-1750	16.7	47
577	Single layer MoS2 nanoribbon field effect transistor. **2019**, 114, 013508		19
576	Probing interlayer excitons in a vertical van der Waals p-n junction using a scanning probe microscopy technique. **2019**, 31, 114001		3
575	Hierarchically assembled two-dimensional goldboron nitride-tungsten disulphide nanohybrid interface system for electrobiocatalytic applications. **2019**, 226, 129-140		8
574	Effect of vacancies on spin transport characteristics of zigzag WS2 nanoribbon. **2019**, 6, 025013		4
573	Uncovering the Conduction Behavior of van der Waals Ambipolar Semiconductors. **2019**, 31, e1805317		14
572	Facile access to shape-controlled growth of WS 2 monolayer via environment-friendly method. **2019**, 6, 015007		10
571	Band Gap Width Control by Cu Intercalation Into ZrSe2. **2019**, 123, 410-416		3
570	Removing Defects in WSe2 via Surface Oxidation and Etching to Improve Solar Conversion Performance. **2019**, 4, 102-109		15
569	Orbital, spin and valley contributions to Zeeman splitting of excitonic resonances in MoSe 2 , WSe 2 and WS 2 Monolayers. **2019**, 6, 015001		46
568	Spatially selective reversible charge carrier density tuning in WS 2 monolayers via photochlorination. **2019**, 6, 015003		7
567	Tunneling field-effect junctions with WS2 barrier. **2019**, 128, 343-350		3
566	Hydrogen Production Through Water Splitting Using Nanomaterials Under Solar Energy. **2020**, 132-135		1
565	Electrons distribution competition: A negative correlation between relative potential energy and bandgap in hexagonal boron nitride. **2020**, 141, 105961		5
564	Photoluminescence quenching of WS2 nanoflakes upon Ga ion irradiation. **2020**, 217, 116786		5
563	Theory of coherent pump–probe spectroscopy in monolayer transition metal dichalcogenides. **2020** , 7, 015021		18
562	Plasmon-enhanced exciton emissions and Raman scattering of CVD-grown monolayer WS2 on Ag nanoprism arrays. **2020**, 504, 144252		4
561	Manipulating 2D Few-Layer Metal Sulfides as Anode Towards Enhanced Sodium-Ion Batteries. **2020** , 3, 236-253		12

560	A review on Raman finger prints of doping and strain effect in TMDCs. **2020**, 219, 111152		21
559	Non-Janus WSSe/MoSSe Heterobilayer and Its Photocatalytic Band Offset. **2020**, 124, 3812-3819		8
558	Construction of WS2/MoSe2 heterojunction for efficient photoelectrocatalytic hydrogen evolution. **2020**, 107, 104822		9
557	Inorganic 2D Luminescent Materials: Structure, Luminescence Modulation, and Applications. **2020**, 8, 1900978		29
556	A comparative study on the application of single-layer MoS2 and WS2 for probing methylated and mutated nucleobases: a vdW-DFT study **2020**, 501, 143892		1
555	Controlling Defects in Continuous 2D GaS Films for High-Performance Wavelength-Tunable UV-Discriminating Photodetectors. **2020**, 32, e1906958		24
554	High throughput study on magnetic ground states with Hubbard U corrections in transition metal dihalide monolayers. **2020**, 2, 495-501		9
553	NiWSe2 nanostructures as efficient catalysts for electrochemical hydrogen evolution reaction (HER) in acidic and alkaline media. **2020**, 8, 1403-1416		43
552	Anomalous Linear Layer-Dependent Blue Shift of Ultraviolet-Range Interband Transition in Two-Dimensional MoS2. **2020**, 124, 1609-1616		1
551	Strain engineering in bilayer WSe2 over a large strain range. **2020**, 223, 111202		2
550	Understanding the excitation wavelength dependent spectral shift and large exciton binding energy of tungsten disulfide quantum dots and its interaction with single-walled carbon nanotubes. **2020**, 561, 519-532		14
549	Ultrathin Pd-based nanosheets: syntheses, properties and applications. **2020**, 12, 4219-4237		28
548	Continuous Wave Sum Frequency Generation and Imaging of Monolayer and Heterobilayer Two-Dimensional Semiconductors. *ACS Nano*, **2020**, 14, 708-714	16.7	22
547	Measuring Photoexcited Free Charge Carriers in Mono- to Few-Layer Transition-Metal Dichalcogenides with Steady-State Microwave Conductivity. **2020**, 11, 99-107		6
546	Controlling Photoluminescence Enhancement and Energy Transfer in WS :hBN:WS Vertical Stacks by Precise Interlayer Distances. **2020**, 16, e1905985		19
545	Photoinduced trion absorption in monolayer WSe2. **2020**, 20, 272-276		2
544	Optical characterization of two-dimensional semiconductors. **2020**, 135-166		1
543	Transition Metal Selenides for Electrocatalytic Hydrogen Evolution Reaction. **2020**, 7, 31-54		46

542	Introduction. **2020**, 1-35	1
541	Black phosphorus: Light-matter interactions and potential applications. **2020**, 159-173	1
540	Spectral ellipsometry of monolayer transition metal dichalcogenides: Analysis of excitonic peaks in dispersion. **2020**, 38, 014002	23
539	Semiconductor-based photocatalysts for photocatalytic and photoelectrochemical water splitting: will we stop with photocorrosion?. **2020**, 8, 2286-2322	123
538	Low-temperature p-type ohmic contact to WSe2 using p+-MoS2/WSe2 van der Waals interface. **2020**, 117, 153101	5
537	High magnetic field spin-valley-split Shubnikov□de Haas oscillations in a WSe2 monolayer. **2020**, 102,	
536	Thickness Identification of Thin InSe by Optical Microscopy Methods. **2020**, 1, 2000025	6
535	Pyrene-functionalized tungsten disulfide as stable resistive photosensor. **2020**, 1, 2459-2466	1
534	Colloidal WSe nanocrystals as anodes for lithium-ion batteries. **2020**, 12, 22307-22316	8
533	Heterogeneous Electronic and Photonic Devices Based on Monolayer Ternary Telluride Core/Shell Structures. **2020**, 32, e2002548	2
532	Temperature- and power-dependent phonon properties of suspended few layers of tungsten diselenide. **2020**, 111, 103169	6
531	Strain tuning of the Stokes shift in atomically thin semiconductors. **2020**, 12, 20786-20796	8
530	The enhanced performance of capacitive-type humidity sensors based on ZnO nanorods/WS2 nanosheets heterostructure. **2020**, 310, 127810	38
529	Characterizations of nanoscale two-dimensional materials and heterostructures. **2020**, 55-90	0
528	Electronic and optoelectronic properties of the heterostructure devices composed of two-dimensional layered materials. **2020**, 151-193	2
527	Temperature dependence of the double-resonance Raman bands in bilayer WSe2. **2020**, 110, 103117	1
526	Hybrid exciton-plasmon-polaritons in van der Waals semiconductor gratings. **2020**, 11, 3552	31
525	Device physics and device integration of two-dimensional heterostructures. **2020**, 195-214	2

524	Synthesis of transition metal dichalcogenides. **2020**, 247-264		0
523	Wafer-Scale Growth of Pristine and Doped Monolayer MoS Films for Electronic Device Applications. **2020**, 59, 17356-17363		8
522	Electro-Optical Manipulation Based on Dielectric Nanoparticles. **2020**,		
521	Excitonic Energy Transfer in Heterostructures of Quasi-2D Perovskite and Monolayer WS. *ACS Nano* , **2020**, 14, 11482-11489	16.7	12
520	High-efficiency synthesis of large-area monolayer WS2 crystals on SiO2/Si substrate via NaCl-assisted atmospheric pressure chemical vapor deposition. **2020**, 533, 147479		8
519	Rapid and Low-Temperature Molecular Precursor Approach toward Ternary Layered Metal Chalcogenides and Oxides: Mo W S and Mo W O Alloys (0 ≤). **2020**, 32, 7895-7907		7
518	Excitons in planar quantum wells based on transition metal dichalcogenides. **2020**, 102,		4
517	Graphene/WS2 Nanodisk Van der Waals Heterostructures on Plasmonic Ag Nanoparticle-Embedded Silica Metafilms for High-Performance Photodetectors. **2020**, 3, 7858-7868		12
516	CVD growth of monolayer WS2 through controlled growth temperature and time. **2020**, 562, 51-57		3
515	Temperature Dependent Synthesis of Inorganic WS2 Nano Rods. **2020**, 830, 85-92		
514	Inks of dielectric h-BN and semiconducting WS2 for capacitive structures with graphene. **2020**, 38, 052201		1
513	Efficient hot-electron extraction in two-dimensional semiconductor heterostructures by ultrafast resonant transfer. **2020**, 153, 044705		8
512	3D-printed and injection molded polymer matrix composites with 2D layered materials. **2020**, 38, 042201		2
511	Ab initio calculations of structural and electronic properties of WSe2 compound. **2020**, 31, S130-S133		1
510	WS/GeSe/WS Bipolar Transistor-Based Chemical Sensor with Fast Response and Recovery Times. **2020**, 12, 39524-39532		20
509	The optical properties of few-layer InSe. **2020**, 128, 060901		10
508	Cathodoluminescence in single and multiwall WS2 nanotubes: Evidence for quantum confinement and strain effect. **2020**, 7, 041401		7
507	Naturally occurring van der Waals materials. **2020**, 4,		26

506	Observation of split defect-bound excitons in twisted WSe2/WSe2 homostructure. **2020**, 117, 153103		7
505	Stability and electronic properties of edges of SnS2. **2020**, 102,		2
504	Highly conductive nanometer-thick gold films grown on molybdenum disulfide surfaces for interconnect applications. **2020**, 10, 14463		2
503	Bandgap engineering of two-dimensional semiconductor materials. **2020**, 4,		152
502	Retracted: Emerging 2D MXene/Organic Heterostructures for Future Nanodevices. **2020**, 30, 2005238		16
501	High Thermoelectric Performance in Two-Dimensional Janus Monolayer Material WS-X (= Se and Te). **2020**, 12, 46212-46219		35
500	Temperature-dependent optical constants of monolayer [Formula: see text], [Formula: see text], [Formula: see text], and [Formula: see text]: spectroscopic ellipsometry and first-principles calculations. **2020**, 10, 15282		18
499	Large Photoluminescence Enhancement by an Out-of-Plane Magnetic Field in Exfoliated WS2 Flakes. **2020**, 37, 087801		5
498	Correlation Between the Crystalline Phase of Molybdenum Oxide and Horizontal Alignment in Thin MoS2 Films. **2020**, 124, 19362-19367		0
497	Photoinduced Enhanced Raman Spectroscopy with Hybrid [email´protected]2 Nanosheets. **2020**, 124, 20350-20358		9
496	2D TMD Channel Transistors with ZnO Nanowire Gate for Extended Nonvolatile Memory Applications. **2020**, 30, 2004140		15
495	Nonvolatile and Neuromorphic Memory Devices Using Interfacial Traps in Two-Dimensional WSe/MoTe Stack Channel. *ACS Nano*, **2020**, 14, 12064-12071	16.7	15
494	Functionalized Two-Dimensional Nanomaterials for Biosensing and Bioimaging. **2020**, 143-165		0
493	Sustainable Liquid-Phase Exfoliation of Layered Materials with Nontoxic Polarclean Solvent. **2020**, 8, 18830-18840		16
492	Anomalous exciton Rydberg series in two-dimensional semiconductors on high-□dielectric substrates. **2020**, 102,		4
491	Study of Structural and Optoelectronic Properties of Thin Films Made of a Few Layered WS Flakes. **2020**, 13,		3
490	Graphene-WS2 van der Waals Hybrid Heterostructure for Photodetector and Memory Device Applications. **2020**, 14,		4
489	Substrates in the Synthesis of Two-Dimensional Materials via Chemical Vapor Deposition. **2020**, 32, 10321-10347		22

488	Mechanisms and Applications of Steady-State Photoluminescence Spectroscopy in Two-Dimensional Transition-Metal Dichalcogenides. *ACS Nano*, **2020**, 14, 14579-14604	16.7	20
487	2D Materials and Heterostructures at Extreme Pressure. **2020**, 7, 2002697		23
486	Operational Limits and Failure Mechanisms in All-2D van der Waals Vertical Heterostructure Devices with Long-Lived Persistent Electroluminescence. *ACS Nano*, **2020**, 14, 15533-15543	16.7	5
485	Spectromicroscopic measurements of electronic structure variations in atomically thin WSe2. **2020**, 10, 095027		
484	Study of the Properties of Two-Dimensional MoS2 and WS2 Films Synthesized by Chemical-Vapor Deposition. **2020**, 54, 454-464		2
483	Band Nesting Bypass in WS Monolayers Förster Resonance Energy Transfer. *ACS Nano*, **2020**, 14, 5946-5955	16.7	4
482	2D-SnSe2 Nanosheet Functionalized Piezo-resistive Flexible Sensor for Pressure and Human Breath Monitoring. **2020**, 8, 7741-7749		29
481	Layer-dependent band to band tunneling in WSe2/ReS2 van der Waals heterojunction. **2020**, 53, 374001		1
480	Tunable optical absorption of WS2 monolayer via alkali metal modulation. **2020**, 34, 2050089		2
479	Optoelectronic performance of multilayer WSe2 transistors enhanced by defect engineering. **2020**, 13, 061004		3
478	Observable Vibronic Modes, Visible Luminescence, and Dewetting Response Mediated via Increased Roughness due to Splitting of WS2 Nanosheets by Energetic Xe+ Ions. **2020**, 257, 1900546		
477	Ultrafast Exciton Dynamics in Scalable Monolayer MoS Synthesized by Metal Sulfurization. **2020**, 5, 10725-10730		9
476	Insights on the enhanced Raman scattering of monolayer TMDCs (Mo, W)(S, Se)2 with Ag nanoparticles via rapid thermal annealing. **2020**, 520, 146367		
475	2D materials beyond graphene toward Si integrated infrared optoelectronic devices. **2020**, 12, 11784-11807		34
474	Recent advances in photodynamic therapy based on emerging two-dimensional layered nanomaterials. **2020**, 13, 1485-1508		24
473	Synthesis of Tungsten Disulfide and Molybdenum Disulfide Quantum Dots and Their Applications. **2020**, 32, 4409-4424		18
472	Recent Progress on Light-Emitting Electrochemical Cells with Nonpolymeric Materials. **2020**, 30, 1908641		14
471	Parametric study of pulsed laser deposited (PLD) WSe2 2D transistors. **2020**, 230, 111368		2

470	Gate-Defined Accumulation-Mode Quantum Dots in Monolayer and Bilayer WSe2. **2020**, 13,		8
469	Quasi-BIC Resonant Enhancement of Second-Harmonic Generation in WS Monolayers. **2020**, 20, 5309-5314		63
468	Preparation and Crystal Growth of Transition Metal Dichalcogenides. **2020**, 646, 1183-1194		
467	Intra- and inter-band magneto-optical absorption in monolayer WS2. **2020**, 124, 114315		0
466	Layer-Dependent Electronic Structure Changes in Transition Metal Dichalcogenides: The Microscopic Origin. **2020**, 5, 15169-15176		16
465	Modulating flow near substrate surface to grow clean and large-area monolayer MoS. **2020**, 31, 415706		3
464	Ultrafast Photocurrent and Absorption Microscopy of Few-Layer Transition Metal Dichalcogenide Devices That Isolate Rate-Limiting Dynamics Driving Fast and Efficient Photoresponse. **2020**, 124, 15195-15204		2
463	Manipulating Transfer and Separation of Photocarriers in Monolayer WS2 via CdSe Quantum Dot Doping. **2020**, 7, 1857-1865		4
462	Measurement of Quantum Yields of Monolayer TMDs Using Dye-Dispersed PMMA Thin Films. **2020**, 10,		17
461	Reconstructing Local Profile of Exciton-Emission Wavelengths across a WS Bubble beyond the Diffraction Limit. *ACS Nano*, **2020**, 14, 6931-6937	16.7	5
460	Visible range photoresponse of vertically oriented on-chip MoS2 and WS2 thin films. **2020**, 10, 065114		0
459	Ammonia sensing with WS2 nanostructures obtained via low-cost probe-sonication method. **2020**,		1
458	Study on the Growth Parameters and the Electrical and Optical Behaviors of 2D Tungsten Disulfide. **2020**, 12, 16576-16583		5
457	Liquid phase exfoliation of MoS2 and WS2 in aqueous ammonia and their application in highly efficient organic solar cells. **2020**, 8, 5259-5264		46
456	Facile and Reliable Thickness Identification of Atomically Thin Dichalcogenide Semiconductors Using Hyperspectral Microscopy. **2020**, 10,		3
455	Transition metal dichalcogenides for biomedical applications. **2020**, 211-247		1
454	Two-Dimensional to Three-Dimensional Growth of Transition Metal Diselenides by Chemical Vapor Deposition: Interplay between Fractal, Dendritic, and Compact Morphologies. **2020**, 12, 15885-15892		12
453	Hydrogen Generation by Solar Water Splitting Using 2D Nanomaterials. **2020**, 4, 2000050		15

452	Curved 2D WS nanostructures: nanocasting and silent phonon mode. **2020**, 12, 9038-9047	3
451	Probing momentum-indirect excitons by near-resonance photoluminescence excitation spectroscopy in WS2 monolayer. **2020**, 7, 031002	9
450	Active tuning of Mie resonances to realize sensitive photothermal measurement of single nanoparticles. **2020**, 7, 1542-1551	4
449	Strained bilayer WSe2 with reduced exciton-phonon coupling. **2020**, 101,	12
448	Theoretical Analysis of the Geometrical Effects of Tilted/Horizontal MoS2/WSe2 van der Waals Heterostructures: Implications for Photoelectric Properties and Energy Conversion. **2020**, 3, 3930-3938	7
447	Mechanism of Extreme Optical Nonlinearities in Spiral WS above the Bandgap. **2020**, 20, 2667-2673	14
446	Black phosphorus-based van der Waals heterostructures for mid-infrared light-emission applications. **2020**, 9, 114	51
445	Resonant energy transfer between hexagonal boron nitride quantum emitters and atomically layered transition metal dichalcogenides. **2020**, 7, 045015	2
444	Modulation of oligonucleotide-binding dynamics on WS nanosheet interfaces for detection of Alzheimer's disease biomarkers. **2020**, 165, 112401	5
443	Flexible paper based piezo-resistive sensor functionalised by 2D-WSe nanosheets. **2020**, 31, 435503	22
442	Two dimensional nanomaterials-enabled smart light regulation technologies: Recent advances and developments. **2020**, 220, 165191	7
441	Harnessing biological applications of quantum materials: opportunities and precautions. **2020**, 8, 10498-10525	2
440	Photocatalytic activity enhanced via surface hybridization. **2020**, 2, 308-349	25
439	Modulating the Optical Band Gap of Small Semiconducting Two-Dimensional Materials by Conjugated Polymers. **2020**, 36, 2574-2583	5
438	Realizing an Omega-Shaped Gate MoS Field-Effect Transistor Based on a SiO/MoS Core-Shell Heterostructure. **2020**, 12, 14308-14314	11
437	Enhanced Photoresponse of WS2 Photodetectors through Interfacial Defect Engineering Using a TiO2 Interlayer. **2020**, 2, 838-845	6
436	Out-of-plane electromechanical coupling in transition metal dichalcogenides. **2020**, 116, 053101	11
435	Temperature-dependent Raman spectroscopy studies of 1–5-layer WSe2. **2020**, 13, 591-595	18

434	Dynamics and efficient conversion of excitons to trions in non-uniformly strained monolayer WS2. **2020**, 14, 324-329	50
433	Identifying defect-related quantum emitters in monolayer WSe2. **2020**, 4,	16
432	Probing Exciton Dispersions of Freestanding Monolayer WSe_{2} by Momentum-Resolved Electron Energy-Loss Spectroscopy. **2020**, 124, 087401	13
431	WSe2 2D p-type semiconductor-based electronic devices for information technology: Design, preparation, and applications. **2020**, 2, 656-697	49
430	Adsorption of small gas molecules on strained monolayer WSe2 doped with Pd, Ag, Au, and Pt: A computational investigation. **2020**, 514, 145911	42
429	Electronic and magnetic properties of group-V TMDs monolayers with defects: A first-principles study. **2020**, 176, 109540	6
428	Solution-Based Synthesis of Few-Layer WS Large Area Continuous Films for Electronic Applications. **2020**, 10, 1696	12
427	Memory materials and devices: From concept to application. **2020**, 2, 261-290	93
426	Tuning the electronic structure of RhX (X = Cl, Br, I) nonmagnetic monolayers: effects of charge-injection and external strain. **2020**, 22, 4561-4573	3
425	Dimensionality-Mediated Semimetal-Semiconductor Transition in Ultrathin PtTe_{2} Films. **2020**, 124, 036402	28
424	Sensitive pressure sensors based on conductive microstructured air-gap gates and two-dimensional semiconductor transistors. **2020**, 3, 59-69	69
423	Production and processing of graphene and related materials. **2020**, 7, 022001	179
422	Temperature dependence of optical properties of monolayer WS2 by spectroscopic ellipsometry. **2020**, 511, 145503	11
421	Design of van der Waals interfaces for broad-spectrum optoelectronics. **2020**, 19, 299-304	64
420	P-type laser-doped WSe/MoTe van der Waals heterostructure photodetector. **2020**, 31, 295201	12
419	Wide Band Gap Chalcogenide Semiconductors. **2020**, 120, 4007-4055	92
418	Wavelength-Tunable Interlayer Exciton Emission at the Near-Infrared Region in van der Waals Semiconductor Heterostructures. **2020**, 20, 3361-3368	17
417	Fast Real-Space Imaging of the Exciton Complexes in WSe2 and WS2 Monolayers Using Multiphoton Microscopy. **2020**, 124, 7979-7987	2

416	2D WS2: From Vapor Phase Synthesis to Device Applications. **2021**, 7, 2000688		16
415	Diamond membranes for photonic devices. **2021**, 104, 173-217		0
414	Electron beam lithography induced doping in multilayer MoTe2. **2021**, 540, 148276		6
413	Recent progress in contact, mobility, and encapsulation engineering of InSe and GaSe. **2021**, 3, 662-693		15
412	Helicity-resolved resonant Raman spectroscopy of layered WS2. **2021**, 52, 525-531		9
411	Solid-source vapor growth of rectangular germanium arsenide (GeAs) film. **2021**, 283, 128748		0
410	Transition from saturable absorption to reverse saturable absorption in multi-layered WS2 nanosheets. **2021**, 136, 106696		4
409	Few-layer WS2/MoS2 in-plane heterostructures for efficient photocatalytic hydrogen evolution. **2021**, 81, 105608		29
408	Solution-based "bottom-up" synthesis of group VI transition metal dichalcogenides and their applications. **2021**, 2, 146-164		14
407	Metal chalcogenide-associated catalysts enabling CO2 electroreduction to produce low-carbon fuels for energy storage and emission reduction: catalyst structure, morphology, performance, and mechanism. **2021**, 9, 2526-2559		8
406	Recent Advances in Electrochemical Water Splitting and Reduction of CO 2 into Green Fuels on 2D Phosphorene-Based Catalyst. **2021**, 9, 2000741		4
405	Rapid thin-layer WS2 detection based on monochromatic illumination photographs. **2021**, 14, 840-845		4
404	Identifying Defect-Induced Trion in Monolayer WS Carrier Screening Engineering. *ACS Nano*, **2021**, 15, 2849-2857	16.7	5
403	"Ray irradiation-induced unprecedent optical, frictional and electrostatic performances on CVD-prepared monolayer WSe.. **2021**, 11, 22088-22094		0
402	Tungsten disulfide passively Q-switched Nd:GdNbO4 laser under 879 nm direct pumping. **2021**, 112, 103600		3
401	Two-dimensional WS/MoS heterostructures: properties and applications. **2021**, 13, 5594-5619		28
400	Spectroscopic ellipsometry of large area monolayer WS2 and WSe2 films. **2021**,		1
399	Electrochemically probing exciton transport in monolayers of two-dimensional semiconductors.. **2021**,		4

398	Probe and manipulation of magnetism of two-dimensional CrI3 crystal. **2021**, 70, 127504-127504	1
397	Magnetic phase transitions in two-dimensional two-valley semiconductors with in-plane magnetic field. **2021**, 103,	2
396	Structural, optical, magnetic and electrochemical properties of hydrothermally synthesized WS2 nanoflakes. **2021**, 36, 884-895	1
395	Solution-Processable Carbon and Graphene Quantum Dots Photodetectors. **2021**, 157-214	
394	Functional two-dimensional black phosphorus nanostructures towards next-generation devices.	16
393	Flexible self-powered photoelectrochemical-type photodetector based on 2D WS2-graphene heterojunction. **2021**, 25, 100215	12
392	Electrical and optical properties of transition metal dichalcogenides on talc dielectrics. **2021**, 13, 15853-15858	2
391	Ultrafast charge dynamics and photoluminescence in bilayer MoS2. **2021**, 8, 025018	5
390	A Review of the Synthesis, Properties, and Applications of Bulk and Two-Dimensional Tin (II) Sulfide (SnS). **2021**, 11, 2062	8
389	Sulfur defect-rich WS2 nanosheet electrocatalysts for N2 reduction. **2021**, 64, 1910-1918	6
388	Direct observation of negative differential resistance in WS2 homojunction. **2021**, 118, 063102	0
387	A Facile Liquid Phase Exfoliation of Tungsten Diselenide using Dimethyl Sulfoxide as Polar Aprotic Solvent to Produce High-quality Nanosheets. **2021**, 7, 328-333	4
386	Optical and electrical characterization of WS2 multilayer on flexible PET substrate. **2021**, 8, 026405	2
385	Plasmonic Effect on the Magneto-Optical Property of Monolayer WS2 Studied by Polarized-Raman Spectroscopy. **2021**, 11, 1599	0
384	Two-dimensional layered WS nanosheets as peroxidase mimetics in a colorimetric chemosensor for simple and rapid detection of acetone. **2021**, 32, 205503	2
383	Structural and magnetic properties of two-dimensional layered BiFeO3 from first principles. **2021**, 103,	4
382	Highly Enhanced Light-Matter Interaction in MXene Quantum Dots-Monolayer WS Heterostructure. **2021**, 17, e2006309	11
381	Charting the low-loss region in electron energy loss spectroscopy with machine learning. **2021**, 222, 113202	1

380	Stacking-Engineered Heterostructures in Transition Metal Dichalcogenides. **2021**, 33, e2005735		15
379	Magneto-optics of layered two-dimensional semiconductors and heterostructures: Progress and prospects. **2021**, 129, 120902		4
378	Laser printed two-dimensional transition metal dichalcogenides. **2021**, 11, 5211		5
377	Transient Optical Modulation of Two-Dimensional Materials by Excitons at Ultimate Proximity. *ACS Nano*, **2021**, 15, 5495-5501	16.7	3
376	Enhancement of Photovoltaic Current through Dark States in Donor-Acceptor Pairs of Tungsten-Based Transition Metal Di-Chalcogenides. **2021**, 31, 2100387		7
375	Filling Exciton Trap-States in Two-Dimensional Tungsten Disulfide (WS) and Diselenide (WSe) Monolayers. **2021**, 11,		1
374	Multiferroicity of Non-Janus MXY (X = Se/S, Y = Te/Se) Monolayers with Giant In-Plane Ferroelectricity. **2021**, 125, 7458-7465		1
373	Liquid-Exfoliated 2D Materials for Optoelectronic Applications. **2021**, 8, e2003864		23
372	Optoelectronic superlattices based on 2D transition metal dichalcogenides. **2021**, 118, 123101		1
371	Electron mobility in monolayer WS2 encapsulated in hexagonal boron-nitride. **2021**, 118, 102105		3
370	First-principles study of strain effect on elastic and optical properties and lattice thermal conductivity of Janus ZrBrCl monolayer. **2021**, 26, 101995		2
369	Direct Laser Patterning of a 2D WSe2 Logic Circuit. **2021**, 31, 2009549		6
368	Recent Advances in Synthesis and Study of 2D Twisted Transition Metal Dichalcogenide Bilayers. **2021**, 2, 2000153		9
367	Optically induced spin current in monolayer NbSe2. **2021**, 103,		1
366	Signatures of subband excitons in few-layer black phosphorus. **2021**, 103,		1
365	Ultrafast Charge Separation in Bilayer WS2/Graphene Heterostructure Revealed by Time- and Angle-Resolved Photoemission Spectroscopy. **2021**, 9,		1
364	Deciphering the Intense Postgap Absorptions of Monolayer Transition Metal Dichalcogenides. *ACS Nano*, **2021**, 15, 7783-7789	16.7	2
363	Optical and electrical properties of monolayer ReS2 developed via chemical vapor deposition on SiO2/Si substrate. **2021**, 78, 1109		

362	Influences of thickness and gamma-ray irradiation on the frictional and electronic properties of WSe2 nanosheets. **2021**, 11, 045229		1
361	Optical Momentum Alignment Effect in WSe2 Phototransistor. **2021**, 9, 2002243		
360	Layer-Dependent Electronic and Optical Properties of 2D Black Phosphorus: Fundamentals and Engineering. **2021**, 15, 2000399		8
359	Dimensional crossover and band topology evolution in ultrathin semimetallic NiTe2 films. **2021**, 5,		2
358	Hierarchical two-atom-layered WSe2/C ultrathin crumpled nanosheets assemblies: Engineering the interlayer spacing boosts potassium-ion storage. **2021**, 36, 309-317		29
357	Modification of the Interlayer Coupling and Chemical Reactivity of Multilayer Graphene through Wrinkle Engineering. **2021**, 33, 2506-2515		5
356	A Bi-Anti-Ambipolar Field Effect Transistor. *ACS Nano*, **2021**, 15, 8686-8693	16.7	11
355	Straintronics of 2D inorganic materials for electronic and optical applications.		0
354	Second Harmonic Generation Covering the Entire Visible Range from a 2D MaterialPlasmon Hybrid Metasurface. **2021**, 9, 2100625		9
353	Temperature-Dependent Electronic Ground-State Charge Transfer in van der Waals Heterostructures. **2021**, 33, e2008677		2
352	Ionic gate spectroscopy of 2D semiconductors. **2021**, 3, 508-519		3
351	Tightly-bound trion and bandgap engineering via-ray irradiation in the monolayer transition metal dichalcogenide WSe. **2021**, 32,		0
350	Interlayer engineering of two-dimensional transition-metal disulfides for electrochemical and optical sensing applications. **2021**, 27, 100242		6
349	Theoretical study of structural and electronic properties of 2H-phase transition metal dichalcogenides. **2021**, 103,		2
348	Thermally induced band hybridization in bilayer-bilayer MoS2/WS2 heterostructure*. **2021**, 30, 057801		2
347	Intracavity second harmonic generation from a WSe2 monolayer in a passively mode-locked picosecond fiber laser. **2021**, 11, 1603		0
346	Semiconducting ZnO&WS2 heterojunction composite films: Fabrication, characterization and ultrafast nonlinear properties. **2021**, 863, 158664		2
345	Chemical defects control the exciton lifetime in CVD grown, few-layer MoTe2. **2021**, 3, 025001		

344	Synthesis of freestanding 2D CuO nanosheets at room temperature through a simple surfactant free co-precipitation process and its application as electrode material in supercapacitors. **2021**, 862, 158549	6
343	Gate-Controlled Rectifying Direction in PdSe2 Lateral Heterojunction Diode. **2021**, 7, 2100005	1
342	Doubly-Resonant Enhancement of Second Harmonic Generation from a WS2 Nanomesh Polymorph with a Modified Energy Landscape. **2021**, 15, 2100117	3
341	Planar-Coordination PdSe2 Nanosheets as Highly Active Electrocatalyst for Hydrogen Evolution Reaction. **2021**, 31, 2102321	56
340	Recent progress in Van der Waals 2D PtSe. **2021**, 32,	3
339	Advances in Liquid-Phase and Intercalation Exfoliations of Transition Metal Dichalcogenides to Produce 2D Framework. **2021**, 8, 2002205	15
338	Electronic structure evolution and exciton energy shifting dynamics in WSe2: from monolayer to bulk. **2021**, 54, 354002	0
337	Progress in light-to-frequency conversion circuits based on low dimensional semiconductors. **2021**, 14, 2938-2964	1
336	Surface plasmon enhanced photoluminescence of monolayer WS2 on ion beam modified functional substrate. **2021**, 118, 263103	4
335	A review of optics-based methods for thickness and surface characterization of two-dimensional materials. **2021**, 54, 393001	2
334	Phase-Selective Synthesis of Ultrathin FeTe Nanoplates by Controllable Fe/Te Atom Ratio in the Growth Atmosphere. **2021**, 17, e2101616	5
333	Spectroscopic view of ultrafast charge carrier dynamics in single- and bilayer transition metal dichalcogenide semiconductors. **2021**, 250, 147093	2
332	A Complete Two-Dimensional Avalanche Photodiode Based on MoTe2□WS2□MoTe2 Heterojunctions With Ultralow Dark Current. **2021**, 8,	3
331	Unusual n-type doping of monolayer WSe2 by CF4 plasma treatment. **2021**, 295, 129865	0
330	Illuminating Invisible Grain Boundaries in Coalesced Single-Orientation WS Monolayer Films. **2021**, 21, 6487-6495	7
329	Hyperspectral Fingerprints for Atomic Layer Mapping of Two-Dimensional Materials with Single-Layer Accuracy. **2021**, 125, 16583-16590	1
328	Conformal Self-Assembly of Nanospheres for Light-Enhanced Airtightness Monitoring and Room-Temperature Gas Sensing. **2021**, 11,	
327	Experimental and Theoretical Studies of the Electronic Band Structure of Bulk and Atomically Thin Mo W Se Alloys. **2021**, 6, 19893-19900	3

326	Anisotropy of two-dimensional ReS2 and advances in its device application. **2021**, 40, 3357-3374	10
325	Enhanced Trion Emission in Monolayer MoSe2 by Constructing a Type-I Van Der Waals Heterostructure. **2021**, 31, 2104960	2
324	Few-Layer PdSe2 Nanofilm/Si Heterojunction for Sensing NO2 at Room Temperature. **2021**, 4, 7358-7370	2
323	Influence of van der waals heterostructures of 2D materials on catalytic performance of ZnO and its applications in energy: A review. **2021**, 46, 25413-25423	3
322	Layer-engineered interlayer excitons. **2021**, 7,	2
321	Synthesis of Ultrathin 2D Nonlayered □MnSe Nanosheets, MnSe/WS2 Heterojunction for High-Performance Photodetectors. **2021**, 2, 2100028	10
320	Synthesis and Electrical Properties of a New Compound (BiSe)0.97(Bi2Se3)1.26(BiSe)0.97(MoSe2) Containing Metallic 1T-MoSe2. **2021**, 33, 6403-6411	2
319	Ultrafast Singlet Energy Transfer before Fission in a Tetracene/WSe Type II Hybrid Heterostructure. **2021**, 12, 8440-8446	2
318	2D Metallic Transition-Metal Dichalcogenides: Structures, Synthesis, Properties, and Applications. 2105132	17
317	Excitonic two-photon absorption in monolayer transition metal dichalcogenides: Impact of screening and trigonal warping. **2021**, 104,	
316	Polarity Control and Weak Fermi-Level Pinning in PdSe Transistors. **2021**, 13, 43480-43488	5
315	Room Temperature Micro-Photoluminescence Studies of Colloidal WS2 Nanosheets. **2021**, 125, 18841-18848	3
314	Transfer-free, scalable photodetectors based on MOCVD-grown 2D-heterostructures. **2021**, 8, 045015	3
313	Sub-10 nm two-dimensional transistors: Theory and experiment. **2021**, 938, 1-1	14
312	Fabrication and characterization of large-area suspended MoSe2 crystals down to the monolayer. **2021**, 4, 046001	3
311	Recent developments in two-dimensional layered tungsten dichalcogenides based materials for gas sensing applications. **2021**, 28, 102717	1
310	Recent advances in the electrochemistry of layered post-transition metal chalcogenide nanomaterials for hydrogen evolution reaction. **2021**, 60, 451-479	18
309	Insights into the reinforcibility and multifarious role of WS2 in polymer matrix. **2021**, 876, 160107	3

308	Bandgap Tuned WS2 Thin-Film Photodetector by Strain Gradient in van der Waals Effective Homojunctions. 2101310	4
307	Synthesis of vertically stacked, highly oriented WS2 thin films by Electron beam evaporation. **2021**, 734, 138851	1
306	Tuning the Optical Band Gap of Two-Dimensional WS Integrated with Gold Nanocubes by Introducing Palladium Nanostructures. **2021**, 37, 10720-10731	
305	Optimization Strategies for High Photoluminescence Quantum Yield of Monolayer Chemical Vapor Deposition Transition Metal Dichalcogenides. **2021**, 13, 44814-44823	0
304	Synthesis of ultrathin rhenium disulfide nanoribbons using nano test tubes. 1	2
303	Observation of polarization dependent excitonic luminescence in few-layered WS2 flakes. **2021**, 781, 139012	
302	Gate-controlled MoTe2 homojunction for sub-thermionic subthreshold swing tunnel field-effect transistor. **2021**, 40, 101263	4
301	Nonlinear optical properties of poly (vinyl alcohol) thin films doped with in-situ WSe2/rGO composite. **2021**, 142, 107198	1
300	Functionalization of monolayer MoS2 with transition metal oxide nanoclusters. **2021**, 619, 413245	0
299	Strain-induced changes of electronic and optical properties of O adsorbed ReS2 monolayer. **2021**, 783, 139057	1
298	Z-scheme induced g-C3N4 /WS2 heterojunction photocatalyst with improved electron mobility for enhanced solar photocatalysis. **2021**, 228, 53-67	7
297	Toward practical solar-driven photocatalytic water splitting on two-dimensional MoS2 based solid-state Z-scheme and S-scheme heterostructure. **2021**, 303, 121302	10
296	Growth Behavior, nucleation control and excellent optical properties of atomically thin WS2 thin films processed via Gas-phase chemical vapor deposition. **2021**, 568, 150908	1
295	Controllable growth of 2H-1 T? MoS2/ReS2 heterostructures via chemical vapor deposition. **2022**, 572, 151438	1
294	Interface Kinetics Assisted Barrier Removal in Large Area 2D-WS Growth to Facilitate Mass Scale Device Production. **2021**, 11,	1
293	Nanostructured 2D Materials as Nano Coatings and Thin Films. **2021**, 55-72	
292	Highly electroconductive and uniform WS2 film growth by sulfurization of W film using diethyl sulfide. **2021**, 5, 3692-3698	3
291	Sensing and electrocatalytic activity of tungsten disulphide thin films fabricated via metalȯrganic chemical vapour deposition. **2021**, 9, 10254-10265	0

290	Lead-Free Halide Perovskites for Light Emission: Recent Advances and Perspectives. **2021**, 8, 2003334	52
289	Defect-related dynamics of photoexcited carriers in 2D transition metal dichalcogenides. **2021**, 23, 8222-8235	5
288	Electrochemistry of 2D nanomaterials. **2021**, 485-536	1
287	Excitonic Dynamics in Janus MoSSe and WSSe Monolayers. **2021**, 21, 931-937	16
286	Photoluminescence emission induced by localized states in halide-passivated colloidal two-dimensional WS2 nanoflakes. **2021**, 9, 2398-2407	1
285	Growth of a Large, Single-Crystalline WS Monolayer for High-Performance Photodetectors by Chemical Vapor Deposition. **2021**, 12,	7
284	Recent Progress in Chemiresistive Gas Sensing Technology Based on Molybdenum and Tungsten Chalcogenide Nanostructures. **2020**, 7, 1901992	15
283	Electronic and Optoelectronic Applications Based on 2D Novel Anisotropic Transition Metal Dichalcogenides. **2017**, 4, 1700231	145
282	Measurement of the Optical Dielectric Function of Monolayer Transition Metal Dichalcogenides: MoS2, MoSe2, WS2, and WSe2. **2016**, 33-43	10
281	High sensitive ratiometric fluorescence analysis of trypsin and dithiothreitol based on WS QDs. **2020**, 219, 121171	11
280	Atomically thin quantum light-emitting diodes.	1
279	Room-temperature exciton-polaritons with two-dimensional WS2.	1
278	Disentangling oxygen and water vapor effects on optoelectronic properties of monolayer tungsten disulfide. **2020**, 12, 8344-8354	4
277	2D van der Waals heterostructures: processing, optical properties and applications in ultrafast photonics. **2020**, 7, 2903-2921	18
276	Electronic structure and thermoelectric properties of Mo-based dichalcogenide monolayers locally and randomly modified by substitutional atoms.. **2020**, 10, 43035-43044	2
275	Temperature-dependent phonon dynamics and anharmonicity of suspended and supported few-layer gallium sulfide. **2020**, 31, 495702	6
274	Manipulation of valley splitting for the WSe2/NiCl2 heterostructure by adjusting the interlayer spacing and constructing a NiCl2/WSe2/NiCl2 heterojunction. **2020**, 22, 103061	4
273	van der Waals coefficients of the multi-layered MoS2 with alkali metals. **2020**, 95, 095506	1

272	Laser exposure induced alteration of WS 2 monolayers in the presence of ambient moisture. **2018**, 5, 015013		26
271	Strain engineering in monolayer WS2 and WS2 nanocomposites. **2020**, 7, 045022		16
270	Surface susceptibility and conductivity of MoS2 and WSe2 monolayers: A first-principles and ellipsometry characterization. **2020**, 101,		16
269	Strain effect on circularly polarized electroluminescence in transition metal dichalcogenides. **2020**, 2,		57
268	Nonexponential Photoluminescence Dynamics in an Inhomogeneous Ensemble of Excitons in WSe2 Monolayers. **2020**, 112, 607-614		3
267	Broadband all-light-control with WS coated microfibers. **2019**, 27, 12817-12831		6
266	Incoherent phonon population and exciton-exciton annihilation dynamics in monolayer WS revealed by time-resolved Resonance Raman scattering. **2019**, 27, 29949-29961		6
265	Second harmonic generation spectroscopy on two-dimensional materials [Invited]. **2019**, 9, 1136		27
264	Passively Q-switched and femtosecond mode-locked erbium-doped fiber laser based on a 2D palladium disulfide (PdS2) saturable absorber. **2020**, 8, 511		23
263	Raman spectroscopy regulation in van der Waals crystals. **2018**, 6, 991		21
262	Broadband nonlinear optical resonance and all-optical switching of liquid phase exfoliated tungsten diselenide. **2018**, 6, 1040		27
261	Multipole and multimode engineering in Mie resonance-based metastructures. **2020**, 9, 1115-1137		37
260	Synthesis and Characterization of Highly Crystalline Vertically Aligned WSe2 Nanosheets. **2020**, 10, 874		10
259	Giant Valley Coherence at Room Temperature in 3R WS with Broken Inversion Symmetry. **2019**, 2019, 6494565		7
258	Electronic Structures and Magnetic Properties of Co-Adsorbed Monolayer WS₂. **2016**, 04, 32-41		1
257	Excitons in Two-Dimensional Materials.		4
256	The numerical-aperture-dependent optical contrast and thickness determination of ultrathin flakes of two-dimensional atomic crystals: A case of graphene multilayers. **2013**, 62, 110702		13
255	Negative Differential Photoconductance as a Signature of Nonradiative Energy Transfer in van der Waals Heterojunction. *ACS Nano*, **2021**, 15, 16432-16441	16.7	0

254	Quantitative Evaluation of Nonlinear Temperature Dependence of Raman Shift in Exfoliated WSe2 Nanosheets. **2021**, 50, 7126		4
253	Enhanced Lithium Storage Property Boosted by Hierarchical Hollow-Structure WSe2 Nanosheets/N, P-Codoped Carbon Nanocomposites. **2021**, 4, 11643-11651		3
252	Ultrafast Exciton Trapping and Exciton–Exciton Annihilation in Large-Area CVD-Grown Monolayer WS2.		5
251	Electronic properties and tunable Schottky barrier of non-Janus MoSSe/graphene heterostructures. **2022**, 55, 035104		0
250	Influence of Plasmon Resonances and Symmetry Effects on Second Harmonic Generation in WS-Plasmonic Hybrid Metasurfaces. *ACS Nano*, **2021**, 15, 16719-16728	16.7	3
249	Bidirectional and reversible tuning of the interlayer spacing of two-dimensional materials. **2021**, 12, 5886		8
248	Selective Vertical and Horizontal Growth of 2D WS2 Revealed by In Situ Thermolysis using Transmission Electron Microscopy. 2106450		0
247	Two-dimensional graphene electronics: current status and prospects. **2018**, 188, 1249-1287		1
246	Introduction. **2018**, 1-6		
245	Thermal tuning of plasmon-bright-exciton coupling by redistribution of exciton density between bright and dark exciton. **2018**,		
244	Dynamics of A-exciton and spin relaxation in WS2 and WSe2 monolayer. **2019**, 68, 017201		1
243	Visualization of lattice dynamics and atomic motion in WSe2 monolayer. **2019**,		
242	Optical response of atomically thin materials: a focus on ellipsometric measurements. **2019**,		
241	High peak power passively Q-switched Nd:GdVO4 laser with thermal decomposed WS2 saturable absorber. **2019**, 58, 1		
240	Activated layered magnetism from bulk TiN. **2019**, 3,		
239	Invited presentation: Nanoscale sensor devices with diamond color centers. **2020**,		
238	Resonant photocurrent from a single quantum emitter in tungsten diselenide. **2020**, 7, 045021		2
237	Efficient degradation of methylene blue: A comparative study using hydrothermally synthesised SnS2, WS2 and VS2 nanostructures. **2021**, 146, 111623		2

236	Layer-Dependent Band Structure of Ternary Metal Chalcogenides: Thickness-Controlled Hexagonal FeIn2S4. **2021**, 33, 164-176	0
235	Electronic structures and band alignment transition in double-wall MoS2/WS2 nanotubes for optoelectronic applications. **2021**, 54, 095105	1
234	2D analogue of band-bending in metal–semiconductor junctions: interior to edge-states of single-layered transition metal dichalcogenides. **2021**, 54, 105106	
233	Layered Structures. **2020**, 415-445	
232	Invited presentation: Versatile diamond nanosensor devices. **2020**,	
231	Chalcogenides. **2020**, 631-833	
230	Synthesis of photonic crystal fiber based on graphene directly grown on air-hole by chemical vapor deposition. **2020**, 69, 194202	0
229	Theoretical study on Schottky regulation of WSe2/graphene heterostructure doped with nonmetallic elements. **2020**, 69, 117101	2
228	Effective spin-orbit models using correlated first-principles wave functions. **2020**, 2,	1
227	Synthesis of 2D semiconducting single crystalline BiS for high performance electronics. **2021**, 23, 26806-26812	0
226	High-Temperature-Induced Intervalley Carrier Transfer in Two-Dimensional Semiconductors: WSe2 versus WS2. **2021**, 125, 23922-23928	
225	Controllable growth of multilayered XSe2 (X=W and Mo) for nonlinear optical and optoelectronic applications.	1
224	Enhanced epitaxial growth of two-dimensional monolayer WS2 film with large single domains. **2021**, 25, 101234	0
223	Recent progress and strategies in photodetectors based on 2D inorganic/organic heterostructures. **2021**, 8, 012001	5
222	Recentadvances in the propertiesand synthesis of bilayer graphene and transition metal dichalcogenides. **2020**, 3, 042003	2
221	Surface Modification for WSe2 Based Complementary Electronics*. **2020**, 37, 118501	2
220	Trap Density Assessment on Multilayer WS2 using Power-Dependent Indirect Photoluminescence. **2020**, 9, 093016	1
219	Trap-free exciton dynamics in monolayer WS oleic acid passivation. **2021**,	1

218	Van der Waals crystal radio with Pt/MoSe2 Schottky diode and h-BN capacitor for RF energy harvesting. **2022**, 92, 106771	1
217	Coexistence of Photoelectric Conversion and Storage in van der Waals Heterojunctions. **2021**, 127, 217401	1
216	Three-Dimensional Structured Photodetectors Based on 2D Transition-Metal Dichalcogenide.	1
215	Manipulation of Exciton Dynamics in Single-Layer WSe Using a Toroidal Dielectric Metasurface. **2021**, 21, 9930-9938	2
214	Highly Suppressed Dark Current and Fast Photoresponse from Au Nanoparticle-Embedded, Si/Au/WS2 Quantum-Dot-Based, Self-Biased Schottky Photodetectors. **2021**, 3, 4891-4904	2
213	Electrodeposited WS2 monolayers on patterned graphene.	0
212	Layer and material-type dependent photoresponse in WSe2/WS2 vertical heterostructures.	2
211	Charge Transfer Properties of Heterostructures Formed by Bi O Se and Transition Metal Dichalcogenide Monolayers. **2021**, e2106078	2
210	Stacking-dependent optical properties in bilayer WSe.. **2021**, 14, 147-156	4
209	Optical and Electrical Properties of Transition Metal Dichalcogenides (Monolayer and Bulk). **2021**, 295-361	1
208	Non-equilibrium diffusion of dark excitons in atomically thin semiconductors. **2021**,	2
207	Optical Study of Liquid Dispersed Few-Layered WS2 Nanosheets. **2021**, 243-249	
206	Exfoliation Routes to the Production of Nanoflakes of Graphene Analogous 2D Materials and Their Applications. **2022**, 377-443	1
205	Thickness Scaling Effects on the Complex Optical Conductivity of Few-Layer WSe 2 Investigated by Spectroscopic Ellipsometry. 2100299	0
204	Dual-wavelength mode-locked fiber laser based on graphene materials. 1	0
203	Enhance the interlayer coupling and modify the properties through Janus WSeTe. **2022**, 203, 111140	0
202	Photoresponse properties of thin films of vertically grown WS2 nanoflakes. **2022**, 277, 115587	0
201	Nonlinear optical properties of two-dimensional palladium ditelluride (PdTe2) and its application as aerosol jet printed saturable absorbers for broadband ultrafast photonics. **2022**, 26, 101296	3

200	Electronic and optical properties and device applications for antimonene/WS2 van der Waals heterostructure. **2022**, 578, 151844		3
199	The Thermal and Electronic Properties of the Lateral Janus MoSSe/WSSe Heterostructure. **2022**, 9,		6
198	High-Responsivity Gate-Tunable Ultraviolet-Visible Broadband Phototransistor Based on Graphene-WS Mixed-Dimensional (2D-0D) Heterostructure.. **2022**,		2
197	Bright excitonic multiplexing mediated by dark exciton transition in two-dimensional TMDCs at room temperature.. **2022**,		1
196	Vertical 1D/2D Heterojunction Architectures for Self-Powered Photodetection Application: GaN Nanorods Grown on Transition Metal Dichalcogenides.. *ACS Nano*, **2022**,	16.7	5
195	Controlling exciton distribution in WS2 monolayer on a photonic crystal. **2022**, 15, 022004		
194	An Asymmetry Field-Effect Phototransistor for Solving Large Exciton Binding Energy of 2D TMDCs. **2021**, e2107468		2
193	Broadband light absorption and photoresponse enhancement in monolayer WSe2 crystal coupled to Sb2O3 microresonators. 1		1
192	Tuning the optical band gap of monolayer WSe2 in ferroelectric field-effect transistors. **2022**,		
191	WS/hBN Hetero-nanoslits with Spatially Mismatched Electromagnetic Multipoles for Directional and Enhanced Light Emission.. *ACS Nano*, **2022**,	16.7	1
190	Strain-dependent doping behavior of WSe(2) monolayer: A first-principal calculations.		0
189	Characterization of high quality, monolayer WS2 domains via chemical vapor deposition technique. **2022**, 128, 1		0
188	Flexible 2D Materials beyond Graphene: Synthesis, Properties, and Applications.. **2022**, e2105383		13
187	Z-scheme 2D/2D WS2/Bi2WO6 heterostructures with enhanced photocatalytic performance. **2022**, 631, 118485		1
186	Emission properties of sequentially deposited ultrathin CH3NH3PbI3/MoS2 heterostructures. **2022**, 36, 27-33		1
185	Visualizing Grain Statistics in MOCVD WSe through Four-Dimensional Scanning Transmission Electron Microscopy.. **2022**,		0
184	Mechanical ball milling: A sustainable route to induce structural transformations in tungsten disulfide for its photocatalytic applications. **2022**, 140, 115152		0
183	Atomic Sharpness of Jagged Edges of Two-Dimensional WS2 Grown by Chemical Vapor Deposition. **2022**, 100183		1

182	Exciton Emissions in Bilayer WSe Tuned by the Ferroelectric Polymer.. **2022**, 1636-1643		1
181	Light-matter coupling in large-area van der Waals superlattices. **2021**,		11
180	Thin Film Transition Metal Dichalcogenide Photoelectrodes for Solar Hydrogen Evolution: A Review.		1
179	Detection and screening of basic amino acids using the luminescence switching of a WS2 nanosheet□Ag2O nanoparticle composite.		0
178	Ultrafast charge transfer and carrier dynamics in a WS2/MoSe2 few-layer van der Waals heterostructure. **2022**, 10, 5328-5335		0
177	Electrically Switchable Intervalley Excitons with Strong Two-Phonon Scattering in Bilayer WSe.. **2022**,		1
176	A Waveguide-Integrated Two-Dimensional Light-Emitting Diode Based on p-Type WSe/n-Type CdS Nanoribbon Heterojunction.. *ACS Nano*, **2022**,	16.7	1
175	Self-Driven Broadband Photodetectors Based on MoSe/FePS van der Waals n-p Type-II Heterostructures.. **2022**,		5
174	2D Van der Waals Rare Earth Material Based Ratiometric Luminescence Thermography Integrated on Micro□Nano Devices Vertically. **2022**, 10, 2102102		1
173	Defect Engineering Strategies Toward Controlled Functionalization of Solution-Processed Transition Metal Dichalcogenides. 2100122		4
172	Controlling exciton-exciton annihilation in WSe2 bilayers via interlayer twist. **2022**, 15, 4661		0
171	Nonlinear optical Hall effect of few-layered NbSe2. **2022**, 4,		0
170	Ultrathin Lateral 2D Photodetectors Using Transition-Metal Dichalcogenides PtSe2□WS2□PtSe2 by Direct Laser Patterning. **2022**, 4, 1029-1038		1
169	Versatile band structure and electron□phonon coupling in layered PtSe2 with strong interlayer interaction. 1		1
168	Evolution of WSe2 Flakes Synthesized by Thermally Assisted Conversion Method. **2022**, 12, 353		
167	Electron Doping of Semiconducting MoS Nanosheets by Silver or Gold Nanoclusters.. **2022**,		0
166	Modulation of Schottky barrier in XSi2N4/graphene (X=Mo and W) heterojunctions by biaxial strain.		0
165	Probing Nanoscale Schottky Barrier Characteristics at WSe 2 /Graphene Heterostructures via Electrostatic Doping. 2200196		1

164	Generating Bright Emissive States by Modulating the Bandgap of Monolayer Tungsten Diselenide. **2022**, 126, 5598-5606	0
163	Dark-Exciton Driven Energy Funneling into Dielectric Inhomogeneities in Two-Dimensional Semiconductors.. **2022**,	2
162	Slater-Koster parametrization for the phonons of monolayer MoX(X = S, Se or Te).. **2022**,	
161	Strongly Tunable Raman Resonance in InSe under Pressure.	
160	Large-Area Transfer of 2D TMDCs Assisted by a Water-Soluble Layer for Potential Device Applications.. **2022**, 7, 11731-11741	0
159	Strain and external electric field modulation of the electronic and optical properties of GaN/WSe2 vdWHs. **2022**, 115258	1
158	Photoexcitation and radiation regulation mechanism of Ag anchoring WSe2 heterojunction with plasma coupling effect. **2022**, 591, 153240	2
157	Optical Characterization of Few-Layer PtSe Nanosheet Films.. **2021**, 6, 35398-35403	
156	In-Plane Field-Driven Excitonic Electro-Optic Modulation in Monolayer Semiconductor. **2022**, 10, 2102132	1
155	Band Structure Engineering of WSe 2 Homo-Junction Interfaces via Thickness Control. **2022**, 9, 2101763	1
154	Low-Cost, Homogeneous, and Continuous Thin Film of 2D Semiconductors: Towards Large Scale Electronic and Photonic Devices. **2021**,	
153	An efficient route to prepare suspended monolayer for feasible optical and electronic characterizations of two-dimensional materials. **2022**, 4,	6
152	High-Performance Mid-IR to Deep-UV van der Waals Photodetectors Capable of Local Spectroscopy at Room Temperature.. **2022**,	1
151	Centimeter-Scale Synthesis of Monolayer WS2 Using Single-Zone Atmospheric-Pressure Chemical Vapor Deposition: A Detailed Study of Parametric Dependence, Growth Mechanism, and Photodetector Properties.	2
150	Enhancement of the Second Harmonic Generation from Monolayer WS2 Coupled with a Silica Microsphere.	
149	Phase transition and formation of inorganic fullerene type nanostructure in WS2 nanosheet system under laser excitation. **2022**, 216, 114729	0
148	Liquid-phase Exfoliation of Nonlayered non-van der Waals Crystals into Nanoplatelets.. **2022**, e2202164	6
147	Significant enhancement of lattice thermal conductivity of monolayer AlN under bi-axial strain: A first principles study.	

146	Significant pressure-induced enhancement of photoelectric properties of WS2 in the near-infrared region. **2022**, 10, 547-555		3
145	Visualization of Band Shifting and Interlayer Coupling in WMoS Alloys Using Near-Field Broadband Absorption Microscopy.. *ACS Nano*, **2022**,	16.7	
144	Novel two-dimensional semi-metallic NiTe2 based saturable absorber for ultrafast mode-locked fiber laser. **2022**, 104195		1
143	Theory of Excitons in Atomically Thin Semiconductors: Tight-Binding Approach.. **2022**, 12,		
142	On the interface between biomaterials and two-dimensional materials for biomedical applications.. **2022**, 186, 114314		0
141	Emerging exciton physics in transition metal dichalcogenide heterobilayers.		7
140	Photoluminescence Induced by Substitutional Nitrogen in Single-Layer Tungsten Disulfide.. *ACS Nano*, **2022**,	16.7	1
139	Solvothermal synthesis of W4S7F as a stable phase with metallic behaviour for energy storage. **2022**, 536, 231325		1
138	A Review on Materials and Methods for the Fabrication of Microcavity Laser. 27-42		
137	Directional Exciton-Energy Transport in a Lateral Heteromonolayer of WSe-MoSe.. *ACS Nano*, **2022**,	16.7	4
136	Observation of in-plane exciton□polaritons in monolayer WSe2 driven by plasmonic nanofingers. **2022**,		1
135	Controlled sputtering time growth, ultrafast nonlinear absorption and carrier dynamics properties of vertically WSe2 films under photoexcitation. **2022**, 129, 112505		1
134	Theoretical Analysis of the Nanoscale Composition, Tip-Enhanced Raman Spectroscopy, and Electronic Properties of Alloys in 2D MoS2□WS2 Heterostructures. **2022**, 126, 9099-9108		1
133	Reliable and broad-range layer identification of Au-assisted exfoliated large area MoS2 and WS2 using reflection spectroscopic fingerprints.		1
132	Dielectric-dependent hybrid functional calculations on the electronic band gap of 3d transition metal doped SnS2 and their optical properties. **2022**, 105,		0
131	Engineering van der Waals Materials for Advanced Metaphotonics.		2
130	Novel wide spectrum light absorber heterostructures based on hBN/In(Ga)Te.		
129	Inkjet-printed TMDC□graphene heterostructures for flexible and broadband photodetectors. **2022**, 131, 234303		0

128	Chirality of Valley Excitons in Monolayer Transition-Metal Dichalcogenides. 5894-5899		0
127	Advanced Hybrid Positioning System of SEM and AFM for 2D Material Surface Metrology. 1-7		
126	Non-linear thermo-optical properties of WS2 and Au/WS2 Schottky-type nano/hetero-junctions. **2022**, 283, 115814		0
125	Hybrid heterostructure of transition metal dichalcogenides as potential photocatalyst for hydrogen evolution. **2022**, 599, 154057		2
124	First principle study of van der Waals heterostructure based on MS2 (M= Mo, W) and Janus CrSSe monolayers.		0
123	Growth of bulk BiOBr single crystals for the characterization of intrinsic semi-conductive properties and application in ultraviolet photodetectors.		1
122	Ultrafast dynamics of spin relaxation in monolayer WSe2 and the WSe2/graphene heterojunction. **2022**, 24, 16538-16544		0
121	Modulation of the MoSH/WSi₂N₄ Schottky-junction Barrier by External Electric Field and Biaxial Strain. **2022**,		
120	Interlayer Charge Transfer and Photodetection Efficiency of Graphene□Transition-Metal-Dichalcogenide Heterostructures. **2022**, 17,		2
119	Substantially Enhanced Properties of 2D WS2 by High Concentration of Erbium Doping against Tungsten Vacancy Formation. **2022**, 2022, 1-13		0
118	CVD growth and optical characterization of homo and heterobilayer TMDs. **2022**, 132, 024301		2
117	Mid-Infrared Optoelectronic Devices Based on Two-Dimensional Materials beyond Graphene: Status and Trends. **2022**, 12, 2260		2
116	Structure inversion asymmetry enhanced electronic structure and electrical transport in 2D A3SnO (A = Ca, Sr, and Ba) anti-perovskite monolayers.		2
115	Self-Hybridized Exciton-Polaritons in Sub-10-nm-Thick WS2 Flakes: Roles of Optical Phase Shifts at WS2/Au Interfaces. **2022**, 12, 2388		0
114	Boost Lasing Performances of 2D Semiconductor in a Hybrid Tungsten Diselenide Monolayer/Cadmium Selenide Quantum Dots Microcavity Laser. 2200799		0
113	WSe2 as Transparent Top Gate for Infrared Near-Field Microscopy.		
112	Signature of lattice dynamics in twisted 2D homo-hetero bilayers.		1
111	The Hidden Flower in WS2 Flakes: A Combined Nanomechanical and Tip-Enhanced Raman Exploration. *ACS Nano*,	16.7	3

110	Van der Waals heterostructures. **2022**, 2,	2
109	Linear and nonlinear optical propagation in 2D materials. **2021**, 2021, 19-37	
108	Two-dimensional van der Waals: characterization and manipulation of superconductivity. **2022**, 0	
107	Reduction in thermal conductivity of monolayer WS2 caused by substrate effect.	0
106	Electronic and optical properties of Nb/V-doped WS 2 monolayer: A first-principles study.	0
105	Molecular Triplet Sensitization of Monolayer Semiconductors in 2D Organic/Inorganic Hybrid Heterostructures. **2022**, 16, 12532-12540	2
104	Temperature- and Power-Dependent Characteristics of Heterointerlayer Excitons Emitting in the Visible Region of a WS2/PbI2 Nanostructure: Implications in Excitonic Devices. **2022**, 5, 11167-11175	1
103	Control of the Schottky barrier height in monolayer WS2 FETs using molecular doping. **2022**, 12, 085222	1
102	Graphene oxide/Ag nanoparticle/WS2 nanosheet heterostructures for surface-enhanced Raman spectroscopy. **2022**, 12, 3718	
101	2D semiconductors for specific electronic applications: from device to system. **2022**, 6,	3
100	Resonant Coherent Raman Scattering from WSe2.	
99	Effect of an ultra-thin 2D transport layer on eco-friendly Perovskite/CIGS tandem solar cell: A numerical study. **2022**, 170, 207398	1
98	Synergistic effect of hafnium doping in tin diselenide for enhanced photodetection application. **2022**, 133, 112909	0
97	Salt-promoted growth of monolayer tungsten disulfide on hexagonal boron nitride using all chemical vapor deposition approach. **2022**, 605, 154812	0
96	Local strain and tunneling current modulate excitonic luminescence in MoS2 monolayers. **2022**, 12, 24922-24929	9
95	Synthesis of mono- and few-layered n-type WSe2 from solid state inorganic precursors.	0
94	Layer-Number Engineered Momentum-Indirect Interlayer Excitons with Large Spectral Tunability. **2022**, 22, 7230-7237	1
93	Hand-Print method for preparation of large area and binder free electrodes for photodetection and electrocatalytic hydrogen evolution. **2022**,	0

92	Quantitative determination of interlayer electronic coupling at various critical points in bilayer MoS2. **2022**, 106,	0
91	Engineering WS2 exciton polarization by an anisotropic organic substrate. **2022**, 132, 114302	0
90	Gate-Tunable Junctions within Monolayer MoS2–WS2 Lateral Heterostructures.	0
89	Symmetric domain segmentation in WS2 flakes: correlating spatially resolved photoluminescence, conductance with valley polarization. **2022**, 33, 495203	0
88	Intelligent Optoelectronic Devices for Next-Generation Artificial Machine Vision. 2200668	1
87	Energy transfer in hybrid 0D-CdSe quantum dot/2D-WSe2 near-infrared photodetectors. **2022**, 55, 444006	0
86	Study on the Field-Effect WSe2/Si Heterojunction Diode.	0
85	Superacid Treatment on Transition Metal Dichalcogenides. **2022**, 3, 034002	1
84	ZnPSe 3 as ultrabright indirect band-gap system with microsecond excitonic lifetimes. **2022**, 119,	1
83	Vapor–Liquid–Solid Growth of Morphology-Tailorable WS2 toward P-Type Monolayer Field-Effect Transistors.	0
82	A pentagonal 2D layered PdSe2-based synaptic device with a graphene floating gate.	0
81	Role of tilt grain boundaries on the structural integrity of WSe2 monolayers.	1
80	Synthesis of Transition Metal Dichalcogenides (TMDs). **2022**, 155-179	0
79	Solution processed, vertically stacked hetero-structured diodes based on liquid-exfoliated WS2 nanosheets: from electrode-limited to bulk-limited behavior. **2022**, 14, 15679-15690	0
78	Nanomechanical Spectroscopy of 2D Materials. **2022**, 22, 8037-8044	0
77	Ultrafast nanoscale exciton dynamics via laser-combined scanning tunneling microscopy in atomically thin materials. **2022**, 6,	1
76	Electrochemical Techniques for Visualizing Photoelectrochemical Processes at the Nanoscale. **2022** , 101164	0
75	Nanostructured MoS2 and WS2 Photoresponses under Gas Stimuli. **2022**, 12, 3585	2

74	Tuning the layered thickness of MoTe 2 thin film for dye-sensitized solar cells, UV and visible spectrum photodetectors, and hydrogen evolution reactions.	0
73	Crystalline Phase Effects on the Nonlinear Optical Response of MoS2 and WS2 Nanosheets: Implications for Photonic and Optoelectronic Applications.	1
72	Tuning the magnetic and electronic properties of monolayer SnS2 by 3d transition metal doping: A DFT study. **2022**, 33, 104626	0
71	Efficient Preparation of Small-Sized Transition Metal Dichalcogenide Nanosheets by Polymer-Assisted Ball Milling. **2022**, 27, 7810	0
70	Extraordinary tunnel electroresistance in layer-by-layer engineered van der Waals ferroelectric tunnel junctions. **2022**,	0
69	Visualizing Giant Ferroelectric Gating Effects in Large-Scale WSe2/BiFeO3 Heterostructures.	0
68	Valley-polarized hyperbolic exciton polaritons in few-layer two-dimensional semiconductors at visible frequencies. **2022**, 106,	0
67	High-throughput analysis of tetragonal transition metal Xenes. **2022**, 24, 29406-29412	1
66	Photoelectric properties of pristine and niobium-doped tungsten disulfide layered crystals. **2023**, 135, 113310	0
65	Integration of photovoltaic and photogating effects in a WSe2/WS2/p-Si dual junction photodetector featuring high-sensitivity and fast-response.	1
64	Structural, electronic, and electrochemical studies of WS2 phases using density functional theory and machine learning. **2023**, 650, 414568	0
63	Optical properties of lateral heteromonolayer WSe2/MoSe2. **2021**,	0
62	Transient Superdiffusion of Energetic Carriers in Transition Metal Dichalcogenides Visualized by Ultrafast Pump-Probe Microscopy. **2022**, 2022,	0
61	Tailoring Exciton-Polariton Emission Lines From Wide-Ranging Monolayer Semiconductors with a Broadband Mie Resonator.	0
60	Optical gain spectrum and confinement factor of a monolayer semiconductor in an ultrahigh quality cavity.	0
59	Probing the interfacial coupling in ternary van der Waals heterostructures. **2022**, 6,	0
58	Impact of defects on the (3) optical nonlinearity of sputtered WSe2 thin films in the optical communication band. **2022**, 132, 243101	0
57	Enhanced Field-Effect Control of Single-Layer WS2 Optical Features by hBN Full Encapsulation. **2022**, 12, 4425	0

56	Two-dimensional Materials in the Display Industry: Status and Prospects. 2205520	0
55	Anisotropic exciton drift□diffusion in a monolayer WS2xSe(2-2x) alloy with a gradually changing composition.	0
54	Impact of Dispersion Force Schemes on Liquid Systems: Comparing Efficiency and Drawbacks for Well-Targeted Test Cases. **2022**, 27, 9034	0
53	Self-Powered, Broadband Photodetector Based on Two-Dimensional Tellurium-Silicon Heterojunction. **2022**, 7, 48383-48390	0
52	Tip-Enhanced Dark Exciton Nanoimaging and Local Strain Control in Monolayer WSe2.	1
51	Measuring the Bandgap of Ambipolar 2D Semiconductors using Multilayer Graphene Contact. 2200075	0
50	High Detectivity and Fast MoS2 Monolayer MSM Photodetector. **2022**, 4, 5739-5746	0
49	Role of Hydrogen in Suppressing Secondary Nucleation in Chemical Vapor-Deposited MoS2. **2022**, 4, 6133-6141	0
48	Time Dependent Exfoliation Study of MoS2 for its use as Cathode Material in High Performing Hybrid Supercapacitors.	0
47	A review of the synthesis, properties, and applications of 2D transition metal dichalcogenides and their heterostructures. **2023**, 127332	0
46	Integrating Graphene Enables Improved and Gate-Tunable Photovoltaic Effect in Van der Waals Heterojunction. 2202646	0
45	Ionic liquid passivated black phosphorus for stabilized compliant electronics.	0
44	Ion-gel-based light-emitting devices using transition metal dichalcogenides and hexagonal boron nitride heterostructures.	0
43	Orientation-Dependent Interaction between the Magnetic Plasmons in Gold Nanocups and the Excitons in WS2 Monolayer and Multilayer.	0
42	Recent progress on fabrication and flat-band physics in 2D transition metal dichalcogenides moir□ superlattices. **2023**, 44, 011901	0
41	Migration-Enhanced Metal□Organic Chemical Vapor Deposition of Wafer-Scale Fully Coalesced WS2 and WSe2 Monolayers.	0
40	Tailoring photoluminescence of WS2-microcavity coupling devices in broad visible range. **2023**,	0
39	Optical spectroscopy study of two-dimensional materials. **2023**, 305-335	0

38	High-Mobility Flexible Transistors with Low-Temperature Solution-Processed Tungsten Dichalcogenides.	0
37	Interface engineering in two-dimensional heterostructures towards novel emitters. **2023**, 44, 011001	0
36	Quantum Spin Hall States in 2D Monolayer WTe2/MoTe2 Lateral Heterojunctions for Topological Quantum Computation. **2023**, 6, 2020-2026	0
35	Atom-passivated GeC nanosheets for photocatalytic overall water splitting with high solar-to-hydrogen conversion efficiency. **2023**, 37, 102667	0
34	Narrowing the optical gap of CdPS3 single crystal via chemical intercalation using liquid ammonia method. **2023**, 363, 115116	0
33	Recent developments of lead-free halide-perovskite nanocrystals: Synthesis strategies, stability, challenges, and potential in optoelectronic applications. **2023**, 34, 101079	0
32	Tuning the surface electronic structure of WS2 with Zn- and Cu-phthalocyanine for improved hydrogen evolution reaction: Experimental and DFT investigation. **2023**, 39, 100499	0
31	Highly flexible and foldable broad band WSe2/CuO heterostructure photodetector. **2023**, 356, 114339	0
30	Gate-tunable self-driven photodetector based on asymmetric monolayer WSe2 channel. **2023**, 616, 156444	0
29	Thickness Determination of Ultrathin 2D Materials Empowered by Machine Learning Algorithms. **2023**, 17,	0
28	Thermal Stability and Sublimation of Two-Dimensional Co9Se8 Nanosheets for Ultrathin and Flexible Nanoelectronic Devices. **2023**, 6, 2421-2428	0
27	A Thrifty Liquid-Phase Exfoliation (LPE) of MoSe2 and WSe2 Nanosheets as Channel Materials for FET Application. **2023**, 52, 2819-2830	0
26	Coulomb-Zeeman-Stark problem in two dimensions. **2023**, 107,	0
25	Fast Fabrication of WS2/Bi2Se3 Heterostructures for High-Performance Photodetection.	0
24	Layer-engineered interlayer charge transfer in WSe2/WS2 heterostructures. **2023**, 56, 135102	0
23	A direction-sensitive photodetector based on the two-dimensional WSe2/MoSe2 lateral heterostructure with enhanced photoresponse. **2023**, 46, 106271	0
22	Flexible electronics based on one-dimensional inorganic semiconductor nanowires and two-dimensional transition metal dichalcogenides. **2023**, 108226	0
21	CVD growth of large-area monolayer WS2 film on sapphire through tuning substrate environment and its application for high-sensitive strain sensor. **2023**, 18,	0

20	Competition mechanism of exciton decay channels in the stacked multilayer tungsten sulfide. **2023**, 31, 9350	0
19	Controllable p-type doping of 2D MoS2via Sodium intercalation for optoelectronics. **2023**, 11, 3386-3394	0
18	A Simple Method to Produce an Aluminum Oxide-Passivated Tungsten Diselenide/n-Type Si Heterojunction Solar Cell with High Power Conversion Efficiency. **2023**, 2023, 1-11	0
17	Excellent Optoelectronic Properties and Low Contact Resistance of Graphene/MoS2 Heterostructure Optoelectronic Devices: First-Principles Calculation and Experimental Verification. **2023**, 5, 1676-1687	0
16	Soft Electronics for Health Monitoring Assisted by Machine Learning. **2023**, 15,	1
15	Epitaxial growth of borophene on substrates. **2023**, 100704	0
14	Integration of Self-Passivated Topological Electrodes for Advanced 2D Optoelectronic Devices. 2201571	0
13	A pre-time-zero spatiotemporal microscopy technique for the ultrasensitive determination of the thermal diffusivity of thin films. **2023**, 94, 034903	0
12	Highly Sensitive Phototransistors Based on Partially Suspended Monolayer WS2.	0
11	Strain-Dependent Band Splitting and Spin-Flip Dynamics in Monolayer WS2. **2023**, 23, 3070-3077	0
10	Large-Scale, Controllable Synthesis of Ultrathin Platinum Diselenide Ribbons for Efficient Electrocatalytic Hydrogen Evolution.	0
9	Engineering of Nanoscale Heterogeneous Transition Metal Dichalcogenide–Au Interfaces. **2023**, 23, 2792-2799	0
8	Valley-optical absorption in planar transition metal dichalcogenide superlattices. **2023**, 13,	0
7	Excitonic effects in time-dependent density functional theory from zeros of the density response. **2023**, 107,	0
6	Tuning of Interlayer Interaction in MoS2–WS2 van der Waals Heterostructures Using Hydrostatic Pressure.	0
5	Nanometer-Scale Structure Property of WS2 Flakes by Nonlinear Optical Microscopy: Implications for Optical Frequency Converted Signals.	0
4	Coherent Second Harmonic Generation Enhanced by Coherent Plasmon–Exciton Coupling in Plasmonic Nanocavities.	0
3	Understanding Dopant–Host Interactions on Electronic Structures and Optical Properties in Ce-Doped WS 2 Monolayers.	0

2	Excitonic absorption signatures of twisted bilayer WSe2 by electron energy-loss spectroscopy. **2023**, 107,	0
1	The role of milling conditions on an ultrasonic-assisted ball milling exfoliation approach for fabrication of few layer MoS2 and WS2 large size sheets.	0