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and MoSe2 Transistors.

1963	Wafer-Scale and Wrinkle-Free Epitaxial Growth of Single-Orientated Multilayer Hexagonal Boron Nitride on Sapphire.	
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1961	Gate-Defined Quantum Confinement in InSe-Based van der Waals Heterostructures.	
1960		
1959	One-Dimensional Edge Contacts to a Monolayer Semiconductor.	
1958	Picosecond Competing Dynamics of Apparent Semiconducting-Metallic Phase Transition in the Topological Insulator Bi2Se3.	
1957	Effect of surface oxidation on transport properties in graphenethetal junctions. 2014 , 53, 05FD07	1
1956	Graphene on nanoscale gratings for the generation of terahertz Smith-Purcell radiation. 2014 , 105, 241102	20
1955	Inelastic carrier lifetime in a coupled graphene/electron-phonon system: Role of plasmon-phonon coupling. 2014 , 90,	9
1954	A Klein-tunneling transistor with ballistic graphene. 2014 , 1, 011006	42
1953	Graphene as a protective coating and superior lubricant for electrical contacts. 2014 , 105, 231907	62
1952	Two-dimensional flexible nanoelectronics. 2014 , 5, 5678	1201
1951	Metalflanocarbon contacts. 2014 , 29, 054006	43
1950	Advancing CMOS with carbon electronics. 2014 ,	1
1949	Carbon nanotube quantum dots on hexagonal boron nitride. 2014 , 105, 023111	12
1948	Thickness determination of few-layer hexagonal boron nitride films by scanning electron microscopy and Auger electron spectroscopy. 2014 , 2, 092502	20
1947	Microscopic origin of low frequency noise in MoS2 field-effect transistors. 2014 , 2, 092515	51
1946	Large-scale fabrication of BN tunnel barriers for graphene spintronics. 2014 , 116, 074306	40

1945	Fast pick up technique for high quality heterostructures of bilayer graphene and hexagonal boron nitride. 2014 , 105, 013101	208
1944	Random Strain Fluctuations as Dominant Disorder Source for High-Quality On-Substrate Graphene Devices. 2014 , 4,	77
1943	Dibromocarbene Functionalization of Boron Nitride Nanosheets: Toward Band Gap Manipulation and Nanocomposite Applications. 2014 , 26, 7039-7050	57
1942	Role of chemical termination in edge contact to graphene. 2014 , 2, 056105	19
1941	Reduction of metal contact resistance of graphene devices via CO2 cluster cleaning. 2014 , 104, 223110	27
1940	Stable boron nitride diamondoids as nanoscale materials. 2014 , 25, 365601	7
1939	Step-edge-induced resistance anisotropy in quasi-free-standing bilayer chemical vapor deposition graphene on SiC. 2014 , 116, 123708	25
1938	From surface to volume plasmons in hyperbolic metamaterials: General existence conditions for bulk high-k waves in metal-dielectric and graphene-dielectric multilayers. 2014 , 90,	41
1937	Design and synthesis of nitrogen-rich carbonaceous two-dimensional polymer. 2014 , 4, 59102-59105	11
1936	Tunable Spontaneous Emission From Layered Graphene/Dielectric Tunnel Junctions. 2014 , 50, 307-313	9
1935	Electronic properties of graphene encapsulated with different two-dimensional atomic crystals. 2014 , 14, 3270-6	345
1934	Multifunctional graphene optical modulator and photodetector integrated on silicon waveguides. 2014 , 14, 2741-6	170
1933	Pattern recognition approach to quantify the atomic structure of graphene. 2014 , 74, 363-366	4
1932	Electronic transport in graphene-based heterostructures. 2014 , 104, 183504	58
1931	Sublattice localized electronic states in atomically resolved graphene-Pt(111) edge-boundaries. 2014 , 8, 3590-6	17
1930	Understanding the electrical impact of edge contacts in few-layer graphene. 2014 , 8, 3584-9	42
1929	Low-contact-resistance graphene devices with nickel-etched-graphene contacts. 2014 , 8, 994-1001	143
1928	Realistic metal-graphene contact structures. 2014 , 8, 642-9	86

1927	Large tunable linear magnetoresistance in gold nanoparticle decorated graphene. 2014, 105, 143103	10
1926	Heterostructures based on inorganic and organic van der Waals systems. 2014 , 2, 092511	52
1925	Low-temperature compatible electrostatic comb-drive actuators with integrated graphene. 2014,	2
1924	Superlubricity of two-dimensional fluorographene/MoS2 heterostructure: a first-principles study. 2014 , 25, 385701	75
1923	Electrical breakdown of multilayer MoS2 field-effect transistors with thickness-dependent mobility. 2014 , 6, 12383-90	63
1922	A first-principle investigation of double-side CVD catalyst metal/graphene contacts. 2014 , 16, 12327-31	2
1921	Giant spin Hall effect in graphene grown by chemical vapour deposition. 2014 , 5, 4748	143
1920	Controlling spin relaxation in hexagonal BN-encapsulated graphene with a transverse electric field. 2014 , 113, 086602	155
1919	Thin partially reduced oxide-graphene films: structural, optical, and electrical properties. 2014, 9, 363-368	23
1918	Electrically continuous graphene from single crystal copper verified by terahertz conductance spectroscopy and micro four-point probe. 2014 , 14, 6348-55	59
1917	Nanosecond spin lifetimes in single- and few-layer graphene-hBN heterostructures at room temperature. 2014 , 14, 6050-5	127
1916	Aqueous gating of van der Waals materials on bilayer nanopaper. 2014 , 8, 10606-12	30
1915	Superior characteristics of graphene field effect transistor enclosed by chemical-vapor-deposition-grown hexagonal boron nitride. 2014 , 2, 7776-7784	17
1914	BEOL Scaling Limits and Next Generation Technology Prospects. 2014,	7
1913	Contact properties to CVD-graphene on GaAs substrates for optoelectronic applications. 2014 , 25, 335707	16
1912	Graphene on hexagonal boron nitride. 2014 , 26, 303201	61
1911	Photovoltaic effect in few-layer black phosphorus PN junctions defined by local electrostatic gating. 2014 , 5, 4651	555
1910	Ultrasensitive terahertz/infrared waveguide modulators based on multilayer graphene metamaterials. 2014 , 8, 916-923	37

1909	Hall Effect Gyrators and Circulators. 2014 , 4,	36
1908	Detecting topological currents in graphene superlattices. <i>Science</i> , 2014 , 346, 448-51 33.3	481
1907	Competing ultrafast energy relaxation pathways in photoexcited graphene. 2014 , 14, 5839-45	71
1906	Plasmon losses due to electron-phonon scattering: The case of graphene encapsulated in hexagonal boron nitride. 2014 , 90,	68
1905	Atomically thin p-n junctions with van der Waals heterointerfaces. 2014 , 9, 676-81	1598
1904	Limitations to carrier mobility and phase-coherent transport in bilayer graphene. 2014 , 113, 126801	43
1903	Fabrication of ballistic suspended graphene with local-gating. 2014 , 79, 486-492	20
1902	Electronics based on two-dimensional materials. 2014 , 9, 768-79	1953
1901	Physical adsorption and charge transfer of molecular Br2 on graphene. 2014 , 8, 2943-50	54
1900	Carbon nanotubes and graphene towards soft electronics. 2014 , 1, 15	81
1899	Fast and broadband photoresponse of few-layer black phosphorus field-effect transistors. 2014 , 14, 3347-52	1305
1898	Bilayer graphene. Tunable fractional quantum Hall phases in bilayer graphene. <i>Science</i> , 2014 , 345, 61-4 33.3	113
1897	Measurement of collective dynamical mass of Dirac fermions in graphene. 2014 , 9, 594-9	45
1896	Fabry-PEot interference in gapped bilayer graphene with broken anti-Klein tunneling. 2014 , 113, 116601	63
1895	What does annealing do to metal-graphene contacts?. 2014 , 14, 3840-7	92
1894	Characterization of bulk hexagonal boron nitride single crystals grown by the metal flux technique. 2014 , 403, 110-113	24
1893	Achieving clean epitaxial graphene surfaces suitable for device applications by improved lithographic process. 2014 , 104, 224102	25
1892	Raman spectroscopy on mechanically exfoliated pristine graphene ribbons. 2014 , 251, 2551-2555	1

(2015-2014)

1891	Impact of thermal annealing on graphene devices encapsulated in hexagonal boron nitride. 2014 , 251, 2545-2550	12
1890	Moir Buperlattice effects in graphene/boron-nitride van der Waals heterostructures. 2015 , 527, 359-376	57
1889	Nanosecond spin lifetimes in bottom-up fabricated bilayer graphene spin-valves with atomic layer deposited AlO spin injection and detection barriers. 2015 , 252, 2395-2400	3
1888	Stability and magnetization of free-standing and graphene-embedded iron membranes. 2015 , 91,	15
1887	Magneto-optical response of graphene: Probing substrate interactions. 2015 , 92,	14
1886	Nonlocal transport and the hydrodynamic shear viscosity in graphene. 2015 , 92,	139
1885	Magnetoelectronic properties of multilayer black phosphorus. 2015 , 92,	34
1884	Two-phonon scattering in graphene in the quantum Hall regime. 2015 , 92,	2
1883	Local Spectroscopic Characterization of Spin and Layer Polarization in WSe_{2}. 2015 , 115, 136803	36
1882	Hybrid stacking structure of electroplated copper onto graphene for future interconnect applications. 2015 , 107, 093105	2
1881	Suppression of 1/f noise in near-ballistic h-BN-graphene-h-BN heterostructure field-effect transistors. 2015 , 107, 023106	74
1880	Tunable mid-infrared coherent perfect absorption in a graphene meta-surface. 2015 , 5, 13956	104
1879	Vibrational Properties of h-BN and h-BN-Graphene Heterostructures Probed by Inelastic Electron Tunneling Spectroscopy. 2015 , 5, 16642	52
1878	Substrate wettability requirement for the direct transfer of graphene. 2015 , 107, 143109	8
1877	Point contacts in encapsulated graphene. 2015 , 107, 183108	4
1876	Magnetic epoxy nanocomposites with superparamagnetic MnFe2O4 nanoparticles. 2015 , 5, 097183	7
1875	Imaging ballistic carrier trajectories in graphene using scanning gate microscopy. 2015 , 107, 243102	23
1874	Comparison of mobility extraction methods based on field-effect measurements for graphene. 2015 , 5, 057136	45

1873	Stacked 3D RRAM Array with Graphene/CNT as Edge Electrodes. 2015 , 5, 13785	28
1872	Analytical theory of the space-charge region of lateral p-n junctions in nanofilms. 2015 , 118, 034503	19
1871	Transition metal contacts to graphene. 2015 , 107, 153104	31
1870	Large-signal model of the bilayer graphene field-effect transistor targeting radio-frequency applications: Theory versus experiment. 2015 , 118, 244501	2
1869	Imaging interfacial electrical transport in graphene-MoS heterostructures with electron-beam-induced-currents. 2015 , 107, 223104	17
1868	Multifunctional semiconductor micro-Hall devices for magnetic, electric, and photo-detection. 2015 , 107, 233504	4
1867	3D WS2 Nanolayers@Heteroatom-Doped Graphene Films as Hydrogen Evolution Catalyst Electrodes. 2015 , 27, 4234-41	350
1866	Graphen auf dem Weg zur Anwendung. 2015 , 46, 269-270	
1865	Functionalized Graphene Superlattice as a Single-Sheet Solar Cell. 2015 , 25, 5199-5205	5
1864	Controlled Synthesis of Organic/Inorganic van der Waals Solid for Tunable Light-Matter Interactions. 2015 , 27, 7800-8	94
1863	High-speed electro-optic modulator integrated with graphene-boron nitride heterostructure and photonic crystal nanocavity. 2015 , 15, 2001-5	111
1862	Development of high frequency and wide bandwidth Johnson noise thermometry. 2015 , 106, 023121	23
1861	Atomic layer deposition of Y2O3 on h-BN for a gate stack in graphene FETs. 2015 , 26, 175708	12
1860	Efficient photoinduced charge accumulation in reduced graphene oxide coupled with titania nanosheets to show highly enhanced and persistent conductance. 2015 , 7, 11436-43	19
1859	Visible-Light-Induced Self-Cleaning Property of Bi2Ti2O7-TiO2 Composite Nanowire Arrays. 2015 , 31, 5962-9	36
1858	Ultrasensitive graphene far-infrared power detectors. 2015 , 27, 164203	9
1857	Plasmon-Induced Transparency in Coupled Graphene Gratings. 2015 , 10, 1557-1564	11
1856	Charge Transfer Excitons at van der Waals Interfaces. 2015 , 137, 8313-20	201

(2015-2015)

1855	Schottky barrier transistor and subgap impurity states. 2015 , 106, 152104	27
1854	Photoinduced nonlinear mixing of terahertz dipole resonances in graphene metadevice. 2015 ,	
1853	Size and edge roughness effects on thermal conductivity of pristine antimonene allotropes. 2015 , 641, 169-172	46
1852	Vertical field effect tunneling transistor based on graphene-ultrathin Si nanomembrane heterostructures. 2015 , 2, 044006	8
1851	WSeLight-Emitting Tunneling Transistors with Enhanced Brightness at Room Temperature. 2015 , 15, 8223-8	183
1850	Evidence for a fractional fractal quantum Hall effect in graphene superlattices. <i>Science</i> , 2015 , 350, 1231- 4 3.3	107
1849	Bandgap-tunable lateral and vertical heterostructures based on monolayer Mo1-x W x S2 alloys. 2015 , 8 , $3261-3271$	46
1848	Chemical Vapor Deposition Growth of Graphene and Related Materials. 2015 , 84, 121013	18
1847	Graphene Nanomesh Formation by Fluorine Intercalation. 2015 , 119, 29193-29200	15
1846	Composite fermions and broken symmetries in graphene. 2015 , 6, 5838	61
1845	Gate tunable quantum oscillations in air-stable and high mobility few-layer phosphorene heterostructures. 2015 , 2, 011001	172
1844	Low B field magneto-phonon resonances in single-layer and bilayer graphene. 2015 , 15, 1547-52	24
1843	Electronic transport of encapsulated graphene and WSe2 devices fabricated by pick-up of prepatterned hBN. 2015 , 15, 1898-903	98
1842	Conductance oscillations induced by ballistic snake states in a graphene heterojunction. 2015 , 6, 6093	66
1841	Bilayer Graphene-Hexagonal Boron Nitride Heterostructure Negative Differential Resistance Interlayer Tunnel FET. 2015 , 36, 405-407	46
1840	Raman characterization of defects and dopants in graphene. 2015 , 27, 083002	339
1839	Light-emitting diodes by band-structure engineering in van der Waals heterostructures. 2015 , 14, 301-6	1116
1838	Scalable tight-binding model for graphene. 2015 , 114, 036601	58

1837	MoS2/Graphene Composite Anodes with Enhanced Performance for Sodium-Ion Batteries: The Role of the Two-Dimensional Heterointerface. 2015 , 25, 1393-1403	577
1836	Formation of a nitride interface in epitaxial graphene on SiC (0001). 2015 , 91,	11
1835	Thermodynamic picture of ultrafast charge transport in graphene. 2015 , 6, 7655	100
1834	Ultrahigh-mobility graphene devices from chemical vapor deposition on reusable copper. 2015 , 1, e1500222	491
1833	Ballistic Josephson junctions in edge-contacted graphene. 2015 , 10, 761-4	151
1832	Spin and charge transport in graphene-based spin transport devices with Co/MgO spin injection and spin detection electrodes. 2015 , 210, 42-55	9
1831	Antenna Enhanced Graphene THz Emitter and Detector. 2015 , 15, 5295-301	107
1830	Recent developments in black phosphorus transistors. 2015 , 3, 8760-8775	128
1829	Quality Heterostructures from Two-Dimensional Crystals Unstable in Air by Their Assembly in Inert Atmosphere. 2015 , 15, 4914-21	289
1828	Dual-gated BN-sandwiched multilayer graphene field-effect transistor fabricated by stamping transfer method and self-aligned contact. 2015 , 15, 1184-1187	5
1827	Highly Stable, Dual-Gated MoS2 Transistors Encapsulated by Hexagonal Boron Nitride with Gate-Controllable Contact, Resistance, and Threshold Voltage. 2015 , 9, 7019-26	256
1826	Synthesis, properties and applications of 2D non-graphene materials. 2015 , 26, 292001	82
1825	Toward Ferroelectric Control of Monolayer MoS2. 2015 , 15, 3364-9	52
1824	Multi-terminal transport measurements of MoS2 using a van der Waals heterostructure device platform. 2015 , 10, 534-40	868
1823	Photocurrent generation with two-dimensional van der Waals semiconductors. 2015 , 44, 3691-718	608
1822	Topological valley transport at bilayer graphene domain walls. 2015 , 520, 650-5	364
1821	Vertical electron transport in van der Waals heterostructures with graphene layers. 2015 , 117, 154504	7
1820	Toward barrier free contact to molybdenum disulfide using graphene electrodes. 2015 , 15, 3030-4	286

(2015-2015)

1819	Freestanding van der Waals heterostructures of graphene and transition metal dichalcogenides. 2015 , 9, 4882-90	132
1818	A monocrystal graphene domain biosensor array with differential output for real-time monitoring of glucose and normal saline. 2015 , 7, 7867-72	7
1817	Carrier transport at the metal-MoS2 interface. 2015 , 7, 9222-8	71
1816	van der Waals epitaxial growth of atomically thin Bißelænd thickness-dependent topological phase transition. 2015 , 15, 2645-51	45
1815	In situ synthesis of a large area boron nitride/graphene monolayer/boron nitride film by chemical vapor deposition. 2015 , 7, 7574-9	48
1814	Vertical 2D Heterostructures. 2015 , 45, 85-109	127
1813	Realization of low contact resistance close to theoretical limit in graphene transistors. 2015 , 8, 1669-1679	65
1812	Generation of photovoltage in graphene on a femtosecond timescale through efficient carrier heating. 2015 , 10, 437-43	159
1811	Nonlocal Response and Anamorphosis: The Case of Few-Layer Black Phosphorus. 2015 , 15, 6991-5	36
1810	Strong interface-induced spin-orbit interaction in graphene on WS2. 2015 , 6, 8339	233
1809	Gate-tunable topological valley transport in bilayer graphene. 2015 , 11, 1027-1031	226
1808	Raman spectroscopy as probe of nanometre-scale strain variations in graphene. 2015 , 6, 8429	253
1807	Superior Current Carrying Capacity of Boron Nitride Encapsulated Carbon Nanotubes with Zero-Dimensional Contacts. 2015 , 15, 6836-40	20
1806	Measurement of Lateral and Interfacial Thermal Conductivity of Single- and Bilayer MoS2 and MoSe2 Using Refined Optothermal Raman Technique. 2015 , 7, 25923-9	195
1805	Physical Insights on the Ambiguous Metal@raphene Interface and Proposal for Improved Contact Resistance. 2015 , 62, 4139-4147	13
1804	Evidence for Defect-Mediated Tunneling in Hexagonal Boron Nitride-Based Junctions. 2015 , 15, 7329-33	62
1803	Graphene-Modified Ru Nanocatalyst for Low-Temperature Hydrogenation of Carbonyl Groups. 2015 , 5, 7379-7384	81
1802	Tunable Fermi surface topology and Lifshitz transition in bilayer graphene. 2015 , 210, 19-31	18

1801	Ultra-sensitive Hall sensors based on graphene encapsulated in hexagonal boron nitride. 2015 , 106, 193501	113
1800	Contact resistance improvement by the modulation of peripheral length to area ratio of graphene contact pattern. 2015 , 106, 213107	10
1799	Graphene on graphene antidot lattices: Electronic and transport properties. 2015, 91,	13
1798	Growth and characterization of sidewall graphene nanoribbons. 2015 , 106, 043109	26
1797	Quantum Hall conductance of graphene combined with charge-trap memory operation. 2015 , 26, 345202	4
1796	Localized charge carriers in graphene nanodevices. 2015 , 2, 031301	62
1795	Properties of Self-Aligned Short-Channel Graphene Field-Effect Transistors Based on Boron-Nitride-Dielectric Encapsulation and Edge Contacts. 2015 , 62, 4322-4326	15
1794	Black Phosphorus: Narrow Gap, Wide Applications. 2015 , 6, 4280-91	515
1793	Electrical Contact Analysis of Multilayer MoS2 Transistor With Molybdenum Source/Drain Electrodes. 2015 , 36, 1215-1218	20
1792	High-quality sandwiched black phosphorus heterostructure and its quantum oscillations. 2015 , 6, 7315	369
1791	Direct Growth of Single- and Few-Layer MoS2 on h-BN with Preferred Relative Rotation Angles. 2015 , 15, 6324-31	152
1790	Flexible Graphene Field-Effect Transistors Encapsulated in Hexagonal Boron Nitride. 2015 , 9, 8953-9	87
1789	Ultrafast Graphene Photodetector for On-chip Broadband Auto-correlator. 2015,	
1788	High-Mobility Holes in Dual-Gated WSe2 Field-Effect Transistors. 2015 , 9, 10402-10	180
1787	Observation of negative refraction of Dirac fermions in graphene. 2015 , 11, 925-929	138
1786	High-Responsivity Graphene-Boron Nitride Photodetector and Autocorrelator in a Silicon Photonic Integrated Circuit. 2015 , 15, 7288-93	140
1785	Construction of van der Waals magnetic tunnel junction using ferromagnetic layered dichalcogenide. 2015 , 107, 103107	34
1784	Graphene-hexagonal boron nitride resonant tunneling diodes as high-frequency oscillators. 2015 , 107, 103105	48

(2015-2015)

1783	Fully dry PMMA transfer of graphene on h -BN using a heating/cooling system. 2015 , 2, 041002	85
1782	Structure and control of charge density waves in two-dimensional 1T-TaS2. 2015 , 112, 15054-9	151
1781	Ballistic Transport in Graphene Antidot Lattices. 2015 , 15, 8402-6	56
1780	Nanoscale measurements of unoccupied band dispersion in few-layer graphene. 2015 , 6, 8926	35
1779	Electrical contacts to two-dimensional semiconductors. 2015 , 14, 1195-205	980
1778	Graphene: Plasmons in moir[superlattices. 2015 , 14, 1187-8	11
1777	Spintronics: Turbulent power. 2015 , 14, 1188	4
1776	Low resistance metal contacts to MoS2 devices with nickel-etched-graphene electrodes. 2015 , 9, 869-77	154
1775	Black phosphorus nanoelectromechanical resonators vibrating at very high frequencies. 2015 , 7, 877-84	105
1774	Synthesis of lateral heterostructures of semiconducting atomic layers. 2015 , 15, 410-5	242
1773	Highly confined low-loss plasmons in graphene-boron nitride heterostructures. 2015 , 14, 421-5	681
1772	Gate-tunable resonant tunneling in double bilayer graphene heterostructures. 2015 , 15, 428-33	136
1771	From two-dimensional materials to heterostructures. 2015 , 90, 21-45	108
1770	Embracing structural nonidealities and asymmetries in two-dimensional nanomechanical resonators. 2014 , 4, 3919	29
1769	A facile process for soak-and-peel delamination of CVD graphene from substrates using water. 2014 , 4, 3882	64
1768	Enhanced Vertical Charge Transport in a Semiconducting P3HT Thin Film on Single Layer Graphene. 2015 , 25, 664-670	124
1767	Edge contacts of graphene formed by using a controlled plasma treatment. 2015 , 7, 825-31	44
1766	Electronic transport in heterostructures of chemical vapor deposited graphene and hexagonal boron nitride. 2015 , 11, 1402-8	11

1765	Science and technology roadmap for graphene, related two-dimensional crystals, and hybrid systems. 2015 , 7, 4598-810	2015
1764	Photonic Structure-Integrated Two-Dimensional Material Optoelectronics. 2016 , 5, 93	12
1763	Inhomogeneous longitudinal distribution of Ni atoms on graphene induced by layer-number-dependent internal diffusion. 2016 , 109, 111604	1
1762	Investigation of the Band Structure of Graphene-Based Plasmonic Photonic Crystals. 2016, 6,	8
1761	Two-Dimensional Semiconductor Optoelectronics Based on van der Waals Heterostructures. 2016 , 6,	79
1760	Mechanically robust 39 GHz cut-off frequency graphene field effect transistors on flexible substrates. 2016 , 8, 14097-103	33
1759	Encapsulated graphene-based Hall sensors on foil with increased sensitivity. 2016 , 253, 2316-2320	13
1758	Charge Inversion and Topological Phase Transition at a Twist Angle Induced van Hove Singularity of Bilayer Graphene. 2016 , 16, 5053-9	69
1757	Heterostructured hBN-BP-hBN Nanodetectors at Terahertz Frequencies. 2016, 28, 7390-6	72
1756	Boron Nitride Nanostructures: Fabrication, Functionalization and Applications. 2016 , 12, 2942-68	135
1755	A charge-density-wave oscillator based on an integrated tantalum disulfide-boron nitride-graphene device operating at room temperature. 2016 , 11, 845-850	123
1754	Parallel Stitching of 2D Materials. 2016 , 28, 2322-9	161
1753	Mesostructured HfxAlyO2 Thin Films as Reliable and Robust Gate Dielectrics with Tunable Dielectric Constants for High-Performance Graphene-Based Transistors. 2016 , 10, 6659-66	15
1752	Thermal conduction across the one-dimensional interface between a MoS2 monolayer and metal electrode. 2016 , 9, 2372-2383	27
1751	In search of quantum-limited contact resistance: understanding the intrinsic and extrinsic effects on the graphenethetal interface. 2016 , 3, 025013	10
1750	Photoinduced Nonlinear Mixing of Terahertz Dipole Resonances in Graphene Metadevices. 2016 , 28, 1495-500	8
1749	High-Performance Phototransistor of Epitaxial PbS Nanoplate-Graphene Heterostructure with Edge Contact. 2016 , 28, 6497-503	40
1748	Characterization of Graphene TFET for Subterahertz Oscillator. 2016 , 63, 2956-2962	2

(2016-2016)

1747	Signatures of Phonon and Defect-Assisted Tunneling in Planar Metal-Hexagonal Boron Nitride-Graphene Junctions. 2016 , 16, 7982-7987	38
1746	Switchable friction enabled by nanoscale self-assembly on graphene. 2016 , 7, 10745	40
1745	Broken-Symmetry Quantum Hall States in Twisted Bilayer Graphene. 2016 , 6, 38068	8
1744	Ballistic Graphene Josephson Junctions from the Short to the Long Junction Regimes. 2016 , 117, 237002	50
1743	Gate-tunable rectification inversion and photovoltaic detection in graphene/WSe2 heterostructures. 2016 , 108, 223501	39
1742	Size quantization of Dirac fermions in graphene constrictions. 2016 , 7, 11528	56
1741	Quantifying electronic band interactions in van der Waals materials using angle-resolved reflected-electron spectroscopy. 2016 , 7, 13621	23
1740	A possible high-mobility signal in bulk MoTe2: Temperature independent weak phonon decay. 2016 , 6, 115207	6
1739	Comparison of magnetoresistances of triangular and rectangular ballistic graphene npn junctions. 2016 , 55, 100305	
1738	Current crowding mediated large contact noise in graphene field-effect transistors. 2016 , 7, 13703	42
1737	Conductance fluctuations in high mobility monolayer graphene: Nonergodicity, lack of determinism and chaotic behavior. 2016 , 6, 33118	3
1736	Quantum Hall effect in epitaxial graphene with permanent magnets. 2016 , 6, 38393	9
1735	Graphene ballistic nano-rectifier with very high responsivity. 2016 , 7, 11670	47
1734	Graphene-based Yagi-Uda antenna with reconfigurable radiation patterns. 2016 , 6, 065308	34
1733	Ultraviolet-Ozone Treatment for Effectively Removing Adhesive Residue on Graphene. 2016 , 11, 1650141	7
1732	Nanosecond spin relaxation times in single layer graphene spin valves with hexagonal boron nitride tunnel barriers. 2016 , 109, 122411	33
1731	The impact of electrical contacts and contact-induced ultralow noise amplitudes in layered transistors. 2016 , 3, 045015	3
1730	Tunable Ultrafast Thermal Relaxation in Graphene Measured by Continuous-Wave Photomixing. 2016 , 117, 257401	11

1729	Molecular beam epitaxy growth of monolayer niobium diselenide flakes. 2016 , 109, 133101	23
1728	Reverse degradation of nickel graphene junction by hydrogen annealing. 2016 , 6, 025301	4
1727	Signatures of evanescent transport in ballistic suspended graphene-superconductor junctions. 2016 , 6, 24274	11
1726	High performance and transparent multilayer MoS2 transistors: Tuning Schottky barrier characteristics. 2016 , 6, 055026	11
1725	Nonequilibrium mesoscopic conductance fluctuations as the origin of 1/f noise in epitaxial graphene. 2016 , 94,	10
1724	Integration of 2D materials on a silicon photonics platform for optoelectronics applications. 2016 , 6, 1205-1218	55
1723	Robust fractional quantum Hall effect in the N=2 Landau level in bilayer graphene. 2016 , 7, 13908	17
1722	Making one-dimensional electrical contacts to molybdenum disulfide-based heterostructures through plasma etching. 2016 , 213, 1358-1364	22
1721	Electrical and Thermoelectric Transport by Variable Range Hopping in Thin Black Phosphorus Devices. 2016 , 16, 3969-75	57
1720	Spin injection into multilayer graphene from highly spin-polarized Co2FeSi Heusler alloy. 2016 , 9, 063006	13
1719	Blue Phosphorene/MS2 (M = Nb, Ta) Heterostructures As Promising Flexible Anodes for Lithium-Ion Batteries. 2016 , 8, 13449-57	134
1718	Van der Waals stacked 2D layered materials for optoelectronics. 2016 , 3, 022001	161
1717	Supercurrent in the quantum Hall regime. <i>Science</i> , 2016 , 352, 966-9	116
1716	Spatial Control of Laser-Induced Doping Profiles in Graphene on Hexagonal Boron Nitride. 2016 , 8, 9377-83	16
1715	Graphene nano-heterostructures for quantum devices. 2016 , 19, 375-381	11
1714	Fundamental and Applied Nano-Electromagnetics. 2016,	2
1713	Patterning Superatom Dopants on Transition Metal Dichalcogenides. 2016 , 16, 3385-9	44
1712	Graphene-Enhanced Metamaterials for THz Applications. 2016 , 145-169	1

1711	Contacts between Two- and Three-Dimensional Materials: Ohmic, Schottky, and p-n Heterojunctions. 2016 , 10, 4895-919		257
1710	Enhancing graphenethetal contact using graphene square flake array sandwich structure. 2016 , 6, 46244-4	1624	18;
1709	Reduced crystallinity and enhanced charge transport by melt annealing of an organic semiconductor on single layer graphene. 2016 , 4, 4143-4149		14
1708	Black Phosphorus-Based Nanodevices. 2016 , 95, 279-303		1
1707	Functionalized hexagonal boron nitride nanomaterials: emerging properties and applications. 2016 , 45, 3989-4012		657
1706	Large-area layer-by-layer controlled and fully bernal stacked synthesis of graphene. 2016 , 105, 205-213		14
1705	Atomically-thin layered films for device applications based upon 2D TMDC materials. 2016 , 616, 482-501		78
1704	Superlattice-Induced Insulating States and Valley-Protected Orbits in Twisted Bilayer Graphene. 2016 , 117, 116804		218
1703	Graphene Quantum Dots. 2016 , 29-65		
1702	Two-dimensional materials for electronic, photonic, spintronic and sensing applications. 2016 ,		1
1701	Ballistic miniband conduction in a graphene superlattice. <i>Science</i> , 2016 , 353, 1526-1529	3.3	87
1700	Unexpected rewards induce dopamine-dependent positive emotion-like state changes in bumblebees. <i>Science</i> , 2016 , 353, 1529-1531	3.3	85
1699	Electron optics with p-n junctions in ballistic graphene. <i>Science</i> , 2016 , 353, 1522-1525	3.3	189
1698	Comparative study of single and multi domain CVD graphene using large-area Raman mapping and electrical transport characterization. 2016 , 10, 807-811		8
1697	Scaling approach to tight-binding transport in realistic graphene devices: The case of transverse magnetic focusing. 2016 , 94,		14
1696	Tuning the valley and chiral quantum state of Dirac electrons in van der Waals heterostructures. Science, 2016 , 353, 575-9	3.3	63
1695	Tunable photoresponse with small drain voltage in few-layer graphene WSe2 heterostructures. 2016 , 380, 2575-2579		3
1694	2D materials and van der Waals heterostructures. <i>Science</i> , 2016 , 353, aac9439	3.3	3469

1693	Graphene-Enabled Heterostructures: Role in Future-Generation Carbon Electronics. 2016, 441-452	1
1692	Graphene-based tunable terahertz plasmon-induced transparency metamaterial. 2016 , 8, 15273-80	116
1691	Magnetic edge states and magnetotransport in graphene antidot barriers. 2016 , 94,	7
1690	Morphology-controllable synthesis and thermal decomposition of Ag and Ni oxalate for Ag-Ni alloy electrical contact materials. 2016 , 108, 640-647	21
1689	Metal Contacts to Graphene. 2016 , 53-78	1
1688	Graphene-stabilized lipid monolayer heterostructures: a novel biomembrane superstructure. 2016 , 8, 18646-18653	15
1687	Synthesis, properties and applications of 2D layered MX (M = Ga, In; X = S, Se, Te) materials. 2016 , 8, 16802-16	58 18 0
1686	Alloyed 2D Metal-Semiconductor Heterojunctions: Origin of Interface States Reduction and Schottky Barrier Lowering. 2016 , 16, 5928-33	51
1685	Rashba Interaction and Local Magnetic Moments in a Graphene-BN Heterostructure Intercalated with Au. 2016 , 117, 076603	7
1684	Controllable waveguide via dielectric cylinder covered with graphene: Tunable entanglement. 2016 , 115, 14002	11
1683	Multi-layer graphene interconnect. 2016 ,	
1682	Efficient plasmonic emission by the quantum Brenkov effect from hot carriers in graphene. 2016 , 7, ncomms11880	51
1681	Multiple hot-carrier collection in photo-excited graphene Moir uperlattices. 2016 , 2, e1600002	28
1680	The hot pick-up technique for batch assembly of van der Waals heterostructures. 2016 , 7, 11894	289
1679	Near-field photocurrent nanoscopy on bare and encapsulated graphene. 2016 , 7, 10783	64
1678	High-ISolid-Gate Transistor Configured Graphene Biosensor with Fully Integrated Structure and Enhanced Sensitivity. 2016 , 26, 7668-7678	36
1677	Line shape of the Raman 2D peak of graphene in van der Waals heterostructures. 2016 , 253, 2326-2330	9
1676	Valley-symmetry-preserved transport in ballistic graphene with gate-defined carrier guiding. 2016 , 12, 1022-1026	43

Negative compressibility in graphene-terminated black phosphorus heterostructures. 2016 , 93,	7
$_{1674}$ Transport in inhomogeneous quantum critical fluids and in the Dirac fluid in graphene. 2016 , 93,	115
Spin transport in fully hexagonal boron nitride encapsulated graphene. 2016 , 93,	37
Interplay between nanometer-scale strain variations and externally applied strain in graphene. 2016 , 93,	8
Dielectric function and plasmons in graphene: A self-consistent-field calculation within a Markovian master equation formalism. 2016 , 93,	16
Magnetic field oscillations of the critical current in long ballistic graphene Josephson junctions. 2016 , 93,	9
One-dimensional carbon nanostructures for terahertz electron-beam radiation. 2016 , 93,	2
Effective gating and tunable magnetic proximity effects in two-dimensional heterostructures. 2016 , 93,	66
Enhanced Thermoelectric Power in Graphene: Violation of the Mott Relation by Inelastic Scattering. 2016 , 116, 136802	109
First-principles method for electron-phonon coupling and electron mobility: Applications to two-dimensional materials. 2016 , 93,	144
Sound waves and resonances in electron-hole plasma. 2016 , 93,	16
Eighty-Eight Percent Directional Guiding of Spin Currents with 90 th Relaxation Length in Bilayer Graphene Using Carrier Drift. 2016 , 16, 4825-30	43
1663 Imprinting of Local Metallic States into VO2 with Ultraviolet Light. 2016 , 26, 6612-6618	33
Effects of Electrode Layer Band Structure on the Performance of Multilayer Graphene-hBN-Graphene Interlayer Tunnel Field Effect Transistors. 2016 , 16, 4975-81	24
1661 Giant plasmon instability in a dual-grating-gate graphene field-effect transistor. 2016 , 93,	26
1660 Robust band gap and half-metallicity in graphene with triangular perforations. 2016 , 93,	6
1659 Negative Coulomb Drag in Double Bilayer Graphene. 2016 , 117, 046802	60
Tunable Symmetries of Integer and Fractional Quantum Hall Phases in Heterostructures with Multiple Dirac Bands. 2016 , 117, 076807	16

1657	Van der Waals heterostructures and devices. 2016 , 1,	1262
1656	Valleytronics in 2D materials. 2016 , 1,	1045
1655	MoS Field-Effect Transistor with Sub-10 nm Channel Length. 2016 , 16, 7798-7806	283
1654	Origin of Contact Resistance at Ferromagnetic Metal-Graphene Interfaces. 2016 , 10, 11219-11227	14
1653	Superior thermal conductivity in suspended bilayer hexagonal boron nitride. 2016 , 6, 25334	87
1652	A Generalized Lossy Transmission-Line Model for Tunable Graphene-Based Transmission Lines with Attenuation Phenomenon. 2016 , 6, 31760	12
1651	Unconventional Correlation between Quantum Hall Transport Quantization and Bulk State Filling in Gated Graphene Devices. 2016 , 117, 186601	23
1650	Recent progress of photodetectors based on MX2/graphene van der Waals heterostructures. 2016,	1
1649	Macroscopic self-reorientation of interacting two-dimensional crystals. 2016 , 7, 10800	86
1648	Phosphorene/rhenium disulfide heterojunction-based negative differential resistance device for multi-valued logic. 2016 , 7, 13413	227
1647	Dual-mode operation of 2D material-base hot electron transistors. 2016 , 6, 32503	11
1646	Hexagonal Boron Nitride assisted transfer and encapsulation of large area CVD graphene. 2016 , 6, 30210	25
1645	Silicon Electro-Absorption Modulator Based on Graphene-Hexagonal Boron Nitride Heterostructure. 2016 , 34, 5293-5299	8
1644	A proposed experimental diagnosing of specular Andreev reflection using the spin orbit interaction. 2016 , 6, 29279	3
1643	Advanced Experimental Methods for Low-temperature Magnetotransport Measurement of Novel Materials. 2016 , e53506	1
1642	Extremely Low Contact Resistance on Graphene through n-Type Doping and Edge Contact Design. 2016 , 28, 864-70	58
1641	Chemistry at the Edge of Graphene. 2016 , 17, 785-801	91
1640	Realization of Room-Temperature Phonon-Limited Carrier Transport in Monolayer MoS2 by Dielectric and Carrier Screening. 2016 , 28, 547-52	161

1639	Ballistic electron propagation through periodic few-layer graphene nanostructures. 2016 , 84, 60-70	1
1638	Water-penetration-assisted mechanical transfer of large-scale molybdenum disulfide onto arbitrary substrates. 2016 , 6, 57497-57501	17
1637	Two- and four-probe field-effect and Hall mobilities in transition metal dichalcogenide field-effect transistors. 2016 , 6, 60787-60793	21
1636	Opportunities and challenges of 2D magnetic van der Waals materials: magnetic graphene?. 2016 , 28, 301001	82
1635	Boosting oxygen reduction and hydrogen evolution at the edge sites of a web-like carbon nanotube-graphene hybrid. 2016 , 107, 739-746	22
1634	High-Performance Inkjet-Printed Indium-Gallium-Zinc-Oxide Transistors Enabled by Embedded, Chemically Stable Graphene Electrodes. 2016 , 8, 17428-34	45
1633	Universal low-temperature Ohmic contacts for quantum transport in transition metal dichalcogenides. 2016 , 3, 021007	78
1632	Grain Boundaries in Chemical Vapor Deposition-Grown Graphene. 2016 , 123-142	
1631	Resistivity of Rotated Graphite-Graphene Contacts. 2016 , 16, 4477-82	45
1630	Electronic spin transport in dual-gated bilayer graphene. 2016 , 8, e274-e274	28
1629	Atomically Thin Ohmic Edge Contacts Between Two-Dimensional Materials. 2016 , 10, 6392-9	144
1628	Rivet Graphene. 2016 , 10, 7307-13	14
1627	On-Surface Synthesis of Atomically Precise Graphene Nanoribbons. 2016 , 28, 6222-31	320
1626	Producing air-stable monolayers of phosphorene and their defect engineering. 2016 , 7, 10450	358
1625	Study of Graphene-based 2D-Heterostructure Device Fabricated by All-Dry Transfer Process. 2016 , 8, 3072-8	38
1624	Ballistic Transport Exceeding 28 fh in CVD Grown Graphene. 2016 , 16, 1387-91	191
1623	Activating "Invisible" Glue: Using Electron Beam for Enhancement of Interfacial Properties of Graphene-Metal Contact. 2016 , 10, 1042-9	11

1621	Quantum oscillations of the critical current and high-field superconducting proximity in ballistic graphene. 2016 , 12, 318-322		144
1620	The Challenge to Develop Metrology at the Nanoscale. 2016 , 105-130		
1619	Nature of the quantum metal in a two-dimensional crystalline superconductor. 2016 , 12, 208-212		177
1618	The influence of chemical reactivity of surface defects on ambient-stable InSe-based nanodevices. 2016 , 8, 8474-9		79
1617	Nonlinear Terahertz Absorption of Graphene Plasmons. 2016 , 16, 2734-8		58
1616	Complementary Metal-Oxide-Semiconductor Integrated Carbon Nanotube Arrays: Toward Wide-Bandwidth Single-Molecule Sensing Systems. 2016 , 16, 2674-9		4
1615	Quantum Hall effect in black phosphorus two-dimensional electron system. 2016 , 11, 593-7		289
1614	van der Waals Heterostructures with High Accuracy Rotational Alignment. 2016 , 16, 1989-95		300
1613	Thermally tunable silicon photonic microdisk resonator with transparent graphene nanoheaters. 2016 , 3, 159		93
1612	Negative local resistance caused by viscous electron backflow in graphene. <i>Science</i> , 2016 , 351, 1055-8	33.3	344
1611	Observation of the Dirac fluid and the breakdown of the Wiedemann-Franz law in graphene. <i>Science</i> , 2016 , 351, 1058-61	33.3	328
1610	Imaging Cyclotron Orbits of Electrons in Graphene. 2016 , 16, 1690-4		55
1609	Ultracompact Graphene Multigate Variable Resistor for Neuromorphic Computing. 2016 , 15, 318-327		5
1608	Graphene-based large area dye-sensitized solar cell modules. 2016 , 8, 5368-78		114
1607	All-graphene edge contacts: Electrical resistance of graphene T-junctions. 2016 , 101, 101-106		7
1606	Current-induced birefringent absorption and non-reciprocal plasmons in graphene. 2016 , 3, 015011		29
1605	Dimensionality effects on the luminescence properties of hBN. 2016 , 8, 6986-93		39
1604	Hofstadter Butterfly and Many-Body Effects in Epitaxial Graphene Superlattice. 2016 , 16, 2387-92		25

1603	Vertical heterostructures based on graphene and other 2D materials. 2016 , 50, 66-82	33
1602	Graphene-Based Interfaces Do Not Alter Target Nerve Cells. 2016 , 10, 615-23	172
1601	2D layered group IIIA metal chalcogenides: synthesis, properties and applications in electronics and optoelectronics. 2016 , 18, 3968-3984	132
1600	Fast growth of inch-sized single-crystalline graphene from a controlled single nucleus on Cu-Ni alloys. 2016 , 15, 43-7	441
1599	Picosecond photoresponse in van der Waals heterostructures. 2016 , 11, 42-6	392
1598	Probing the Spin-Polarized Electronic Band Structure in Monolayer Transition Metal Dichalcogenides by Optical Spectroscopy. 2017 , 17, 740-746	80
1597	Three-Dimensional Integration of Black Phosphorus Photodetector with Silicon Photonics and Nanoplasmonics. 2017 , 17, 985-991	81
1596	Electronic and Optoelectronic Devices based on Two-Dimensional Materials: From Fabrication to Application. 2017 , 3, 1600364	100
1595	Encapsulation of graphene in Parylene. 2017 , 110, 053504	14
1594	Effect of oxide traps on channel transport characteristics in graphene field effect transistors. 2017 , 35, 01A115	15
1593	Photon-assisted transport in bilayer graphene flakes. 2017 , 95,	8
1592	The properties of ultrapure delafossite metals. 2017 , 80, 032501	78
1591	Au concentration-dependent quenching of Raman 2D peak in graphene. 2017 , 48, 586-591	12
1590	A review on mechanics and mechanical properties of 2D materials araphene and beyond. 2017 , 13, 42-77	581
1589	Strong electronic interaction and multiple quantum Hall ferromagnetic phases in trilayer graphene. 2017 , 8, 14518	15
1588	Quantum dot behavior in transition metal dichalcogenides nanostructures. 2017 , 12, 1	20
1587	Field Effect in Graphene-Based van der Waals Heterostructures: Stacking Sequence Matters. 2017 , 17, 2660-2666	14
1586	Junction-Structure-Dependent Schottky Barrier Inhomogeneity and Device Ideality of Monolayer MoS Field-Effect Transistors. 2017 , 9, 11240-11246	38

1585	Chemical manipulation of edge-contact and encapsulated graphene by dissociated hydrogen adsorption. 2017 , 7, 6013-6017	4
1584	Flexural-Phonon Scattering Induced by Electrostatic Gating in Graphene. 2017 , 118, 046601	23
1583	Creating and Steering Highly Directional Electron Beams in Graphene. 2017, 118, 066801	39
1582	Very-wide electrothermal tuning of graphene nanoelectromechanical resonators. 2017,	0
1581	Control of interlayer valley excitons in atomically-thin MoSe2-WSe2heterostructures. 2017,	
1580	Determination of Crystal Axes in Semimetallic T?-MoTe2 by Polarized Raman Spectroscopy. 2017 , 27, 1604799	28
1579	Theory of plasmonic effects in nonlinear optics: The case of graphene. 2017 , 95,	39
1578	Magnetoresistance and quantum oscillations of an electrostatically tuned semimetal-to-metal transition in ultrathin WTe2. 2017 , 95,	43
1577	Universal conformal ultrathin dielectrics on epitaxial graphene enabled by a graphene oxide seed layer. 2017 , 110, 013106	6
1576	Ultrafast photocurrent measurements of a black phosphorus photodetector. 2017 , 110, 051102	30
1575	Identifying suitable substrates for high-quality graphene-based heterostructures. 2017, 4, 025030	60
1574	Odd-Integer Quantum Hall States and Giant Spin Susceptibility in p-Type Few-Layer WSe_{2}. 2017 , 118, 067702	28
1573	Stability, electronic and thermodynamic properties of aluminene from first-principles calculations. 2017 , 409, 85-90	40
1572	Interfacial Engineering of Van der Waals Coupled 2D Layered Materials. 2017 , 4, 1601054	18
1571	Exfoliation of natural van der Waals heterostructures to a single unit cell thickness. 2017 , 8, 14410	66
1570	Thermal conduction across a boron nitride and SiO2interface. 2017 , 50, 104002	29
1569	Recent Development of Boron Nitride towards Electronic Applications. 2017, 3, 1600485	53
1568	Shot noise detection in hBN-based tunnel junctions. 2017 , 110, 133106	4

1567	1 / f noise in van der Waals materials and hybrids. 2017 , 2, 428-449	11
1566	Approaching the intrinsic photoluminescence linewidth in transition metal dichalcogenide monolayers. 2017 , 4, 031011	188
1565	Active 2D materials for on-chip nanophotonics and quantum optics. 2017 , 6, 1329-1342	28
1564	A self-powered high-performance graphene/silicon ultraviolet photodetector with ultra-shallow junction: breaking the limit of silicon?. 2017 , 1,	144
1563	Solution-Growth Strategy for Large-Scale [IuGaO2 Nanoplate/ZnS MicrospherelHeterostructure Arrays with Enhanced UV Adsorption and Optoelectronic Properties. 2017, 27, 1701066	16
1562	Tunable transmission of quantum Hall edge channels with full degeneracy lifting in split-gated graphene devices. 2017 , 8, 14983	25
1561	Shubnikov-de Haas measurements on a high mobility monolayer graphene flake sandwiched between boron nitride sheets. 2017 , 29, 225301	2
1560	Absorptive pinhole collimators for ballistic Dirac fermions in graphene. 2017 , 8, 15418	26
1559	Optimal light harvesting in 2D semiconductor heterostructures. 2017 , 4, 025115	8
1558	Emergence of Tertiary Dirac Points in Graphene Moir' Superlattices. 2017, 17, 3576-3581	16
1557	Graphene: Synthesis and Functionalization. 2017 , 101-132	1
1556	Interfacial Charge Transfer Circumventing Momentum Mismatch at Two-Dimensional van der Waals Heterojunctions. 2017 , 17, 3591-3598	122
1555	Tunnelling spectroscopy of Andreev states in graphene. 2017 , 13, 756-760	49
1554	Fabrication and room temperature operation of semiconductor nano-ring lasers using a general applicable membrane transfer method. 2017 , 110, 171105	10
1553	Layer Polarizability and Easy-Axis Quantum Hall Ferromagnetism in Bilayer Graphene. 2017 , 17, 3416-3420	4
1552	Electronic transport in helium-ion-beam etched encapsulated graphene nanoribbons. 2017 , 119, 419-425	24
1551	Current-Phase Relation of Ballistic Graphene Josephson Junctions. 2017 , 17, 3396-3401	40
1550	Substantially enhanced carrier mobility in graphene in proximity to ferromagnetic insulator EuS. 2017 , 10, 055103	4

1549	Highly efficient and stable MoS FETs with reversible n-doping using a dehydrated poly(vinyl-alcohol) coating. 2017 , 9, 258-265	30
1548	Solvent-free electrospinning: opportunities and challenges. 2017 , 8, 333-352	55
1547	Dry transfer of CVD graphene using MoS2-based stamps. 2017 , 11, 1700136	5
1546	Molecular Beam Epitaxy of Highly Crystalline Monolayer Molybdenum Disulfide on Hexagonal Boron Nitride. 2017 , 139, 9392-9400	110
1545	Surface transport and quantum Hall effect in ambipolar black phosphorus double quantum wells. 2017 , 3, e1603179	19
1544	Analysis of a graphene-based silicon electro-absorption modulator in isotropic and anisotropic graphene models. 2017 , 70, 967-972	2
1543	Progress on Electronic and Optoelectronic Devices of 2D Layered Semiconducting Materials. 2017 , 13, 1604298	55
1542	Recent Progress on Localized Field Enhanced Two-dimensional Material Photodetectors from Ultraviolet-Visible to Infrared. 2017 , 13, 1700894	181
1541	Evidence of electric field-tunable tunneling probability in graphene and metal contact. 2017, 9, 9520-9528	13
1540	Reducing graphene device variability with yttrium sacrificial layers. 2017 , 110, 223106	9
1539	Tuning quantum nonlocal effects in graphene plasmonics. <i>Science</i> , 2017 , 357, 187-191 33.3	189
1538	A two-dimensional Dirac fermion microscope. 2017 , 8, 15783	50
1537	Quantum Hall drag of exciton condensate in graphene. 2017 , 13, 746-750	101
1536	Excitonic superfluid phase in double bilayer graphene. 2017 , 13, 751-755	85
1535	Few-atomic-layered hexagonal boron nitride: CVD growth, characterization, and applications. 2017 , 20, 611-628	66
1534	Epitaxial electrical contact to graphene on SiC. 2017 , 121, 48-55	7
1533	Ab initio studies of coherent spin transport in Fe-hBN/graphene van der Waals multilayers. 2017 , 29, 285302	7
1532	Graphene and Related Materials for Resistive Random Access Memories. 2017 , 3, 1600195	137

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1531	8, 68-103	153
1530	Coherent Interlayer Tunneling and Negative Differential Resistance with High Current Density in Double Bilayer Graphene-WSe Heterostructures. 2017 , 17, 3919-3925	40
1529	Effect of polymer residues on the electrical properties of large-area graphene-hexagonal boron nitride planar heterostructures. 2017 , 28, 285601	6
1528	The role of contact resistance in graphene field-effect devices. 2017 , 92, 143-175	130
1527	Graphene Nanoribbon Based Thermoelectrics: Controllable Self- Doping and Long-Range Disorder. 2017 , 4, 1600467	3
1526	High electron mobility and quantum oscillations in non-encapsulated ultrathin semiconducting BiOSe. 2017 , 12, 530-534	332
1525	Inducing superconducting correlation in quantum Hall edge states. 2017 , 13, 693-698	77
1524	Gate tunable magneto-resistance of ultra-thin W Te 2 devices. 2017 , 4, 021018	7
1523	Lighthatter interaction in transition metal dichalcogenides and their heterostructures. 2017, 50, 173001	66
1522	Super-Planckian Electron Cooling in a van der Waals Stack. 2017 , 118, 126804	26
1521	Electrically Tunable Energy Bandgap in Dual-Gated Ultra-Thin Black Phosphorus Field Effect Transistors. 2017 , 34, 047304	8
1520	Oscillating Magnetoresistance in Graphene p-n Junctions at Intermediate Magnetic Fields. 2017 , 17, 2852-2857	9
1519	. 2017 , 11, 18-32	14
1518	The Prospect of Two-Dimensional Heterostructures: A Review of Recent Breakthroughs. 2017 , 11, 6-17	20
1517	Graphene bubbles and their role in graphene quantum transport. 2017 , 9, 6041-6047	10
1516	Electric-field-induced widely tunable direct and indirect band gaps in hBN/MoS2 van der Waals heterostructures. 2017 , 5, 4426-4434	21
1515	Anisotropic transport in 1T' monolayer MoS and its metal interfaces. 2017 , 19, 10453-10461	15
1514	Ultrafast radiative heat transfer. 2017 , 8, 2	80

1513	Slidable atomic layers in van der Waals heterostructures. 2017 , 10, 045201	17
1512	Tunable moir[bands and strong correlations in small-twist-angle bilayer graphene. 2017 , 114, 3364-3369	294
1511	Photodetectors based on junctions of two-dimensional transition metal dichalcogenides. 2017 , 26, 038504	44
1510	Dirac fermion reflector by ballistic graphene sawtooth-shaped npn junctions. 2017 , 32, 045010	13
1509	Recent Advances in Ultrathin Two-Dimensional Nanomaterials. 2017 , 117, 6225-6331	2919
1508	Doping, Contact and Interface Engineering of Two-Dimensional Layered Transition Metal Dichalcogenides Transistors. 2017 , 27, 1603484	134
1507	Large-scale flexible conductive copper-silver pattern based on direct photo-patterning via volume additive process on demand. 2017 , 188, 296-299	3
1506	Analyzing the Carrier Mobility in Transition-Metal Dichalcogenide MoS2 Field-Effect Transistors. 2017 , 27, 1604093	178
1505	Frequency conversion with nonlinear graphene photodetectors. 2017, 9, 4082-4089	8
1504	Asymmetric Light Excitation for Photodetectors Based on Nanoscale Semiconductors. 2017 , 11, 549-557	8
1503	Mixed-Mode Operation of Hybrid Phase-Change Nanophotonic Circuits. 2017, 17, 150-155	37
1502	Nitride Dielectric Environments to Suppress Surface Optical Phonon Dominated Scattering in High-Performance Multilayer MoS2 FETs. 2017 , 3, 1600358	16
1501	Fabry-Plot Resonances in a Graphene/hBN Moir Superlattice. 2017, 17, 328-333	25
1500	A mixed-dimensional light-emitting diode based on a p-MoS nanosheet and an n-CdSe nanowire. 2017 , 9, 18175-18179	22
1499	Atomic layer MoS-graphene van der Waals heterostructure nanomechanical resonators. 2017 , 9, 18208-18215	36
1498	Fully inkjet-printed two-dimensional material field-effect heterojunctions for wearable and textile electronics. 2017 , 8, 1202	230
1497	Platinum-free, graphene based anodes and air cathodes for single chamber microbial fuel cells. 2017 , 5, 23872-23886	40
1496	Intersubband Landau Level Couplings Induced by In-Plane Magnetic Fields in Trilayer Graphene. 2017 , 119, 186802	9

1495	Even-denominator fractional quantum Hall states in bilayer graphene. Science, 2017, 358, 648-652	33.3	58	
1494	Role of charged impurities in thermoelectric transport in molybdenum disulfide monolayers. 2017 , 29, 485303		1	
1493	Strong Proximity Josephson Coupling in Vertically Stacked NbSe-Graphene-NbSe van der Waals Junctions. 2017 , 17, 6125-6130		34	
1492	Propagation of superconducting coherence via chiral quantum-Hall edge channels. 2017 , 7, 10953		18	
1491	Magnetics and spintronics on two-dimensional composite materials of graphene/hexagonal boron nitride. 2017 , 3, 93-117		47	
1490	Dry-transferred CVD graphene for inverted spin valve devices. 2017 , 111, 152402		12	
1489	Terahertz Nanofocusing with Cantilevered Terahertz-Resonant Antenna Tips. 2017 , 17, 6526-6533		53	
1488	Direct measurement of discrete valley and orbital quantum numbers in bilayer graphene. 2017 , 8, 948		49	
1487	Gate-controlled reversible rectifying behaviour in tunnel contacted atomically-thin MoS transistor. 2017 , 8, 970		52	
1486	2D Raman band splitting in graphene: Charge screening and lifting of the K-point Kohn anomaly. 2017 , 7, 13539		14	
1485	Atomic layer deposited oxide films as protective interface layers for integrated graphene transfer. 2017 , 28, 485201		14	
1484	Capillary-Force-Assisted Clean-Stamp Transfer of Two-Dimensional Materials. 2017 , 17, 6961-6967		61	
1483	A MoTe-based light-emitting diode and photodetector for silicon photonic integrated circuits. 2017 , 12, 1124-1129		229	
1482	Properties of in-plane graphene/MoS 2 heterojunctions. 2017 , 4, 045001		30	
1481	Graphene-Based Josephson-Junction Single-Photon Detector. 2017 , 8,		47	
1480	Superballistic flow of viscous electron fluid through graphene constrictions. 2017 , 13, 1182-1185		172	
1479	Observation of ultralong valley lifetime in WSe/MoS heterostructures. 2017, 3, e1700518		160	
1478	Strain-Modulated Bandgap and Piezo-Resistive Effect in Black Phosphorus Field-Effect Transistors. 2017 , 17, 6097-6103		88	

1477	Mach-Zehnder interferometry using spin- and valley-polarized quantum Hall edge states in graphene. 2017 , 3, e1700600	40
1476	Mechanical Detection and Imaging of Hyperbolic Phonon Polaritons in Hexagonal Boron Nitride. 2017 , 11, 8741-8746	34
1475	A versatile DNA detection scheme based on the quenching of fluorescent silver nanoclusters by MoS2 nanosheets: Application to aptamer-based determination of hepatitis B virus and of dopamine. 2017 , 184, 4417-4424	30
1474	Enhancement of thermal transport properties of asymmetric Graphene/hBN nanoribbon heterojunctions by substrate engineering. 2017 , 124, 642-650	19
1473	Tunable antenna radome based on graphene frequency selective surface. 2017 , 7, 095307	8
1472	Anomalous Coulomb drag between bilayer graphene and a GaAs electron gas. 2017 , 19, 103042	6
1471	Characterization of Edge Contact: Atomically Resolved Semiconductor-Metal Lateral Boundary in MoS. 2017 , 29, 1702931	9
1470	Coplanar semiconductor-metal circuitry defined on few-layer MoTe via polymorphic heteroepitaxy. 2017 , 12, 1064-1070	160
1469	Absence of a Band Gap at the Interface of a Metal and Highly Doped Monolayer MoS. 2017, 17, 5962-5968	27
1468	Layer-by-layer assembly of two-dimensional materials into wafer-scale heterostructures. 2017 , 550, 229-233	305
1467	High-Velocity Saturation in Graphene Encapsulated by Hexagonal Boron Nitride. 2017 , 11, 9914-9919	60
1466	Graphene Klein tunnel transistors for high speed analog RF applications. 2017 , 7, 9714	9
1465	Two-dimensional black phosphorus: Synthesis, modification, properties, and applications. 2017 , 120, 1-33	102
1464	Piezotronic effect in 1D van der Waals solid of elemental tellurium nanobelt for smart adaptive electronics. 2017 , 32, 104004	25
1463	Magnetotransport in heterostructures of transition metal dichalcogenides and graphene. 2017, 96,	46
1462	Expanding the Concept of van der Waals Heterostructures to Interwoven 3D Structures. 2017 , 29, 8292-8298	11
1461	Seamless Staircase Electrical Contact to Semiconducting Graphene Nanoribbons. 2017, 17, 6241-6247	51
1460	Photo and Thermal Cured Silicon-Containing Diethynylbenzene Fibers via Melt Electrospinning with Enhanced Thermal Stability. 2017 , 55, 2815-2823	10

1459	Low Resistive Edge Contacts to CVD-Grown Graphene Using a CMOS Compatible Metal. 2017 , 529, 1600410	22
1458	Progress of Large-Scale Synthesis and Electronic Device Application of Two-Dimensional Transition Metal Dichalcogenides. 2017 , 13, 1700098	37
1457	Interlayer tunnel field-effect transistor (ITFET): physics, fabrication and applications. 2017, 50, 383002	8
1456	Spontaneous doping on high quality talc-graphene-hBN van der Waals heterostructures. 2017 , 4, 031008	13
1455	Efficient Carrier-to-Exciton Conversion in Field Emission Tunnel Diodes Based on MIS-Type van der Waals Heterostack. 2017 , 17, 5156-5162	53
1454	Lippmann-Schwinger theory for two-dimensional plasmon scattering. 2017 , 96,	10
1453	Electrical properties and applications of graphene, hexagonal boron nitride (h-BN), and graphene/h-BN heterostructures. 2017 , 2, 6-34	188
1452	Strong electron-hole symmetric Rashba spin-orbit coupling in graphene/monolayer transition metal dichalcogenide heterostructures. 2017 , 96,	71
1451	Disorder from the Bulk Ionic Liquid in Electric Double Layer Transistors. 2017 , 11, 8395-8400	19
1450	Hexagonal boron nitride nanomechanical resonators with spatially visualized motion. 2017 , 3, 17038	39
1449	Realisation of topological zero-energy mode in bilayer graphene in zero magnetic field. 2017, 7, 6466	9
1448	Graphene B N Heterostructures. 219-237	
1447	Frictional Magneto-Coulomb Drag in Graphene Double-Layer Heterostructures. 2017 , 119, 056802	16
1446	Dielectric properties of graphene on transition metal dichalcogenide substrate. 2017 , 254, 1600827	
1445	Twisted Bilayer Graphene: Interlayer Configuration and Magnetotransport Signatures. 2017 , 529, 1700025	15
1444	Infrared Nanophotonics Based on Graphene Plasmonics. 2017 , 4, 2989-2999	70
1443	A facile and efficient dry transfer technique for two-dimensional Van derWaals heterostructure. 2017 , 26, 087306	7
1442	Gate-tunable Hall sensors on large area CVD graphene protected by h-BN with 1D edge contacts. 2017 , 122, 054506	12

1441	From Diffusive to Ballistic Transport in Etched Graphene Constrictions and Nanoribbons. 2017 , 529, 1700082	12
1440	Optical Properties of TMD Heterostructures. 310-328	1
1439	Giant Valley-Isospin Conductance Oscillations in Ballistic Graphene. 2017 , 17, 5389-5393	14
1438	Electrical detection of hyperbolic phonon-polaritons in heterostructures of graphene and boron nitride. 2017 , 1,	18
1437	Dirac quantum time mirror. 2017 , 95,	7
1436	Ballistic transport through irradiated graphene. 2017 , 96,	11
1435	Electrostatics of lateral p-n junctions in atomically thin materials. 2017 , 122, 194501	28
1434	van der Waals Layered Materials: Opportunities and Challenges. 2017 , 11, 11803-11830	258
1433	Layered Two-Dimensional Heterostructures and Their Tunneling Characteristics. 2017,	
1432	Contact morphology and revisited photocurrent dynamics in monolayer MoS2. 2017 , 1,	11
1431	Tunable excitons in bilayer graphene. <i>Science</i> , 2017 , 358, 907-910	89
1430	Widely tunable black phosphorus mid-infrared photodetector. 2017 , 8, 1672	191
1429	Magnetocapacitance and dissipation factor of epitaxial graphene-based quantum Hall effect devices. 2017 , 96,	5
1428	Hall sensors batch-fabricated on all-CVD h-BN/graphene/h-BN heterostructures. 2017 , 7, 15231	24
1427	Nano-infrared imaging of localized plasmons in graphene nano-resonators. 2017 , 26, 117802	6
1426	Aharonov-Bohm oscillations and magnetic focusing in ballistic graphene rings. 2017, 96,	7
1425	Lifting the mist of flatland: The recent progress in the characterizations of two-dimensional materials. 2017 , 63, 72-93	6
1424	Electrical 2lphase control of infrared light in a 350-nm footprint using graphene plasmons. 2017 , 11, 421-424	48

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1423	Low-Temperature Ohmic Contact to Monolayer MoS by van der Waals Bonded Co/h-BN Electrodes. 2017 , 17, 4781-4786	164
1422	Synthesis, structure and applications of graphene-based 2D heterostructures. 2017 , 46, 4572-4613	206
1421	Restoring the Electrical Properties of CVD Graphene via Physisorption of Molecular Adsorbates. 2017 , 9, 25014-25022	19
1420	Deep-subwavelength lithography via graphene plasmons. 2017 , 95,	13
1419	Suppression of intrinsic roughness in encapsulated graphene. 2017 , 96,	19
1418	Gate-Defined One-Dimensional Channel and Broken Symmetry States in MoS van der Waals Heterostructures. 2017 , 17, 5008-5011	33
1417	High mobility dry-transferred CVD bilayer graphene. 2017 , 110, 263110	29
1416	Development of electronic devices based on two-dimensional materials. 2017 , 3, 43-63	15
1415	Suppression of Magnetoresistance in Thin WTe Flakes by Surface Oxidation. 2017, 9, 23175-23180	29
1414	Strong Modulation of Spin Currents in Bilayer Graphene by Static and Fluctuating Proximity Exchange Fields. 2017 , 118, 187201	56
1413	Contactless Microwave Characterization of Encapsulated Graphene pl Junctions. 2017, 7,	1
1412	Valley- and spin-polarized Landau levels in monolayer WSe. 2017 , 12, 144-149	121
1411	Nonlinear transport of graphene in the quantum Hall regime. 2017 , 4, 015003	1
1410	Helical edge states and fractional quantum Hall effect in a graphene electron-hole bilayer. 2017 , 12, 118-122	57
1409	Graphene Triangular Ballistic Rectifier: Fabrication and Characterisation. 2017, 46, 3942-3948	14
1408	Acoustic terahertz graphene plasmons revealed by photocurrent nanoscopy. 2017 , 12, 31-35	178
1407	Interlayer electronphonon coupling in WSe2/hBN heterostructures. 2017 , 13, 127-131	129
1406	A Broadband Graphene-Based THz Coupler with Wide-Range Tunable Power-Dividing Ratios. 2017 , 12, 1487-1492	10

1405	A theoretical study of the electrical contact between metallic and semiconducting phases in monolayer MoS 2. 2017 , 4, 015014	13
1404	Probing the intrinsic optical quality of CVD grown MoS2. 2017 , 10, 1608-1617	51
1403	Evaluation of multilayer graphene for advanced interconnects. 2017 , 167, 1-5	7
1402	Tunable Terahertz Filter-Integrated Quasi-Yagi Antenna Based on Graphene. 2017 , 12, 811-817	7
1401	Sensing at the Surface of Graphene Field-Effect Transistors. 2017 , 29, 1603610	148
1400	Polaritons in layered two-dimensional materials. 2017 , 16, 182-194	665
1399	High electron mobility, quantum Hall effect and anomalous optical response in atomically thin InSe. 2017 , 12, 223-227	723
1398	Wettability of Supported Monolayer Hexagonal Boron Nitride in Air. 2017 , 27, 1603181	38
1397	Thermoelectric detection and imaging of propagating graphene plasmons. 2017 , 16, 204-207	104
1396	Direct observation of the layer-dependent electronic structure in phosphorene. 2017 , 12, 21-25	473
1395	ReS2-based interlayer tunnel field effect transistor. 2017 , 122, 245701	5
1394	Broadband impedance match to two-dimensional materials in the terahertz domain. 2017 , 8, 2233	25
1393	Lattice relaxation and energy band modulation in twisted bilayer graphene. 2017, 96,	226
1392	Graphene based on-chip variable optical attenuator operating at 855 nm wavelength. 2017 , 25, 31660-31669	6
1391	Inhomogeneous screening of gate electric field by interface states in graphene FETs. 2017, 29, 385302	2
1390	Adsorption of Metal Clusters on Graphene and Their Effect on the Electrical Conductivity. 2017,	
1389	Q-factors of CVD monolayer graphene and graphite inductors. 2017 , 50, 345103	4
1388	Mid-infrared sensing of molecular vibrational modes with tunable graphene plasmons. 2017 , 42, 2066-2069	13

1387	The integration of graphene into microelectronic devices. 2017 , 8, 1056-1064	22
1386	Contribution of many-body effects into thermoelectricity and heat transport in graphene. 2018 , 341-418	
1385	Proximity coupling in superconductor-graphene heterostructures. 2018, 81, 056502	25
1384	Electronic Transport in Two-Dimensional Materials. 2018 , 69, 299-325	145
1383	Large spin relaxation anisotropy and valley-Zeeman spin-orbit coupling in WSe2/graphene/h-BN heterostructures. 2018 , 97,	78
1382	Two-dimensional transition metal dichalcogenides: interface and defect engineering. 2018 , 47, 3100-3128	381
1381	Hybrid Interfaces in Molecular Spintronics. 2018 , 18, 737-748	16
1380	Interfacial engineering in graphene bandgap. 2018 , 47, 3059-3099	94
1379	Spatially controlled doping of two-dimensional SnS through intercalation for electronics. 2018 , 13, 294-299	169
1378	Tunable EK Valley Populations in Hole-Doped Trilayer WSe_{2}. 2018 , 120, 107703	12
1377	All-Two-Dimensional-Material Hot Electron Transistor. 2018 , 39, 634-637	14
1376	Tunable Lifshitz Transitions and Multiband Transport in Tetralayer Graphene. 2018 , 120, 096802	15
1375	Observation of fractional Chern insulators in a van der Waals heterostructure. <i>Science</i> , 2018 , 360, 62-66 33.3	84
1374	Contact engineering for 2D materials and devices. 2018 , 47, 3037-3058	337
1373	Novel circuit design for high-impedance and non-local electrical measurements of two-dimensional materials. 2018 , 89, 024705	1
1372	Correlated insulator behaviour at half-filling in magic-angle graphene superlattices. 2018, 556, 80-84	1771
1371	Unconventional superconductivity in magic-angle graphene superlattices. 2018, 556, 43-50	2942
1370	Electrical control of 2D magnetism in bilayer CrI. 2018 , 13, 544-548	626

1369	Atomically thin p-n junctions based on two-dimensional materials. 2018 , 47, 3339-3358	158
1368	Optimising the visibility of graphene and graphene oxide on gold with multilayer heterostructures. 2018 , 29, 275205	11
1367	New routes to the functionalization patterning and manufacture of graphene-based materials for biomedical applications. 2018 , 8, 20170057	10
1366	Asymmetric electric field screening in van der Waals heterostructures. 2018 , 9, 1271	23
1365	Modeling the oblique spin precession in lateral spin valves for accurate determination of the spin lifetime anisotropy: Effect of finite contact resistance and channel length. 2018 , 97,	8
1364	High-Performance WSe Phototransistors with 2D/2D Ohmic Contacts. 2018 , 18, 2766-2771	79
1363	Quantum transport through MoS constrictions defined by photodoping. 2018 , 30, 205001	13
1362	Graphene-based plasmonic waveguide devices for electronic-photonic integrated circuit. 2018 , 106, 76-86	14
1361	Autonomous robotic searching and assembly of two-dimensional crystals to build van der Waals superlattices. 2018 , 9, 1413	129
1360	Minimizing residues and strain in 2D materials transferred from PDMS. 2018 , 29, 265203	59
1359	Investigation of the two-gap superconductivity in a few-layer NbSe2-graphene heterojunction. 2018 , 97,	9
1358	Short Ballistic Josephson Coupling in Planar Graphene Junctions with Inhomogeneous Carrier Doping. 2018 , 120, 077701	14
1357	Nanopatterning Hexagonal Boron Nitride with Helium Ion Milling: Towards Atomically-Thin, Nanostructured Insulators. 2018 , 3, 327-331	5
1356	Edge-Contact Formed by Oxygen Plasma and Rapid Thermal Annealing to Improve Metal-Graphene Contact Resistance. 2018 , 7, M11-M15	3
1355	Graphene induced electrical percolation enables more efficient charge transport at a hybrid organic semiconductor/graphene interface. 2018 , 20, 4422-4428	12
1354	Superior Valley Polarization and Coherence of 2s Excitons in Monolayer WSe_{2}. 2018 , 120, 046402	26
1353	Effective Landau Level Diagram of Bilayer Graphene. 2018 , 120, 047701	13
1352	Guided Modes of Anisotropic van der Waals Materials Investigated by near-Field Scanning Optical Microscopy. 2018 , 5, 1196-1201	10

1351	Edge channel confinement in a bilayer graphenen paquantum dot. 2018 , 20, 013013	4
1350	2D Layered Material-Based van der Waals Heterostructures for Optoelectronics. 2018 , 28, 1706587	191
1349	Via Method for Lithography Free Contact and Preservation of 2D Materials. 2018 , 18, 1416-1420	37
1348	Ultra-low contact resistance in graphene devices at the Dirac point. 2018 , 5, 025014	39
1347	Gate-Controlled Transmission of Quantum Hall Edge States in Bilayer Graphene. 2018, 120, 057701	6
1346	Design of a Graphene-Based Tunable Frequency Selective Surface and Its Application for Variable Radiation Pattern of a Dipole at Terahertz. 2018 , 53, 183-189	7
1345	Ultrafast Graphene Light Emitters. 2018 , 18, 934-940	75
1344	High-quality graphene flakes exfoliated on a flat hydrophobic polymer. 2018 , 112, 033101	7
1343	Giant spin-splitting and gap renormalization driven by trions in single-layer WS2/h-BN heterostructures. 2018 , 14, 355-359	63
1342	A review of the quantum Hall effects in MgZnO/ZnO heterostructures. 2018 , 81, 056501	29
1341	Many-Particle Effects in the Cyclotron Resonance of Encapsulated Monolayer Graphene. 2018 , 120, 047401	17
1340	Large capacitance and fast polarization response of thin electrolyte dielectrics by spin coating for two-dimensional MoS2 devices. 2018 , 11, 3739-3745	8
1339	Electrostatically Induced Quantum Point Contacts in Bilayer Graphene. 2018, 18, 553-559	57
1338	Conversion of Face-On Orientation to Edge-On/Flat-On in Induced-Crystallization of Poly(3-hexylthiophene) via Functionalization/Grafting of Reduced Graphene Oxide with Thiophene Adducts. 2018 , 219, 1700484	7
1337	Integer and Fractional Quantum Hall effect in Ultrahigh Quality Few-layer Black Phosphorus Transistors. 2018 , 18, 229-234	26
1336	Hydrodynamics of electrons in graphene. 2018 , 30, 053001	122
1335	Dual-Gate Black Phosphorus Field-Effect Transistors with Hexagonal Boron Nitride as Dielectric and Passivation Layers. 2018 , 10, 925-932	24
1334	Controlled Electrochemical Intercalation of Graphene/h-BN van der Waals Heterostructures. 2018 , 18, 460-466	37

1333	Reducing the contact and channel resistances of black phosphorus via low-temperature vacuum annealing. 2018 , 6, 1567-1572	15
1332	Electrical control of charged carriers and excitons in atomically thin materials. 2018, 13, 128-132	113
1331	Moir[Metamaterials and Metasurfaces. 2018, 6, 1701057	32
1330	High-Performance Near-Infrared Photodetector Based on Ultrathin Bi2O2Se Nanosheets. 2018 , 28, 1706437	144
1329	Electronically Tunable Perfect Absorption in Graphene. 2018, 18, 971-979	134
1328	Spin transport in two-layer-CVD-hBN/graphene/hBN heterostructures. 2018 , 97,	19
1327	Charge transfer in (PbSe) (NbSe) and (SnSe) (NbSe) ferecrystals investigated by photoelectron spectroscopy. 2018 , 30, 055001	4
1326	Novel Optoelectronic Devices: Transition-Metal-Dichalcogenide-Based 2D Heterostructures. 2018 , 4, 1700335	61
1325	Probing magnetism in 2D van der Waals crystalline insulators via electron tunneling. <i>Science</i> , 2018 , 360, 1218-1222	444
1324	Electron transport in a bilayer graphene/layered superconductor NbSe2junction: effect of work function difference. 2018 , 969, 012147	1
1323	Tailoring supercurrent confinement in graphene bilayer weak links. 2018 , 9, 1722	8
1322	Joule-heating induced thermal voltages in graphene three-terminal nanojunctions. 2018 , 112, 133501	3
1321	Large Photothermal Effect in Sub-40 nm h-BN Nanostructures Patterned Via High-Resolution Ion Beam. 2018 , 14, e1800072	10
1320	High-order fractal states in graphene superlattices. 2018 , 115, 5135-5139	37
1319	Dissociation of two-dimensional excitons in monolayer WSe. 2018 , 9, 1633	76
1318	Optical properties of uniaxially strained graphene on transition metal dichalcogenide substrate. 2018 , 32, 1850164	1
1317	Pressure sensing element based on the BNgrapheneBN heterostructure. 2018, 112, 143502	13
1316	Toward High-Performance Photodetectors Based on 2D Materials: Strategy on Methods. 2018 , 2, 1700349	83

1315	Ambipolar Landau levels and strong band-selective carrier interactions in monolayer WSe. 2018, 17, 411-415	41
1314	Fast MoTe2 Waveguide Photodetector with High Sensitivity at Telecommunication Wavelengths. 2018 , 5, 1846-1852	49
1313	Out-of-plane heat transfer in van der Waals stacks through electron-hyperbolic phonon coupling. 2018 , 13, 41-46	87
1312	Two-dimensional halide perovskite nanomaterials and heterostructures. 2018 , 47, 6046-6072	244
1311	Dyakonov-Shur instability across the ballistic-to-hydrodynamic crossover. 2018 , 112, 124101	8
1310	CVD-graphene for low equivalent series resistance in rGO/CVD-graphene/Ni-based supercapacitors. 2018 , 29, 195404	12
1309	Photoresponse in h-BN/MoS2/h-BN thin-film transistor. 2018 , 57, 045201	8
1308	Ultra-thin chips for high-performance flexible electronics. 2018 , 2,	151
1307	Investigation of Supercurrent in the Quantum Hall Regime in Graphene Josephson Junctions. 2018 , 191, 288-300	5
1306	Ultrafast nonlinear optical response of Dirac fermions in graphene. 2018 , 9, 1018	81
1305	Modeling of graphene-based field-effect transistors through a 1-D real-space approach. 2018 , 17, 90-100	11
1304	Imaging Bulk and Edge Transport near the Dirac Point in Graphene Moir Superlattices. 2018, 18, 2530-2537	11
1303	Electric-field switching of two-dimensional van der Waals magnets. 2018 , 17, 406-410	431
1302	Dynamically Tunable Electromagnetically Induced Transparency in Graphene and Split-Ring Hybrid Metamaterial. 2018 , 13, 451-457	15
1301	Approaching quantum anomalous Hall effect in proximity-coupled YIG/graphene/h-BN sandwich structure. 2018 , 6, 026401	20
1300	Extenuated interlayer scattering in double-layered graphene/hexagonal boron nitride heterostructure. 2018 , 126, 17-22	6
1299	Locally hydrazine doped WSe p-n junction toward high-performance photodetectors. 2018 , 29, 015203	22
1298	Quantum Wires and Waveguides Formed in Graphene by Strain. 2018 , 18, 64-69	27

1297 Lattic	e-Matched Epitaxial Graphene Grown on Boron Nitride. 2018 , 18, 498-504	24
	It progress in the assembly of nanodevices and van der Waals heterostructures by ministic placement of 2D materials. 2018 , 47, 53-68	312
	and induced superconductivity in single-layer graphene and topological insulator bismuth de. 2018 , 31, 015011	5
1294 Grap ł	ene hot-electron light bulb: incandescence from hBN-encapsulated graphene in air. 2018 , 5, 011006	29
1202	le Graphene Solution-Gated Field-Effect Transistors: Efficient Transducers for -Electrocorticography. 2018 , 28, 1703976	67
1292 Ргоре	rties of graphene-metal contacts probed by Raman spectroscopy. 2018 , 127, 491-497	54
1201	sing the Functioning Mechanisms and Potential Improvements Concerning Graphene-Assisted o-Optical Modulators. 2018 ,	
1290 Phot o	voltaic effects in reconfigurable heterostructured black phosphorus transistors. 2018 , 27, 128502	6
1289 Disco	very of a novel spin-polarized nodal ring in a two-dimensional HK lattice. 2018, 10, 20748-20753	37
1288 Prop e	rties of Synthetic Two-Dimensional Materials and Heterostructures. 2018,	2
1287 Can A	dsorption on Graphene be Used for Isotopic Enrichment? A DFT Perspective. 2018 , 23,	7
1286 Strair	-Engineering of Twist-Angle in Graphene/hBN Superlattice Devices. 2018 , 18, 7919-7926	16
	sive Assembling of Poly(3-hexylthiophene) onto Chemically Treated Multi-Wall Carbon cube versus Reduced Graphene Oxide. 2018 , 26, 1200-1211	3
1284 Multi	ayer graphene shows intrinsic resistance peaks in the carrier density dependence. 2018 , 8, 13992	5
1283 THz b	and gap in encapsulated graphene quantum dots. 2018,	1
1282 Electi	ical contacts to two-dimensional transition-metal dichalcogenides. 2018 , 39, 124001	7
1281 Topo	ogical zero-line modes in folded bilayer graphene. 2018 , 98,	10
1280 Topo l	ogically Nontrivial Valley States in Bilayer Graphene Quantum Point Contacts. 2018 , 121, 257702	23

1279	Valley Subband Splitting in Bilayer Graphene Quantum Point Contacts. 2018 , 121, 257703		26
1278	Cleaning interfaces in layered materials heterostructures. 2018 , 9, 5387		152
1277	A valley valve and electron beam splitter. <i>Science</i> , 2018 , 362, 1149-1152	33.3	57
1276	Quantitative Transport Measurements of Fractional Quantum Hall Energy Gaps in Edgeless Graphene Devices. 2018 , 121, 226801		21
1275	Plasmon induced thermoelectric effect in graphene. 2018 , 9, 5190		39
1274	Double carrier transport in electron-doped region in black phosphorus FET. 2018 , 113, 193101		6
1273	Proximity-induced spin-orbit coupling in graphene/Bi1.5Sb0.5Te1.7Se1.3 heterostructures. 2018 , 98,		8
1272	Gate voltage and temperature dependent Ti-graphene junction resistance toward straightforward p-n junction formation. 2018 , 124, 215302		6
1271	Atomically precise graphene etch stops for three dimensional integrated systems from two dimensional material heterostructures. 2018 , 9, 3988		33
1270	Tuning Anti-Klein to Klein Tunneling in Bilayer Graphene. 2018 , 121, 127706		19
1269	Recent Advances in Synthesis and Assembly of van der Waals Materials. 2018, 73, 805-816		8
1268	Recent Advances in Synthesis and Applications of 2D Junctions. 2018 , 14, e1801606		16
1267	Pt©raphene Contacts Fabricated by Plasma Functionalization and Atomic Layer Deposition. 2018 , 5, 1800268		7
1266	Metal contact and carrier transport in single crystalline CH3NH3PbBr3 perovskite. 2018 , 53, 817-827		21
1265	The impact of substrate surface defects on the properties of two-dimensional van der Waals heterostructures. 2018 , 10, 19212-19219		9
1264	The DFT+U: Approaches, Accuracy, and Applications. 2018 ,		20
1263	Layout influence on microwave performance of graphene field effect transistors. 2018 , 54, 984-986		6
1262	Graphene-based integrated photonics for next-generation datacom and telecom. 2018 , 3, 392-414		170

1261	Defects in h-BN tunnel barrier for local electrostatic probing of two dimensional materials. 2018 , 6, 091102	8
1260	Tunneling spectroscopy of graphene nanodevices coupled to large-gap superconductors. 2018, 98,	6
1259	Optical conductivity-based ultrasensitive mid-infrared biosensing on a hybrid metasurface. 2018 , 7, 67	72
1258	Large scale graphene/h-BN heterostructures obtained by direct CVD growth of graphene using high-yield proximity-catalytic process. 2018 , 1, 015003	14
1257	Signatures of van Hove Singularities Probed by the Supercurrent in a Graphene-hBN Superlattice. 2018 , 121, 137701	12
1256	All CVD Boron Nitride Encapsulated Graphene FETs With CMOS Compatible Metal Edge Contacts. 2018 , 65, 4129-4134	19
1255	A ballistic graphene superconducting microwave circuit. 2018 , 9, 4069	22
1254	Graphene-Based Light Sensing: Fabrication, Characterisation, Physical Properties and Performance. 2018 , 11,	26
1253	Electrical generation and detection of spin waves in a quantum Hall ferromagnet. <i>Science</i> , 2018 , 362, 229-233	24
1252	Two-Dimensional Materials. 2018 , 1-19	
1251	Spatially varying electronic dephasing in three-dimensional topological insulators. 2018, 98,	2
1250	Electron quantum metamaterials in van der Waals heterostructures. 2018 , 13, 986-993	56
1249	Waterproof Perovskite-Hexagonal Boron Nitride Hybrid Nanolasers with Low Lasing Thresholds and High Operating Temperature. 2018 , 5, 4520-4528	17
1248	Two-dimensional Materials for Electronic Applications. 2018 , 55-90	1
1247	Transport Through a Network of Topological Channels in Twisted Bilayer Graphene. 2018 , 18, 6725-6730	68
1246	Transport properties and thermoelectric effects in gated silicene superlattices. 2018 , 124, 144305	6
	and the control of th	
1245	Equilibration of quantum Hall edges in symmetry-broken bilayer graphene. 2018 , 98,	5

1243	Fluidity onset in graphene. 2018 , 9, 4533	70
1242	Stacked Janus Device Concepts: Abrupt pn-Junctions and Cross-Plane Channels. 2018 , 18, 7275-7281	45
1241	Nano-electromechanical Drumhead Resonators from Two-Dimensional Material Bimorphs. 2018 , 18, 6686-6695	22
1240	Operation Mechanism of a MoSIBP Heterojunction FET. 2018 , 8,	7
1239	Revealing the biexciton and trion-exciton complexes in BN encapsulated WSe. 2018, 9, 3719	105
1238	Aligned van der Waals Coupled Growth of Carbon Nanotubes to Hexagonal Boron Nitride. 2018 , 5, 1800793	
1237	Quantum Hall Effect in Electron-Doped Black Phosphorus Field-Effect Transistors. 2018 , 18, 6611-6616	31
1236	Halide-Induced Self-Limited Growth of Ultrathin Nonlayered Ge Flakes for High-Performance Phototransistors. 2018 , 140, 12909-12914	65
1235	Contacting and Gating 2-D Nanomaterials. 2018, 65, 4073-4083	21
1234	Enhanced Thermoelectric Conversion Efficiency of CVD Graphene with Reduced Grain Sizes. 2018 , 8,	16
1233	Progress in Contact, Doping and Mobility Engineering of MoS2: An Atomically Thin 2D Semiconductor. 2018 , 8, 316	75
1232	Tuning Local Electrical Conductivity via Fine Atomic Scale Structures of Two-Dimensional Interfaces. 2018 , 18, 6030-6036	13
1231	Controllable one-step growth of bilayer MoS-WS/WS heterostructures by chemical vapor deposition. 2018 , 29, 455707	13
1230	CVD Technology for 2-D Materials. 2018 , 65, 4040-4052	23
1229	Comparison of trapped charges and hysteresis behavior in hBN encapsulated single MoS flake based field effect transistors on SiO and hBN substrates. 2018 , 29, 335202	44
1228	Asymmetric Two-Terminal Graphene Detector for Broadband Radiofrequency Heterodyne- and Self-Mixing. 2018 , 18, 3516-3522	9
1227	Monolayer Molybdenum Disulfide Transistors with Single-Atom-Thick Gates. 2018 , 18, 3807-3813	52
1226	Observation of the quantum valley Hall state in ballistic graphene superlattices. 2018 , 4, eaaq0194	59

1225	Fundamental limits to graphene plasmonics. 2018 , 557, 530-533	280
1224	Imaging of pure spin-valley diffusion current in WS-WSe heterostructures. <i>Science</i> , 2018 , 360, 893-896 33.3	100
1223	High-Pressure Synthesis of Polymorphic form of Boron Nitride Crystals and Their Impurity Control. 2018 , 67, 508-513	
1222	Effect of Distance on Photoluminescence Quenching and Proximity-Induced Spin-Orbit Coupling in Graphene/WSe Heterostructures. 2018 , 18, 3580-3585	20
1221	Dynamic band-structure tuning of graphene moir uperlattices with pressure. 2018, 557, 404-408	154
1220	High Mobility HgTe Microstructures for Quantum Spin Hall Studies. 2018 , 18, 4831-4836	19
1219	Even-denominator fractional quantum Hall states at an isospin transition in monolayer graphene. 2018 , 14, 930-935	62
1218	One Second Formation of Large Area Graphene on a Conical Tip Surface via Direct Transformation of Surface Carbide. 2018 , 14, e1801288	O
1217	Gate-Defined Electron-Hole Double Dots in Bilayer Graphene. 2018 , 18, 4785-4790	31
1216	Convergent beam electron holography for analysis of van der Waals heterostructures. 2018 , 115, 7473-7478	12
1215	Stark Tuning of Single-Photon Emitters in Hexagonal Boron Nitride. 2018 , 18, 4710-4715	81
1214	High carrier mobility in monolayer CVD-grown MoS through phonon suppression. 2018 , 10, 15071-15077	40
1213	Landau Level Diagram and the Continuous Rotational Symmetry Breaking in Trilayer Graphene. 2018 , 121, 056801	5
1212	Recent Progress and Future Prospects of 2D-Based Photodetectors. 2018 , 30, e1801164	221
1211	High-efficiency energy transfer in perovskite heterostructures. 2018 , 26, 18448-18456	16
1210	Photothermal Engineering of Graphene Plasmons. 2018 , 121, 057404	15
1209	Design of a graphene-based dual-slot hybrid plasmonic electro-absorption modulator with high-modulation efficiency and broad optical bandwidth for on-chip communication. 2018 , 57, 3260-3267	10
1208	Two-dimensional transistors beyond graphene and TMDCs. 2018 , 47, 6388-6409	193

1207	Electrically Inert h-BN/Bilayer Graphene Interface in All-Two-Dimensional Heterostructure Field Effect Transistors. 2018 , 10, 28780-28788	17
1206	Interlayer coupling in two-dimensional semiconductor materials. 2018 , 33, 093001	23
1205	Interface Characterization and Control of 2D Materials and Heterostructures. 2018, 30, e1801586	85
1204	Gate-Tuned Temperature in a Hexagonal Boron Nitride-Encapsulated 2-D Semiconductor Device. 2018 , 65, 4068-4072	8
1203	Progress on Black Phosphorus Photonics. 2018 , 6, 1800365	29
1202	Spin inversion in graphene spin valves by gate-tunable magnetic proximity effect at one-dimensional contacts. 2018 , 9, 2869	40
1201	Synthesis of hexagonal boron nitride heterostructures for 2D van der Waals electronics. 2018 , 47, 6342-6369	8o
1200	Transport measurements in twisted bilayer graphene: Electron-phonon coupling and Landau level crossing. 2018 , 98,	32
1199	Spin and Valley States in Gate-Defined Bilayer Graphene Quantum Dots. 2018 , 8,	51
1198	Advanced contact technology. 2018 , 157-213	
1197	Electronics and Optoelectronics Based on Two-Dimensional Materials. 2018, 73, 1-15	8
1196	Tunable WSe-CdS mixed-dimensional van der Waals heterojunction with a piezo-phototronic effect for an enhanced flexible photodetector. 2018 , 10, 14472-14479	41
1195	Quantum transport in graphene junctions with moir uperlattice modulation. 2018, 98,	12
1194	Frequency Tuning of Graphene Nanoelectromechanical Resonators via Electrostatic Gating. 2018 , 9,	4
1193	Coexistence of classical snake states and Aharonov-Bohm oscillations along graphene pli junctions. 2018 , 98,	13
1192	Large Landau-level splitting in a tunable one-dimensional graphene superlattice probed by magnetocapacitance measurements. 2018 , 98,	5
1191	Commensurability Oscillations in One-Dimensional Graphene Superlattices. 2018, 121, 026806	15
1100	Interminiband Optical Transitions in Graphene Lateral Superlattices. 2018 , 5, 3331-3337	2

1189	Electrical contact resistance in graphite-graphene contacts from ab initio methods. 2018 , 30, 325302	1
1188	A Graphene-Edge Ferroelectric Molecular Switch. 2018 , 18, 4675-4683	15
1187	Electrical spin injection, transport, and detection in graphene-hexagonal boron nitride van der Waals heterostructures: progress and perspectives. 2018 , 5, 032004	34
1186	Controlling magnetism in 2D CrI by electrostatic doping. 2018 , 13, 549-553	525
1185	Band structure engineering of 2D materials using patterned dielectric superlattices. 2018 , 13, 566-571	87
1184	The ultrafast dynamics and conductivity of photoexcited graphene at different Fermi energies. 2018 , 4, eaar5313	61
1183	Nonlocal superconducting correlations in graphene in the quantum Hall regime. 2018, 97,	3
1182	Three-Dimensional Atomistic Tomography of W-Based Alloyed Two-Dimensional Transition Metal Dichalcogenides. 2018 , 10, 30640-30648	3
1181	Molecular Beam Epitaxy of Graphene and Hexagonal Boron Nitride. 2018, 487-513	1
1180	Borophene: a promising adsorbent material with strong ability and capacity for SO2 adsorption. 2018 , 124, 1	28
1179	Stable and scalable 1T MoS with low temperature-coefficient of resistance. 2018 , 8, 12463	16
1178	Inter-Landau-level Andreev Reflection at the Dirac Point in a Graphene Quantum Hall State Coupled to a NbSe_{2} Superconductor. 2018 , 121, 086809	15
1177	Spatial solitons supported by graphene/hexagonal boron nitride heterostructures. 2018, 232, 58-61	5
1176	Nano-imaging of intersubband transitions in van der Waals quantum wells. 2018 , 13, 1035-1041	45
1175	Valleytronics: Opportunities, Challenges, and Paths Forward. 2018, 14, e1801483	96
1174	Optoelectronic properties of bottom gate-defined in-plane monolayer WSe2 pfi junction. 2018 , 27, 087303	O
1173	Atomistic Insight into the Formation of Metal-Graphene One-Dimensional Contacts. 2018, 10,	6
1172	Twistable electronics with dynamically rotatable heterostructures. <i>Science</i> , 2018 , 361, 690-693 33.3	242

1171	Narrow Plasmon Resonances in Hybrid Systems. 2018,	2
1170	Recent advances in the preparation, characterization, and applications of two-dimensional heterostructures for energy storage and conversion. 2018 , 6, 21747-21784	62
1169	Two-Dimensional Materials. 2018 , 29-49	
1168	Edge-Limited Valley-Preserved Transport in Quasi-1D Constriction of Bilayer Graphene. 2018 , 18, 5961-5966	5
1167	Tunneling Spin Valves Based on FeGeTe/hBN/FeGeTe van der Waals Heterostructures. 2018 , 18, 4303-4308	167
1166	Preparation of 2D material dispersions and their applications. 2018 , 47, 6224-6266	291
1165	Magnetotransport and lateral confinement in an InSe van der Waals Heterostructure. 2018, 5, 035040	6
1164	Long-distance spin transport through a graphene quantum Hall antiferromagnet. 2018 , 14, 907-911	47
1163	Electrophilic radical coupling at the edge of graphene. 2018 , 10, 12011-12017	4
1162	MoirEModulated Conductance of Hexagonal Boron Nitride Tunnel Barriers. 2018, 18, 4241-4246	15
1161	Luminescence in 2D Materials and van der Waals Heterostructures. 2018 , 6, 1701296	45
1160	Heterointerface effects in the electrointercalation of van der Waals heterostructures. 2018 , 558, 425-429	125
1159	Heterogeneous Integration of 2D Materials and Devices on a Si Platform. 2019 , 43-84	2
1158	Proximitized materials. 2019 , 22, 85-107	124
1157	Planar graphene Josephson coupling via van der Waals superconducting contacts. 2019 , 19, 251-255	3
1156	Size effects in the resistivity of graphene nanoribbons. 2019 , 30, 445203	Ο
1155	Quantum thermoelectrics based on two-dimensional semi-Dirac materials. 2019 , 100,	6
1154	Van der Waals heterostructures for optoelectronics: Progress and prospects. 2019 , 16, 435-455	62

1153	Realization of Quantum Hall Effect in Chemically Synthesized InSe. 2019 , 29, 1904032	16
1152	Van der Waals 2D Transition Metal Tellurides. 2019 , 6, 1900741	22
1151	High-efficiency spin polarization in electron transport through the graphene nanoribbon coupled to chromium triiodide. 2019 , 52, 435304	1
1150	2D materials for quantum information science. 2019 , 4, 669-684	146
1149	2D Crystal-Based Fibers: Status and Challenges. 2019 , 15, e1902691	26
1148	Improved contacts to p-type MoS transistors by charge-transfer doping and contact engineering. 2019 , 115,	17
1147	Multifunctional anti-ambipolar p-n junction based on MoTe2/MoS2 heterostructure. 2019 , 115, 073104	15
1146	Towards quantum-limited coherent detection of terahertz waves in charge-neutral graphene. 2019 , 3, 983-988	18
1145	Experimentally Determining the Top and Edge Contact Resistivities of Two-Step Sulfurization Nb-Doped MoS2 Films Using the Transmission Line Measurement. 2019 , 40, 1662-1665	4
1144	Photonics with hexagonal boron nitride. 2019 , 4, 552-567	253
1144	Photonics with hexagonal boron nitride. 2019, 4, 552-567 Large linear-in-temperature resistivity in twisted bilayer graphene. 2019, 15, 1011-1016	253
1143		
1143	Large linear-in-temperature resistivity in twisted bilayer graphene. 2019 , 15, 1011-1016	127 36
1143	Large linear-in-temperature resistivity in twisted bilayer graphene. 2019 , 15, 1011-1016 Recent advances in plasma modification of 2D transition metal dichalcogenides. 2019 , 11, 19202-19213	127 36
1143 1142 1141	Large linear-in-temperature resistivity in twisted bilayer graphene. 2019 , 15, 1011-1016 Recent advances in plasma modification of 2D transition metal dichalcogenides. 2019 , 11, 19202-19213 Tailoring Surface Properties via Functionalized Hydrofluorinated Graphene Compounds. 2019 , 31, e1903424	127 36 9
1143 1142 1141 1140	Large linear-in-temperature resistivity in twisted bilayer graphene. 2019, 15, 1011-1016 Recent advances in plasma modification of 2D transition metal dichalcogenides. 2019, 11, 19202-19213 Tailoring Surface Properties via Functionalized Hydrofluorinated Graphene Compounds. 2019, 31, e1903424 Tailored Tunnel Magnetoresistance Response in Three Ultrathin Chromium Trihalides. 2019, 19, 5739-5745	127 36 9 29
1143 1142 1141 1140 1139	Large linear-in-temperature resistivity in twisted bilayer graphene. 2019, 15, 1011-1016 Recent advances in plasma modification of 2D transition metal dichalcogenides. 2019, 11, 19202-19213 Tailoring Surface Properties via Functionalized Hydrofluorinated Graphene Compounds. 2019, 31, e1903424 Tailored Tunnel Magnetoresistance Response in Three Ultrathin Chromium Trihalides. 2019, 19, 5739-5745 Signatures of tunable superconductivity in a trilayer graphene moir Superlattice. 2019, 572, 215-219	127 36 9 29 264

1135	Synthesis of edge-rich vertical multilayer graphene nanotube arrays towards high-performance supercapacitors. 2019 , 30, 425401	4
1134	Graphene Hybrid Structures for Integrated and Flexible Optoelectronics. 2020 , 32, e1902039	53
1133	Immunity to Contact Scaling in MoS Transistors Using in Situ Edge Contacts. 2019 , 19, 5077-5085	44
1132	Fragility of the dissipationless state in clean two-dimensional superconductors. 2019 , 15, 947-953	13
1131	Excited States in Bilayer Graphene Quantum Dots. 2019 , 123, 026803	39
1130	Intimate Ohmic contact to two-dimensional WSe via thermal alloying. 2019 , 30, 415302	1
1129	All-2D ReS transistors with split gates for logic circuitry. 2019 , 9, 10354	13
1128	Recent Advances in Interface Engineering of Transition-Metal Dichalcogenides with Organic Molecules and Polymers. 2019 , 13, 9713-9734	45
1127	Universal quantized thermal conductance in graphene. 2019 , 5, eaaw5798	23
1126	Graphene Thermal Emitter with Enhanced Joule Heating and Localized Light Emission in Air. 2019 , 6, 2117-2125	23
1125	Nanoscale mapping of quasiparticle band alignment. 2019 , 10, 3283	19
1124	Electronic Compressibility of Magic-Angle Graphene Superlattices. 2019 , 123, 046601	68
1123	Emergent ferromagnetism near three-quarters filling in twisted bilayer graphene. <i>Science</i> , 2019 , 365, 605-608	3 568
1122	Conductance interference effects in an electron-beam-resist-free chemical vapor deposition graphene device sandwiched between two h-BN sheets. 2019 , 154, 238-243	2
1121	Strong magnetophonon oscillations in extra-large graphene. 2019 , 10, 3334	14
1120	Laser-Like Emission from a Sandwiched MoTe2 Heterostructure on a Silicon Single-Mode Resonator. 2019 , 7, 1900538	8
1119	Peeling off Nanometer-Thick Ferromagnetic Layers and Their van der Waals Heterostructures. 2019 , 5, 1900345	1
1118	Approaching ohmic contact to two-dimensional semiconductors. 2019 , 64, 1426-1435	21

1117	Chemical Identification of Interlayer Contaminants within van der Waals Heterostructures. 2019 , 11, 25578-25585	24
1116	High-performance monolayer MoS2 field-effect transistor with large-scale nitrogen-doped graphene electrodes for Ohmic contact. 2019 , 115, 012104	14
1115	A corner reflector of graphene Dirac fermions as a phonon-scattering sensor. 2019 , 10, 2428	6
1114	Antisymmetric magnetoresistance in van der Waals FeGeTe/graphite/FeGeTe trilayer heterostructures. 2019 , 5, eaaw0409	57
1113	Nontrivial quantum oscillation geometric phase shift in a trivial band. 2019 , 5, eaax6550	3
1112	Progress of Photodetectors Based on the Photothermoelectric Effect. 2019 , 31, e1902044	56
1111	Integration of single photon emitters in 2D layered materials with a silicon nitride photonic chip. 2019 , 10, 4435	92
1110	Borophene-graphene heterostructures. 2019 , 5, eaax6444	50
1109	Influence of microfabrication on superconducting properties of exfoliated thin films of layered superconductor NbSe2: reactive ion etching. 2019 , 1293, 012005	1
1108	Influence of focused-ion-beam microfabrication on superconducting transition in exfoliated thin films of layered superconductor NbSe2. 2019 , 1293, 012006	O
1107	Response of a superconductor NbSe2 flake to magnetic field detected with small tunnel junctions. 2019 , 1293, 012016	
1106	Landau levels of bilayer graphene in a WSe2/bilayer graphene van der Waals heterostructure. 2019 , 100,	2
1105	Features and Prospects for Epitaxial Graphene on SiC. 2019 , 153-199	1
1104	Gap Opening in Twisted Double Bilayer Graphene by Crystal Fields. 2019 , 19, 8821-8828	24
1103	Andreev reflection in ballistic normal metal/graphene/superconductor junctions. 2019, 100,	5
1102	Insulating State in Low-Disorder Graphene Nanoribbons. 2019 , 256, 1900269	1
1101	Edge Contact for Carrier Injection and Transport in MoS Field-Effect Transistors. 2019 , 13, 13169-13175	28
1100	Electrical control of interlayer exciton dynamics in atomically thin heterostructures. <i>Science</i> , 2019 , 366, 870-875	135

1099	Leveraging electron-phonon interaction to enhance the thermoelectric power factor in graphene-like semimetals. 2019 , 100,	2
1098	Correlated Insulating States in Twisted Double Bilayer Graphene. 2019 , 123, 197702	110
1097	High quality hydrogen silsesquioxane encapsulated graphene devices with edge contacts. 2019 , 257, 126765	4
1096	Effective Hexagonal Boron Nitride Passivation of Few-Layered InSe and GaSe to Enhance Their Electronic and Optical Properties. 2019 , 11, 43480-43487	23
1095	Pressure-controlled interlayer magnetism in atomically thin Crl. 2019 , 18, 1303-1308	178
1094	Far-UV photoluminescence microscope for impurity domain in hexagonal-boron-nitride single crystals by high-pressure, high-temperature synthesis. 2019 , 3,	11
1093	Charge carrier density noise in graphene: effect of localized/delocalized traps. 2019 , 2019, 094015	4
1092	Reliable Nonvolatile Memory Black Phosphorus Ferroelectric Field-Effect Transistors with van der Waals Buffer. 2019 , 11, 42358-42364	5
1091	Franz-Keldysh effect and electric field-induced second harmonic generation in graphene: From one-dimensional nanoribbons to two-dimensional sheet. 2019 , 99,	О
1090	Proximity Engineering of the van der Waals Interaction in Multilayered Graphene. 2019 , 11, 42528-42533	7
1089	Emerging properties of two-dimensional twisted bilayer materials. 2019 , 28, 107304	14
1088	Anisotropic Strain-Induced Soliton Movement Changes Stacking Order and Band Structure of Graphene Multilayers: Implications for Charge Transport. 2019 , 2, 6067-6075	10
1087	Recent progress in two-dimensional nanomaterials: Synthesis, engineering, and applications. 2019 , 18, 100133	33
1086	Identification of spin, valley and moir[quasi-angular momentum of interlayer excitons. 2019, 15, 1140-1144	55
1085	Direct Observation of Gate-Tunable Dark Trions in Monolayer WSe. 2019 , 19, 6886-6893	33
1084	Long valley lifetime of dark excitons in single-layer WSe. 2019 , 10, 4047	27
1083	Controlled fractal growth of transition metal dichalcogenides. 2019 , 11, 17065-17072	6
1082	Carbon-Rich Domain in Hexagonal Boron Nitride: Carrier Mobility Degradation and Anomalous Bending of the Landau Fan Diagram in Adjacent Graphene. 2019 , 19, 7282-7286	11

1081	Current-Driven Terahertz Light Emission from Graphene Plasmonic Oscillations. 2019 , 6, 2562-2569	12
1080	One-Dimensional Edge Contacts to a Monolayer Semiconductor. 2019 , 19, 6914-6923	30
1079	Comprehensive understanding of intrinsic mobility in the monolayers of III-VI group 2D materials. 2019 , 21, 21898-21907	10
1078	Metallic contact induced van der Waals gap in a MoS FET. 2019 , 11, 18246-18254	6
1077	Waveguide-Integrated, Plasmonic Enhanced Graphene Photodetectors. 2019 , 19, 7632-7644	60
1076	Quantum Hall Effect Measurement of Spin-Orbit Coupling Strengths in Ultraclean Bilayer Graphene/WSe Heterostructures. 2019 , 19, 7028-7034	17
1075	Optical generation of high carrier densities in 2D semiconductor heterobilayers. 2019 , 5, eaax0145	40
1074	Quantum Hall-based superconducting interference device. 2019 , 5, eaaw8693	6
1073	Correlated insulating and superconducting states in twisted bilayer graphene below the magic angle. 2019 , 5, eaaw9770	75
1072	Floating magnetic microrobots for fiber functionalization. 2019 , 4,	26
,	Floating magnetic microrobots for fiber functionalization. 2019 , 4, A room-temperature polariton light-emitting diode based on monolayer WS. 2019 , 14, 1024-1028	26 49
1071		
1071	A room-temperature polariton light-emitting diode based on monolayer WS. 2019 , 14, 1024-1028	49
1071	A room-temperature polariton light-emitting diode based on monolayer WS. 2019 , 14, 1024-1028 Evidence of a gate-tunable Mott insulator in a trilayer graphene moir uperlattice. 2019 , 15, 237-241 Two-Mode MoS Filament Transistor with Extremely Low Subthreshold Swing and Record High	49 274
1071 1070 1069 1068	A room-temperature polariton light-emitting diode based on monolayer WS. 2019, 14, 1024-1028 Evidence of a gate-tunable Mott insulator in a trilayer graphene moir superlattice. 2019, 15, 237-241 Two-Mode MoS Filament Transistor with Extremely Low Subthreshold Swing and Record High On/Off Ratio. 2019, 13, 2205-2212 Atomic-Scale Characterization of Graphene p-n Junctions for Electron-Optical Applications. 2019,	49 274 17
1071 1070 1069 1068	A room-temperature polariton light-emitting diode based on monolayer WS. 2019, 14, 1024-1028 Evidence of a gate-tunable Mott insulator in a trilayer graphene moir uperlattice. 2019, 15, 237-241 Two-Mode MoS Filament Transistor with Extremely Low Subthreshold Swing and Record High On/Off Ratio. 2019, 13, 2205-2212 Atomic-Scale Characterization of Graphene p-n Junctions for Electron-Optical Applications. 2019, 13, 2558-2566	49 274 17 7
1071 1070 1069 1068	A room-temperature polariton light-emitting diode based on monolayer WS. 2019, 14, 1024-1028 Evidence of a gate-tunable Mott insulator in a trilayer graphene moir superlattice. 2019, 15, 237-241 Two-Mode MoS Filament Transistor with Extremely Low Subthreshold Swing and Record High On/Off Ratio. 2019, 13, 2205-2212 Atomic-Scale Characterization of Graphene p-n Junctions for Electron-Optical Applications. 2019, 13, 2558-2566 van der Waals heterostructures combining graphene and hexagonal boron nitride. 2019, 1, 112-125 Van der Waals Broken-Gap p-n Heterojunction Tunnel Diode Based on Black Phosphorus and	49 274 17 7 177

1063	Hybrid Graphene-Silicon Based Polarization-Insensitive Electro-Absorption Modulator with High-Modulation Efficiency and Ultra-Broad Bandwidth. 2019 , 9,	12
1062	Electron-Driven In Situ Transmission Electron Microscopy of 2D Transition Metal Dichalcogenides and Their 2D Heterostructures. 2019 , 13, 978-995	42
1061	Tuning superconductivity in twisted bilayer graphene. <i>Science</i> , 2019 , 363, 1059-1064 33.3	814
1060	The adhesion energy measured by a stress accumulation-peeling mechanism in the exfoliation of graphite. 2019 , 21, 1217-1223	6
1059	Laser-writable high-k dielectric for van der Waals nanoelectronics. 2019 , 5, eaau0906	35
1058	Flexible One-Dimensional Metallhsulator (Graphene Diode. 2019 , 1, 945-950	20
1057	Graphene/MoXY Heterostructures Adjusted by Interlayer Distance, External Electric Field, and Strain for Tunable Devices. 2019 , 2, 3977-3988	32
1056	Vortex fluidic mediated transformation of graphite into highly conducting graphene scrolls. 2019 , 1, 2495-2501	10
1055	Femtosecond light pulse response of photodetectors based on Graphene/n-Si heterojunctions. 2019 , 152, 643-651	7
1054	Fractional and Symmetry-Broken Chern Insulators in Tunable Moir Superlattices. 2019, 19, 4321-4326	2
1053	On-chip integrated photonic circuits based on two-dimensional materials and hexagonal boron nitride as the optical confinement layer. 2019 , 125, 230901	6
1052	Sign-Reversing Hall Effect in Atomically Thin High-Temperature Bi_{2.1}Sr_{1.9}CaCu_{2.0}O_{8+} Superconductors. 2019 , 122, 247001	19
1051	Graphene-based polarization insensitive rasorber with tunable passband. 2019 , 14, 102172	5
1050	Recent progress of boron nitrides. 2019 , 347-419	3
1049	Topological valley currents in bilayer graphene/hexagonal boron nitride superlattices. 2019, 114, 243105	16
1048	Spin-Split Band Hybridization in Graphene Proximitized with RuCl Nanosheets. 2019 , 19, 4659-4665	29
1047	Emerging photoluminescence from the dark-exciton phonon replica in monolayer WSe. 2019 , 10, 2469	57
1046	Monolayer triphosphates MP (M = Sn, Ge) with excellent basal catalytic activity for hydrogen evolution reaction. 2019 , 11, 12210-12219	56

1045	Approaching the Intrinsic Limit in Transition Metal Diselenides via Point Defect Control. 2019 , 19, 4371-4379	90
1044	Two-Dimensional Black Phosphorus and Graphene Oxide Nanosheets Synergistically Enhance Cell Proliferation and Osteogenesis on 3D Printed Scaffolds. 2019 , 11, 23558-23572	63
1043	Thermodynamically stable octahedral MoS 2 in van der Waals hetero-bilayers. 2019 , 6, 041002	9
1042	Spin-orbit-driven band inversion in bilayer graphene by the van der Waals proximity effect. 2019 , 571, 85-89	61
1041	Dynamic structure-properties characterization and manipulation in advanced nanodevices. 2019 , 7, 100042	12
1040	Integrating graphene into semiconductor fabrication lines. 2019 , 18, 525-529	80
1039	Disorder in van der Waals heterostructures of 2D materials. 2019 , 18, 541-549	209
1038	Epitaxial growth of a 100-square-centimetre single-crystal hexagonal boron nitride monolayer on copper. 2019 , 570, 91-95	247
1037	In Situ Strain Tuning in hBN-Encapsulated Graphene Electronic Devices. 2019 , 19, 4097-4102	17
1036	Dry release transfer of graphene and few-layer h-BN by utilizing thermoplasticity of polypropylene carbonate. 2019 , 3,	30
1035	UV-SWIR broad range photodetectors made from few-layer 🛭 nSe nanosheets. 2019 , 11, 12817-12828	30
1034	A Fermi-Level-Pinning-Free 1D Electrical Contact at the Intrinsic 2D MoS -Metal Junction. 2019 , 31, e1808231	66
1033	Intrinsic Van Der Waals Magnetic Materials from Bulk to the 2D Limit: New Frontiers of Spintronics. 2019 , 31, e1900065	136
1032	Synthesis and Characterization of Plasma-Polymer Gate Dielectric Films for Graphene Field Effect Transistor Devices. 2019 , 15, 396-401	5
1031	Evolution of interlayer and intralayer magnetism in three atomically thin chromium trihalides. 2019 , 116, 11131-11136	120
1030	Gate electrostatics and quantum capacitance in ballistic graphene devices. 2019 , 99,	3
1029	Influence of oxygen on the synthesis of large area hexagonal boron nitride on Fe2B substrate. 2019 , 247, 52-55	4
1028	The origin of intrinsic charge transport for Dirac carbon sheet materials: roles of acetylenic linkage and electron-phonon couplings. 2019 , 11, 10828-10837	6

Modeling Atomic-Scale Electrical Contact Quality Across Two-Dimensional Interfaces. 2019 , 19, 3654-3662	2 10
1026 Valley-Engineering Mobilities in Two-Dimensional Materials. 2019 , 19, 3723-3729	10
Direct Evidence for Charge Compensation-Induced Large Magnetoresistance in Thin WTe. 2019 , 19, 3969-	397523
1024 Atomically Thin CrCl: An In-Plane Layered Antiferromagnetic Insulator. 2019 , 19, 3993-3998	120
SbSI whisker/PbI2 flake mixed-dimensional van der Waals heterostructure for photodetection. 2019 , 21, 3779-3787	14
The intrinsic temperature-dependent Raman spectra of graphite in the temperature range from 4K to 1000K. 2019 , 152, 451-458	28
1021 Characterization of hydrogen plasma defined graphene edges. 2019 , 150, 417-424	5
1020 All-Dry Transfer of Graphene Film by van der Waals Interactions. 2019 , 19, 3590-3596	18
1019 Electron Transport through Metal/MoS Interfaces: Edge- or Area-Dependent Process?. 2019 , 19, 3641-364	7 20
1018 Controlled synthesis of uniform multilayer hexagonal boron nitride films on FeB alloy 2019 , 9, 10155-101	58 8
Controlled synthesis of uniform multilayer hexagonal boron nitride films on FeB alloy 2019 , 9, 10155-101 Gate-Tunable Graphene-WSe Heterojunctions at the Schottky-Mott Limit. 2019 , 31, e1901392	34
Gate-Tunable Graphene-WSe Heterojunctions at the Schottky-Mott Limit. 2019 , 31, e1901392 Structural Engineering of Low-Dimensional Metal-Organic Frameworks: Synthesis, Properties, and	34
Gate-Tunable Graphene-WSe Heterojunctions at the Schottky-Mott Limit. 2019, 31, e1901392 Structural Engineering of Low-Dimensional Metal-Organic Frameworks: Synthesis, Properties, and Applications. 2019, 6, 1802373 Acoustic plasmons at the crossover between the collisionless and hydrodynamic regimes in	34 138
Gate-Tunable Graphene-WSe Heterojunctions at the Schottky-Mott Limit. 2019, 31, e1901392 Structural Engineering of Low-Dimensional Metal-Organic Frameworks: Synthesis, Properties, and Applications. 2019, 6, 1802373 Acoustic plasmons at the crossover between the collisionless and hydrodynamic regimes in two-dimensional electron liquids. 2019, 99, Electrostatics of metal-graphene interfaces: sharp p-n junctions for electron-optical applications.	34 138 7
Gate-Tunable Graphene-WSe Heterojunctions at the Schottky-Mott Limit. 2019, 31, e1901392 Structural Engineering of Low-Dimensional Metal-Organic Frameworks: Synthesis, Properties, and Applications. 2019, 6, 1802373 Acoustic plasmons at the crossover between the collisionless and hydrodynamic regimes in two-dimensional electron liquids. 2019, 99, Electrostatics of metal-graphene interfaces: sharp p-n junctions for electron-optical applications. 2019, 11, 10273-10281	34 138 7
Gate-Tunable Graphene-WSe Heterojunctions at the Schottky-Mott Limit. 2019, 31, e1901392 Structural Engineering of Low-Dimensional Metal-Organic Frameworks: Synthesis, Properties, and Applications. 2019, 6, 1802373 Acoustic plasmons at the crossover between the collisionless and hydrodynamic regimes in two-dimensional electron liquids. 2019, 99, Electrostatics of metal-graphene interfaces: sharp p-n junctions for electron-optical applications. 2019, 11, 10273-10281 Exciton localization in MoSe2 monolayers induced by adsorbed gas molecules. 2019, 114, 172106 Coexistence of two graphene-induced modulation effects on surface plasmons in hybrid graphene	34 138 7 11

1009	Atomic and electronic reconstruction at the van der Waals interface in twisted bilayer graphene. 2019 , 18, 448-453	282
1008	Probing magnetism in 2D materials at the nanoscale with single-spin microscopy. <i>Science</i> , 2019 , 364, 973-976	189
1007	Recent progress on in situ characterizations of electrochemically intercalated transition metal dichalcogenides. 2019 , 12, 2126-2139	19
1006	Plasmon Excited Ultrahot Carriers and Negative Differential Photoresponse in a Vertical Graphene van der Waals Heterostructure. 2019 , 19, 3295-3304	19
1005	Enhanced Photoenergy Harvesting and Extreme Thomson Effect in Hydrodynamic Electronic Systems. 2019 , 122, 166802	1
1004	Contact resistance at graphene/MoS2 lateral heterostructures. 2019 , 114, 163101	9
1003	Van der Waals integration before and beyond two-dimensional materials. 2019 , 567, 323-333	530
1002	Fast and Sensitive Terahertz Detection Using an Antenna-Integrated Graphene pn Junction. 2019 , 19, 2765-2773	82
1001	The electronic properties of Au and Pt metal contacts on quasi-one-dimensional layered TiS3(001). 2019 , 114, 101604	18
1000	van der Waals Contact Engineering of Graphene Field-Effect Transistors for Large-Area Flexible Electronics. 2019 , 13, 3257-3268	31
999	Metallic Phase and Temperature Dependence of the 월0 Quantum Hall State in Bilayer Graphene. 2019 , 122, 097701	8
998	High-Quality Electrostatically Defined Hall Bars in Monolayer Graphene. 2019 , 19, 2583-2587	9
997	Gate-tuned conductance of graphene-ribbon junctions with nanoscale width variations. 2019 , 11, 4735-4742	3
996	Quantum-critical conductivity of the Dirac fluid in graphene. <i>Science</i> , 2019 , 364, 158-162	43
995	Measuring Hall viscosity of graphene's electron fluid. <i>Science</i> , 2019 , 364, 162-165	97
994	Fabry-PEot resonances and a crossover to the quantum Hall regime in ballistic graphene quantum point contacts. 2019 , 9, 3031	7
993	Atomistic simulations of charge transport in photoswitchable organic-graphene hybrids. 2019 , 2, 035001	4
992	Heterostructures of graphene and hBN: Electronic, spin-orbit, and spin relaxation properties from first principles. 2019 , 99,	22

991	Unraveling the multiscale damping properties of two-dimensional layered MXene. 2019, 8, 84-95	3
990	Physics of Graphene: Basic to FET Application. 2019 , 29-63	
989	Weak localization in boron nitride encapsulated bilayer MoS2. 2019 , 99,	9
988	Recent Progress on Two-Dimensional Heterostructures for Catalytic, Optoelectronic, and Energy Applications. 2019 , 6, 2841-2851	11
987	Chemically deposited palladium nanoparticles on graphene for hydrogen sensor applications. 2019 , 9, 3653	40
986	Energetics of the complex phase diagram of a tunable bilayer graphene probed by quantum capacitance. 2019 , 99,	1
985	Introducing Well-Defined Nanowrinkles in CVD Grown Graphene. 2019 , 9,	3
984	Graphene transistor based on tunable Dirac fermion optics. 2019 , 116, 6575-6579	19
983	Black phosphorus and its isoelectronic materials. 2019 , 1, 306-317	107
982	Recent Advances in Growth and Modification of Graphene-Based Energy Materials: From Chemical Vapor Deposition to Reduction of Graphene Oxide. 2019 , 3, 1900071	18
981	Electronic properties of h-BN/g-C2N van der Waals heterojunction: A first-principles calculation. 2019 , 725, 75-79	3
980	Pinpoint pick-up and bubble-free assembly of 2D materials using PDMS/PMMA polymers with lens shapes. 2019 , 12, 055008	18
979	Tunneling Spectroscopy of Quantum Hall States in Bilayer Graphene p-n Junctions. 2019, 122, 146801	6
978	Transition Metal Dichalcogenide-Based Field-Effect Transistors for Analog/Mixed- Signal Applications. 2019 , 66, 2424-2430	7
977	Negative photoconductivity and hot-carrier bolometric detection of terahertz radiation in graphene-phosphorene hybrid structures. 2019 , 125, 151608	9
976	Spin tunnel field-effect transistors based on two-dimensional van der Waals heterostructures. 2019 , 2, 159-163	99
975	Contact transparency in mechanically assembled 2D material devices. 2019 , 2, 035003	0
974	Superlubricity enabled dry transfer of non-encapsulated graphene. 2019 , 28, 028102	2

973	High-temperature electronic devices enabled by hBN-encapsulated graphene. 2019 , 114, 123104	19
972	Low-Resistance, High-Yield Electrical Contacts to Atom Scale Si:P Devices Using Palladium Silicide. 2019 , 11,	6
971	Reversible doping of graphene field effect transistors by molecular hydrogen: the role of the metal/graphene interface. 2019 , 6, 025037	7
970	High-Quality Magnetotransport in Graphene Using the Edge-Free Corbino Geometry. 2019 , 122, 137701	37
969	Edge-terminated few-layer MoS2 nanoflakes supported on TNAs@C with enhanced electrocatalysis activity for iodine reduction reaction. 2019 , 6, 100033	11
968	Paraffin-enabled graphene transfer. 2019 , 10, 867	122
967	Experimental progress on layered topological semimetals. 2019 , 6, 032001	16
966	Bioelectronics and Interfaces Using Monolayer Graphene. 2019 , 6, 31-59	32
965	Bright Mid-Infrared Photoluminescence from Thin-Film Black Phosphorus. 2019 , 19, 1488-1493	58
964	Low-energy band structure in Bernal stacked six-layer graphene: Landau fan diagram and resistance ridge. 2019 , 99,	5
963	Determining Interaction Enhanced Valley Susceptibility in Spin-Valley-Locked MoS. 2019 , 19, 1736-1742	21
962	Coherence and Density Dynamics of Excitons in a Single-Layer MoS Reaching the Homogeneous Limit. 2019 , 13, 3500-3511	16
961	Direction-dependent giant optical conductivity in two-dimensional semi-Dirac materials. 2019 , 99,	9
960	New Generation of Moir Superlattices in Doubly Aligned hBN/Graphene/hBN Heterostructures. 2019 , 19, 2371-2376	49
959	Nonlinear anomalous Hall effect in few-layer WTe. 2019 , 18, 324-328	117
958	Observation of moirlexcitons in WSe/WS heterostructure superlattices. 2019 , 567, 76-80	459
957		
	Structural and Electronic Properties of Medium-Sized Aluminum-Doped Boron Clusters AlBn and Their Anions. 2019 , 123, 6276-6283	42

955	Lithographic band structure engineering of graphene. 2019 , 14, 340-346	44
954	Epitaxial van der Waals Contacts between Transition-Metal Dichalcogenide Monolayer Polymorphs. 2019 , 19, 1814-1820	25
953	Phonon Polariton-assisted Infrared Nanoimaging of Local Strain in Hexagonal Boron Nitride. 2019 , 19, 1982-1989	30
952	Electric and Terahertz Characterisation of FET based on BLG/h-BN. 2019,	
951	THz excited state level spacing in encapsulated graphene quantum dots. 2019,	
950	Approaching the Collection Limit in Hot Electron Transistors with Ambipolar Hot Carrier Transport. 2019 , 13, 14191-14197	15
949	Magnetotransport study of the mini-Dirac cone in AB-stacked four- to six-layer graphene under perpendicular electric field. 2019 , 100,	1
948	Dirac fermion quantum Hall antidot in graphene. 2019 , 100,	2
947	Reliable Postprocessing Improvement of van der Waals Heterostructures. 2019 , 13, 14182-14190	16
946	Engineering Crossed Andreev Reflection in Double-Bilayer Graphene. 2019 , 19, 9002-9007	5
945	Heteroepitaxial vertical perovskite hot-electron transistors down to the monolayer limit. 2019 , 10, 5312	7
944	Pattern Pick and Place Method for Twisted Bi- and Multi-Layer Graphene. 2019 , 12,	3
943	A nonlinear, geometric Hall effect without magnetic field. 2019 , 116, 24475-24479	3
942	Guiding Dirac Fermions in Graphene with a Carbon Nanotube. 2019 , 123, 216804	16
941	Visualizing Poiseuille flow of hydrodynamic electrons. 2019 , 576, 75-79	56
940	Flattening van der Waals heterostructure interfaces by local thermal treatment. 2019 , 115, 231603	8
939	Degradation of Black Phosphorus upon Environmental Exposure and Encapsulation Strategies To Prevent It. 2019 , 47-59	3
938	A new metal transfer process for van der Waals contacts to vertical Schottky-junction transition metal dichalcogenide photovoltaics. 2019 , 5, eaax6061	40

937	Heterogeneous Integration of 2D Materials: Recent Advances in Fabrication and Functional Device Applications. 2019 , 14, 1930009	8
936	Effects of Different Ion Irradiation on the Contact Resistance of Pd/Graphene Contacts. 2019, 12,	5
935	Noninvasive Subsurface Electrical Probe for Encapsulated Layers in van der Waals Heterostructures. 2019 , 12,	4
934	Tunable crystal symmetry in graphene-boron nitride heterostructures with coexisting moir superlattices. 2019 , 14, 1029-1034	61
933	Path towards graphene commercialization from lab to market. 2019 , 14, 927-938	126
932	Evidence of high-temperature exciton condensation in two-dimensional atomic double layers. 2019 , 574, 76-80	162
931	Micromagnetometry of two-dimensional ferromagnets. 2019 , 2, 457-463	46
930	Uniform and ultrathin high-lgate dielectrics for two-dimensional electronic devices. 2019 , 2, 563-571	93
929	p-MoS/n-InSe van der Waals heterojunctions and their applications in all-2D optoelectronic devices 2019 , 9, 35039-35044	7
928	Recent Advances in Optoelectronic Devices Based on 2D Materials and Their Heterostructures. 2019 , 7, 1800441	132
927	Progress, Challenges, and Opportunities for 2D Material Based Photodetectors. 2019 , 29, 1803807	481
926	Synergetic Behavior in 2D Layered Material/Complex Oxide Heterostructures. 2019 , 31, e1803732	20
925	Ohmic Contact in 2D Semiconductors via the Formation of a Benzyl Viologen Interlayer. 2019 , 29, 1807338	15
924	Twist-Angle-Dependent Optoelectronics in a Few-Layer Transition-Metal Dichalcogenide Heterostructure. 2019 , 11, 2470-2478	15
923	Hyperbolic Phonon Polaritons in Suspended Hexagonal Boron Nitride. 2019, 19, 1009-1014	42
922	Wafer-Scale van der Waals Heterostructures with Ultraclean Interfaces via the Aid of Viscoelastic Polymer. 2019 , 11, 1579-1586	9
921	Data-driven and probabilistic learning of the process-structure-property relationship in solution-grown tellurene for optimized nanomanufacturing of high-performance nanoelectronics. 2019 , 57, 480-491	29
920	Coherent control of a hybrid superconducting circuit made with graphene-based van der Waals heterostructures. 2019 , 14, 120-125	75

919	Correlation of exfoliation performance with interlayer cations of montmorillonite in the preparation of two-dimensional nanosheets. 2019 , 102, 3908-3922	18
918	Hybrid single-layer/bulk tungsten diselenide transistors by lithographic encoding of material thickness in chemical vapor deposition. 2019 , 6, 015017	2
917	Even denominator fractional quantum Hall states in higher Landau levels of graphene. 2019 , 15, 154-158	41
916	Recent progress in synthesis, properties, and applications of hexagonal boron nitride-based heterostructures. 2019 , 30, 074003	16
915	Ultralow Specific Contact Resistivity in Metalliraphene Junctions via Contact Engineering. 2019 , 6, 1801285	29
914	Air and Water-Stable n-Type Doping and Encapsulation of Flexible MoS2 Devices with SU8. 2019 , 5, 1800492	11
913	Hysteresis-Free Hexagonal Boron Nitride Encapsulated 2D Semiconductor Transistors, NMOS and CMOS Inverters. 2019 , 5, 1800419	17
912	Monolayer MoS2 Strained to 1.3% With a Microelectromechanical System. 2019 , 28, 254-263	25
911	Planar and van der Waals heterostructures for vertical tunnelling single electron transistors. 2019 , 10, 230	29
910	Raman Spectroscopy of van der Waals Heterostructures. 2019 , 81-98	
909	Fluorinated graphene suspension for flexible and printed electronics: Flakes, 2D films, and heterostructures. 2019 , 164, 107526	16
908	Low-Magnetic-Field Regime of a Gate-Defined Constriction in High-Mobility Graphene. 2019 , 19, 635-642	9
907	Competing Fractional Quantum Hall and Electron Solid Phases in Graphene. 2019 , 122, 026802	17
906	Controllable Synthesis of One-Dimensional MoO /MoS Hybrid Composites with their Enhanced Efficient Electromagnetic Wave Absorption Properties. 2019 , 84, 226-232	13
905	Supercurrent Flow in Multiterminal Graphene Josephson Junctions. 2019, 19, 1039-1043	22
904	Thermal radiation control from hot graphene electrons coupled to a photonic crystal nanocavity. 2019 , 10, 109	51
903	Short ballistic Josephson coupling in micrometer-long tantalum/graphene/tantalum junction. 2019 , 19, 436-439	2
902	A Peeling Approach for Integrated Manufacturing of Large Monolayer h-BN Crystals. 2019 , 13, 2114-2126	27

901	Nanoscale patterning hots up. 2019 , 2, 13-14	2
900	Ultra-thin h-BN substrates for nanoscale plasmon spectroscopy. 2019 , 125, 023104	7
899	Impact of geometry and non-idealities on electron optics (based graphene p-n junction devices. 2019 , 114, 013507	11
898	Effect of gap width on electron transport through quantum point contact in hBN/graphene/hBN in the quantum Hall regime. 2019 , 114, 023101	5
897	Dual plasmon-induced transparency and slow light effect in monolayer graphene structure with rectangular defects. 2019 , 52, 025104	36
896	Stacking transition in rhombohedral graphite. 2019 , 14, 1	15
895	Two-dimensional Organic Materials and Their Electronic Applications. 2019 , 48, 14-21	3
894	Recent Advances in Low-Dimensional Heterojunction-Based Tunnel Field Effect Transistors. 2019 , 5, 1800569	39
893	Excess resistivity in graphene superlattices caused by umklapp electronBlectron scattering. 2019 , 15, 32-36	25
892	Edge currents driven by terahertz radiation in graphene in quantum Hall regime. 2019 , 6, 011002	5
891	Performance Enhancement of Graphene Photodetectors via In Situ Preparation of TiO2 on Graphene Channels. 2019 , 4, 1800548	8
890	Ambipolar Memristive Phenomenon in Large-Scale, Few-Layered MoO3 Recrystallized Films. 2019 , 6, 1801591	4
889	Graphene: Properties and Applications. 2019 , 287-304	2
888	Structure and Chemistry of 2D Materials. 2019 , 55-90	3
887	Nanoenvelopes: Wrapping a Single-Walled Carbon Nanotube with Graphene using an Atomic Force Microscope. 2019 , 31, e1804918	4
886	Thermal Transport in 2D SemiconductorsConsiderations for Device Applications. 2020 , 30, 1903929	41
885	Air tightness of hBN encapsulation and its impact on Raman spectroscopy of van der Waals materials. 2020 , 7, 015012	4
884	Ultrasensitive Field-Effect Biosensors Enabled by the Unique Electronic Properties of Graphene. 2020 , 16, e1902820	27

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883	Engineering Field Effect Transistors with 2D Semiconducting Channels: Status and Prospects. 2020 , 30, 1901971		36	
882	Active control of electromagnetically induced transparency based on terahertz hybrid metal-graphene metamaterials for slow light applications. 2020 , 200, 163398		19	
881	Phonon Polaritons and Hyperbolic Response in van der Waals Materials. 2020 , 8, 1901393		49	
880	Nanophotonic devices for power-efficient communications. 2020 , 103-141			
879	Photodetector based on heterostructure of two-dimensional WSe/InSe. 2020, 31, 065203		14	
878	Edge-contact large area hetero-structure fast photodetector utilizing two-dimensional r-GO on three-dimensional GaN material interface. 2020 , 303, 111720		3	
877	Probing bias and power dependency of high-performance broadband Mg/ZnSnP2/Sn back-to-back Schottky junction photodetectors. 2020 , 208, 110386		4	
876	Mechanical Exfoliation of Select MAX Phases and Mo Ce Al C Single Crystals to Produce MAXenes. 2020 , 16, e1905784		15	
875	Hexagonal Boron Nitride Synthesized at Atmospheric Pressure Using Metal Alloy Solvents: Evaluation as a Substrate for 2D Materials. 2020 , 20, 735-740		7	
874	Robust Impact-Ionization Field-Effect Transistor Based on Nanoscale Vertical Graphene/Black Phosphorus/Indium Selenide Heterostructures. 2020 , 14, 434-441		15	
873	Bridging the van der Waals Interface for Advanced Optoelectronic Devices. 2020 , 32, e1906874		16	
872	Electron-hole hybridization in bilayer graphene. 2020 , 7, 248-253		3	
871	Intrinsic quantized anomalous Hall effect in a moir[heterostructure. <i>Science</i> , 2020 , 367, 900-903	33.3	377	
870	SolidDiquid Interdiffusion Bonding of CuBnDu Interconnection and Sealing for High-Temperature Pressure Sensor Based on Graphene. 2020 , 10, 65-71		6	
869	In situ growth of graphene on hexagonal boron nitride for electronic transport applications. 2020 , 8, 380-386		8	
868	Continuous Wave Sum Frequency Generation and Imaging of Monolayer and Heterobilayer Two-Dimensional Semiconductors. 2020 , 14, 708-714		22	
867	Triplet Excitation and Electroluminescence from a Supramolecular Monolayer Embedded in a Boron Nitride Tunnel Barrier. 2020 , 20, 278-283		5	
866	Fully Solid-State Graphene Transistors with Striking Homogeneity and Sensitivity for the Practicalization of Single-Device Electronic Bioassays. 2020 , 20, 166-175		7	

865	2D semiconducting materials for electronic and optoelectronic applications: potential and challenge. 2020 , 7, 022003	73
864	Mid-Infrared Photonics Using 2D Materials: Status and Challenges. 2020 , 14, 1900098	68
863	Electron Tunneling through Boron Nitride Confirms Marcus-Hush Theory Predictions for Ultramicroelectrodes. 2020 , 14, 993-1002	10
862	Functional Mid-Infrared Polaritonics in van der Waals Crystals. 2020 , 8, 1901194	10
861	A Reconfigurable Remotely Epitaxial VO Electrical Heterostructure. 2020 , 20, 33-42	13
860	Tailoring the thermal transport properties of monolayer hexagonal boron nitride by grain size engineering. 2020 , 7, 015031	11
859	Electrically controllable router of interlayer excitons. 2020, 6,	20
858	Thickness Trends of Electron and Hole Conduction and Contact Carrier Injection in Surface Charge Transfer Doped 2D Field Effect Transistors. 2020 , 14, 13557-13568	22
857	Broken Symmetries and Kohn Theorem in Graphene Cyclotron Resonance. 2020, 10,	1
856	Gate-Tunable Two-Dimensional Superlattices in Graphene. 2020 , 20, 8046-8052	8
855	Electron-Hole Crossover in Gate-Controlled Bilayer Graphene Quantum Dots. 2020 , 20, 7709-7715	17
854	Chemical Patterning of Graphene Metal-Assisted Highly Energetic Electron Irradiation for Graphene Homojunction-Based Gas Sensors. 2020 , 12, 47802-47810	7
853	Plasmonic antenna coupling to hyperbolic phonon-polaritons for sensitive and fast mid-infrared photodetection with graphene. 2020 , 11, 4872	19
852	Moir[Band Topology in Twisted Bilayer Graphene. 2020 , 20, 6076-6083	12
851	Coupling Interlayer Excitons to Whispering Gallery Modes in van der Waals Heterostructures. 2020 , 20, 6155-6161	13
850	Imaging viscous flow of the Dirac fluid in graphene. 2020 , 583, 537-541	69
849	Excitons in strain-induced one-dimensional moir[potentials at transition metal dichalcogenide heterojunctions. 2020 , 19, 1068-1073	79

847	Chemical identification through two-dimensional electron energy-loss spectroscopy. 2020 , 6, eabb4713	1
846	Graphene-Based Gas Sensors with High Sensitivity and Minimal Sensor-to-Sensor Variation. 2020 , 3, 2257-226	55 48
845	Review of fabrication methods of large-area transparent graphene electrodes for industry. 2020 , 13, 91-113	13
844	Contact engineering for two-dimensional semiconductors. 2020 , 41, 071901	7
843	Borophene: New Sensation in Flatland. 2020 , 32, e2000531	41
842	Device physics and device integration of two-dimensional heterostructures. 2020 , 195-214	2
841	Anomalous Cyclotron Motion in Graphene Superlattice Cavities. 2020, 125, 217701	3
840	Determination of the Nonlinear Optical Properties of Single- and Few-Layered Graphene Dispersions under Femtosecond Laser Excitation: Electronic and Thermal Origin Contributions. 2020 , 124, 27241-27249	6
839	Long-range ballistic transport of Brown-Zak fermions in graphene superlattices. 2020 , 11, 5756	10
838	Flux Tunable Superconducting Quantum Circuit Based on Weyl Semimetal MoTe. 2020 , 20, 8469-8475	4
837	Correlated insulating states at fractional fillings of moir superlattices. 2020, 587, 214-218	82
836	Hybrid/Integrated Silicon Photonics Based on 2D Materials in Optical Communication Nanosystems. 2020 , 14, 2000239	19
835	Giant-Capacitance-Induced Wide Quantum Hall Plateaus in Graphene on LaAlO3/SrTiO3 Heterostructures. 2020 , 37, 077301	2
834	Modulation Doping via a Two-Dimensional Atomic Crystalline Acceptor. 2020 , 20, 8446-8452	16
833	Directional ultrafast charge transfer in a WSe/MoSe heterostructure selectively probed by time-resolved SHG imaging microscopy. 2020 , 5, 1603-1609	3
832	Site-specific electrical contacts with the two-dimensional materials. 2020 , 11, 3982	4
831	Limiting Damage to 2D Materials during Focused Ion Beam Processing. 2020 , 257, 2000318	2
830	Preparation of Twisted Bilayer Graphene via the Wetting Transfer Method. 2020 , 12, 40958-40967	11

829	Simultaneously enhancing mechanical properties and electrical conductivity of aluminum by using graphene as the reinforcement. 2020 , 265, 127440	14
828	Towards Scalable Fabrications and Applications of 2D Layered Material-based Vertical and Lateral Heterostructures. 2020 , 36, 525-550	3
827	Giant, unconventional anomalous Hall effect in the metallic frustrated magnet candidate, KVSb. 2020 , 6, eabb6003	97
826	First principles study of structural, optoelectronic and photocatalytic properties of SnS, SnSe monolayers and their van der Waals heterostructure. 2020 , 539, 110939	9
825	Tunneling Spectroscopy in Carbon Nanotube-Hexagonal Boron Nitride-Carbon Nanotube Heterojunctions. 2020 , 20, 6712-6718	5
824	Robust subgap edge conduction in bilayer graphene with disordered edge termination. 2020 , 102,	
823	Double Negative Differential Resistance Device Based on Hafnium Disulfide/Pentacene Hybrid Structure. 2020 , 7, 2000991	10
822	Unveiling Electron Optics in Two-Dimensional Materials by Nonlocal Resistance Mapping. 2020 , 20, 6623-662	29 o
821	. 2020 , 8, 127220-127225	9
820	Ougatum data in AA stacked hilayes asanbana 2020 102	
020	Quantum dots in AA-stacked bilayer graphene. 2020 , 102,	2
819	Layer-dependent and light-tunable surface potential of two-dimensional indium selenide (InSe) flakes. 2020 , 39, 1356-1363	8
	Layer-dependent and light-tunable surface potential of two-dimensional indium selenide (InSe)	
819	Layer-dependent and light-tunable surface potential of two-dimensional indium selenide (InSe) flakes. 2020 , 39, 1356-1363	8
819 818	Layer-dependent and light-tunable surface potential of two-dimensional indium selenide (InSe) flakes. 2020, 39, 1356-1363 Photodetectors based on 2D material/Si heterostructure. 2020, 41, 080401 Spectral and spatial isolation of single tungsten diselenide quantum emitters using hexagonal	8 5
819 818 817	Layer-dependent and light-tunable surface potential of two-dimensional indium selenide (InSe) flakes. 2020, 39, 1356-1363 Photodetectors based on 2D material/Si heterostructure. 2020, 41, 080401 Spectral and spatial isolation of single tungsten diselenide quantum emitters using hexagonal boron nitride wrinkles. 2020, 5, 096105 Mixed-Dimensional In-Plane Heterostructures from 1D Mo Te and 2D MoTe Synthesized by	8 5 0
819 818 817 816	Layer-dependent and light-tunable surface potential of two-dimensional indium selenide (InSe) flakes. 2020, 39, 1356-1363 Photodetectors based on 2D material/Si heterostructure. 2020, 41, 080401 Spectral and spatial isolation of single tungsten diselenide quantum emitters using hexagonal boron nitride wrinkles. 2020, 5, 096105 Mixed-Dimensional In-Plane Heterostructures from 1D Mo Te and 2D MoTe Synthesized by Te-Flux-Controlled Chemical Vapor Deposition. 2020, 16, e2002849 High-Throughput Electrical Characterization of Nanomaterials from Room to Cryogenic	8 5 0
819 818 817 816 815	Layer-dependent and light-tunable surface potential of two-dimensional indium selenide (InSe) flakes. 2020, 39, 1356-1363 Photodetectors based on 2D material/Si heterostructure. 2020, 41, 080401 Spectral and spatial isolation of single tungsten diselenide quantum emitters using hexagonal boron nitride wrinkles. 2020, 5, 096105 Mixed-Dimensional In-Plane Heterostructures from 1D Mo Te and 2D MoTe Synthesized by Te-Flux-Controlled Chemical Vapor Deposition. 2020, 16, e2002849 High-Throughput Electrical Characterization of Nanomaterials from Room to Cryogenic Temperatures. 2020, 14, 15293-15305	8 5 O 6 2

811	Terahertz radiation processes in critically coupled graphene plasmonic nanostructures. 2020 , 128, 153105	1
810	Optoelectronic Properties of Graphene-Based van der Waals Hybrids. 2020 ,	O
809	Observation of logarithmic Kohn anomaly in monolayer graphene. 2020 , 102,	3
808	1/f Noise in epitaxial sidewall graphene nanoribbons. 2020 , 117, 083105	1
807	Compact SQUID Realized in a Double-Layer Graphene Heterostructure. 2020 , 20, 7129-7135	2
806	Current distribution in a slit connecting two graphene half planes. 2020 , 102,	1
805	Progress and Prospects of Solution-Processed Two-Dimensional Semiconductor Nanocrystals. 2020 , 124, 21895-21908	19
804	First-principles calculation of phonon-limited mobility in planar T graphene. 2020 , 322, 114064	2
803	Exciton diffusion in hBN-encapsulated monolayer MoSe2. 2020 , 102,	5
802	A Review on Graphene-Based Light Emitting Functional Devices. 2020 , 25,	7
801	Chemical Vapor Deposition Growth of Uniform Multilayer Hexagonal Boron Nitride Driven by Structural Transformation of a Metal Thin Film. 2020 , 2, 3270-3278	8
800	High Throughput Screening of Millions of van der Waals Heterostructures for Superlubricant Applications. 2020 , 3, 2000029	4
799	Terahertz Photogalvanics in Twisted Bilayer Graphene Close to the Second Magic Angle. 2020 , 20, 7152-7158	7
798	Magnetic field detection limits for ultraclean graphene Hall sensors. 2020 , 11, 4163	13
797	Optimal architecture for ultralow noise graphene transistors at room temperature. 2020 , 12, 17762-17768	8
796	Bulk valley transport and Berry curvature spreading at the edge of flat bands. 2020 , 11, 5548	7
795	Emerging Artificial Two-Dimensional van der Waals Heterostructures for Optoelectronics. 2020,	O
794	Contact Resistance Parallel Model for Edge-Contacted 2D Material Back-Gate FET. 2020 , 9, 2110	3

793	Band Engineering of Large-Twist-Angle Graphene/h-BN Moir (Superlattices with Pressure. 2020 , 125, 226403	8
792	. 2020,	O
791	growth of large-area and self-aligned graphene nanoribbon arrays on liquid metal 2021, 8, nwaa298	3
790	Time-Domain Investigations of Coherent Phonons in van der Waals Thin Films. 2020 , 10,	13
789	Electrostatic Detection of Shubnikovde Haas Oscillations in Bilayer Graphene by Coulomb Resonances in Gate-Defined Quantum Dots. 2020 , 257, 2000333	5
788	Out-of-plane corrugations in graphene based van der Waals heterostructures. 2020 , 102,	1
787	Electronically Coupled 2D Polymer/MoS Heterostructures. 2020 , 142, 21131-21139	8
786	Thermal Transport in Two-Dimensional Heterostructures. 2020 , 7,	4
785	Ohmic contact engineering in few-layer black phosphorus: approaching the quantum limit. 2020 , 31, 334002	8
784	Manipulating Berry curvature in hBN/bilayer graphene commensurate heterostructures. 2020, 101,	4
783	Interference of chiral Andreev edge states. 2020 , 16, 862-867	13
782	Superconductivity and strong correlations in moir[flat bands. 2020, 16, 725-733	139
781	Mapping the twist-angle disorder and Landau levels in magic-angle graphene. 2020 , 581, 47-52	118
780	Tunable correlated states and spin-polarized phases in twisted bilayer-bilayer graphene. 2020 , 583, 215-220	209
779	Superconducting proximity effect in a transparent van der Waals superconductor-metal junction. 2020 , 101,	7
778	Tiled Monolayer Films of 2D Molybdenum Disulfide Nanoflakes Assembled at Liquid/Liquid Interfaces. 2020 , 12, 25125-25134	5
777	Control of electron-electron interaction in graphene by proximity screenings. 2020 , 11, 2339	17
776	Nonlocal Spin Dynamics in the Crossover from Diffusive to Ballistic Transport. 2020 , 124, 196602	10

(2020-2020)

775	Strong mid-infrared photoresponse in small-twist-angle bilayer graphene. 2020 , 14, 549-553	37
774	Independent superconductors and correlated insulators in twisted bilayer graphene. 2020 , 16, 926-930	124
773	Thermal annealing effect on the electrical quality of graphene/hexagonal boron nitride heterostructure devices. 2020 , 31, 355001	3
772	Observation of Magnetic Proximity Effect Using Resonant Optical Spectroscopy of an Electrically Tunable MoSe_{2}/CrBr_{3} Heterostructure. 2020 , 124, 197401	34
771	Asymmetric dual-grating gates graphene FET for detection of terahertz radiations. 2020 , 5, 066102	12
770	Graphene Field-Effect Transistors on Hexagonal-Boron Nitride for Enhanced Interfacial Thermal Dissipation. 2020 , 6, 2000059	3
769	Opportunities and Challenges in Twisted Bilayer Graphene: A Review. 2020 , 12, 126	32
768	Versatile construction of van der Waals heterostructures using a dual-function polymeric film. 2020 , 11, 3029	17
767	Correlated electronic phases in twisted bilayer transition metal dichalcogenides. 2020, 19, 861-866	197
766	Gate-tunable spin waves in antiferromagnetic atomic bilayers. 2020 , 19, 838-842	35
765	Design of MXene contacts for high-performance WS2 transistors. 2020 , 527, 146701	4
764	Artificial Metaphotonics Born Naturally in Two Dimensions. 2020 , 120, 6197-6246	42
763	Multiband and broadband active controllable terahertz absorption in dual-side grating-gate graphene field-effect transistors. 2020 , 31, 284001	О
762	Intrinsic limit of contact resistance in the lateral heterostructure of metallic and semiconducting PtSe. 2020 , 12, 14636-14641	3
761	Electrostatic superlattices on scaled graphene lattices. 2020 , 3,	9
760	Imaging and control of critical fluctuations in two-dimensional magnets. 2020 , 19, 1290-1294	13
759	Macro van der Waals p-n heterojunction based on SnSe and SnSe. 2020 , 31, 385203	4
758	Single-Carrier Transport in Graphene/hBN Superlattices. 2020 , 20, 2551-2557	5

757	Simulation of Hubbard model physics in WSe/WS moir uperlattices. 2020, 579, 353-358	195
756	Mott and generalized Wigner crystal states in WSe/WS moir uperlattices. 2020 , 579, 359-363	212
755	Thermal Rectification in Asymmetric Graphene/Hexagonal Boron Nitride van der Waals Heterostructures. 2020 , 12, 15517-15526	25
754	Limits on gas impermeability of graphene. 2020 , 579, 229-232	109
753	Gate controlled valley polarizer in bilayer graphene. 2020 , 11, 1202	9
752	Tunable nonlocal valley-entangled Cooper pair splitter realized in bilayer-graphene van der Waals spin valves. 2020 , 101,	7
751	Anomalous Coulomb Drag between InAs Nanowire and Graphene Heterostructures. 2020 , 124, 116803	6
750	Multiband Ballistic Transport and Anisotropic Commensurability Magnetoresistance in Antidot Lattices of AB-stacked Trilayer Graphene. 2020 , 89, 044703	1
749	Van der waals heterojunctions for catalysis. 2020 , 6, 100059	13
748	Graphene-Based Frequency-Conversion Mixers for High-Frequency Applications. 2020 , 68, 2090-2096	О
747	Tunable Valley Splitting due to Topological Orbital Magnetic Moment in Bilayer Graphene Quantum Point Contacts. 2020 , 124, 126802	26
746	Correlated states in twisted double bilayer graphene. 2020 , 16, 520-525	194
745	Room Temperature Graphene Mid-Infrared Bolometer with a Broad Operational Wavelength Range. 2020 , 7, 1206-1215	19
744	Floquet oscillations in periodically driven Dirac systems. 2020 , 101,	3
743	. 2020 , 8, 70488-70495	6
742	High-frequency rectification via chiral Bloch electrons. 2020 , 6, eaay2497	35
741	3D Manipulation of 2D Materials Using Microdome Polymer. 2020 , 20, 2486-2492	19
740	Fabrication of folded bilayer-bilayer graphene/hexagonal boron nitride superlattices. 2020 , 13, 035003	1

(2020-2020)

739	Tunable correlated Chern insulator and ferromagnetism in a moir uperlattice. 2020 , 579, 56-61	215
738	High oscillator strength interlayer excitons in two-dimensional heterostructures for mid-infrared photodetection. 2020 , 15, 675-682	56
737	Surface-Induced 2D/1D Heterostructured Growth of ReS/CoS for High-Performance Electrocatalysts. 2020 , 12, 33586-33594	12
736	Double-Gate MoS Field-Effect Transistor with a Multilayer Graphene Floating Gate: A Versatile Device for Logic, Memory, and Synaptic Applications. 2020 , 12, 33926-33933	20
735	Tunable spin-polarized correlated states in twisted double bilayer graphene. 2020 , 583, 221-225	191
734	Electronic Transport in Few-Layer Black Phosphorus. 2020 ,	
733	Synthesis of two-dimensional hexagonal boron nitride. 2020 , 223-246	
732	Graphene ballistic rectifiers: Theory and geometry dependence. 2020 , 168, 201-208	5
731	Bubble-Free Transfer Technique for High-Quality Graphene/Hexagonal Boron Nitride van der Waals Heterostructures. 2020 , 12, 8533-8538	23
730	Modeling and Simulation of Resistive Random Access Memory With Graphene Electrode. 2020 , 67, 915-921	4
729	Intrinsic resistance peaks in AB-stacked multilayer graphene with odd number of layers. 2020 , 101,	4
728	Structure and Dynamics of the Electronic Heterointerfaces in MoS by First-Principles Simulations. 2020 , 11, 1644-1649	6
727	Ultra-long carrier lifetime in neutral graphene-hBN van der Waals heterostructures under mid-infrared illumination. 2020 , 11, 863	18
726	Transfer assembly for two-dimensional van der Waals heterostructures. 2020 , 7, 022005	54
725	Graphene on Silicon Modulators. 2020 , 38, 2782-2789	13
724	Weak localization in graphene sandwiched by aligned h-BN flakes. 2020 , 31, 215712	2
723	Liquids relax and unify strain in graphene. 2020 , 11, 898	16
722	Domain-size effect on the electronic properties of two-dimensional MoS2/WS2. 2020 , 101,	О

721	Single-Electron Double Quantum Dots in Bilayer Graphene. 2020 , 20, 2005-2011	25
720	. 2020 , 67, 1310-1316	7
719	Widely tunable mid-infrared light emission in thin-film black phosphorus. 2020, 6, eaay6134	42
718	An inexpensive system for the deterministic transfer of 2D materials. 2020 , 3, 016001	15
717	High-Frequency Limits of Graphene Field-Effect Transistors with Velocity Saturation. 2020, 10, 446	10
716	Frictional Drag Effect between Massless and Massive Fermions in Single-Layer/Bilayer Graphene Heterostructures. 2020 , 20, 1396-1402	3
715	Persistent and reversible electrostatic control of doping in graphene/hexagonal boron nitride heterostructures. 2020 , 127, 044303	4
714	Visibility of hexagonal boron nitride on transparent substrates. 2020 , 31, 195701	2
713	Transfer of Epitaxial SrTiO Nanothick Layers Using Water-Soluble Sacrificial Perovskite Oxides. 2020 , 12, 8466-8474	8
712	Valley phonons and exciton complexes in a monolayer semiconductor. 2020 , 11, 618	55
711	Direct writing of lateral fluorographene nanopatterns with tunable bandgaps and its application in new generation of moir uperlattice. 2020 , 7, 011403	11
710	Production and processing of graphene and related materials. 2020 , 7, 022001	179
709	Accurate Determination of Interlayer Resistivity of 2-D Layered Systems: Graphene Case Study. 2020 , 67, 627-632	1
708	Reversible writing of high-mobility and high-carrier-density doping patterns in two-dimensional van der Waals heterostructures. 2020 , 3, 99-105	32
707	Metal-graphene interfaces in epitaxial and bulk systems: A review. 2020 , 110, 100652	62
706	Extraordinary magnetoresistance in encapsulated monolayer graphene devices. 2020 , 116, 053102	3
705	Interface engineering of two-dimensional transition metal dichalcogenides towards next-generation electronic devices: recent advances and challenges. 2020 , 5, 787-807	25
704	On-chip terahertz modulation and emission with integrated graphene junctions. 2020 , 116, 161104	5

(2021-2020)

703	Stacking of Exfoliated Two-Dimensional Materials: A Review. 2020 , 38, 981-995	13
702	Few-layer PdSe2-based field-effect transistor for photodetector applications. 2020 , 115, 105102	3
701	Strongly correlated electrons and hybrid excitons in a moir[heterostructure. 2020, 580, 472-477	113
700	Contact resistance and mobility in back-gate graphene transistors. 2020 , 1, 010001	28
699	The electronic thickness of graphene. 2020 , 6, eaay8409	15
698	Large Responsivity of Graphene Radiation Detectors With Thermoelectric Readout: Results of Simulations. 2020 , 20,	2
697	Tunable bandwidths and gaps in twisted double bilayer graphene on the verge of correlations. 2020 , 101,	17
696	Global Control of Stacking-Order Phase Transition by Doping and Electric Field in Few-Layer Graphene. 2020 , 20, 3106-3112	17
695	Stacking order driving bandgap and conductance of graphene/C3B (C3N) van der Waals heterostructures. 2020 , 116, 153103	4
694	HBN-Encapsulated, Graphene-based, Room-temperature Terahertz Receivers, with High Speed and Low Noise. 2020 , 20, 3169-3177	35
693	Excellent electronic transport in heterostructures of graphene and monoisotopic boron-nitride grown at atmospheric pressure. 2020 , 7, 031009	11
692	Mobility Enhancement in Graphene by in´situ Reduction of Random Strain Fluctuations. 2020 , 124, 157701	8
691	The Dependence of the High-Frequency Performance of Graphene Field-Effect Transistors on Channel Transport Properties. 2020 , 8, 457-464	10
690	Minibands in twisted bilayer graphene probed by magnetic focusing. 2020 , 6, eaay7838	8
689	Photo-induced electrodeposition of metallic nanostructures on graphene. 2020 , 12, 11063-11069	3
688	Classical and quantum phases in hexagonal boron nitride-combined van der Waals heterostructures. 2021 , 3, 252-270	2
687	2D WS2: From Vapor Phase Synthesis to Device Applications. 2021 , 7, 2000688	16
686	Flexible and Stretchable Microwave Electronics: Past, Present, and Future Perspective. 2021 , 6, 2000759	20

685	Conductive Biomaterials as Substrates for Neural Stem Cells Differentiation towards Neuronal Lineage Cells. 2021 , 21, e2000123	10
684	Building Functional Memories and Logic Circuits with 2D Boron Nitride. 2021 , 31, 2004733	12
683	Tailoring Single- and Double-Sided Fluorination of Bilayer Graphene via Substrate Interactions. 2021 , 21, 891-898	4
682	Electrically tunable correlated and topological states in twisted monolayer B ilayer graphene. 2021 , 17, 374-380	64
681	Multi-Level Electro-Thermal Switching of Optical Phase-Change Materials Using Graphene. 2021 , 2, 2000034	24
68o	Stacking of 2D Materials. 2021 , 31, 2007810	42
679	2D HfN2/graphene interface based Schottky device: Unmatched controllability in electrical contacts and carrier concentration via electrostatic gating and out-of-plane strain. 2021 , 540, 148389	5
678	All-2D architectures toward advanced electronic and optoelectronic devices. 2021 , 36, 101026	15
677	The Art of Constructing Black Phosphorus Nanosheet Based Heterostructures: From 2D to 3D. 2021 , 33, e2005254	16
676	Synthesis of Large-Area Single-Crystal Graphene. 2021 , 3, 15-33	8
675	Ambipolar 2D Semiconductors and Emerging Device Applications 2021 , 5, e2000837	12
674	Detection of nucleobases on borophene nanosheet: A DFT investigation. 2021 , 138, 107721	2
673	Multiterminal Transport Measurements of Multilayer InSe Encapsulated by hBN. 2021 , 3, 163-169	1
672	Tuning layer-hybridized moirlexcitons by the quantum-confined Stark effect. 2021 , 16, 52-57	18
671	Symmetry breaking in twisted double bilayer graphene. 2021 , 17, 26-30	69
670	The Basic Category and Application of Graphene-based Hybrid Photodetector. 632, 052092	
669	Ultra-compact integrated terahertz modulator based on a graphene metasurface. 2021 , 46, 605-608	1
668	Mapping current profiles of point-contacted graphene devices using single-spin scanning magnetometer. 2021 , 118, 033101	4

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666	Electronic transport in graphene. 2021 , 27-49	1
665	Two-Dimensional Material-Based Heterostructures for Rechargeable Batteries. 2021 , 2, 100286	12
664	Ohmic Contact Engineering for Two-Dimensional Materials. 2021 , 2, 100298	29
663	Large-area, high-responsivity, fast and broadband graphene/n-Si photodetector. 2021 , 32, 155504	4
662	Fermi-level depinning of 2D transition metal dichalcogenide transistors. 2021 , 9, 11407-11427	11
661	Synthesis of Diamond-like Carbon as a Dielectric Platform for Graphene Field Effect Transistors. 2021 , 4, 1385-1393	2
660	Tunnel barrier engineering of spin-polarized mild band gap vertical ternary heterostructures. 2021 , 23, 22418-22422	
659	Moir[metrology of energy landscapes in van der Waals heterostructures. 2021 , 12, 242	22
658	Recent progress of transfer methods of two-dimensional atomic crystals and high-quality electronic devices. 2021 , 70, 1-35	
657	Hot carriers in graphene - fundamentals and applications. 2021 , 13, 8376-8411	15
656	Conductance modulated by the strain in normal metalgraphene junctions. 2021 , 20, 103723	
655	Methods of transferring two-dimensional materials. 2021 , 70, 028201-028201	1
654	Electronic-temperature estimation of Joule-heated graphene via Raman investigations. 2021, 78, 164-168	
653	Layer- and gate-tunable spin-orbit coupling in a high-mobility few-layer semiconductor. 2021 , 7,	1
652	Designing the Bending Stiffness of 2D Material Heterostructures. 2021 , 33, e2007269	13
651	A novel spin-valley-coupled nodal-ring semimetal in single-layer TaC. 2021 , 23, 12280-12287	О
650	Controllable preparation and photoelectric applications of two-dimensional in-plane and van der Waals heterostructures. 2021 , 70, 027901-027901	5

649	Imaging metasurfaces based on graphene-loaded slot antennas. 2021 , 29, 1076-1089	О
648	Domain walls in topological tri-hinge matter. 2021 , 136, 1	1
647	High-quality borophene quantum dot realization and their application in a photovoltaic device.	2
646	Enhancement of thermoelectric efficiency of T⊞fSe2 via nanostructuring. 2021 , 103,	5
645	Electrical control of anisotropic and tightly bound excitons in bilayer phosphorene. 2021, 103,	6
644	Evolution of low-dimensional material-based field-effect transistors. 2021 , 13, 5162-5186	14
643	Transport at the nanoscale. 2021 , 363-460	
642	Review and comparison of layer transfer methods for two-dimensional materials for emerging applications. 2021 , 50, 11032-11054	14
641	Nanofabrication of graphene field-effect transistors by thermal scanning probe lithography. 2021 , 9, 011107	2
640	Energy-efficient transistors: suppressing the subthreshold swing below the physical limit. 2021 , 8, 1601-1617	8
639	Optical properties of multilayer heterostructures based on transition metal dichalcogenides. 2021,	
638	Zeolite-supported synthesis, solution dispersion, and optical characterizations of single-walled carbon nanotubes wrapped by boron nitride nanotubes. 2021 , 129, 015101	1
637	Charged Exciton Kinetics in Monolayer MoSe near Ferroelectric Domain Walls in Periodically Poled LiNbO. 2021 , 21, 959-966	2
636	Hofstadter subband ferromagnetism and symmetry-broken Chern insulators in twisted bilayer graphene. 2021 , 17, 478-481	44
635	Heterointerface Effects on Lithium-Induced Phase Transitions in Intercalated MoS. 2021 , 13, 10603-10611	8
634	The performance limits of hexagonal boron nitride as an insulator for scaled CMOS devices based on two-dimensional materials. 2021 , 4, 98-108	53
633	Chern insulators, van Hove singularities and topological flat bands in magic-angle twisted bilayer graphene. 2021 , 20, 488-494	56

(2021-2021)

631	One- and two-dimensional electrical contacts and transport properties in monolayer black phosphorene-Ni interface. 2021 ,	1
630	Two-Dimensional Hexagonal Boron Nitride for Building Next-Generation Energy-Efficient Devices. 2021 , 6, 985-996	12
629	Nanoscale evaluation of the number of layers of hexagonal boron nitride by scattering-type scanning near-field optical microscopy. 2021 , 60, SBBH15	2
628	Pulsed-gate spectroscopy of single-electron spin states in bilayer graphene quantum dots. 2021 , 103,	5
627	Tip-Based Cleaning and Smoothing Improves Performance in Monolayer MoS Devices. 2021 , 6, 4013-4021	2
626	Large-area integration of two-dimensional materials and their heterostructures by wafer bonding. 2021 , 12, 917	37
625	Wafer-Scale Integration of Graphene-Based Photonic Devices. 2021 , 15, 3171-3187	24
624	Recent Advances on Multivalued Logic Gates: A Materials Perspective. 2021 , 8, 2004216	22
623	Van der Waals Heterostructures by Design: From 1D and 2D to 3D. 2021 , 4, 552-581	19
622	Aharonov-Bohm effect in graphene-based Fabry-PĒot quantum Hall interferometers. 2021 , 16, 563-569	10
621	Tunable interdot coupling in few-electron bilayer graphene double quantum dots. 2021, 118, 103101	4
620	Controllable potential barrier for multiple negative-differential-transconductance and its application to multi-valued logic computing. 2021 , 5,	7
619	Experimental and Computational Investigation of Layer-Dependent Thermal Conductivities and Interfacial Thermal Conductance of One- to Three-Layer WSe. 2021 , 13, 13063-13071	9
618	Electric-Field-Tunable Valley Zeeman Effect in Bilayer Graphene Heterostructures: Realization of the Spin-Orbit Valve Effect. 2021 , 126, 096801	5
617	Nano-imaging photoresponse in a moirlunit cell of minimally twisted bilayer graphene. 2021 , 12, 1640	11
616	The properties and prospects of chemically exfoliated nanosheets for quantum materials in two dimensions. 2021 , 8, 011312	7
615	Dispersive sensing of charge states in a bilayer graphene quantum dot. 2021 , 118, 093104	2
614	Reconfigurable electronics by disassembling and reassembling van der Waals heterostructures. 2021 , 12, 1825	10

613	2D Nanomaterials for Effective Energy Scavenging. 2021 , 13, 82	15
612	Enhanced tunable second harmonic generation from twistable interfaces and vertical superlattices in boron nitride homostructures. 2021 , 7,	23
611	Stripe phases in WSe/WS moir uperlattices. 2021 , 20, 940-944	41
610	One-Dimensional van der Waals Heterojunction Diode. 2021 , 15, 5600-5609	15
609	Moir[Patterns in 2D Materials: A Review. 2021 , 15, 5944-5958	27
608	Femtosecond carrier dynamics and saturable absorption in few layer germanium sulfide. 2021 , 229, 166226	3
607	Progress on material characterization methods under big data environment. 2021 , 4, 235-247	4
606	Materials Science Challenges to Graphene Nanoribbon Electronics. 2021 , 15, 3674-3708	31
605	Enhanced electron-phonon coupling in doubly aligned hexagonal boron nitride bilayer graphene heterostructure. 2021 , 103,	3
604	Micro-mechanical assembly and characterization of high-quality FabryPfot microcavities for the integration of two-dimensional materials. 2021 , 118, 103103	7
603	Promises and prospects of two-dimensional transistors. 2021 , 591, 43-53	143
602	Gapless Spin Wave Transport through a Quantum Canted Antiferromagnet. 2021 , 11,	2
601	Accurate Measurement of the Gap of Graphene/h-BN Moir Superlattice through Photocurrent Spectroscopy. 2021 , 126, 146402	O
600	Energetics for Twisted Bilayer of Circular Graphene Flake. 2021 , 90, 044602	
599	Low-frequency critical current noise in graphene Josephson junctions in the open-circuit gate voltage limit. 2021 , 230, 821-825	Ο
598	Ballistic Graphene Cooper Pair Splitter. 2021 , 126, 147701	3
597	A wavelength-scale black phosphorus spectrometer. 2021 , 15, 601-607	28
596	Identification of Point Defects in Atomically Thin Transition-Metal Dichalcogenide Semiconductors as Active Dopants. 2021 , 21, 3341-3354	3

595	One-step synthesis of seamless graphene-carbon nanotube heterojunctions by chemical vapor deposition. 2021 , 9, 041110	О
594	Josephson junction infrared single-photon detector. <i>Science</i> , 2021 , 372, 409-412	17
593	Enhanced nonlinear interaction of polaritons via excitonic Rydberg states in monolayer WSe. 2021 , 12, 2269	13
592	Ultracompact electro-optic waveguide modulator based on a graphene-covered [1000 plasmonic nanogap. 2021 , 29, 13852-13863	1
591	Ballistic thermoelectric transport properties of two-dimensional group III-VI monolayers. 2021, 103,	2
590	Sonochemical exfoliation, characterization and photoresponse of MoS0.5Se1.5 nanosheets. 2021 , 32, 11805-11812	3
589	Shell Filling and Trigonal Warping in Graphene Quantum Dots. 2021 , 126, 147703	6
588	Bias-controlled multi-functional transport properties of InSe/BP van der Waals heterostructures. 2021 , 11, 7843	О
587	Dimensionality-Reduced Fermi Level Pinning in Coplanar 2D Heterojunctions. 2021 , 12, 4299-4305	6
586	Van Der Waals Heterostructures Based on Atomically-Thin Superconductors. 2021 , 7, 2000987	6
585	Nematicity and competing orders in superconducting magic-angle graphene. <i>Science</i> , 2021 , 372, 264-271 _{33.3}	49
584	Isospin Pomeranchuk effect in twisted bilayer graphene. 2021 , 592, 220-224	38
583	Schottky barrier heights in two-dimensional field-effect transistors: from theory to experiment. 2021 , 84,	26
582	Mechanically sensing and tailoring electronic properties in two-dimensional atomic membranes. 2021 , 25, 100900	3
581	Quantum Hall Valley Splitters and a Tunable Mach-Zehnder Interferometer in Graphene. 2021 , 126, 146803	5
580	Turn of the decade: versatility of 2D hexagonal boron nitride. 2021 , 4,	7
579	Single-Crystalline Metallic Films Induced by van der Waals Epitaxy on Black Phosphorus. 2021 , 33, 3593-3601	3
578	Recent progress on antimonene: from theoretical calculation to epitaxial growth. 2021 , 60, SE0805	2

577	Gate-defined Josephson junctions in magic-angle twisted bilayer graphene. 2021, 16, 760-763	10
576	Rashba valleys and quantum Hall states in few-layer black arsenic. 2021 , 593, 56-60	7
575	Anomalous thermopower oscillations in graphene-nanowire vertical heterostructures. 2021 , 32,	1
574	Efficacy of boron nitride encapsulation against plasma-processing of 2D semiconductor layers. 2021 , 39, 032201	
573	Near-field probing of dielectric screening by hexagonal boron nitride in graphene integrated on silicon photonics. 2021 , 32,	3
572	Unconventional satellite resistance peaks in moir[superlattice of h-BN/ AB-stacked tetralayer-graphene heterostructures. 2021 , 4,	1
571	Silicon-assisted growth of hexagonal boron nitride to improve oxidation resistance of germanium. 2021 , 8, 035041	2
570	Highly tunable junctions and non-local Josephson effect in magic-angle graphene tunnelling devices. 2021 , 16, 769-775	16
569	Stacking-engineered ferroelectricity in bilayer boron nitride. <i>Science</i> , 2021 , 372,	3 76
568	Current-Induced Complementary Doping to Graphene from Hydrogen Silsesquioxane Passivation Layer. 2021 , 15, 2100151	O
567	Thin-suspended 2D materials: facile, versatile, and deterministic transfer assembly. 2021 , 8, 035028	1
566	Twisted monolayer and bilayer graphene for vertical tunneling transistors. 2021 , 118, 183106	2
565	Frontiers of graphene-based Hall-effect sensors. 2021 , 33,	3
564	Pressure-dependent interfacial charge transfer excitons in WSe2-MoSe2 heterostructures in near infrared region. 2021 , 24, 104110	10
563	Stabilization of Chemical-Vapor-Deposition-Grown WS Monolayers at Elevated Temperature with Hexagonal Boron Nitride Encapsulation. 2021 , 13, 31271-31278	O
562	Universal superdiffusive modes in charged two dimensional liquids. 2021 , 103,	
561	Third-order nonlinear Hall effect induced by the Berry-connection polarizability tensor. 2021 , 16, 869-873	4
560	Configurable topological phonon polaritons in twisted hBN metasurfaces. 2021 , 60, 5735-5741	

(2021-2021)

559	Strong interaction between interlayer excitons and correlated electrons in WSe/WS moir superlattice. 2021 , 12, 3608	10
558	Recent mechanical processing techniques of two-dimensional layered materials: A review. 2021 , 6, 135-152	6
557	Direct-Writing of 2D Diodes by Focused Ion Beams. 2021 , 31, 2102708	3
556	Spin Dynamics Slowdown near the Antiferromagnetic Critical Point in Atomically Thin FePS. 2021 , 21, 5045-5052	3
555	Graphene Nanoribbon Grids of Sub-10 nm Widths with High Electrical Connectivity. 2021 , 13, 28593-28599	2
554	Valley polarized conductance quantization in bilayer graphene narrow quantum point contact. 2021 , 118, 263102	1
553	Acoustic cavities in 2D heterostructures. 2021 , 12, 3267	3
552	Fabrication and electrochemical response of pristine graphene ultramicroelectrodes. 2021 , 177, 207-215	4
551	Graphene-Based Hybrid Functional Materials. 2021 , 17, e2100514	8
550	Ultra-Narrowband Photodetector with High Responsivity Enabled by Integrating Monolayer J-Aggregate Organic Crystal with Graphene. 2021 , 9, 2100158	5
549	All-parylene flexible wafer-scale graphene thin film transistor. 2021 , 551, 149410	5
548	Efficient ReSe Photodetectors with CVD Single-Crystal Graphene Contacts. 2021, 11,	5
547	Metallization-Induced Quantum Limits of Contact Resistance in Graphene Nanoribbons with One-Dimensional Contacts. 2021 , 14,	2
546	One-Dimensional Edge Contacts to Two-Dimensional Transition-Metal Dichalcogenides: Uncovering the Role of Schottky-Barrier Anisotropy in Charge Transport across MoS2/Metal Interfaces. 2021 , 15,	12
545	Contaminant-Free Wafer-Scale Assembled h-BN/Graphene van der Waals Heterostructures for Graphene Field-Effect Transistors. 2021 , 4, 5677-5684	1
544	High-responsivity graphene photodetectors integrated on silicon microring resonators. 2021 , 12, 3733	10
543	Hot-Carrier Cooling in High-Quality Graphene Is Intrinsically Limited by Optical Phonons. 2021,	8
542	Measuring and Tuning the Potential Landscape of Electrostatically Defined Quantum Dots in Graphene. 2021 , 21, 5013-5020	1

541	Anisotropic moir optical transitions in twisted monolayer/bilayer phosphorene heterostructures. 2021 , 12, 3947	9
540	Heated Assembly and Transfer of Van der Waals Heterostructures with Common Nail Polish. 2021 , 1, 49-56	1
539	Fizeau drag in graphene plasmonics. 2021 , 594, 513-516	20
538	2D Material-Based Heterostructures for Rechargeable Batteries. 2100864	24
537	Global strain-induced scalar potential in graphene devices. 2021 , 4,	1
536	Hybrid System Combining Two-Dimensional Materials and Ferroelectrics and Its Application in Photodetection. 2021 ,	14
535	Ultrafast non-volatile flash memory based on van der Waals heterostructures. 2021 , 16, 874-881	27
534	. 2021 , 68, 3124-3128	6
533	Enabling high efficiencies in MoS2 homojunction solar cells. 2021,	
532	Progress in light-to-frequency conversion circuits based on low dimensional semiconductors. 2021 , 14, 2938-2964	1
531	Efficient Fizeau drag from Dirac electrons in monolayer graphene. 2021 , 594, 517-521	15
530	A review on supramolecules/nanocomposites based on carbonic precursors and dielectric/conductive polymers and their applications. 2021 , 269, 115181	2
529	Microwave photoassisted dissipation and supercurrent of a phase-biased graphene-superconductor ring. 2021 , 3,	O
528	Versatile, Low-Cost, and Portable 2D Material Transfer Setup with a Facile and Highly Efficient DIY Inert-Atmosphere Glove Compartment Option. 2021 , 6, 17952-17964	1
5 ² 7	Presence of s-Wave Pairing in Josephson Junctions Made of Twisted Ultrathin Bi2Sr2CaCu2O8+x Flakes. 2021 , 11,	5
526	Low temperature carrier transport mechanism and photo-conductivity of WSe2. 2021 , 869, 159369	6
525	Helical-edge transport near	2
524	Phonon Thermal Transport across Multilayer Graphene/Hexagonal Boron Nitride van der Waals Heterostructures. 2021 , 13, 32564-32578	6

523	Band-tailored van der Waals heterostructure for multilevel memory and artificial synapse. 2021 , 3, 917-928	15
522	SnSe field-effect transistors with improved electrical properties. 1	1
521	A Meta-Analysis of Conductive and Strong Carbon Nanotube Materials. 2021 , 33, e2008432	18
520	Out-of-Plane Transport of 1T-TaS/Graphene-Based van der Waals Heterostructures. 2021 , 15, 11898-11907	7
519	Giant Broadband (450🛭300 nm) Optical Limiting and Enhancement of the Nonlinear Optical Response of Some Graphenes by Defect Engineering. 2021 , 125, 16075-16085	3
518	Superconducting Quantum Interference in Twisted van der Waals Heterostructures. 2021 , 21, 6725-6731	2
517	Ultrathin Multibridge Channel Transistor Enabled by van der Waals Assembly. 2021, 33, e2102201	9
516	Strain-induced doping and zero line mode at the fold of twisted Bernal-stacked bilayer graphene. 2021 , 8, 045009	O
515	New method of transport measurements on van der Waals heterostructures under pressure. 2021 , 130, 064303	6
514	Charge-order-enhanced capacitance in semiconductor moir superlattices. 2021 , 16, 1068-1072	9
513	Wafer-scale integration of graphene for waveguide-integrated optoelectronics. 2021, 119, 050501	1
512	Minimum Contact Resistance in Monoelemental 2D Material Nanodevices With Edge-Contacts. 2021 , 42, 1240-1243	1
511	Optimization and integration of ultrathin e-beam grown HfO2 gate dielectrics in MoS2 transistors. 2021 , 54, 445302	О
510	Gate-tunable plasmons in mixed-dimensional van der Waals heterostructures. 2021 , 12, 5039	7
509	Competing correlated states and abundant orbital magnetism in twisted monolayer-bilayer graphene. 2021 , 12, 4727	5
508	Terahertz Rectennas on Flexible Substrates Based on One-Dimensional Metal [hsulator []raphene Diodes. 2021 , 3, 3747-3753	3
507	Extraordinary phase coherence length in epitaxial halide perovskites. 2021 , 24, 102912	1
506	Two-dimensional heterostructures and their device applications: progress, challenges and opportunitiesEeview. 2021 , 54, 433001	6

505	Andreev Reflections in NbN/Graphene Junctions under Large Magnetic Fields. 2021, 21, 8229-8235	0
504	A review of assembly techniques for fabricating twisted bilayer graphene.	O
503	Anomalous Dimensionality-Driven Phase Transition of MoTe2 in Van der Waals Heterostructure. 2107376	3
502	High-Performance and Ultralow-Noise Two-Dimensional Heterostructure Field-Effect Transistors with One-Dimensional Electrical Contacts. 2021 , 3, 4126-4134	O
501	A Review: Ion Transport of Two-Dimensional Materials in Novel Technologies from Macro to Nanoscopic Perspectives. 2021 , 14, 5819	2
500	Demonstration of intrinsic STDP learning capability in all-2D multi-state MoS2 memory and its application in modelling neuromorphic speech recognition. 2021 , 8, 045031	2
499	Contacts between monolayer black phosphorene and metal electrodes: Ohmic, Schottky, and their regulating strategy. 2021 , 130, 124305	0
498	Signature of Spin-Resolved Quantum Point Contact in p-Type Trilayer WSe van der Waals Heterostructure. 2021 , 21, 7534-7541	1
497	Recent progress in terahertz modulation using photonic structures based on two-dimensional materials. 2021 , 3, 1110	7
496	Continuous Mott transition in semiconductor moir (superlattices. 2021 , 597, 350-354	29
495	Superconductivity in rhombohedral trilayer graphene. 2021, 598, 434-438	26
494	Imaging two-dimensional generalized Wigner crystals. 2021 , 597, 650-654	19
493	High-Speed Efficient On-Chip Electro-Optic Modulator Based on Midinfrared Hyperbolic Metamaterials. 2021 , 16,	1
492	Electronic and transport properties of TMDC planar superlattices: effective Hamiltonian approach. 2021 , 96, 125808	1
491	Correlated electron-hole state in twisted double-bilayer graphene. <i>Science</i> , 2021 , 373, 1257-1260 33.3	16
490	Localization to delocalization probed by magnetotransport of hBN/graphene/hBN stacks in the ultra-clean regime. 2021 , 11, 18845	O
489	Gate-controlled quantum dots in monolayer WSe2. 2021 , 119, 133104	4
488	Quantum criticality in twisted transition metal dichalcogenides. 2021 , 597, 345-349	17

487	Structure, Properties and Applications of Two-Dimensional Hexagonal Boron Nitride. 2021 , 33, e2101589	42
486	Half- and quarter-metals in rhombohedral trilayer graphene. 2021 , 598, 429-433	16
485	Performance Limits and Potential of Multilayer Graphene Tungsten Diselenide Heterostructures. 2100355	0
484	Coulomb Drag by Injected Ballistic Carriers in Graphene n+IBE+ Structures: Doping and Temperature Effects. 2100535	3
483	Boosting proximity spinBrbit coupling in graphene/WSe2 heterostructures via hydrostatic pressure. 2021 , 5,	11
482	Modulation of the contact barrier at VS2/MoS2 interface: A first principles study. 2021 , 413, 127604	5
481	Improved contact properties of graphene-metal hybrid interfaces by grain boundaries. 2021 , 563, 150392	
480	Fabrication and microfluidic analysis of graphene-based molecular communication receiver for Internet of Nano Things (IoNT). 2021 , 11, 19600	3
479	Recent advances of atomically thin 2D heterostructures in sensing applications. 2021 , 40, 101287	14
478	Directly grown Te nanowire electrodes and soft plasma etching for high-performance MoTe2 field-effect transistors. 2021 , 565, 150521	2
477	Direct imaging of interlayer-coupled symmetric and antisymmetric plasmon modes in graphene/hBN/graphene heterostructures. 2021 , 13, 14628-14635	1
476	Superconducting contact and quantum interference between two-dimensional van der Waals and three-dimensional conventional superconductors. 2021 , 5,	2
475	Physics of electron emission and injection in two-dimensional materials: Theory and simulation. 2021 , 3, 502-535	19
474	Synthesis of graphene and other two-dimensional materials. 2021 , 1-79	2
473	Magnetotransport in hybrid InSe/monolayer graphene on SiC. 2021 , 32, 155704	1
472	Evidence of Lifshitz Transition in the Thermoelectric Power of Ultrahigh-Mobility Bilayer Graphene. 2021 , 21, 1221-1227	2
471	High-bandwidth, variable-resistance differential noise thermometry. 2021 , 92, 014904	1
470	Electrical conductivity in a non-covalent two-dimensional porous organic material with high crystallinity. 2021 , 12, 2955-2959	2

469	Synthesis of centimeter-scale high-quality polycrystalline hexagonal boron nitride films from Fe fluxes. 2021 , 13, 11223-11231	1
468	Coherent terahertz radiation from a nonlinear oscillator of viscous electrons. 2021 , 118, 013105	10
467	Gate induced charge transfer and hysteresis enlargement in MoS2/GeSe2 vertical heterostructures. 2021 , 9, 8213-8219	1
466	Creation of moir[bands in a monolayer semiconductor by spatially periodic dielectric screening. 2021 , 20, 645-649	15
465	Design and tailoring of two-dimensional Schottky, PN and tunnelling junctions for electronics and optoelectronics. 2021 , 13, 6713-6751	13
464	Synthesis and Properties of Graphene-Based Materials. 2020 , 57-72	1
463	Observing Imperfection in Atomic Interfaces for van der Waals Heterostructures. 2017 , 17, 5222-5228	39
462	Damage-Free Atomic Layer Etch of WSe: A Platform for Fabricating Clean Two-Dimensional Devices. 2021 , 13, 1930-1942	12
461	Selective p-Doping of 2D WSe UV/Ozone Treatments and Its Application in Field-Effect Transistors. 2021 , 13, 955-961	9
460	Observation of Time-Reversal Invariant Helical Edge-Modes in Bilayer Graphene/WSe Heterostructure. 2021 , 15, 916-922	4
459	Vapor-liquid-solid growth of large-area multilayer hexagonal boron nitride on dielectric substrates. 2020 , 11, 849	36
458	Selective etching of hexagonal boron nitride by high-pressure CF4 plasma for individual one-dimensional ohmic contacts to graphene layers. 2020 , 117, 243101	4
457	Circular electromechanical resonators based on hexagonal-boron nitride-graphene heterostructures. 2020 , 117, 183103	1
456	Humidity effect on peeling of monolayer graphene and hexagonal boron nitride. 2021 , 32, 025302	2
455	A system for the deterministic transfer of 2D materials under inert environmental conditions. 2020 , 7, 025034	11
454	High-quality electrical transport using scalable CVD graphene. 2020 , 7, 041003	14
453	Strongly adhesive dry transfer technique for van der Waals heterostructure. 2020 , 7, 041005	16
452	Fractional quantum Hall effect in CVD-grown graphene. 2020 , 7, 041007	6

451	Graphene based Van der Waals contacts on MoS2 field effect transistors. 2021, 8, 015003		10
450	Nonlocal hydrodynamic transport and collective excitations in Dirac fluids. 2020 , 102,		2
449	Spin-Orbit-Enhanced Robustness of Supercurrent in Graphene/WS_{2} Josephson Junctions. 2020 , 125, 266801		5
448	Thermal and transport properties of pristine single-layer hexagonal boron nitride: A first principles investigation. 2017 , 1,		10
447	Natural optical anisotropy of h-BN: Highest giant birefringence in a bulk crystal through the mid-infrared to ultraviolet range. 2018 , 2,		33
446	Measuring the local mobility of graphene on semiconductors. 2018 , 2,		1
445	Cathodoluminescence enhancement and quenching in type-I van der Waals heterostructures: Cleanliness of the interfaces and defect creation. 2019 , 3,		7
444	Photoluminescence dynamics in few-layer InSe. 2020 , 4,		7
443	Electrical switching of valley polarization in monolayer semiconductors. 2020, 4,		7
442	Coulomb dominated cavities in bilayer graphene. 2020 , 2,		3
441	Giant ratchet magneto-photocurrent in graphene lateral superlattices. 2020 , 2,		1
440	Cold-source paradigm for steep-slope transistors based on van der Waals heterojunctions. 2020 , 2,		3
439	Scanning gate microscopy of localized states in a gate-defined bilayer graphene channel. 2020, 2,		1
438	Electron-phonon instability in graphene revealed by global and local noise probes. <i>Science</i> , 2019 , 364, 154-157	33.3	29
437	Helical quantum Hall phase in graphene on SrTiO. Science, 2020, 367, 781-786	33.3	27
436	Hall effect for Dirac electrons in graphene exposed to an Abrikosov flux lattice. 2020 , 132, 37002		O
435	BiOSe for broadband terahertz wave switching. 2020 , 59, 11076-11079		2
434	Graphene on nanoscale gratings: a novel materials platform for THz electron-beam radiation. 2015,		1

433	High-precision local transfer of van der Waals materials on nanophotonic structures. 2020, 10, 645	2
432	2D materials integrated with metallic nanostructures: fundamentals and optoelectronic applications. 2020 , 9, 1877-1900	16
431	Hybrid silicon photonic devices with two-dimensional materials. 2020 , 9, 2295-2314	6
430	Graphene plasmonic devices for terahertz optoelectronics. 2020 , 9, 1901-1920	23
429	Thermoelectric graphene photodetectors with sub-nanosecond response times at terahertz frequencies. 2020 , 10, 89-98	11
428	Nanoelectromechanical Sensors Based on Suspended 2D Materials. 2020 , 2020, 8748602	39
427	Effects of Plasma Treatment on Contact Resistance and Sheet Resistance of Graphene FET. 2016 , 49, 152-158	1
426	Research progress of high-quality monolayer MoS2 films. 2018 , 67, 128103	6
425	Recent progress on advanced infrared photodetectors. 2019 , 68, 120701	25
424	Ambipolar Gate Modulation Technique for the Reduction of Offset and Flicker Noise in Graphene Hall-Effect Sensors. 2021 , 21, 25675-25686	1
423	Graphene Structures-Based 2D Nanotransistors (Review). 2021 , 66, 1108-1122	1
422	Correlated Insulating States and Transport Signature of Superconductivity in Twisted Trilayer Graphene Superlattices. 2021 , 127, 166802	4
421	Interlayer polarizability in twisted bilayer graphene quantum dots. 2021, 104,	1
420	Electrically tunable Feshbach resonances in twisted bilayer semiconductors. <i>Science</i> , 2021 , 374, 336-340 _{33.3}	O
419	High carrier mobility in graphene doped using a monolayer of tungsten oxyselenide. 2021, 4, 731-739	4
418	Exciton-polaron Rydberg states in monolayer MoSe and WSe. 2021 , 12, 6131	6
417	Tailoring the Band Structure of Twisted Double Bilayer Graphene with Pressure. 2021 , 21, 8777-8784	4
416	Thin-film electronics based on all-2D van der Waals heterostructures. 1-15	O

(2020-2021)

415	Supercurrent and Phase Slips in a Ballistic Carbon Nanotube Bundle Embedded into a van der Waals Heterostructure. 2021 , 21, 8627-8633	1
414	Kondo effect and spin-orbit coupling in graphene quantum dots. 2021 , 12, 6004	5
413	Spin-crossover nanoparticles anchored on MoS layers for heterostructures with tunable strain driven by thermal or light-induced spin switching. 2021 , 13, 1101-1109	12
412	Nonlinear intensity dependence of edge photocurrents in graphene induced by terahertz radiation. 2021 , 104,	1
411	Graphene on nanoscale gratings for terahertz Smith-Purcell radiation. 2015,	
410	Graphene/Metal Contact. 2015 , 53-78	O
409	Electrical Excitation of Plasmons in Graphene through the 2D Brenkov Effect. 2016,	
408	Room temperature operation of semiconductor nano-ring lasers fabricated through a general applicable membrane release and transfer method. 2016 ,	
407	Zastosowania grafenu. 2016 ,	
406	Nonlinear Plasmonic THz Absorption in Graphene Ribbons. 2016,	
405	Applications of metal-semiconductor phase transition in 2D layered transition metal dichalcogenides. 2016 , 3, 4-8	
404	Introduction. 2017 , 1-15	
403	Research progress of graphene radio frequency devices. 2017 , 66, 218502	
402	Progress Toward 2D Tunneling Devices. 2017 , 117-122	
401	How to detect Berry phase in graphene without magnetic field?. 2017,	
400	Spectroscopic studies of plasmons in topological materials. 2019 , 68, 227801	
399	First-principles study of metal-graphene edge contact for ballistic Josephson junction. 2019 , 3,	
398	Review: Electronic Band Structure and Interface Properties. 2020 , 13-36	

397 Potential Applications of h-BN Crystals in Future ULSI. **2020**,

396	Infrared photovoltaic detector based on p-GeTe/n-Si heterojunction. 2020 , 15, 138	5
395	Recent advances in 2D materials-based UV photodetectors: A Review.	2
394	Strongly correlated excitonic insulator in atomic double layers. 2021 , 598, 585-589	18
393	Van der Waals Heterostructures in Photocatalytic Energy Conversion. 2022 , 225-274	
392	Transferred metal gate to 2D semiconductors for sub-1 V operation and near ideal subthreshold slope. 2021 , 7, eabf8744	3
391	Photoluminescent Semiconducting Graphene Nanoribbons via Longitudinally Unzipping Single-Walled Carbon Nanotubes. 2021 ,	O
390	On Dielectric Screening in Twisted Double Bilayer Graphene. 2021 , 90,	O
389	Introduction. 2020 , 1-11	
388	Twist the doorknob to open the electronic properties of graphene-based van der Waals structure. 2021 , 4, 3444-3482	3
387	Scalably Nanomanufactured Atomically Thin Materials-Based Wearable Health Sensors. 2100120	3
386	Tribological characteristics of atomic-scale niobium diselenide grown via chemical vapor deposition. 2020 , 13, 105004	1
385	Photoresist-enabled assembly of BN/graphene/BN heterostructure and fabrication of one-dimensional contact electrode. 2020 , 7, 116405	
384	Sensitive detection of water/oxygen molecule adsorption and reaction on a titanium oxide nanosheet with a graphene field effect transistor. 2020 , 1, 030022	
383	Materials at Atomic Scale. 2021 , 1-40	
382	Fundamentals of Spin Dynamics in Two-Dimensional Materials. 2022 , 13-44	
381	Introduction. 2022 , 1-12	
380	Van der Waals ferromagnetic Josephson junctions. 2021 , 12, 6580	4

379	Making high-quality quantum microwave devices with van der Waals superconductors. 2021,	О
378	Contacts and upstream modes explain the electron-hole asymmetry in the graphene quantum Hall regime. 2021 , 104,	1
377	The development of integrated circuits based on two-dimensional materials. 2021, 4, 775-785	26
376	3D graphene-like semiconductor Ba2HfTe4 with electronic structure similar to graphene and bandgap close to silicon. 2021 , 100658	O
375	Intrinsic Wettability in Pristine Graphene. 2021 , e2103620	9
374	Quasistationary near-gate plasmons in van der Waals heterostructures. 2021 , 104,	1
373	Ionic Transport Triggered by Asymmetric Illumination on 2D Nano-Membrane. 2021 , 26,	
372	Two-dimensional transition metal dichalcogenides and their heterostructures: Role of process parameters in top-down and bottom-up synthesis approaches. 2021 , 139, 106313	2
371	Optical tunable multifunctional slow light device based on double monolayer graphene grating-like metamaterial.	4
370	Electronic thermal transport measurement in low-dimensional materials with graphene non-local noise thermometry. 2021 ,	O
369	Surface Engineering of Substrates for Chemical Vapor Deposition Growth of Graphene and Applications in Electronic and Spintronic Devices.	2
368	Non-Local Electrostatic Gating Effect in Graphene Revealed by Infrared Nano-Imaging. 2021 , e2105687	1
367	Miniaturizing Transmon Qubits Using van der Waals Materials. 2021 , 21, 10122-10126	3
366	Robust Quantum Oscillation of Dirac Fermions in a Single-Defect Resonant Transistor. 2021,	O
365	Spin-orbit coupling and interactions in quantum Hall states of graphene/WSe2 heterobilayers. 2021 , 104,	
364	Interlayer Interactions in 1D Van der Waals Moir (Superlattices. 2021 , e2103460	5
363	Optimum design for the ballistic diode based on graphene field-effect transistors. 2021 , 5,	1
362	Revisiting the Mechanism of Electric Field Sensing in Graphene Devices 2021 , 6, 34086-34091	1

361	Free-carrier-induced nonlinear dynamics in hybrid graphene-based photonic waveguides. 2021 , 104,		2
360	Van der Waals two-color infrared photodetector 2022 , 11, 6		18
359	Enhanced terahertz detection of multigate graphene nanostructures. 2021,		2
358	Ratchet effect in spatially modulated bilayer graphene: Signature of hydrodynamic transport. 2022 , 105,		1
357	Geometric interference in a high-mobility graphene annulus p-n junction device. 2022, 105,		0
356	Dielectric engineering enable to lateral anti-ambipolar MoTe2 heterojunction 2022,		1
355	Latest advance on seamless metal-semiconductor contact with ultralow Schottky barrier in 2D-material-based devices. 2022 , 42, 101372		3
354	Thermal Conductivities and Interfacial Thermal Conductance of 2D WSe2. 2020 ,		1
353	High Throughput Investigation of an Emergent and Naturally Abundant 2D Material: Clinochlore.		0
352	Out-of-equilibrium criticalities in graphene superlattices <i>Science</i> , 2022 , 375, 430-433	33.3	1
351	All About the Interface: Do Residual Contaminants at A High-Quality h-BN Monolayer Perylene Diimide Interface Cause Charge Trapping?. 2101701		0
350	Contact Resistivity in Edge-Contacted Graphene Field Effect Transistors. 2101169		1
349	ReviewRecent Advances in Graphene-Based Field-Effect-Transistor Biosensors: A Review on Biosensor Designing Strategy.		0
348	Isospin magnetism and spin-polarized superconductivity in Bernal bilayer graphene <i>Science</i> , 2022 , 375, eabm8386	33.3	12
347	Intervalley Excitonic Hybridization, Optical Selection Rules, and Imperfect Circular Dichroism in Monolayer h-BN 2022 , 128, 047402		О
347 346			0
	Monolayer h-BN 2022 , 128, 047402		

343	Spatially indirect intervalley excitons in bilayer WSe2. 2022 , 105,	2
342	Tunable Orbital Ferromagnetism at Noninteger Filling of a Moir Superlattice 2022,	О
341	Interlayer exciton complexes in bilayer MoS2. 2022 , 105,	3
340	Scanning probe analysis of twisted graphene grown on a graphene/silicon carbide template 2021,	1
339	Crossover between strongly coupled and weakly coupled exciton superfluids <i>Science</i> , 2022 , 375, 205-20 9 3.3	4
338	Anomalously persistent p-type behavior of WSe2 field-effect transistors by oxidized edge-induced Fermi-level pinning. 2022 , 10, 846-853	1
337	Recent Advances on Tuning the Interlayer Coupling and Properties in van der Waals Heterostructures 2022 , e2105877	4
336	Novel transport phenomena in graphene induced by strong spin-orbit interaction. 2021 , 22, 1-18	О
335	Excitonic devices with van der Waals heterostructures: valleytronics meets twistronics.	15
334	Positron charge sensing using a double-gated graphene field effect transistor 2022 , 93, 015002	
333	The fabrication and physical properties of two-dimensional van der Waals heterostructures. 2022,	0
332	Hexagonal boron nitride as a low-loss dielectric for superconducting quantum circuits and qubits 2022 ,	4
331	A Bottom-Electrode Contact: The Most Suitable Structure for Graphene Electronics. 2102207	1
330	Interface effects of Schottky devices built from MoSand high work function metals 2022,	2
329	Graphene moir uperlattices with giant quantum nonlinearity of chiral Bloch electrons 2022,	3
328	Electrical and Low Frequency Noise Characterization of Graphene Chemical Sensor Devices Having Different Geometries 2022 , 22,	1
327	2D Heterostructures for Ubiquitous Electronics and Optoelectronics: Principles, Opportunities, and Challenges 2022 ,	28
326	All Solution-Processed van der Waals Heterostructures for Wafer-Scale Electronics 2021 , e2106110	10

325	Nonlinear intensity dependence of photogalvanics and photoconductance induced by terahertz laser radiation in twisted bilayer graphene close to magic angle. 2022 , 6,	0
324	Pauli Blockade of Tunable Two-Electron Spin and Valley States in Graphene Quantum Dots 2022 , 128, 067702	2
323	Mechanical Behavior of Blisters Spontaneously Formed by Multilayer 2D Materials. 2101939	1
322	Wafer-Scale Programmed Assembly of One-Atom-Thick Crystals 2022,	0
321	Quantum anomalous Hall effect from intertwined moir[bands 2021, 600, 641-646	18
320	Identifying the charge density and dielectric environment of graphene using Raman spectroscopy and deep learning 2022 ,	O
319	High-Performance All-Optical Modulator Based on Graphene-hBN Heterostructures. 2022, 1-1	О
318	Realization of electronic grade graphene and h-BN. 2022 , 119-157	
317	2D-Heterostructures. 2022 , 111-146	
316	Integrating Homogeneous Current-Saturation Graphene Transistors Into High-Linearity Amplifiers. 2022 , 1-7	
315	Strong in-plane scattering of acoustic graphene plasmons by surface atomic steps 2022, 13, 983	1
314	Lower Limits of Contact Resistance in Phosphorene Nanodevices with Edge Contacts 2022 , 12,	O
313	Robust growth of two-dimensional metal dichalcogenides and their alloys by active chalcogen monomer supply 2022 , 13, 1007	3
312	Large terahertz electric dipole of a single graphene quantum dot. 2022 , 4,	
311	Fermi Level Pinning Dependent 2D Semiconductor Devices: Challenges and Prospects 2021 , e2108425	10
310	Tunable metal contacts at layered black-arsenic/metal interface forming during metal deposition for device fabrication. 2022 , 3,	1
309	Inorganic molecular crystal dielectric film enabling high-performance 2D van der Waals devices and scalable integration. 2022 ,	1
308	Impedance Spectroscopy of Encapsulated Single Graphene Layers 2022 , 12,	

307	Direct Transition from Ultrathin Orthorhombic Dinickel Silicides to Epitaxial Nickel Disilicide Revealed by In Situ Synthesis and Analysis 2022 , e2106093	2
306	Silicon Thermo-Optic Switches with Graphene Heaters Operating at Mid-Infrared Waveband 2022 , 12,	2
305	Emerging Two-Dimensional Inorganic Molecular Crystals: The Concept and Beyond 2022, 2173-2179	1
304	Magnon-Coupled Intralayer MoirlTrion in Monolayer Semiconductor-Antiferromagnet Heterostructures 2022 , e2200301	1
303	2D Materials for Wearable Energy Harvesting. 2101623	1
302	Rectifying Effect in a High-Performance Ballistic Diode Bridge Based on Encapsulated Graphene with a Unique Design.	O
301	Two-dimensional weak topological insulators in inversion-symmetric crystals. 2022, 105,	1
300	Phase-dependent microwave response of a graphene Josephson junction. 2022 , 4,	O
299	Counterintuitive gate dependence of weak antilocalization in bilayer graphene/WSe2 heterostructures. 2022 , 105,	0
298	Scalable and Versatile Transfer of Sensitive Two-dimensional Materials 2022,	O
297	Engineering Interlayer Electron-Phonon Coupling in WS/BN Heterostructures 2022,	О
296	Photoinduced interlayer dynamics in Td-MoTe2: A broadband pump-probe study. 2022 , 120, 123102	O
295	Electronic structure of 2D van der Waals crystals and heterostructures investigated by spatially-and angle-resolved photoemission. 2021 , 22, 107-131	
294	Electron spin resonance in a proximity-coupled MoS2/graphene van der Waals heterostructure. 2022 , 12, 035111	
293	Dipolar excitonic insulator in a moir[lattice.	2
292	Constructing van der Waals heterostructures by dry-transfer assembly for novel optoelectronic device 2022 ,	O
291	Quasi 1D Electronic Transport in a 2D Magnetic Semiconductor 2022 , e2109759	5
290	Phase-controlled epitaxial growth of MoTe2: Approaching high-quality 2D materials for electronic devices with low contact resistance. 2022 , 131, 110902	O

289	Steady Floquet-Andreev states in graphene Josephson junctions 2022 , 603, 421-426	О
288	Strong interlayer interactions in bilayer and trilayer moir uperlattices 2022 , 8, eabk1911	1
287	A monolithically sculpted van der Waals nano-opto-electro-mechanical coupler 2022, 11, 48	0
286	Multi-dimensional characteristic construction methods of computational materials under big data environment. 2022 ,	
285	Science of 2.5 dimensional materials: paradigm shift of materials science toward future social innovation 2022 , 23, 275-299	4
284	Mechanisms of Interface Cleaning in Heterostructures Made from Polymer-Contaminated Graphene 2022 , e2201248	2
283	Bridging the gap between atomically thin semiconductors and metal leads 2022, 13, 1777	2
282	Type-II CdS/PtSSe heterostructures used as highly efficient water-splitting photocatalysts. 2022 , 589, 152931	8
281	Fabrication of encapsulated graphene-based heterostructure using molybdenum as edge-contacts. 2021 , 2145, 012039	
280	Improving the Optical Quality of MoSe and WS Monolayers with Complete -BN Encapsulation by High-Temperature Annealing 2021 ,	1
279	Parallel transport and layer-resolved thermodynamic measurements in twisted bilayer graphene. 2021 , 104,	1
278	Thermionic electron emission in the 1D edge-to-edge limit.	
277	Ultrahigh Anisotropic Transport Properties of Black Phosphorus Field Effect Transistors Realized by Edge Contact. 2022 , 8, 2100988	3
276	Plasmon excitation in \$\$hbox {MoS}_{2}/\$\$graphene van der waals heterostructures. 2022 , 96, 1	
275	A wafer-scale van der Waals dielectric made from an inorganic molecular crystal film. 2021 , 4, 906-913	16
274	Deep-ultraviolet electroluminescence and photocurrent generation in graphene/hBN/graphene heterostructures. 2021 , 12, 7134	5
273	Correlated states in doubly-aligned hBN/graphene/hBN heterostructures. 2021 , 12, 7196	1
272	Unexpected Electron Transport Suppression in a Heterostructured Graphene-MoS Multiple Field-Effect Transistor Architecture 2021 ,	O

271	Maximum Thermoelectric Power Factor and Optimal Carrier Concentration of Bilayer Graphene at Various Temperatures. 2021 , 19, 125-130	1
270	Thickness and Morphology Dependent Electrical Properties of ALD-Synthesized MoS 2 FETs. 2022 , 8, 2100781	О
269	Next-generation machine vision systems incorporating two-dimensional materials: Progress and perspectives. 2022 , 4,	7
268	Plasmonic excitation for a tunable transmitter without magnetic field immune to backscattering. 2021 , 104,	О
267	Coulomb Drag between a Carbon Nanotube and Monolayer Graphene 2021 , 127, 257701	О
266	Free Trions with Near-Unity Quantum Yield in Monolayer MoSe 2021,	2
265	Self-sustaining MoS2 nanomechanical oscillators and feedback cooling. 2021 , 119, 243506	О
264	Controllable spin filtering and half-metallicity in 🛭 2 -borophene nanoribbons. 2021, 104,	Ο
263	Quantum Oscillations in Two-Dimensional Insulators Induced by Graphite Gates 2021, 127, 247702	4
262	Single-crystalline-level properties of ultrathin SrRuO3 flexible membranes with wide and clean surface. 2022 , 6,	1
261	Clean BN-Encapsulated 2D FETs with Lithography-Compatible Contacts 2022,	1
260	Intelligent infrared sensing enabled by tunable moir[quantum geometry 2022, 604, 266-272	7
259	Oxidizing Hexagonal Boron Nitride into Fluorescent Structures by Photodissociated Directional Oxygen Radical 2022 , 3369-3376	О
258	Few-layer hexagonal boron nitride as a shield of brittle materials for cryogenic s-SNOM exploration of phonon polaritons. 2022 , 120, 161101	
257	Preparation and photoelectric characterization of p-GeSe/p-WS2 heterojunction devices.	О
256	Dissipation-enabled hydrodynamic conductivity in a tunable bandgap semiconductor 2022, 8, eabi8481	1
255	Gate-Controlled Quantum Dots Based on 2D Materials. 2100162	2
254	The Magnetic Genome of Two-Dimensional van der Waals Materials 2022,	10

253 Giant coercivity in single crystal Ta<sub>3</sub>FeS<sub>6</sub> film. **2022**,

252	Graphene-empowered dynamic metasurfaces and metadevices. 2022 , 5, 200098-200098	7
251	Correlated Hofstadter spectrum and flavour phase diagram in magic-angle twisted bilayer graphene.	1
250	Terahertz radiation induced circular Hall effect in graphene. 2022 , 105,	O
249	Recent advances in graphene-based polymer composite scaffolds for bone/cartilage tissue engineering. 2022 , 103360	1
248	Solution-Processed h-BN Film as an Alignment Layer for Liquid Crystal Devices: Realization of a Non-Polymer Approach for Unidirectional Alignment over Unprecedentedly Large Areas. 2200486	
247	Coupling between magnetic order and charge transport in a two-dimensional magnetic semiconductor 2022 ,	4
246	Fabrication and characterization of InSb nanosheet/hBN/graphite heterostructure devices 2022 , 33,	O
245	The trend of 2D transistors toward integrated circuits: Scaling down and new mechanisms 2022, e2201916	4
244	Tunable multi-bands in twisted double bilayer graphene. 2022 , 9, 034001	O
243	Light emission properties of mechanical exfoliation induced extended defects in hexagonal boron nitride flakes.	1
242	Imaging tunable quantum Hall broken-symmetry orders in graphene 2022 , 605, 51-56	3
241	Emerging exciton physics in transition metal dichalcogenide heterobilayers.	7
240	Imaging of Submicroampere Currents in Bilayer Graphene Using a Scanning Diamond Magnetometer. 2022 , 17,	4
239	Optoelectronic Properties of MoS2/Graphene Heterostructures Prepared by Dry Transfer for Light-Induced Energy Applications.	1
238	Component wise contribution to total thermal resistance in 2D material based device stacks. 2022 , 179, 107623	
237	Recent progress in 1D contacts for 2D material-based devices 2022 , e2202408	1
236	Optical study on the crystal symmetry of two-dimensional WTe₂. 2022 ,	

235	Integrated Optoelectronics with Two-Dimensional Materials. 2022,	О
234	Phonon-Limited Mobility in h -BN Encapsulated AB -Stacked Bilayer Graphene. 2022 , 128,	Ο
233	Spontaneous-polarization-induced photovoltaic effect in rhombohedrally stacked MoS2.	2
232	Resistance anomaly and linear magnetoresistance in thin flakes of itinerant ferromagnet Fe3GeTe2.	0
231	Quantitative Evaluation of Doped Potassium Concentrations in Stacked Tow-Layer Graphene Using X-Ray Photoelectron Spectroscopy.	
230	Evidence for 4e charge of Cooper quartets in a biased multi-terminal graphene-based Josephson junction. 2022 , 13,	1
229	Nontrivial effect of out-of-plane acoustic phonon mode on limiting room temperature conductivity of ABA-stacked trilayer graphene. 2022 , 105,	
228	Tunable ultra-high quality factor graphene absorber based on semicylindrical silica array and distributed Bragg reflector structure. 2022 , 12, 055125	
227	Band conductivity oscillations in a gate-tunable graphene superlattice. 2022, 13,	1
226	CVD Bilayer Graphene Spin Valves with 26 th Spin Diffusion Length at Room Temperature.	O
225	Epitaxial single-crystal hexagonal boron nitride multilayers on Ni (111). 2022 , 606, 88-93	14
224	Boron nitride on SiC(0001). 2022 , 6,	
223	Unbiased Plasmonic-Assisted Integrated Graphene Photodetectors.	1
222	Ab initio simulations of metal contacts for graphene-based devices. 2022 , 131, 214301	1
221	Even-denominator fractional quantum Hall state in bilayer graphene. 2022,	
220	Quantum oscillations in a hexagonal boron nitride-supported single crystalline InSb nanosheet.	
219	Improved Crystallinity of Graphene Grown on Cu/Ni (111) through Sequential Mobile Hot-Wire Heat Treatment.	
218	Distinctive Photo-Induced Memory Effect in Heterostructure of 2D Van Der Waals Materials and Lanthanum Aluminate. 2200124	0

217	Graphene Via Contact Architecture for Vertical Integration of vdW Heterostructure Devices. 2200882	1
216	Two-Dimensional Tellurene Transistors with Low Contact Resistance and Self-Aligned Catalytic Thinning Process. 2200380	О
215	Advances in Flexible Optoelectronics Based on Chemical Vapor Deposition-Grown Graphene. 2203115	1
214	van der Waals 🛮 osephson Junctions.	1
213	Ferroelectricity in hBN intercalated double-layer graphene. 2022, 17,	1
212	Andreev Reflection in the Fractional Quantum Hall State. 2022 , 12,	1
211	Overdamped phase diffusion in hBN encapsulated graphene Josephson junctions. 2022, 4,	
21 0	Chemical Vapor-Deposited Graphene on Ultraflat Copper Foils for van der Waals Hetero-Assembly.	
209	Microstructure Engineering of Hexagonal Boron Nitride for Single-Photon Emitter Applications. 2200207	
208	High throughput investigation of an emergent and naturally abundant 2D material: Clinochlore. 2022 , 599, 153959	2
207	Two-dimensional CdO/PtSSe heterojunctions used for Z-scheme photocatalytic water-splitting. 2022 , 599, 153960	3
206	Impact of Contact Configuration on Contact Resistance in Ultranarrow Graphene Nanoribbon Devices. 2022 , 1-6	
205	Nano-engineering and nano-manufacturing in 2D materials: marvels of nanotechnology.	2
204	Ultrafast photoresponse of vertically oriented TMD films probed in a vertical electrode configuration on Si chips.	O
203	Low contact resistance side-interconnects strategy for epi-graphene based electronic integration. 2022 , 33, 17249-17257	
202	Electronic and magnetic properties of tripentaphene nanoribbons. 2022, 6,	O
201	Phonon-assisted carrier cooling in h -BN/graphene van der Waals heterostructures. 2022, 105,	
200	Electrically and Magnetically Tunable Valley Polarization in Monolayer MoSe 2 Proximitized by a 2D Ferromagnetic Semiconductor. 2204779	2

199	Dry pick-and-flip assembly of van der Waals heterostructures for microfocus angle-resolved photoemission spectroscopy. 2022 , 12,	O
198	Doping of Graphene Films: Open the way to Applications in Electronics and Optoelectronics. 2203179	4
197	Evaluation of polyvinyl chloride adhesion to 2D crystal flakes. 2022 , 6,	
196	Moir-Induced Transport in CVD-Based Small-Angle Twisted Bilayer Graphene. 2022 , 22, 5252-5259	O
195	Ultra-low-energy programmable non-volatile silicon photonics based on phase-change materials with graphene heaters.	5
194	Orbital polarization and third-order anomalous Hall effect in WTe2. 2022 , 106,	O
193	Pentagonal 2D Transition Metal Dichalcogenides: PdSe 2 and Beyond. 2203555	1
192	A nanogapped hysteresis-free field-effect transistor. 2022 , 121, 023503	
191	Contact optimisation strategy for wafer-scale field-effect transistors based on two-dimensional semiconductors. 2022 ,	1
190	Tuning colour centres at a twisted hexagonal boron nitride interface.	4
189	Engineering Grain Boundaries in Two-dimensional Electronic Materials. 2203425	4
		0
189	Engineering Grain Boundaries in Two-dimensional Electronic Materials. 2203425	
189	Engineering Grain Boundaries in Two-dimensional Electronic Materials. 2203425 Beyond CMOS. 2021,	0
189 188 187	Engineering Grain Boundaries in Two-dimensional Electronic Materials. 2203425 Beyond CMOS. 2021, Multi-Stimuli-Responsive Synapse Based on Vertical van der Waals Heterostructures.	0
189 188 187	Engineering Grain Boundaries in Two-dimensional Electronic Materials. 2203425 Beyond CMOS. 2021, Multi-Stimuli-Responsive Synapse Based on Vertical van der Waals Heterostructures. Multivalued Logic for Optical Computing with Photonically Enabled Chiral Bio-organic Structures.	0 2
189 188 187 186	Engineering Grain Boundaries in Two-dimensional Electronic Materials. 2203425 Beyond CMOS. 2021, Multi-Stimuli-Responsive Synapse Based on Vertical van der Waals Heterostructures. Multivalued Logic for Optical Computing with Photonically Enabled Chiral Bio-organic Structures. Towards RF graphene devices: a review. 2022, 100409	0 2 1

181	Large-area transfer of two-dimensional materials free of cracks, contamination and wrinkles via controllable conformal contact. 2022 , 13,	0
180	Supercurrent diode effect and magnetochiral anisotropy in few-layer NbSe2. 2022, 13,	4
179	Dielectric catastrophe at the Wigner-Mott transition in a moir superlattice. 2022, 13,	1
178	Dirac-source diode with sub-unity ideality factor. 2022 , 13,	О
177	Hermetic Packaging Based on CuBn and AuAu Dual Bonding for High-Temperature Graphene Pressure Sensor. 2022 , 13, 1191	O
176	Correlated interlayer exciton insulator in heterostructures of monolayer WSe2 and moir WS2/WSe2.	2
175	Transport properties of vertical heterostructures under light irradiation. 2022, 106,	O
174	Ultrafast intrinsic optical-to-electrical conversion dynamics in a graphene photodetector.	6
173	Giant Carrier Mobility in Graphene with Enhanced Shubnikovde Haas Quantum Oscillations: Implications for Low-Power-Consumption Device Applications. 2022 , 5, 10860-10866	
172	2D materials and van der Waals heterojunctions for neuromorphic computing.	О
171	Fully Depleted Self-Aligned Heterosandwiched Van Der Waals Photodetectors. 2203283	9
170	Effect of boundary scattering on magneto-transport performance in BN-encapsulated graphene.	
169	Probing the spin dimensionality in single-layer CrSBr van der Waals heterostructures by magneto-transport measurements. 2204940	3
168	Recent Advances of Preparation and Application of Two-Dimension van der Waals Heterostructure. 2022 , 12, 1152	O
167	Imaging the Breakdown of Ohmic Transport in Graphene. 2022 , 129,	3
166	Ultrahigh resistance of hexagonal boron nitride to mineral scale formation. 2022 , 13,	O
165	Tuning moirlexcitons and correlated electronic states through layer degree of freedom. 2022, 13,	2
164	Irreversible Conductive Filament Contacts for Passivated van der Waals Heterostructure Devices. 2207351	

163	Persistent Photogenerated State Attained by Femtosecond Laser Irradiation of Thin Td-MoTe2. 2022 , 126, 13840-13846	O
162	Anomalous Hall effect at half filling in twisted bilayer graphene.	O
161	Emerging reconfigurable electronic devices based on two-dimensional materials: A review.	
160	Contacting atomically precise graphene nanoribbons for next-generation quantum electronics. 2022 , 5, 2497-2499	1
159	High Quality Pt P t Metal Bonding for High Temperature Packaging. 2022 , 13, 1543	O
158	Salt-promoted growth of monolayer tungsten disulfide on hexagonal boron nitride using all chemical vapor deposition approach. 2022 , 605, 154812	O
157	Evaluation of doped potassium concentrations in stacked Two-Layer graphene using Real-time XPS. 2022 , 605, 154748	1
156	Potentials of individual atoms by convergent beam electron diffraction. 2023 , 201, 244-250	O
155	Inkjet printing of two-dimensional van der Waals materials: a new route towards emerging electronic device applications. 2022 , 7, 1161-1176	1
154	Improved electrical properties of encapsulated MoTe2 with 1T? edge contacts via laser irradiation. 2023 , 153, 107133	O
153	Minimizing the Programming Power of Phase Change Memory by Using Graphene Nanoribbon Edge-Contact. 2022 , 9, 2202222	2
152	Integrated biosensor platform based on graphene transistor arrays for real-time high-accuracy ion sensing. 2022 , 13,	1
151	Intralayer charge-transfer moir[excitons in van der Waals superlattices. 2022, 609, 52-57	3
150	Designing coupled metal slot antennas for detecting micron-sized 2D material in terahertz regime. 2022 ,	O
149	Angle- and polarization-resolved luminescence from suspended and hexagonal Boron Nitride encapsulated MoSelmonolayers.	O
148	Imaging hydrodynamic electrons flowing without LandauerBharvin resistance. 2022 , 609, 276-281	2
147	Contact property depending on radiation intensity between the perovskite semiconductor layer and electrode film. 2022 , 121, 121601	O
146	Synthesis of two-dimensional materials: How computational studies can help?.	O

145	Switchable moir[potentials in ferroelectric WTe2/WSe2 superlattices.	0
144	Dual-Gate Anti-Ambipolar Transistor with Van der Waals ReS 2 /WSe 2 Heterojunction for Reconfigurable Logic Operations. 2200704	Ο
143	Enhancement of 2D topological semimetal transport properties by current annealing. 2022 , 121, 113101	1
142	Integrated wafer-scale ultra-flat graphene by gradient surface energy modulation. 2022, 13,	1
141	A Comprehensive Review on Graphene Nanoparticles: Preparation, Properties, and Applications. 2022 , 14, 12336	O
140	Emerging low-dimensional materials for nanoelectromechanical systems resonators. 2023 , 11, 21-52	O
139	Lowering Contact Resistances of Two-Dimensional Semiconductors by Memristive Forming. 2022 , 22, 7094-7103	0
138	Low-resistance metal contacts to encapsulated semiconductor monolayers with long transfer length. 2022 , 5, 579-585	O
137	Multivalley Superconductivity in Monolayer Transition Metal Dichalcogenides.	0
136	Molecular Dynamics Simulation on In-Plane Thermal Conductivity of Graphene/Hexagonal Boron Nitride van der Waals Heterostructures.	O
135	Towards the Growth of Hexagonal Boron Nitride on Ge(001)/Si Substrates by Chemical Vapor Deposition. 2022 , 12, 3260	О
134	Weak localization on moirßuperlattice in twisted double bilayer graphene.	O
133	Two dimensional semiconducting materials for ultimately scaled transistors. 2022 , 25, 105160	0
132	Synthesis of vertically aligned boron nitride nanotubes with a template of single-walled carbon nanotubes.	O
131	Charge Sampling Photodetector Based on van der Waals Heterostructures. 2201442	Ο
130	Emerging Trends in 2D TMDs with a Broken Gap Interface.	2
129	Gate Dielectrics Integration for Two-Dimensional Electronics: Challenges, Advances and Outlook. 2207901	1
128	Effect of dilute impurities on short graphene Josephson junctions. 2022 , 5,	О

127	Optically Probing the Asymmetric Interlayer Coupling in Rhombohedral-Stacked MoS2 Bilayer. 2022 , 12,	О
126	Large and Tunable Magnetoresistance in Cr 1ြk Te/Al 2 O 3 /Cr 1ြk Te Vertical Spin Valve Device. 2200823	O
125	Multifractal Conductance Fluctuations in High-Mobility Graphene in the Integer Quantum Hall Regime. 2022 , 129,	O
124	Magnetoconductance oscillations in electron-hole hybridization gaps and valley splittings in tetralayer graphene. 2022 , 106,	O
123	2D Van der Waals Heterostructures for Chemical Sensing. 2207065	3
122	Interactions between Fermi polarons in monolayer WS2. 2022 , 13,	O
121	Quantum-noise-limited microwave amplification using a graphene Josephson junction.	О
120	Two-dimensional devices and integration towards the silicon lines. 2022 , 21, 1225-1239	3
119	Revealing Intrinsic Superconductivity of the Nb/BiSbTe 2 Se Interface. 2209853	1
118	A gate-tunable graphene Josephson parametric amplifier.	O
117	Experimental observation of spin plit energy dispersion in high-mobility single-layer graphene/WSe2 heterostructures. 2022 , 6,	О
116	Giant ferroelectric polarization in a bilayer graphene heterostructure. 2022 , 13,	Ο
115	Strongly enhanced THz generation enabled by a graphene hot-carrier fast lane. 2022, 13,	1
114	High-Temperature Quantum Hall Effect in Graphite-Gated Graphene Heterostructure Devices with High Carrier Mobility. 2022 , 12, 3777	O
113	Crystalline Phase Effects on the Nonlinear Optical Response of MoS2 and WS2 Nanosheets: Implications for Photonic and Optoelectronic Applications.	1
112	Graphene metasurfaces for terahertz wavefront shaping and light emission.	O
111	Poly(vinyl alcohol)-Assisted Exfoliation of van der Waals Materials. 2022 , 7, 38774-38781	0

109	Dual-gated hBN/bilayer-graphene superlattices and the transitions between the insulating phases at the charge neutrality point. 2022 , 106,	O
108	Highly nonlinear dipolar exciton-polaritons in bilayer MoS2. 2022 , 13,	1
107	Chiral Transport of Hot Carriers in Graphene in the Quantum Hall Regime.	O
106	Nanoscale infrared imaging and spectroscopy of few-layer hexagonal boron nitride. 2022, 132, 174301	О
105	Terahertz Electronic Devices. 2023 , 807-849	О
104	Engineering high quality graphene superlattices via ion milled ultra-thin etching masks. 2022, 13,	O
103	Tunneling Spectroscopy of Two-Dimensional Materials Based on Via Contacts.	O
102	Chiral, magnetic, molecule-based materials: A chemical path toward spintronics and quantum nanodevices. 2022 , 132, 180901	O
101	Coherent momentum control of forbidden excitons. 2022 , 13,	1
100	Correlated and topological physics in ABC-trilayer graphene moir[superlattices. 2022, 1,	О
99	Programmable WSe 2 /Ge Heterojunction Field-Effect Transistor with Visible-Infrared Wavelength-Distinguishing Detection Capability. 2200924	0
98	Challenges and Opportunities of Chemiresistors Based on Microelectromechanical Systems for Chemical Olfaction.	1
97	The Influence of Graphene Nanoplatelets Addition on the Electrical and Mechanical Properties of Pure Aluminum Used in High-Capacity Conductors. 2022 , 12, 1883	0
96	Theoretical study on the electronic and transport properties of top and edge contact MoSiN42/Au heterostructure. 2022 , 128535	O
95	Gate-tunable Veselago interference in a bipolar graphene microcavity. 2022, 13,	0
94	Carbon-Based Field-Effect Transistors. 2023 , 905-930	О
93	Recent Advances in Two-dimensional p-type Metal Chalcogenides: synthesis, doping strategies and applications.	0
92	A Gate Programmable van der Waals Metal-Ferroelectric-Semiconductor Vertical Heterojunction Memory. 2208266	О

91	Probing Gate Dielectrics for Two-Dimensional Electronics at Atomistic Scale Using Transmission Electron Microscope. 2022 , 1-10	1
90	Dielectric Material Technologies for 2-D Semiconductor Transistor Scaling. 2022 , 1-20	2
89	Recent progress in mid-infrared photodetection devices using 2D/nD (n=0, 1, 2, 3) heterostructures. 2023 , 225, 111446	O
88	Highly responsive SnSe/GaN heterostructure-based UVC-SWIR broadband photodetector. 2023 , 156, 107277	1
87	Superconductivity and bosonic fluid emerging from moir[flat bands. 2022, 106,	О
86	Electric Field-Controlled Damping Switches of Coupled Dirac Plasmons. 2022 , 129,	O
85	Quantum Hall phase in graphene engineered by interfacial charge coupling. 2022, 17, 1272-1279	0
84	Terahertz Photoconductivity in Bilayer Graphene Transistors: Evidence for Tunneling at Gate-Induced Junctions.	O
83	Fast and sensitive terahertz detection with a current-driven epitaxial-graphene asymmetric dual-grating-gate field-effect transistor structure. 2022 , 7, 126101	1
82	Energy distribution controlled ballistic Josephson junction. 2022 , 106,	О
81	Only gold can pull this off: mechanical exfoliations of transition metal dichalcogenides beyond scotch tape. 2023 , 129,	0
80	Perpendicular electric field drives Chern transitions and layer polarization changes in Hofstadter bands. 2022 , 13,	Ο
79	Graphene FETs with high and low mobilities have universal temperature-dependent properties.	Ο
78	Graphene Frameworks for Nanodevices. 2022 , 12, 1936	O
77	The VdW Heterostructure Controllable Fabrications. 2022 , 69-96	О
76	Three-dimensional transistors and integration based on low-dimensional materials for the post-Moorell law era. 2022 ,	Ο
75	Charge transport in single polymer fiber transistors in the sub-100 nm regime: temperature dependence and Coulomb blockade. 2023 , 6, 015001	0
74	Unconventional non-local relaxation dynamics in a twisted trilayer graphene moir uperlattice. 2022 , 13,	O

73	Wafer-scale integration of transition metal dichalcogenide field-effect transistors using adhesion lithography.	О
72	Photodetection Properties of MoS2, WS2 and MoxW1-xS2 Heterostructure: A Comparative Study. 2023 , 13, 24	O
71	The study of contact properties in edge-contacted graphenelluminum Josephson junctions. 2022 , 121, 243503	0
70	All-dry flip-over stacking of van der Waals junctions of 2D materials using polyvinyl chloride. 2022 , 12,	O
69	Non-Additive Optical Response in Transition Metal Dichalcogenides Heterostructures. 2022 , 12, 4436	0
68	Coupled ferroelectricity and superconductivity in bilayer Td-MoTe2. 2023 , 613, 48-52	O
67	Twist-Dependent Intra- and Interlayer Excitons in Moir[MoSe2 Homobilayers. 2023, 130,	O
66	Above-Room-Temperature Ferromagnetism in Thin van der Waals Flakes of Cobalt-Substituted Fe5GeTe2. 2023 , 15, 3287-3296	1
65	In Situ Imaging of an Anisotropic Layer-by-Layer Phase Transition in Few-Layer MoTe2.	О
64	Control over Berry Curvature Dipole with Electric Field in WTe2. 2023 , 130,	O
63	Electrical Contacts With 2D Materials: Current Developments and Future Prospects. 2206550	O
62	Stabile fluoro-benzene-based spacer for lead-free DionIlacobson perovskites. 2023 , 13, 1185-1193	O
61	Aharonov B ohm Oscillations in Bilayer Graphene Quantum Hall Edge State Fabry P Eot Interferometers.	О
60	Mobility and quasi-ballistic charge carrier transport in graphene field-effect transistors. 2022 , 132, 244303	O
59	Single-molecule field-effect transistors: carbon nanotube devices for temporally encoded biosensing. 2022 ,	0
58	Tunable Photoresponse in a Two-Dimensional Superconducting Heterostructure. 2023 , 13, 421	O
57	One-dimensional semimetal contacts to two-dimensional semiconductors. 2023 , 14,	О
56	Wearable chemical sensors based on 2D materials for healthcare applications.	O

55	Laser-Induced Phase Transition and Patterning of hBN-Encapsulated Mo Te 2. 2205224	Ο
54	Phonon-mediated room-temperature quantum Hall transport in graphene. 2023, 14,	1
53	Interface engineering in two-dimensional heterostructures towards novel emitters. 2023, 44, 011001	O
52	Electrostatic restacking of two-dimensional materials to generate novel hetero-superlattices and their energy applications. 2023 , 11, 020901	О
51	Two Dimensional Heterostructures for Optoelectronics: Current Status and Future Perspective. 2023 , 28, 2275	0
50	Exciton polariton interactions in Van der Waals superlattices at room temperature. 2023, 14,	O
49	Layer-dependent optically induced spin polarization in InSe. 2023, 107,	O
48	Remote imprinting of moirflattices.	O
47	Room-Temperature Intrinsic Ferromagnetic Chromium Tellurium Compounds with Thickness-Tunable Magnetic Texture.	0
46	Complete Determination of Thermoelectric and Thermal Properties of Supported Few-Layer Two-Dimensional Materials. 2023 , 19,	O
45	Vacancy Assisted Bilayer Graphene Contact for Monolayer Graphene Channel Devices. 2023 , 44, 666-669	0
44	Giant magnetoresistance of Dirac plasma in high-mobility graphene. 2023 , 616, 270-274	O
43	Controlling and visualizing fracture of 2D crystals by wrinkling. 2023 , 174, 105253	0
42	First-principles calculations integrated with experimental optical and electronic properties for MoS2-graphene heterostructures and MoS2-graphene-Au heterointerfaces. 2023 , 623, 156948	O
41	Tailoring carbon nanotubes quickly into graphene nanoribbons along axis-direction via dynamic magnetic flux template. 2023 , 208, 338-344	0
40	Increasing coverage of mono-layer graphene grown on hexagonal boron nitride. 2023 , 34, 165601	O
39	Persistent and reliable electrical properties of ReS2 FETs using PMMA encapsulation. 2023, 48, 11-16	1
38	A critical review of fabrication challenges and reliability issues in top/bottom gated MoS2 field-effect transistors. 2023 , 34, 232001	O

37	A primer on twistronics: a massless Dirac fermion journey to moir patterns and flat bands in twisted bilayer graphene. 2023 , 35, 143001	О
36	Ultra-High Interfacial Thermal Conductance via Double hBN Encapsulation for Efficient Thermal Management of 2D Electronics. 2023 , 19, 2205726	О
35	Charge carrier density dependent Raman spectra of graphene encapsulated in hexagonal boron nitride. 2023 , 107,	0
34	Imaging the breaking of electrostatic dams in graphene for ballistic and viscous fluids. 2023, 379, 671-676	O
33	Blowing Ultrathin 2D Materials. 2023 , 10, 2202239	О
32	Predicting the Level of Background Current Noise in Graphene Biosensor through a Non-Covalent Functionalization Process. 2023 , 13, 359	O
31	Decoupling Effects of Electrostatic Gating on Electronic Transport and Interfacial Charge-Transfer Kinetics at Few-Layer Molybdenum Disulfide.	O
30	Mobile Trions in Electrically Tunable 2D Hybrid Perovskites. 2210221	O
29	Anti-ambipolar and polarization-resolved behavior in MoTe2 channel sensitized with low-symmetric CrOCl. 2023 , 122, 083503	О
28	Controlling quantum phases of electrons and excitons in moir uperlattices. 2023, 133, 080901	О
27	2D Material Infrared Photonics and Plasmonics. 2023 , 17, 4134-4179	1
26	Manipulating optical micrograph contrast for visualizing monolayer graphene encapsulated by hBN layers. 2023 , 16, 035004	O
25	Multilayered Atomic Relaxation in van der Waals Heterostructures. 2023, 13,	0
24	Exciton insulator in a moir[lattice. 2023 , 72, 067101	O
23	Single-crystalline van der Waals layered dielectric with high dielectric constant.	О
22	Cyclotron and magnetoplasmon resonances in bilayer graphene ratchets. 2023 , 107,	O
21	Optical tunable multifunctional applications based on graphene metasurface in terahertz. 2023 , 98, 045511	0
20	Black Phosphorus as Tunable Van der Waals Quantum Wells with High Optical Quality. 2023 , 17, 6073-6080	O

19	Preparation, properties, and applications of Bi2O2Se thin films: A review. 2023, 44, 031001	О
18	Anomalous interlayer exciton diffusion in WS2/WSe2 moir[heterostructure.	О
17	Gate-tunable heavy fermions in a moir[Kondo lattice. 2023 , 616, 61-65	1
16	Raman spectroscopic studies on the evolution of interlayer coupling and stacking order in twisted bilayers and polytypes of WSe2. 2023 , 133, 114301	O
15	Signature of quantum interference effect in inter-layer Coulomb drag in graphene-based electronic double-layer systems. 2023 , 14,	O
14	Electrochemical regulation of the band gap of single layer graphene: from semimetal to semiconductor.	О
13	van der Waals heterostructures. 2022 ,	O
12	WSe2 Light-Emitting Device Coupled to an h-BN Waveguide.	О
11	Signatures of hot carriers and hot phonons in the re-entrant metallic and semiconducting states of MoirEgapped graphene. 2023 , 14,	0
10	Fabrication and applications of van der Waals heterostructures. 2023 , 5, 022007	О
9	Keep in contact. 2023 ,	0
8	Scalable Fabrication of Edge Contacts to 2D Materials: Implications for Quantum Resistance Metrology and 2D Electronics. 2023 , 6, 6292-6298	О
7	Giant spin Hall effect in AB-stacked MoTe2/WSe2 bilayers.	О
6	Time-reversal even charge hall effect from twisted interface coupling. 2023, 14,	О
5	Application of Machine Learning for Malicious Node Detection in IoT Networks. 2023,	0
4	Electroluminescence from a phthalocyanine monolayer encapsulated in a van der Waals tunnel diode.	О
3	Unconventional correlated insulator in CrOCl-interfaced Bernal bilayer graphene. 2023, 14,	O
2	2D materials readiness for the transistor performance breakthrough. 2023 , 106673	O

Long-range electrostatic contribution to electron-phonon couplings and mobilities of two-dimensional and bulk materials. **2023**, 107,

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