

CITATION REPORT

List of articles citing

Synthesis of monolayer hexagonal boron nitride on Cu foil using chemical vapor deposition

DOI: 10.1021/nl203249a
Nano Letters, 2012, 12, 161-6.

Source: <https://exaly.com/paper-pdf/54318493/citation-report.pdf>

Version: 2024-04-19

This report has been generated based on the citations recorded by exaly.com for the above article. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

#	Paper	IF	Citations
987	Trimethylamine Borane: A New Single-Source Precursor for Monolayer h-BN Single Crystals and h-BCN Thin Films.		
986	Role of Pressure in the Growth of Hexagonal Boron Nitride Thin Films from Ammonia-Borane.		
985	Controllable growth of triangular hexagonal boron nitride domains on copper foils by an improved low-pressure chemical vapor deposition method. <i>Nanotechnology</i> , 2012 , 23, 415605	3.4	69
984	Effective control of the charge and magnetic states of transition-metal atoms on single-layer boron nitride. 2012 , 108, 206802		120
983	Band-gap engineering via tailored line defects in boron-nitride nanoribbons, sheets, and nanotubes. 2012 , 6, 4104-12		108
982	Synthesis and characterization of hexagonal boron nitride film as a dielectric layer for graphene devices. 2012 , 6, 8583-90		388
981	Advances in 2D boron nitride nanostructures: nanosheets, nanoribbons, nanomeshes, and hybrids with graphene. 2012 , 4, 6908-39		611
980	Two-dimensional transition metal dichalcogenides under electron irradiation: defect production and doping. 2012 , 109, 035503		768
979	Origin of the significantly enhanced optical transitions in layered boron nitride. <i>Physical Review B</i> , 2012 , 86,	3.3	37
978	Graphene-based flexible and stretchable thin film transistors. 2012 , 4, 4870-82		125
977	Low-dimensional boron nitride nanomaterials. 2012 , 15, 256-265		297
976	Quantitative determination of the band gap of WS ₂ with ambipolar ionic liquid-gated transistors. <i>Nano Letters</i> , 2012 , 12, 5218-23	11.5	406
975	Ab initio study of energy-band modulation in graphene-based two-dimensional layered superlattices. 2012 , 22, 23821		17
974	Graphene and boron nitride lateral heterostructures for atomically thin circuitry. 2012 , 488, 627-32		650
973	Interface formation in monolayer graphene-boron nitride heterostructures. <i>Nano Letters</i> , 2012 , 12, 4869-74		230
972	Boron nitride on Cu(111): an electronically corrugated monolayer. <i>Nano Letters</i> , 2012 , 12, 5821-8	11.5	168
971	Growth of atomically thin hexagonal boron nitride films by diffusion through a metal film and precipitation. 2012 , 45, 385304		37

970	Toward the controlled synthesis of hexagonal boron nitride films. 2012 , 6, 6378-85		242
969	Dislocations and grain boundaries in two-dimensional boron nitride. 2012 , 6, 7053-8		189
968	Integration of hexagonal boron nitride with quasi-freestanding epitaxial graphene: toward wafer-scale, high-performance devices. 2012 , 6, 5234-41		104
967	Nanoscale bending of multilayered boron nitride and graphene ribbons: experiment and objective molecular dynamics calculations. 2012 , 109, 025504		36
966	van der Waals epitaxy of MoS ₂ layers using graphene as growth templates. <i>Nano Letters</i> , 2012 , 12, 2784-91.5	788	
965	Large-scale production of two-dimensional nanosheets. 2012 , 22, 13494		306
964	A facile tool for the characterization of two-dimensional materials grown by chemical vapor deposition. 2012 , 5, 504-511		24
963	Structure and electronic properties of boron nitride sheet with grain boundaries. 2012 , 14, 1		14
962	Boron nitride growth on metal foil using solid sources. 2013 , 31, 041804		15
961	Van der Waals heterostructures. 2013 , 499, 419-25		6627
960	Strain engineering of magnetic states of vacancy-decorated hexagonal boron nitride. 2013 , 103, 102401		45
959	Step flow versus mosaic film growth in hexagonal boron nitride. 2013 , 135, 2368-73		72
958	Substrate engineering by hexagonal boron nitride/SiO ₂ for hysteresis-free graphene FETs and large-scale graphene p-n junctions. 2013 , 8, 2446-52		21
957	Ultrathin high-temperature oxidation-resistant coatings of hexagonal boron nitride. <i>Nature Communications</i> , 2013 , 4, 2541	17.4	418
956	Electronic structure of boron nitride sheets doped with carbon from first-principles calculations. <i>Physical Review B</i> , 2013 , 87,	3.3	129
955	Stacking order dependent second harmonic generation and topological defects in h-BN bilayers. <i>Nano Letters</i> , 2013 , 13, 5660-5	11.5	106
954	Graphene analogues of inorganic layered materials. 2013 , 52, 13162-85		402
953	Atomic-layer triangular WSe ₂ sheets: synthesis and layer-dependent photoluminescence property. <i>Nanotechnology</i> , 2013 , 24, 465705	3.4	94

952	h-BN monolayer on the Ni(111) surface: a potential catalyst for oxidation. 2013 , 5, 10404-8		37
951	Continuous growth of hexagonal graphene and boron nitride in-plane heterostructures by atmospheric pressure chemical vapor deposition. 2013 , 7, 10129-38		156
950	Electron-beam assisted growth of hexagonal boron-nitride layer. 2013 , 13, 1365-1369		7
949	The effect of copper pre-cleaning on graphene synthesis. <i>Nanotechnology</i> , 2013 , 24, 365602	3.4	102
948	Evidence for graphite-like hexagonal AlN nanosheets epitaxially grown on single crystal Ag(111). 2013 , 103, 251605		201
947	Electronic states in hybrid boron nitride and graphene structures. 2013 , 114, 063707		12
946	Electronic and Magnetic Properties of Hybrid Boron Nitride Nanoribbons and Sheets with 5Å Line Defects. 2013 , 117, 17309-17318		22
945	From point to extended defects in two-dimensional MoS ₂ : Evolution of atomic structure under electron irradiation. <i>Physical Review B</i> , 2013 , 88,	3.3	334
944	From boron cluster to two-dimensional boron sheet on Cu(111) surface: growth mechanism and hole formation. 2013 , 3, 3238		162
943	Quantitative determination of scattering mechanism in large-area graphene on conventional and SAM-functionalized substrates at room temperature. 2013 , 5, 5784-93		24
942	Transmission electron microscope as an ultimate tool for nanomaterial property studies. 2013 , 62, 157-75		7
941	Graphene-like two-dimensional materials. 2013 , 113, 3766-98		3191
940	Band gap engineering of chemical vapor deposited graphene by in situ BN doping. 2013 , 7, 1333-41		222
939	Scalable synthesis of uniform few-layer hexagonal boron nitride dielectric films. <i>Nano Letters</i> , 2013 , 13, 276-81	11.5	149
938	Tuning the solubility of boron nitride nanosheets in organic solvents by using block copolymer as a "Janus" modifier. 2013 , 49, 388-90		32
937	Large scale synthesis of single-crystal and polycrystalline boron nitride nanosheets. 2013 , 48, 2543-2549		22
936	Efficient catalytic conversion of ammonia borane to borazine and its use for hexagonal boron nitride (white graphene). 2013 , 1, 1976-1981		37
935	Synthesis of patched or stacked graphene and hBN flakes: a route to hybrid structure discovery. <i>Nano Letters</i> , 2013 , 13, 933-41	11.5	162

934	Progress, challenges, and opportunities in two-dimensional materials beyond graphene. 2013 , 7, 2898-926	3414
933	Growth of high-crystalline, single-layer hexagonal boron nitride on recyclable platinum foil. <i>Nano Letters</i> , 2013 , 13, 1834-9	11.5 278
932	Two-dimensional semiconductors: recent progress and future perspectives. <i>Journal of Materials Chemistry C</i> , 2013 , 1, 2952	7.1 287
931	Strain- and electric field-induced band gap modulation in nitride nanomembranes. <i>Journal of Physics Condensed Matter</i> , 2013 , 25, 195801	1.8 28
930	Silicene on Substrates: A Way To Preserve or Tune Its Electronic Properties. 2013 , 117, 10353-10359	215
929	Graphene-analogous low-dimensional materials. 2013 , 58, 1244-1315	600
928	Graphene Field-Effect Transistors Based on Boron Nitride Dielectrics. 2013 , 101, 1609-1619	114
927	Facile synthesis of large-area ultrathin hexagonal BN films via self-limiting growth at the molten BN surface. 2013 , 9, 1353-8	23
926	Structural and electronic properties of a large-scale Moiré pattern of hexagonal boron nitride on Cu(111) studied with density functional theory. 2013 , 5, 5589-95	30
925	Advance in novel boron nitride nanosheets to nanoelectronic device applications. 2013 , 5, 5051-6	82
924	Growth and low-energy electron microscopy characterization of monolayer hexagonal boron nitride on epitaxial cobalt. 2013 , 6, 335-347	93
923	SYNTHETIC GRAPHENE GROWN BY CHEMICAL VAPOR DEPOSITION ON COPPER FOILS. 2013 , 27, 1341002	26
922	Ultralight three-dimensional boron nitride foam with ultralow permittivity and superelasticity. <i>Nano Letters</i> , 2013 , 13, 3232-6	11.5 152
921	Atomic resolution imaging of grain boundary defects in monolayer chemical vapor deposition-grown hexagonal boron nitride. 2013 , 135, 6758-61	195
920	Repeated and controlled growth of monolayer, bilayer and few-layer hexagonal boron nitride on Pt foils. 2013 , 7, 5199-206	182
919	A platform for large-scale graphene electronics--CVD growth of single-layer graphene on CVD-grown hexagonal boron nitride. 2013 , 25, 2746-52	196
918	Stability of Edges and Extended Defects on Boron Nitride and Graphene Monolayers: The Role of Chemical Environment. 2013 , 117, 11770-11779	34
917	Extraordinary sunlight absorption and one nanometer thick photovoltaics using two-dimensional monolayer materials. <i>Nano Letters</i> , 2013 , 13, 3664-70	11.5 1346

916	A facile chemical exfoliation method to obtain large size boron nitride nanosheets. 2013 , 15, 1782		140
915	Mechanical behavior of gallium nitride nanosheets using molecular dynamics. 2013 , 75, 29-34		11
914	Hyperspectral imaging of structure and composition in atomically thin heterostructures. <i>Nano Letters</i> , 2013 , 13, 3942-6	11.5	37
913	Graphen-analoge anorganische Schichtmaterialien. 2013 , 125, 13400-13424		40
912	Highly sensitive hot electron bolometer based on disordered graphene. 2013 , 3, 3533		51
911	DNA translocation through hydrophilic nanopore in hexagonal boron nitride. 2013 , 3, 3287		81
910	Fringe structures and tunable bandgap width of 2D boron nitride nanosheets. 2014 , 5, 1186-92		13
909	One-Step Exfoliation and Fluorination of Boron Nitride Nanosheets and a Study of Their Magnetic Properties. 2014 , 126, 3719-3723		29
908	Synthesis of wafer-scale hexagonal boron nitride monolayers free of aminoborane nanoparticles by chemical vapor deposition. <i>Nanotechnology</i> , 2014 , 25, 145604	3-4	44
907	Boron Nitride Nanosheets for Metal Protection. 2014 , 1, 1300132		95
906	Growth of two-dimensional materials on non-catalytic substrates: h-BN/Au(111). 2014 , 1, 025003		33
905	Surface energy controlled growth of single crystalline two-dimensional hexagonal (h)-boron nitride. 2014 ,		
904	Boron nitride film as a buffer layer in deposition of dielectrics on graphene. 2014 , 10, 2293-9		18
903	Generating electric current based on the solvent-dependent charging effects of defective boron nitride nanosheets. 2014 , 6, 19752-7		8
902	Nanocrystalline-graphene-tailored hexagonal boron nitride thin films. 2014 , 53, 11493-7		21
901	Nanocrystalline-Graphene-Tailored Hexagonal Boron Nitride Thin Films. 2014 , 126, 11677-11681		4
900	In Situ Observations during Chemical Vapor Deposition of Hexagonal Boron Nitride on Polycrystalline Copper. 2014 , 26, 6380-6392		147
899	Synthesis of few-layer, large area hexagonal-boron nitride by pulsed laser deposition. 2014 , 572, 245-250		67

898	Large Scale Graphene/Hexagonal Boron Nitride Heterostructure for Tunable Plasmonics. 2014 , 24, 731-738	48
897	One-step exfoliation and fluorination of boron nitride nanosheets and a study of their magnetic properties. 2014 , 53, 3645-9	105
896	Nanomechanical and Charge Transport Properties of Two-Dimensional Atomic Sheets. 2014 , 1, 1300089	28
895	Synthesis, Properties, and Applications of 2-D Materials: A Comprehensive Review. 2014 , 39, 231-252	97
894	Monolayer hexagonal boron nitride films with large domain size and clean interface for enhancing the mobility of graphene-based field-effect transistors. 2014 , 26, 1559-64	178
893	Growth of large single-crystalline two-dimensional boron nitride hexagons on electropolished copper. <i>Nano Letters</i> , 2014 , 14, 839-46	11.5 226
892	Interlayer coupling enhancement in graphene/hexagonal boron nitride heterostructures by intercalated defects or vacancies. 2014 , 140, 134706	42
891	Controllable co-segregation synthesis of wafer-scale hexagonal boron nitride thin films. 2014 , 26, 1776-81	73
890	Chemical vapor deposition growth of crystalline monolayer MoSe ₂ . 2014 , 8, 5125-31	566
889	Enhancing the photocurrent and photoluminescence of single crystal monolayer MoS ₂ with resonant plasmonic nanoshells. 2014 , 104, 031112	182
888	Role of the seeding promoter in MoS ₂ growth by chemical vapor deposition. <i>Nano Letters</i> , 2014 , 14, 464-475	534
887	Excitonic recombinations in hBN: From bulk to exfoliated layers. <i>Physical Review B</i> , 2014 , 89,	3-3 52
886	Heteroepitaxial growth of two-dimensional hexagonal boron nitride templated by graphene edges. 2014 , 343, 163-7	415
885	Self-accelerating CO sorption in a soft nanoporous crystal. 2014 , 343, 167-70	371
884	Nano boron nitride flatland. 2014 , 43, 934-59	499
883	First-principles study of the electronic and magnetic properties of 4-8 line-defect-embedded BN sheets decorated with transition metals. 2014 , 526, 415-422	16
882	Unusual role of epilayer-substrate interactions in determining orientational relations in van der Waals epitaxy. 2014 , 111, 16670-5	51
881	EBSDB study of substrate-mediated growth of hexagonal boron nitride. 2014 , 522, 012070	2

880	Tunable magnetic and electronic properties of BN nanosheets with triangular defects: a first-principles study. <i>Journal of Physics Condensed Matter</i> , 2014 , 26, 435302	1.8	6
879	Structural instabilities and wrinkles at the grain boundaries in 2-D h-BN: a first-principles analysis. <i>Physical Chemistry Chemical Physics</i> , 2014 , 16, 21664-72	3.6	11
878	Preparation of Graphene with Large Area. 2014 , 39-76		2
877	Layer-dependent electrical and optoelectronic responses of ReSe2 nanosheet transistors. 2014 , 6, 7226-31		170
876	Tuning of the electronic and optical properties of single-layer black phosphorus by strain. <i>Physical Review B</i> , 2014 , 90,	3.3	235
875	A systematic study of the atmospheric pressure growth of large-area hexagonal crystalline boron nitride film. <i>Journal of Materials Chemistry C</i> , 2014 , 2, 1650	7.1	60
874	From ultrathin nanosheets, triangular plates to nanocrystals with exposed (102) facets, a morphology and phase transformation of sp ² hybrid BN nanomaterials. <i>RSC Advances</i> , 2014 , 4, 14233	3.7	24
873	Novel heterostructures by stacking layered molybdenum disulfides and nitrides for solar energy conversion. 2014 , 2, 15389-15395		71
872	Impact of intrinsic atomic defects on the electronic structure of MoS ₂ monolayers. <i>Nanotechnology</i> , 2014 , 25, 375703	3.4	197
871	Two-dimensional heterostructures: fabrication, characterization, and application. 2014 , 6, 12250-72		266
870	Polycrystalline graphene with single crystalline electronic structure. <i>Nano Letters</i> , 2014 , 14, 5706-11	11.5	112
869	Triggering the atomic layers control of hexagonal boron nitride films. 2014 , 313, 647-653		18
868	Ultrathin two-dimensional atomic crystals as stable interfacial layer for improvement of lithium metal anode. <i>Nano Letters</i> , 2014 , 14, 6016-22	11.5	545
867	Stacking of Two-Dimensional Materials in Lateral and Vertical Directions. 2014 , 26, 4891-4903		84
866	Structure and electronic properties of transition metal dichalcogenide MX ₂ (M = Mo, W, Nb; X = S, Se) monolayers with grain boundaries. <i>Materials Chemistry and Physics</i> , 2014 , 147, 1068-1073	4.4	21
865	Impact of copper overpressure on the synthesis of hexagonal boron nitride atomic layers. 2014 , 6, 16755-62		15
864	Ultrathin Chemical Vapor Deposition (CVD)-Grown Hexagonal Boron Nitride as a High-Quality Dielectric for Tunneling Devices on Rigid and Flexible Substrates. 2014 , 118, 3340-3346		23
863	Ab initio synthesis of single-layer III-V materials. <i>Physical Review B</i> , 2014 , 89,	3.3	98

862	High thermal conductivity of suspended few-layer hexagonal boron nitride sheets. 2014 , 7, 1232-1240		157
861	Van der Waals epitaxy and characterization of hexagonal boron nitride nanosheets on graphene. 2014 , 9, 367		20
860	Group theory analysis of phonons in two-dimensional transition metal dichalcogenides. <i>Physical Review B</i> , 2014 , 90,	3.3	130
859	Configurable three-dimensional boron nitride-carbon architecture and its tunable electronic behavior with stable thermal performances. 2014 , 10, 2992-9		43
858	Large-scale synthesis and functionalization of hexagonal boron nitride nanosheets. 2014 , 6, 11671-5		125
857	Tuning the optical response in carbon doped boron nitride nanodots. <i>Journal of Materials Chemistry C</i> , 2014 , 2, 8322-8327	7.1	12
856	Large-area monolayer hexagonal boron nitride on Pt foil. 2014 , 8, 8520-8		160
855	A new horizon for hexagonal boron nitride film. 2014 , 64, 1605-1616		19
854	Large area hexagonal boron nitride monolayer as efficient atomically thick insulating coating against friction and oxidation. <i>Nanotechnology</i> , 2014 , 25, 105701	3.4	85
853	Electronic and optical properties of MoS ₂ /WS ₂ multi-layers: First principles study. 2014 , 92, 451-456		20
852	Optimization of Ni/Cr flux growth for hexagonal boron nitride single crystals. 2014 , 393, 114-118		42
851	Mechanical properties of polycrystalline boron-nitride nanosheets. <i>RSC Advances</i> , 2014 , 4, 19137-19143	3.7	83
850	Engineering by Mn embedment and adsorption in defective boron nitrogen sheet. 2014 , 56, 24-31		3
849	Catalytic transparency of hexagonal boron nitride on copper for chemical vapor deposition growth of large-area and high-quality graphene. 2014 , 8, 5478-83		43
848	Growth of Hexagonal Boron Nitride on Microelectronic Compatible Substrates. 2015 , 1781, 1-10		2
847	Influence of Cu film microstructure on MOCVD growth of BN. 2015 , 1726, 43		0
846	Interface designed MoS ₂ /GaAs heterostructure solar cell with sandwich stacked hexagonal boron nitride. 2015 , 5, 15103		87
845	Monolayer II-VI semiconductors: A first-principles prediction. <i>Physical Review B</i> , 2015 , 92,	3.3	160

844	Layer- and strain-dependent optoelectronic properties of hexagonal AlN. <i>Physical Review B</i> , 2015 , 92,	3.3	41
843	Oxygen-stabilized triangular defects in hexagonal boron nitride. <i>Physical Review B</i> , 2015 , 92,	3.3	19
842	Oxidative Etching of Hexagonal Boron Nitride Toward Nanosheets with Defined Edges and Holes. 2015 , 5, 14510		52
841	Single Crystalline Film of Hexagonal Boron Nitride Atomic Monolayer by Controlling Nucleation Seeds and Domains. 2015 , 5, 16159		60
840	Direct growth of graphene on in situ epitaxial hexagonal boron nitride flakes by plasma-assisted molecular beam epitaxy. 2015 , 107, 213103		33
839	Variations in Crystalline Structures and Electrical Properties of Single Crystalline Boron Nitride Nanosheets. 2015 , 5, 16703		22
838	Growth kinetics of white graphene (h-BN) on a planarised Ni foil surface. 2015 , 5, 11985		35
837	Nematic Liquid Crystal on a Two Dimensional Hexagonal Lattice and its Application. 2015 , 5, 13331		36
836	Self-Aligned Single-Crystalline Hexagonal Boron Nitride Arrays: Toward Higher Integrated Electronic Devices. 2015 , 1, 1500223		38
835	Synthesis of Large-Sized Single-Crystal Hexagonal Boron Nitride Domains on Nickel Foils by Ion Beam Sputtering Deposition. 2015 , 27, 8109-15		60
834	Growth and Etching of Monolayer Hexagonal Boron Nitride. 2015 , 27, 4858-64		75
833	BN-Enabled Epitaxy of Pb(1-x)Sn(x)Se Nanoplates on SiO ₂ /Si for High-Performance Mid-Infrared Detection. 2015 , 11, 5388-94		34
832	Aligned Growth of Hexagonal Boron Nitride Monolayer on Germanium. 2015 , 11, 5375-80		45
831	Synthesis of Ternary Borocarbonitrides by High Temperature Pyrolysis of Ethane 1,2-Diamineborane. 2015 , 8, 5974-5985		10
830	Hexagonal AlN: Dimensional-crossover-driven band-gap transition. <i>Physical Review B</i> , 2015 , 91,	3.3	86
829	Elucidating the Optical Properties of Novel Heterolayered Materials Based on MoTe ₂ /hN for Photovoltaic Applications. 2015 , 119, 11886-11895		36
828	Space-charge limited transport in large-area monolayer hexagonal boron nitride. <i>Nano Letters</i> , 2015 , 15, 2263-8	11.5	41
827	MoS ₂ Surface Structure Tailoring via Carbonaceous Promoter. 2015 , 5, 10378		22

826	Simulated scanning tunneling microscopy images of few-layer phosphorus capped by graphene and hexagonal boron nitride monolayers. <i>Physical Review B</i> , 2015 , 91,	3.3	27
825	Chemical Vapor Deposition Growth of Graphene and Related Materials. 2015 , 84, 121013		18
824	Synthesis of Hexagonal Boron Nitride Monolayer: Control of Nucleation and Crystal Morphology. 2015 , 27, 8041-8047		153
823	Synthesis and characterization of polymer (sulfonated poly-ether-ether-ketone) based nanocomposite (h-boron nitride) membrane for hydrogen storage. 2015 , 40, 1836-1845		38
822	Boron nitride hollow nanospheres: Synthesis, formation mechanism and dielectric property. 2015 , 64, 61-67		13
821	Nucleation control for large, single crystalline domains of monolayer hexagonal boron nitride via Si-doped Fe catalysts. <i>Nano Letters</i> , 2015 , 15, 1867-75	11.5	121
820	Boron nitride nanomaterials for thermal management applications. 2015 , 16, 1339-46		89
819	Controlling coordination reactions and assembly on a Cu(111) supported boron nitride monolayer. 2015 , 137, 2420-3		48
818	Dopant segregation in polycrystalline monolayer graphene. <i>Nano Letters</i> , 2015 , 15, 1428-36	11.5	16
817	Synthesis of large and few atomic layers of hexagonal boron nitride on melted copper. 2015 , 5, 7743		53
816	Is hexagonal boron nitride always good as a substrate for carbon nanotube-based devices?. <i>Physical Chemistry Chemical Physics</i> , 2015 , 17, 5072-7	3.6	6
815	Few-atomic-layer boron nitride nanosheets synthesized in solid thermal waves. <i>RSC Advances</i> , 2015 , 5, 8579-8584	3.7	16
814	Synthesis of large single-crystal hexagonal boron nitride grains on Cu-Ni alloy. <i>Nature Communications</i> , 2015 , 6, 6160	17.4	258
813	Boron Nitride Nanoplatelets as a Solid Radical Initiator for the Aerobic Oxidation of Thiophenol to Diphenyldisulfide. 2015 , 7, 776-780		12
812	Atomic scale microstructure and properties of Se-deficient two-dimensional MoSe ₂ . 2015 , 9, 3274-83		176
811	Breaking of symmetry in graphene growth on metal substrates. 2015 , 114, 115502		63
810	Tunnel magnetoresistance with atomically thin two-dimensional hexagonal boron nitride barriers. 2015 , 8, 1357-1364		72
809	A high-yield ionic liquid-promoted synthesis of boron nitride nanosheets by direct exfoliation. 2015 , 51, 12068-71		89

808	Catalytic Conversion of Hexagonal Boron Nitride to Graphene for In-Plane Heterostructures. <i>Nano Letters</i> , 2015 , 15, 4769-75	11.5	47
807	Scalable synthesis of two-dimensional antimony telluride nanoplates down to a single quintuple layer. <i>RSC Advances</i> , 2015 , 5, 59320-59325	3.7	9
806	Grain Boundary Structures and Electronic Properties of Hexagonal Boron Nitride on Cu(111). <i>Nano Letters</i> , 2015 , 15, 5804-10	11.5	100
805	Two-dimensional van der Waals C60 molecular crystal. 2015 , 5, 12221		19
804	Single layer of MX ₂ (M = Ti, Zr; X = S, Se, Te): a new platform for nano-electronics and optics. <i>Physical Chemistry Chemical Physics</i> , 2015 , 17, 18665-9	3.6	93
803	Flexible band gap tuning of hexagonal boron nitride sheets interconnected by acetylenic bonds. <i>Physical Chemistry Chemical Physics</i> , 2015 , 17, 20376-81	3.6	8
802	Ultraclean and large-area monolayer hexagonal boron nitride on Cu foil using chemical vapor deposition. <i>Nanotechnology</i> , 2015 , 26, 275601	3.4	22
801	Opening of triangular hole in triangular-shaped chemical vapor deposited hexagonal boron nitride crystal. 2015 , 5, 10426		36
800	A Cu(111) supported h-BN nanosheet: a potential low-cost and high-performance catalyst for CO oxidation. <i>Physical Chemistry Chemical Physics</i> , 2015 , 17, 22097-105	3.6	41
799	Wrinkles of graphene on Ir(1 1 1): Macroscopic network ordering and internal multi-lobed structure. 2015 , 94, 856-863		6
798	Electron backscatter diffraction study of hexagonal boron nitride growth on Cu single-crystal substrates. 2015 , 7, 15200-5		11
797	Realization of a p-n junction in a single layer boron-phosphide. <i>Physical Chemistry Chemical Physics</i> , 2015 , 17, 13013-20	3.6	93
796	The reconstructed edges of the hexagonal BN. 2015 , 7, 9723-30		29
795	Temperature-triggered chemical switching growth of in-plane and vertically stacked graphene-boron nitride heterostructures. <i>Nature Communications</i> , 2015 , 6, 6835	17.4	169
794	A grapheneBoron nitride lateral heterostructure: a first-principles study of its growth, electronic properties, and chemical topology. <i>Journal of Materials Chemistry C</i> , 2015 , 3, 5918-5932	7.1	26
793	A systematic study of metal-supported boron nitride materials for the oxygen reduction reaction. <i>Physical Chemistry Chemical Physics</i> , 2015 , 17, 12722-7	3.6	58
792	Recent Advancement on the Optical Properties of Two-Dimensional Molybdenum Disulfide (MoS ₂) Thin Films. 2015 , 2, 288-307		127
791	Template-free synthesis of porous boron nitride using a single source precursor. <i>RSC Advances</i> , 2015 , 5, 46823-46828	3.7	11

790	Prediction of half-semiconductor antiferromagnets with vanishing net magnetization. <i>RSC Advances</i> , 2015 , 5, 46640-46647	3.7	17
789	New Strategy for the Growth of Complex Heterostructures Based on Different 2D Materials. 2015 , 27, 4105-4113		28
788	Direct growth of nanocrystalline hexagonal boron nitride films on dielectric substrates. 2015 , 106, 101901		47
787	Synthesis of boron nitride nanotubes via chemical vapour deposition: a comprehensive review. <i>RSC Advances</i> , 2015 , 5, 35116-35137	3.7	40
786	Recent Progress on Fabrications and Applications of Boron Nitride Nanomaterials: A Review. 2015 , 31, 589-598		199
785	Recent development in 2D materials beyond graphene. 2015 , 73, 44-126		842
784	Porous BN for hydrogen generation and storage. 2015 , 3, 9632-9637		65
783	Large-Area, Transfer-Free, Oxide-Assisted Synthesis of Hexagonal Boron Nitride Films and Their Heterostructures with MoS ₂ and WS ₂ . 2015 , 137, 13060-5		95
782	First-Principles Study on Graphene/Hexagonal Boron Nitride Heterostructures. 2015 , 84, 121002		19
781	Synthesis of large-area multilayer hexagonal boron nitride for high material performance. <i>Nature Communications</i> , 2015 , 6, 8662	17.4	298
780	Synthesis of atomically thin hexagonal boron nitride films on nickel foils by molecular beam epitaxy. 2015 , 106, 213108		68
779	The transition metal surface passivated edges of hexagonal boron nitride (h-BN) and the mechanism of h-BN's chemical vapor deposition (CVD) growth. <i>Physical Chemistry Chemical Physics</i> , 2015 , 17, 29327-34	3.6	38
778	Noncovalent Molecular Doping of Two-Dimensional Materials. 2015 , 1, 542-557		35
777	Studying Edge Defects of Hexagonal Boron Nitride Using High-Resolution Electron Energy Loss Spectroscopy. <i>Journal of Physical Chemistry Letters</i> , 2015 , 6, 4189-93	6.4	8
776	Growth mechanism and modification of electronic and magnetic properties of silicene. 2015 , 24, 087303		5
775	Chemical vapor deposition growth of large-scale hexagonal boron nitride with controllable orientation. 2015 , 8, 3164-3176		131
774	Synthesis of high quality two-dimensional materials chemical vapor deposition. 2015 , 6, 6705-6716		160
773	Synthesis of in-plane and stacked graphene/hexagonal boron nitride heterostructures by combining with ion beam sputtering deposition and chemical vapor deposition. 2015 , 7, 16046-53		56

- 772 Few-layer black phosphorus based saturable absorber mirror for pulsed solid-state lasers. **2015**, 23, 22643-8 203
- 771 One-pot synthesis of h-BN fullerenes using a graphene oxide template. **2015**, 21, 950-955 4
- 770 Chemical Vapor Deposition of Boron Nitride Thin Films on SiC. **2015**, 821-823, 990-994
- 769 Modeling of the interaction between polypropylene and monolayer sheets: a quantum mechanical study. *RSC Advances*, **2015**, 5, 80779-80785 3.7 18
- 768 Pentagonal monolayer crystals of carbon, boron nitride, and silver azide. **2015**, 118, 104303 69
- 767 The effect of substrate and external strain on electronic structures of stanene film. *Physical Chemistry Chemical Physics*, **2015**, 17, 26979-87 3.6 43
- 766 The effect of h-BN buffer layers in bilayer graphene on Co (111). **2015**, 66, 1631-1636 2
- 765 An open canvas--2D materials with defects, disorder, and functionality. **2015**, 48, 73-80 99
- 764 Two-dimensional graphene analogues for biomedical applications. **2015**, 44, 2681-701 687
- 763 Inorganic Graphene Analogs. **2015**, 45, 29-62 39
- 762 From two-dimensional materials to heterostructures. **2015**, 90, 21-45 108
- 761 Co-solvent exfoliation and suspension of hexagonal boron nitride. **2015**, 51, 187-90 74
- 760 Controlled growth of few-layer hexagonal boron nitride on copper foils using ion beam sputtering deposition. **2015**, 11, 1542-7 58
- 759 Cheap, gram-scale fabrication of BN nanosheets via substitution reaction of graphite powders and their use for mechanical reinforcement of polymers. **2014**, 4, 4211 36
- 758 Enhanced tunnel spin injection into graphene using chemical vapor deposited hexagonal boron nitride. **2014**, 4, 6146 122
- 757 Chemical Vapor Deposition of Two-Dimensional Crystals. **2015**, 785-833 2
- 756 Synthesis Strategies about 2D Materials. **2016**, 7
- 755 How to Increase the h-BN Crystallinity of Microfilms and Self-Standing Nanosheets: A Review of the Different Strategies Using the PDCs Route. **2016**, 6, 55 13

754	Controlled Synthesis of Atomically Layered Hexagonal Boron Nitride via Chemical Vapor Deposition. 2016 , 21,	10
753	Dual-wavelength Q-switched Er:SrF ₂ laser with a black phosphorus absorber in the mid-infrared region. 2016 , 24, 30289-30295	79
752	Carbon- and crack-free growth of hexagonal boron nitride nanosheets and their uncommon stacking order. 2016 , 8, 15926-33	17
751	Growth of Polar Hexagonal Boron Nitride Monolayer on Nonpolar Copper with Unique Orientation. 2016 , 12, 3645-50	44
750	Amorphous Boron Nitride: A Universal, Ultrathin Dielectric For 2D Nanoelectronics. 2016 , 26, 2640-2647	58
749	Fabrication of Hexagonal Boron Nitride Nanosheets by Using a Simple Thermal Exfoliation Process. 2016 , 63, 303-307	6
748	Boron Nitride Nanostructures: Fabrication, Functionalization and Applications. 2016 , 12, 2942-68	135
747	Hexagonal Boron Nitride Thin Film for Flexible Resistive Memory Applications. 2016 , 26, 2176-2184	119
746	Recent Advances in Controlling Syntheses and Energy Related Applications of MX ₂ and MX ₂ /Graphene Heterostructures. 2016 , 6, 1600459	35
745	Characterization of Graphene TFET for Subterahertz Oscillator. 2016 , 63, 2956-2962	2
744	Large-roll growth of 25-inch hexagonal BN monolayer film for self-release buffer layer of free-standing GaN wafer. 2016 , 6, 34766	22
743	A nitride-based epitaxial surface layer formed by ammonia treatment of silicene-terminated ZrB ₂ . 2016 , 144, 134703	4
742	Direct growth of hexagonal boron nitride/graphene heterostructures on cobalt foil substrates by plasma-assisted molecular beam epitaxy. 2016 , 109, 043110	28
741	Infrared study of large scale h-BN film and graphene/h-BN heterostructure. 2016 , 108, 241910	2
740	Growth of hexagonal boron nitride on (111) Si for deep UV photonics and thermal neutron detection. 2016 , 109, 113501	45
739	Boron nitride as two dimensional dielectric: Reliability and dielectric breakdown. 2016 , 108, 012905	72
738	Silicon-based chalcogenide: Unexpected quantum spin Hall insulator with sizable band gap. 2016 , 109, 182109	62
737	High-Yield Production of Boron Nitride Nanosheets and Its Uses as a Catalyst Support for Hydrogenation of Nitroaromatics. 2016 , 8, 9881-8	123

736	Preparation of ultra-thin hexagonal boron nitride nanoplates for cancer cell imaging and neurotransmitter sensing. 2016 , 52, 6146-9		23
735	A systematic study of the synthesis of monolayer tungsten diselenide films on gold foil. 2016 , 16, 1216-1222		12
734	Tuning of the electronic and optical properties of single-layer boron nitride by strain and stress. 2016 , 66, 163-170		19
733	Vertically Oriented Arrays of ReS ₂ Nanosheets for Electrochemical Energy Storage and Electrocatalysis. <i>Nano Letters</i> , 2016 , 16, 3780-7	11.5	201
732	Formation of hexagonal boron nitride on graphene-covered copper surfaces. 2016 , 31, 945-958		13
731	Transport properties through hexagonal boron nitride clusters embedded in graphene nanoribbons. <i>Nanotechnology</i> , 2016 , 27, 185203	3.4	5
730	Rise of silicene: A competitive 2D material. 2016 , 83, 24-151		548
729	Thickness-controlled multilayer hexagonal boron nitride film prepared by plasma-enhanced chemical vapor deposition. 2016 , 16, 1229-1235		12
728	Large-Area Two-Dimensional Layered Hexagonal Boron Nitride Grown on Sapphire by Metalorganic Vapor Phase Epitaxy. 2016 , 16, 3409-3415		81
727	Facile one-step and high-yield synthesis of few-layered and hierarchically porous boron nitride nanosheets. <i>RSC Advances</i> , 2016 , 6, 45402-45409	3.7	7
726	Wafer-Scale and Wrinkle-Free Epitaxial Growth of Single-Orientated Multilayer Hexagonal Boron Nitride on Sapphire. <i>Nano Letters</i> , 2016 , 16, 3360-6	11.5	130
725	Functionalized hexagonal boron nitride nanomaterials: emerging properties and applications. 2016 , 45, 3989-4012		657
724	The structural and dynamical aspects of boron nitride nanotubes under high velocity impacts. <i>Physical Chemistry Chemical Physics</i> , 2016 , 18, 14776-81	3.6	13
723	Two-dimensional metallic NbS ₂ : growth, optical identification and transport properties. 2016 , 3, 025027		66
722	Recent Progress on the Synthesis of 2D Boron Nitride Nanosheets. 2016 , 37-66		
721	A computational study on the SO ₂ adsorption by the pristine, Al, and Si doped BN nanosheets. 2016 , 100, 350-357		101
720	Morphology-Controlled Synthesis of Hexagonal Boron Nitride Crystals by Chemical Vapor Deposition. 2016 , 16, 6440-6445		9
719	First-Principles Prediction of the Electronic Structure and Carrier Mobility in Hexagonal Boron Phosphide Sheet and Nanoribbons. 2016 , 120, 25037-25042		66

718	2D Boron Nitride: Synthesis and Applications. 2016 , 95, 101-147		44
717	Structural Attributes and Photodynamics of Visible Spectrum Quantum Emitters in Hexagonal Boron Nitride. <i>Nano Letters</i> , 2016 , 16, 7037-7045	11.5	115
716	A comprehensive investigation on CVD growth thermokinetics of h-BN white graphene. 2016 , 3, 035007		23
715	2D nanosheets-based novel architectures: Synthesis, assembly and applications. 2016 , 11, 483-520		76
714	Computational simulation of subatomic-resolution AFM and STM images for graphene/hexagonal boron nitride heterostructures with intercalated defects. <i>Physical Review B</i> , 2016 , 94,	3-3	5
713	High-yield fabrication of suspended two-dimensional materials for atomic resolution imaging. <i>RSC Advances</i> , 2016 , 6, 76273-76279	3-7	2
712	Freestanding Boron Nitride Nanosheet Films for Ultrafast Oil/Water Separation. 2016 , 12, 4960-4965		30
711	Defective Hexagonal Boron Nitride Nanosheet on Ni(111) and Cu(111): Stability, Electronic Structures, and Potential Applications. 2016 , 8, 24238-47		43
710	Half-metallic and magnetic properties of AlN nanosheets doped with nonmagnetic metals: A first-principles study. 2016 , 124, 98-105		9
709	Hexagonal boron nitride hollow capsules with collapsed surfaces: Chemical vapor deposition with single-source precursor ammonium fluoroborate. 2016 , 25, 078107		
708	Effect of precursor purity and flow rate on the CVD growth of hexagonal boron nitride. 2016 , 688, 1006-1012		12
707	Synthesis and Characterization of Hexagonal Boron Nitride as a Gate Dielectric. 2016 , 6, 30449		84
706	Nonlinear bandgap opening behavior of BN co-doped graphene. 2016 , 107, 857-864		21
705	Single layer PbI ₂ : hydrogenation-driven reconstructions. <i>RSC Advances</i> , 2016 , 6, 89708-89714	3-7	10
704	Tunable Electronic Transport Properties of 2D Layered Double Hydroxide Crystalline Microsheets with Varied Chemical Compositions. 2016 , 12, 4471-6		21
703	Bilayer SnS ₂ : Tunable stacking sequence by charging and loading pressure. <i>Physical Review B</i> , 2016 , 93,	3-3	33
702	The effect of temperature and topological defects on fracture strength of grain boundaries in single-layer polycrystalline boron-nitride nanosheet. 2016 , 123, 277-286		40
701	Influences of growth parameters on the film formation of hexagonal boron nitride thin films grown on sapphire substrates by low-pressure chemical vapor deposition. 2016 , 55, 05FD09		12

700	White graphene/hexagonal boron nitride based polymeric composites and their application in thermal management. 2016 , 2, 19-24		75
699	Functionalized Thallium Antimony Films as Excellent Candidates for Large-Gap Quantum Spin Hall Insulator. 2016 , 6, 21351		25
698	ZnO quantum dot-doped graphene/h-BN/GaN-heterostructure ultraviolet photodetector with extremely high responsivity. <i>Nanotechnology</i> , 2016 , 27, 48LT03	3-4	36
697	Giant spin-orbit coupling topological insulator h-GaBi with exotic O-bridge states. 2016 , 8, 19066-19074		2
696	Controllable band structure and topological phase transition in two-dimensional hydrogenated arsenene. 2016 , 6, 20342		72
695	Dioxin sensing properties of graphene and hexagonal boron nitride based van der Waals solids: a first-principles study. <i>RSC Advances</i> , 2016 , 6, 107114-107126	3-7	5
694	Synthesis and characterization of nano hexagonal boron nitride powder and evaluating the influence on aluminium alloy matrix. <i>Materials Today: Proceedings</i> , 2016 , 3, 2018-2026	1-4	4
693	Line defects in boron nitride nanostructures: A first-principles study. 2016 , 234-235, 45-50		8
692	In situ chemical vapor deposition of graphene and hexagonal boron nitride heterostructures. 2016 , 16, 1175-1191		28
691	Role of Pressure in the Growth of Hexagonal Boron Nitride Thin Films from Ammonia-Borane. 2016 , 28, 4169-4179		67
690	Quantitative Subsurface Atomic Structure Fingerprint for 2D Materials and Heterostructures by First-Principles-Calibrated Contact-Resonance Atomic Force Microscopy. 2016 , 10, 6491-500		19
689	Catalyzed synthesis of rhombohedral boron nitride in sodium chloride molten salt. 2016 , 42, 11626-11633		7
688	Seven-inch large-size synthesis of monolayer hexagonal BN film by low-pressure CVD. 2016 , 253, 829-833		9
687	On the use of two dimensional hexagonal boron nitride as dielectric. 2016 , 163, 119-133		77
686	Growth Mechanism and Morphology of Hexagonal Boron Nitride. <i>Nano Letters</i> , 2016 , 16, 1398-403	11-5	97
685	Aging of Transition Metal Dichalcogenide Monolayers. 2016 , 10, 2628-35		267
684	Black phosphorus-based saturable absorber for Q-switched Tm:YAG ceramic laser. 2016 , 55, 081307		31
683	Synthesis and applications of two-dimensional hexagonal boron nitride in electronics manufacturing. 2016 , 12, 1-16		49

682	Controlling Catalyst Bulk Reservoir Effects for Monolayer Hexagonal Boron Nitride CVD. <i>Nano Letters</i> , 2016 , 16, 1250-61	11.5	97
681	Atomistic modeling of BN nanofillers for mechanical and thermal properties: a review. 2016 , 8, 22-49		61
680	Heterostructures based on two-dimensional layered materials and their potential applications. 2016 , 19, 322-335		327
679	Trimethylamine Borane: A New Single-Source Precursor for Monolayer h-BN Single Crystals and h-BCN Thin Films. 2016 , 28, 2180-2190		52
678	Improvement of n-type conductivity in hexagonal boron nitride monolayers by doping, strain and adsorption. <i>RSC Advances</i> , 2016 , 6, 29190-29196	3.7	8
677	Monolayer MoS ₂ /GaAs heterostructure self-driven photodetector with extremely high detectivity. 2016 , 23, 89-96		87
676	The static and dynamic magnetic properties of monolayer iron dioxide and iron dichalcogenides. <i>RSC Advances</i> , 2016 , 6, 31758-31761	3.7	20
675	Hexagonal Boron Nitride-Graphene Heterostructures: Synthesis and Interfacial Properties. 2016 , 12, 32-50		101
674	A long-term corrosion barrier with an insulating boron nitride monolayer. 2016 , 4, 5044-5050		110
673	Enhanced Graphene Mechanical Properties through Ultrasoother Copper Growth Substrates. <i>Nano Letters</i> , 2016 , 16, 1657-62	11.5	52
672	Graphene/h-BN/GaAs sandwich diode as solar cell and photodetector. 2016 , 24, 134-45		81
671	A strain or electric field induced direct bandgap in ultrathin silicon film and its application in photovoltaics or photocatalysis. <i>Physical Chemistry Chemical Physics</i> , 2016 , 18, 7156-62	3.6	11
670	Biological and environmental interactions of emerging two-dimensional nanomaterials. 2016 , 45, 1750-80		168
669	Ultrathin SnS ₂ nanosheets of ultrasonic synthesis and their photoresponses from ultraviolet to near-infrared. 2016 , 231, 211-217		22
668	Large-scale exfoliation of hexagonal boron nitride with combined fast quenching and liquid exfoliation strategies. 2016 , 51, 3162-3169		26
667	Nitrogenated, phosphorated and arsenicated monolayer holey graphenes. <i>Physical Chemistry Chemical Physics</i> , 2016 , 18, 3144-50	3.6	49
666	Scalable fabrication of thermally conductive elastomer/boron nitride nanosheets composites by slurry compounding. 2016 , 123, 179-186		65
665	High-Throughput Graphene Synthesis in Gapless Stacks. 2016 , 28, 40-43		30

664	Synthesis of aligned symmetrical multifaceted monolayer hexagonal boron nitride single crystals on resolidified copper. 2016 , 8, 2434-44		65
663	Effect of surface nitridation on the epitaxial growth of few-layer sp ² BN. 2016 , 436, 16-22		18
662	Effect of hexagonal boron nitride on high-performance polyether ether ketone composites. 2016 , 294, 127-133		21
661	Optical and Electronic Properties of Two-Dimensional Layered Materials. 2017 , 6, 479-493		86
660	Single-step synthesis of crystalline h-BN quantum- and nanodots embedded in boron carbon nitride films. <i>Nanotechnology</i> , 2017 , 28, 105602	3-4	14
659	A Density functional theory study of the sensitivity of two-dimensional BN nanosheet to nerve agents cyclosarin and tabun. 2017 , 623, 157-163		57
658	Oxygen-suppressed selective growth of monolayer hexagonal boron nitride on copper twin crystals. 2017 , 10, 826-833		9
657	Relationships between the elastic and fracture properties of boronitrene and molybdenum disulfide and those of graphene. <i>Nanotechnology</i> , 2017 , 28, 064002	3-4	17
656	Real-time oxide evolution of copper protected by graphene and boron nitride barriers. 2017 , 7, 39770		37
655	Large-scale fabrication and utilization of novel hexagonal/turbostratic composite boron nitride nanosheets. 2017 , 120, 266-272		22
654	Electrochemically Prepared Polycrystalline Copper Surface for the Growth of Hexagonal Boron Nitride. 2017 , 17, 1669-1678		9
653	Oligomeric aminoborane precursors for the chemical vapour deposition growth of few-layer hexagonal boron nitride. 2017 , 19, 285-294		34
652	A hybrid MBE-based growth method for large-area synthesis of stacked hexagonal boron nitride/graphene heterostructures. 2017 , 7, 43644		39
651	Epitaxial chemical vapour deposition growth of monolayer hexagonal boron nitride on a Cu(111)/sapphire substrate. <i>Physical Chemistry Chemical Physics</i> , 2017 , 19, 8230-8235	3.6	26
650	Characterization of hexagonal boron nitride layers on nickel surfaces by low-energy electron microscopy. 2017 , 659, 31-42		17
649	Strong thermal transport along polycrystalline transition metal dichalcogenides revealed by multiscale modeling for MoS ₂ . 2017 , 7, 67-76		29
648	Ion beam modification of two-dimensional materials: Characterization, properties, and applications. 2017 , 4, 011103		114
647	h-AlN-Mg(OH) ₂ van der Waals bilayer heterostructure: Tuning the excitonic characteristics. <i>Physical Review B</i> , 2017 , 95,	3.3	19

646	Aligned Growth of Millimeter-Size Hexagonal Boron Nitride Single-Crystal Domains on Epitaxial Nickel Thin Film. 2017 , 13, 1604179	55
645	Investigation of crack propagation and existing notch on the mechanical response of polycrystalline hexagonal boron-nitride nanosheets. 2017 , 131, 86-99	31
644	Controlling the orientations of h-BN during growth on transition metals by chemical vapor deposition. 2017 , 9, 3561-3567	18
643	Chemical Vapor-Deposited Hexagonal Boron Nitride as a Scalable Template for High-Performance Organic Field-Effect Transistors. 2017 , 29, 2341-2347	46
642	Irreparable Defects Produced by the Patching of h-BN Frontiers on Strongly Interacting Re(0001) and Their Electronic Properties. 2017 , 139, 5849-5856	10
641	Energetics of hexagonal boron nitride nanostructures: edge dependence and truncation effects. 2017 , 9, 6734-6740	20
640	Boosting the adsorption performance of BN nanosheet as an anode of Na-ion batteries: DFT studies. 2017 , 381, 2010-2015	24
639	Introducing Overlapping Grain Boundaries in Chemical Vapor Deposited Hexagonal Boron Nitride Monolayer Films. 2017 , 11, 4521-4527	27
638	Two-Dimensional Semiconductors: From Materials Preparation to Electronic Applications. 2017 , 3, 1700045	69
637	First-principles prediction on bismuthylene monolayer as a promising quantum spin Hall insulator. 2017 , 9, 8207-8212	23
636	Graphene: Synthesis and Functionalization. 2017 , 101-132	1
635	Scalable and efficient separation of hydrogen isotopes using graphene-based electrochemical pumping. <i>Nature Communications</i> , 2017 , 8, 15215	17.4 76
634	Photoluminescence Segmentation within Individual Hexagonal Monolayer Tungsten Disulfide Domains Grown by Chemical Vapor Deposition. 2017 , 9, 15005-15014	48
633	Chemical Interaction-Guided, Metal-Free Growth of Large-Area Hexagonal Boron Nitride on Silicon-Based Substrates. 2017 , 11, 4985-4994	21
632	Hexagonal Boron Nitride Self-Launches Hyperbolic Phonon Polaritons. <i>Journal of Physical Chemistry Letters</i> , 2017 , 8, 2158-2162	6.4 18
631	On-stack two-dimensional conversion of MoS ₂ into MoO ₃ . 2017 , 4, 014003	32
630	Charge Density Wave Transition in (PbSe) ₁ +(MSe ₂) _n Compounds with n = 1, 2, and 3. 2017 , 29, 5646-5653	13
629	Carbon-Doped BN Nanosheets for the Oxidative Dehydrogenation of Ethylbenzene. 2017 , 56, 8231-8235	132

628	Carbon-Doped BN Nanosheets for the Oxidative Dehydrogenation of Ethylbenzene. 2017 , 129, 8343-8347		38
627	Synthesis of High-Quality Graphene and Hexagonal Boron Nitride Monolayer In-Plane Heterostructure on Cu-Ni Alloy. <i>Advanced Science</i> , 2017 , 4, 1700076	13.6	60
626	Microanalysis of single-layer hexagonal boron nitride islands on Ir(111). 2017 , 420, 504-510		25
625	Graphene and related two-dimensional materials: Structure-property relationships for electronics and optoelectronics. 2017 , 4, 021306		368
624	Carbon-assisted chemical vapor deposition of hexagonal boron nitride. 2017 , 4, 025117		42
623	Few-atomic-layered hexagonal boron nitride: CVD growth, characterization, and applications. 2017 , 20, 611-628		66
622	Coherent Interlayer Tunneling and Negative Differential Resistance with High Current Density in Double Bilayer Graphene-WSe Heterostructures. <i>Nano Letters</i> , 2017 , 17, 3919-3925	11.5	40
621	A comparative DFT study on the interaction of cathinone drug with BN nanotubes, nanocages, and nanosheets. 2017 , 422, 763-768		61
620	Epitaxial Templating of Two-Dimensional Metal Chloride Nanocrystals on Monolayer Molybdenum Disulfide. 2017 , 11, 6404-6415		17
619	Chemical and Bandgap Engineering in Monolayer Hexagonal Boron Nitride. 2017 , 7, 45584		49
618	Large-area growth of multi-layer hexagonal boron nitride on polished cobalt foils by plasma-assisted molecular beam epitaxy. 2017 , 7, 43100		39
617	A theoretical simulation of small-molecules sensing on an S-vacancy SnS monolayer. <i>Physical Chemistry Chemical Physics</i> , 2017 , 19, 10470-10480	3.6	33
616	Recent progress in synthesis of two-dimensional hexagonal boron nitride. 2017 , 38, 031003		25
615	Fracture toughness enhancement of h-BN monolayers via hydrogen passivation of a crack edge. <i>Nanotechnology</i> , 2017 , 28, 165702	3.4	21
614	High Operating Temperature and Low Power Consumption Boron Nitride Nanosheets Based Broadband UV Photodetector. 2017 , 7, 42973		43
613	Synthesis of continuous hexagonal boron nitride films on alloy substrate. 2017 , 196, 252-255		4
612	Heterogeneous Pyrolysis: A Route for Epitaxial Growth of hBN Atomic Layers on Copper Using Separate Boron and Nitrogen Precursors. <i>Nano Letters</i> , 2017 , 17, 2404-2413	11.5	16
611	Atomistic Insights into Nucleation and Formation of Hexagonal Boron Nitride on Nickel from First-Principles-Based Reactive Molecular Dynamics Simulations. 2017 , 11, 3585-3596		37

610	Boron Nitride Quantum Dots with Solvent-Regulated Blue/Green Photoluminescence and Electrochemiluminescent Behavior for Versatile Applications. 2017 , 5, 1600661		59
609	Enhanced Quality CVD-Grown Graphene via a Double-Plateau Copper Surface Planarization Methodology. 2017 , 17, 5725-5731		7
608	Two-dimensional and three-dimensional hybrid assemblies based on graphene oxide and other layered structures: A carbon science perspective. 2017 , 125, 437-453		20
607	Hydrogenation-driven phase transition in single-layer TiSe. <i>Nanotechnology</i> , 2017 , 28, 495709	3.4	5
606	Catalytic CVD synthesis of boron nitride and carbon nanomaterials - synergies between experiment and theory. <i>Physical Chemistry Chemical Physics</i> , 2017 , 19, 26466-26494	3.6	22
605	Corrugation in the Weakly Interacting Hexagonal-BN/Cu(111) System: Structure Determination by Combining Noncontact Atomic Force Microscopy and X-ray Standing Waves. 2017 , 11, 9151-9161		40
604	Mapping the electrical properties of large-area graphene. 2017 , 4, 042003		75
603	BN nanoflake quantum-dot arrays: structural stability, and electronic and half-metallic properties. <i>Physical Chemistry Chemical Physics</i> , 2017 , 19, 20137-20146	3.6	7
602	Highly thermally conductive and electrically insulating polymer nanocomposites with boron nitride nanosheet/ionic liquid complexes. <i>RSC Advances</i> , 2017 , 7, 36450-36459	3.7	32
601	First-principles study of the small molecule adsorption on the InSe monolayer. 2017 , 426, 244-252		67
600	High-Performance Polymers Sandwiched with Chemical Vapor Deposited Hexagonal Boron Nitrides as Scalable High-Temperature Dielectric Materials. 2017 , 29, 1701864		153
599	Multilayer Regulation of Atomic Boron Nitride Films to Improve Oxidation and Corrosion Resistance of Cu. 2017 , 9, 27152-27165		35
598	Growth temperature impact on film quality of hBN grown on Al ₂ O ₃ using non-catalyzed borazane CVD. 2017 , 28, 14341-14347		8
597	Growth of Large Single-Crystalline Monolayer Hexagonal Boron Nitride by Oxide-Assisted Chemical Vapor Deposition. 2017 , 29, 6252-6260		46
596	Electrical properties and applications of graphene, hexagonal boron nitride (h-BN), and graphene/h-BN heterostructures. 2017 , 2, 6-34		188
595	A facile strategy to simultaneously exfoliate and functionalize boron nitride nanosheets via Lewis acid-base interaction. <i>Chemical Engineering Journal</i> , 2017 , 330, 309-321	14.7	86
594	Dislocation assisted crack healing in h-BN nanosheets. <i>Physical Chemistry Chemical Physics</i> , 2017 , 19, 21739-21747	3.6	15
593	Experimentally determined edge orientation of triangular crystals of hexagonal boron nitride. 2017 , 254, 1700069		12

592	Growth mechanism of AlN on hexagonal BN/sapphire substrate by metalorganic chemical vapor deposition. 2017 , 19, 5849-5856		21
591	Theory of Finite-Length Grain Boundaries of Controlled Misfit Angle in Two-Dimensional Materials. <i>Nano Letters</i> , 2017 , 17, 5297-5303	11.5	13
590	Stability, electronic and phononic properties of band 1T structures of SiTe (x = 1, 2) and their vertical heterostructures. <i>Journal of Physics Condensed Matter</i> , 2017 , 29, 395504	1.8	5
589	Growth of Graphene/h-BN Heterostructures on Recyclable Pt Foils by One-Batch Chemical Vapor Deposition. 2017 , 7, 17083		16
588	Multilayer Graphene-WSe Heterostructures for WSe Transistors. 2017 , 11, 12817-12823		65
587	van der Waals Layered Materials: Opportunities and Challenges. 2017 , 11, 11803-11830		258
586	Toward a Mechanistic Understanding of Vertical Growth of van der Waals Stacked 2D Materials: A Multiscale Model and Experiments. 2017 , 11, 12780-12788		58
585	A DFT study on graphene, SiC, BN, and AlN nanosheets as anodes in Na-ion batteries. 2017 , 23, 354		31
584	Stitching h-BN by atomic layer deposition of LiF as a stable interface for lithium metal anode. 2017 , 3, eaa03170		191
583	Oxygen-assisted synthesis of hexagonal boron nitride films for graphene transistors. 2017 , 111, 203103		9
582	In situ gas analysis during the growth of hexagonal boron nitride from ammonia borane. 2017 , 4, 115905		4
581	Electrical Homogeneity of Large-Area Chemical Vapor Deposited Multilayer Hexagonal Boron Nitride Sheets. 2017 , 9, 39895-39900		15
580	Chemical Vapor Deposition Growth of Large Single-Crystal Mono-, Bi-, Tri-Layer Hexagonal Boron Nitride and Their Interlayer Stacking. 2017 , 11, 12057-12066		58
579	Water-Assisted Synthesis of Molybdenum Disulfide Film with Single Organic Liquid Precursor. 2017 , 7, 1983		20
578	Epitaxial growth of HfS ₂ on sapphire by chemical vapor deposition and application for photodetectors. 2017 , 4, 031012		36
577	Initial stage of hexagonal boron nitride growth in diffusion and precipitation method. 2017 , 56, 06GE06		2
576	Mechanical characterization and cleaning of CVD single-layer h-BN resonators. 2017 , 1,		29
575	On the mechanism of molybdenite exfoliation during mechanical milling. 2017 , 43, 12957-12967		16

574	Controllable coating of boron nitride on ceramic fibers by CVD at low temperature. 2017 , 43, 1509-1516	18
573	Few-layer boron nitride nanosheets: Preparation, characterization and application in epoxy resin. 2017 , 43, 2274-2278	15
572	Physics and chemistry of oxidation of two-dimensional nanomaterials by molecular oxygen. 2017 , 7, e1280	34
571	Surface chemistry and catalysis confined under two-dimensional materials. 2017 , 46, 1842-1874	309
570	Boron phosphide monolayer as a potential anode material for alkali metal-based batteries. 2017 , 5, 672-679	144
569	Wettability of Supported Monolayer Hexagonal Boron Nitride in Air. 2017 , 27, 1603181	38
568	Thermal transport properties of bulk and monolayer MoS ₂ : an ab-initio approach. 2017 , 836, 012052	3
567	Performance analysis of 2D Graphene FET embedded with hexagonal boron nitride clusters. 2017 ,	
566	Inorganic analogues of graphene. 2017 , 75-101	2
565	High-Efficient Liquid Exfoliation of Boron Nitride Nanosheets Using Aqueous Solution of Alkanolamine. 2017 , 12, 596	35
564	Raman Enhancement and Photo-Bleaching of Organic Dyes in the Presence of Chemical Vapor Deposition-Grown Graphene. <i>Nanomaterials</i> , 2017 , 7,	5-4 7
563	Ab-initio investigations on physisorption of alkaline earth metal atoms on monolayer hexagonal boron nitride (h-BN). 2018 , 118, 114-125	16
562	Edge defect switched dual spin filter in zigzag hexagonal boron nitride nanoribbons. <i>Physical Chemistry Chemical Physics</i> , 2018 , 20, 9241-9247	3.6 10
561	Fundamentals, progress, and future directions of nitride-based semiconductors and their composites in two-dimensional limit: A first-principles perspective to recent synthesis. 2018 , 5, 011105	50
560	Ni foam assisted synthesis of high quality hexagonal boron nitride with large domain size and controllable thickness. 2018 , 5, 025020	11
559	Engineering the Electronic Structure of Tin Sulfide Nanoribbons: A Computational Study. 2018 , 122, 5731-5741	15
558	Graphene/Semiconductor Hybrid Heterostructures for Optoelectronic Device Applications. 2018 , 19, 41-83	124
557	Probing the ultimate plasmon confinement limits with a van der Waals heterostructure. 2018 , 360, 291-295	179

556	Insulator-to-Metallic Spin-Filtering in 2D-Magnetic Tunnel Junctions Based on Hexagonal Boron Nitride. 2018 , 12, 4712-4718	59
555	Interface amorphization in hexagonal boron nitride films on sapphire substrate grown by metalorganic vapor phase epitaxy. 2018 , 11, 051002	5
554	Controlling enzyme function through immobilisation on graphene, graphene derivatives and other two dimensional nanomaterials. 2018 , 6, 3200-3218	32
553	Recent progress in plasma-assisted synthesis and modification of 2D materials. 2018 , 5, 032002	39
552	First principles study of the electronic properties and band gap modulation of two-dimensional phosphorene monolayer: Effect of strain engineering. 2018 , 118, 289-297	15
551	Low-temperature amorphous boron nitride on Si _{0.7} Ge _{0.3} (001), Cu, and HOPG from sequential exposures of N ₂ H ₄ and BCl ₃ . 2018 , 439, 689-696	9
550	Nanopatterning Hexagonal Boron Nitride with Helium Ion Milling: Towards Atomically-Thin, Nanostructured Insulators. 2018 , 3, 327-331	5
549	Tuning Electronic Structure of Single Layer MoS through Defect and Interface Engineering. 2018 , 12, 2569-2579	133
548	MoS ₂ nanostructures for electrochemical sensing of multidisciplinary targets: A review. 2018 , 102, 75-90	78
547	Predicting the structural and electronic properties of two-dimensional single layer boron nitride sheets. 2018 , 694, 102-106	18
546	Hexagonal Boron Nitride: The Thinnest Insulating Barrier to Microbial Corrosion. 2018 , 12, 2242-2252	42
545	Repeated roll-to-roll transfer of two-dimensional materials by electrochemical delamination. 2018 , 10, 5522-5531	22
544	Liquid-Phase Exfoliation of Hexagonal Boron Nitride into Boron Nitride Nanosheets in Common Organic Solvents with Hyperbranched Polyethylene as Stabilizer. 2018 , 219, 1700482	36
543	Enhanced Crystallinity of h-BN Films Induced by Substrate Bias During Magnetron Sputtering. 2018 , 255, 1700458	2
542	Exploring Two-Dimensional Materials toward the Next-Generation Circuits: From Monomer Design to Assembly Control. 2018 , 118, 6236-6296	261
541	Formation of graphitic carbon nitride and boron carbon nitride film on sapphire substrate. 2018 , 57, 02CB09	10
540	Interface Engineering of Earth-Abundant Transition Metals Using Boron Nitride for Selective Electroreduction of CO. 2018 , 10, 6694-6700	40
539	p-Type conductivity of hexagonal boron nitride as a dielectrically tunable monolayer: modulation doping with magnesium. 2018 , 10, 4361-4369	13

538	Large-area few-layer hexagonal boron nitride prepared by quadrupole field aided exfoliation. <i>Nanotechnology</i> , 2018 , 29, 12LT01	3.4	2
537	Defect-selective dry etching for quick and easy probing of hexagonal boron nitride domains. <i>Nanotechnology</i> , 2018 , 29, 125704	3.4	2
536	Tuning electronic and magnetic properties of monolayer h-RuCl_3 by in-plane strain. <i>Journal of Materials Chemistry C</i> , 2018 , 6, 2019-2025	7.1	31
535	Structural transformations of carbon and boron nitride nanoscrolls at high impact collisions. <i>Physical Chemistry Chemical Physics</i> , 2018 , 20, 4911-4916	3.6	11
534	Boron Nitride Quantum Dots as Efficient Coreactant for Enhanced Electrochemiluminescence of Ruthenium(II) Tris(2,2'-bipyridyl). 2018 , 90, 2141-2147		71
533	Edge controlled growth of hexagonal boron nitride crystals on copper foil by atmospheric pressure chemical vapor deposition. 2018 , 20, 550-555		15
532	Growth of h-BN on copper (110) in a LEEM. 2018 , 669, 133-139		8
531	Recent progress in the tailored growth of two-dimensional hexagonal boron nitride via chemical vapour deposition. 2018 , 47, 4242-4257		70
530	Role of Carbon Interstitials in Transition Metal Substrates on Controllable Synthesis of High-Quality Large-Area Two-Dimensional Hexagonal Boron Nitride Layers. <i>Nano Letters</i> , 2018 , 18, 3352-3361	11.5	25
529	Largely enhanced energy storage density of poly(vinylidene fluoride) nanocomposites based on surface hydroxylation of boron nitride nanosheets. 2018 , 6, 7573-7584		90
528	Two-dimensional halide perovskite nanomaterials and heterostructures. 2018 , 47, 6046-6072		244
527	High-temperature molecular beam epitaxy of hexagonal boron nitride layers. 2018 , 36, 02D103		19
526	Effect of ^{10}B isotope and vacancy defects on the phonon modes of two-dimensional hexagonal boron nitride. 2018 , 57, 02CB04		3
525	Strain mapping in single-layer two-dimensional crystals via Raman activity. <i>Physical Review B</i> , 2018 , 97,	3.3	32
524	Material Chemistry of Two-Dimensional Inorganic Nanosheets in Cancer Theranostics. 2018 , 4, 1284-1313		111
523	Infrared spectroscopy and density functional calculations on titanium-dinitrogen complexes. 2018 , 698, 163-170		2
522	Chemical synthesis of two-dimensional atomic crystals, heterostructures and superlattices. 2018 , 47, 3129-3151		99
521	Progress in CVD synthesis of layered hexagonal boron nitride with tunable properties and their applications. 2018 , 63, 162-203		25

520	Systematic Theoretical Investigations for Crystal Structure Deformation in Group-III Nitrides: A First-Principles Study. 2018 , 255, 1700446	4
519	Growth of hexagonal boron nitride on sapphire substrate by pulsed-mode metalorganic vapor phase epitaxy. 2018 , 482, 1-8	31
518	Recent Applications of 2D Inorganic Nanosheets for Emerging Energy Storage System. 2018 , 24, 4757-4773	40
517	In situ crystallization kinetics of two-dimensional MoS ₂ . 2018 , 5, 011009	24
516	Enhanced thermal stability of boron nitride-coated Au nanoparticles for surface enhanced Raman spectroscopy. 2018 , 730, 487-492	5
515	Zweidimensionale Chemie jenseits von Graphen: das aufstrebende Gebiet der Funktionalisierung von Molybdädisulfid und schwarzem Phosphor. 2018 , 130, 4421-4437	20
514	Post-Graphene 2D Chemistry: The Emerging Field of Molybdenum Disulfide and Black Phosphorus Functionalization. 2018 , 57, 4338-4354	156
513	Alloyed monolayers of Cu, Ag, Au and Pt in hexagonal phase: A comprehensive first principles study. 2018 , 228, 84-90	12
512	Applications of Phosphorene and Black Phosphorus in Energy Conversion and Storage Devices. 2018 , 8, 1702093	272
511	Magnetic moment changed by interlayer charge transfer in vertical graphene/C-doped hexagonal boron nitride heterostructure. 2018 , 692, 81-87	1
510	A computational study on the cisplatin drug interaction with boron nitride nanocluster. 2018 , 79, 223-229	28
509	Scalable synthesis of two-dimensional nano-sheet materials with chlorophyll extracts: enhancing the hydrogen evolution reaction. 2018 , 20, 525-533	9
508	Measuring the dielectric and optical response of millimeter-scale amorphous and hexagonal boron nitride films grown on epitaxial graphene. 2018 , 5,	16
507	The ClCN adsorption on the pristine and Al-doped boron nitride nanosheet, nanocage, and nanocone: Density functional studies. 2018 , 645, 363-369	15
506	Selective-area heteroepitaxial growth of h-BN micropatterns on graphene layers. 2018 , 5, 015021	3
505	Multifunctional Cellular Materials Based on 2D Nanomaterials: Prospects and Challenges. 2018 , 30, 1704850	30
504	Synthesis and optoelectronic applications of graphene/transition metal dichalcogenides flat-pack assembly. 2018 , 127, 602-610	13
503	Chloropicrin sensor based on the pristine BN nanocones: DFT studies. 2018 , 29, 585-592	9

502	Effect of Flow Rate and Precursor Sublimation Temperature on the LPCVD Growth of Hexagonal Boron Nitride. 2018,	
501	Low temperature solution synthesis of reduced two dimensional TiC MXenes with paramagnetic behaviour. 2018, 10, 22429-22438	41
500	Hydrogenated derivatives of hexacoordinated metallic CuSi monolayer.. <i>RSC Advances</i> , 2018, 8, 39976-39982	2
499	A visual electrochemiluminescence resonance energy transfer/surface plasmon coupled electrochemiluminescence nanosensor for Shiga toxin-producing Escherichia coli detection. 2018, 20, 5520-5527	35
498	The Existence of Strong Solutions for a Class of Stochastic Differential Equations. 2018, 2018, 1-5	
497	Influence of Oxalic Acid Concentrations on The Growth of Molybdenum Disulfide via Spin Coating Technique. 2018, 1083, 012060	0
496	Nucleation of boron-nitrogen on transition metal surface: A first-principles investigation. 2018, 31, 335-340	2
495	Effect of Flow Rate and Precursor Sublimation Temperature on the LPCVD Growth of Hexagonal Boron Nitride. 2018,	
494	Direct, Transfer-Free Growth of Large-Area Hexagonal Boron Nitride Films by Plasma-Enhanced Chemical Film Conversion (PECFC) of Printable, Solution-Processed Ammonia Borane. 2018, 10, 43936-43945	6
493	Enhanced Stability of Single-Layer w-Gallenene through Hydrogenation. 2018, 122, 28302-28309	14
492	Energetics and Electronic Structure of Triangular Hexagonal Boron Nitride Nanoflakes. 2018, 8, 16657	19
491	Wafer-scale single-crystal hexagonal boron nitride film via self-collimated grain formation. 2018, 362, 817-821	233
490	A HR-XPS study of the formation of h-BN on Ni(111) from the two precursors, ammonia borane and borazine. 2018, 149, 164709	12
489	Structural and electronic properties of III-nitride nanoribbons. 2018, 124, 175106	7
488	Geometrical and electronic properties of C-doped graphyne-like BN sheets. 2018, 191, 180-188	1
487	Two-Dimensional Nanomaterials in Thermal Management Applications: Further Efforts Are Needed to Achieve Full Potential and Wider Realization. 2018, 12, 19-27	1
486	Modifying the geometric and electronic structure of hexagonal boron nitride on Ir(111) by Cs adsorption and intercalation. <i>Physical Review B</i> , 2018, 98,	3-3 7
485	Hydrogenation and Fluorination of 2D Boron Phosphide and Boron Arsenide: A Density Functional Theory Investigation. 2018, 3, 16416-16423	31

484	Near-deterministic activation of room-temperature quantum emitters in hexagonal boron nitride. 2018 , 5, 1128	100
483	Recent Advances in Synthesis and Applications of 2D Junctions. 2018 , 14, e1801606	16
482	Direct CVD Growth of Graphene on Technologically Important Dielectric and Semiconducting Substrates. <i>Advanced Science</i> , 2018 , 5, 1800050	13.6 41
481	Investigation on mechanical performances of grain boundaries in hexagonal boron nitride sheets. 2018 , 149, 262-272	12
480	h-BN Defective Layers as Giant N-Donor Macrocycles for Cu Adatom Trapping from the Underlying Metal Substrate. 2018 , 122, 23610-23622	3
479	In Situ Optical Tracking of Electroablation in Two-Dimensional Transition-Metal Dichalcogenides. 2018 , 10, 40773-40780	5
478	Nanopowdered h-BN as a Wear-Reducing Eco-Friendly Material. 2018 , 1-20	1
477	Three-leaf dart-shaped single-crystal BN formation promoted by surface oxygen. 2018 , 113, 163101	
476	Introduction of Protonated Sites on Exfoliated, Large-Area Sheets of Hexagonal Boron Nitride. 2018 , 12, 9931-9939	32
475	Liquid catalysts: an innovative solution to 2D materials in CVD processes. 2018 , 5, 1021-1034	17
474	CVD Technology for 2-D Materials. 2018 , 65, 4040-4052	23
473	Structural, electronic, and magnetic properties of gas molecules on Mo-, Si-, and Pt-doped BC ₃ sheets. 2018 , 121, 247-255	7
472	Flatlands in the Holy Land: The Evolution of Layered Materials Research in Israel. 2018 , 30, e1706581	7
471	Identification of Copper Surface Index by Optical Contrast. 2018 , 5, 1800377	12
470	Controlled growth and Atomic-scale Characterization of Two-dimensional hexagonal boron nitride crystals. 2018 , 496-497, 51-56	5
469	Atomic-scale etching of hexagonal boron nitride for device integration based on two-dimensional materials. 2018 , 10, 15205-15212	17
468	Synthesis of 2D boron nitride doped polyaniline hybrid nanocomposites for photocatalytic degradation of carcinogenic dyes from aqueous solution. 2018 , 11, 1000-1016	45
467	Emerging trends in 2D nanotechnology that are redefining our understanding of Nanocomposites 2018 , 21, 18-40	47

466	A theoretical study on metal atom-modified BC ₃ sheets for effects of gas molecule adsorptions. 2018 , 124, 1	15
465	Selective Direct Growth of Atomic Layered HfS ₂ on Hexagonal Boron Nitride for High Performance Photodetectors. 2018 , 30, 3819-3826	40
464	Growth and characterization of porous sp ² -BN films with hollow spheres under hydrogen etching effect via borazane thermal CVD. 2018 , 452, 314-321	1
463	Monolayer AsTe : Stable Robust Metal in 2D, 1D and 0D. 2018 , 19, 2176-2182	2
462	Semiconductor Nanomembrane Materials for High-Performance Soft Electronic Devices. 2018 , 140, 9001-9019	22
461	Synthesis of Two-Dimensional Hexagonal Boron Nitride. 2018 , 1-10	2
460	Controllable Growth of Hexagonal Boron Nitride Films on Cu Foils. 2018 , 29-41	1
459	Growth of Large Single Crystalline Monolayer Boron Nitride Hexagons. 2018 , 53-68	
458	Growth of Oriented Single Crystalline Hexagonal Boron Nitride Monolayers. 2018 , 69-98	
457	A New Single-Source Precursor for Monolayer h-BN and h-BCN Thin Films. 2018 , 99-115	
456	Conclusions and Recommendations for Future Work. 2018 , 117-122	
455	Chemical Vapor Deposition Growth and Characterization of Two-Dimensional Hexagonal Boron Nitride. 2018 ,	1
454	Literature Review. 2018 , 11-28	
453	Growth of Nanocrystalline Boron Nitride Films on Dielectric Substrates. 2018 , 43-51	
452	Hexagonal Boron Nitride/Metal Junction: Removing the Schottky Barriers by Grain Boundary. 2018 , 1, 1800045	4
451	Tunable Electron and Hole Injection Enabled by Atomically Thin Tunneling Layer for Improved Contact Resistance and Dual Channel Transport in MoS ₂ /WSe ₂ van der Waals Heterostructure. 2018 , 10, 23961-23967	7
450	Molecular dynamics study on the mechanical properties of carbon doped single-layer polycrystalline boron-nitride nanosheets. 2018 , 153, 16-27	16
449	Smoothing of wrinkles in CVD-grown hexagonal boron nitride films. 2018 , 10, 16243-16251	6

448	Recent Advances in Growth of Novel 2D Materials: Beyond Graphene and Transition Metal Dichalcogenides. 2018 , 30, e1800865		135
447	Strain engineering of antimonene by a first-principles study: Mechanical and electronic properties. <i>Physical Review B</i> , 2018 , 98,	3.3	50
446	High-Temperature Molecular Beam Epitaxy of Hexagonal Boron Nitride with High Active Nitrogen Fluxes. 2018 , 11,		14
445	Boron-Containing Nanocrystalline Ceramic and Metal-Ceramic Materials. 2018 , 13-35		5
444	Flow modulation epitaxy of hexagonal boron nitride. 2018 , 5, 045018		38
443	A study of boron nitride coatings on carbon fibers by the powder immersion reaction method. 2018 , 5, 066421		2
442	Synthesis of hexagonal boron nitride heterostructures for 2D van der Waals electronics. 2018 , 47, 6342-6369		80
441	Brief review of monolayer molybdenum disulfide application in gas sensor. 2018 , 545, 510-518		28
440	Laser-controlled field effect in graphene/hexagonal boron nitride heterostructures. 2018 , 123, 235103		2
439	Electronic transport properties of heterojunction devices constructed by single-wall Fe ₂ Si and carbon nanotubes. <i>Journal of Materials Chemistry C</i> , 2018 , 6, 5794-5802	7.1	11
438	Porous Hexagonal Boron Nitride Sheets: Effect of Hydroxyl and Secondary Amino Groups on Photocatalytic Hydrogen Evolution. <i>ACS Applied Nano Materials</i> , 2018 , 1, 4566-4575	5.6	67
437	Effect of growth temperature on the structural and optical properties of few-layer hexagonal boron nitride by molecular beam epitaxy. 2018 , 26, 23031-23039		14
436	Electronic and vibrational properties of PbI ₂ : From bulk to monolayer. <i>Physical Review B</i> , 2018 , 98,	3.3	33
435	Hydrogenated amorphous boron nitride: A first principles study. 2018 , 502, 159-163		3
434	Electronic and Optical Properties of 2D Materials Constructed from Light Atoms. 2018 , 30, e1801600		24
433	State-of-the-Art and Future Prospects for Atomically Thin Membranes from 2D Materials. 2018 , 30, e1801179		52
432	Missing links towards understanding the equilibrium shapes of hexagonal boron nitride: algorithm, hydrogen passivation, and temperature effects. 2018 , 10, 17683-17690		7
431	Controlled Growth of Large-Area Uniform Multilayer Hexagonal Boron Nitride as an Effective 2D Substrate. 2018 , 12, 6236-6244		47

430	Structural, electronic and phononic properties of PtSe ₂ : from monolayer to bulk. 2018 , 33, 085002	55
429	Effects of polymer-coated boron nitrides with increased hemorheological compatibility on human erythrocytes and blood coagulation. 2018 , 70, 241-256	5
428	Novel antimonene tunneling field-effect transistors using an abrupt transition from semiconductor to metal in monolayer and multilayer antimonene heterostructures. 2018 , 10, 13652-13660	21
427	Interface-Assisted Synthesis of 2D Materials: Trend and Challenges. 2018 , 118, 6189-6235	358
426	Native point defects and impurities in hexagonal boron nitride. <i>Physical Review B</i> , 2018 , 97, 3-3	131
425	Overcoming the quantum efficiency-lifetime tradeoff of photocathodes by coating with atomically thin two-dimensional nanomaterials. 2018 , 2,	18
424	Boron Nitride Nanotube Nucleation via Network Fusion during Catalytic Chemical Vapor Deposition. 2019 , 141, 13385-13393	12
423	Light-Assisted Charge Propagation in Networks of Organic Semiconductor Crystallites on Hexagonal Boron Nitride. 2019 , 29, 1903816	2
422	Vacuum-Ultraviolet-Oriented van der Waals Photovoltaics. 2019 , 6, 1869-1875	36
421	Liquid Phase Exfoliated Hexagonal Boron Nitride/Graphene Heterostructure Based Electrode Toward Asymmetric Supercapacitor Application. 2019 , 7, 544	15
420	Conductive AFM of 2D Materials and Heterostructures for Nanoelectronics. 2019 , 303-350	6
419	High-Modulus Hexagonal Boron Nitride Nanoplatelet Gel Electrolytes for Solid-State Rechargeable Lithium-Ion Batteries. 2019 , 13, 9664-9672	37
418	Growth of Multi-Layer hBN on Ni(111) Substrates via MOCVD. 2019 , 9, 339	10
417	A review on synthesis of graphene, h-BN and MoS ₂ for energy storage applications: Recent progress and perspectives. 2019 , 12, 2655-2694	156
416	Carbon Nanomaterials and Two-Dimensional Transition Metal Dichalcogenides (2D TMDCs). 2019 , 165-245	2
415	Tunable optoelectronic properties in h-BP/h-BAs bilayers: The effect of an external electrical field. 2019 , 493, 308-319	16
414	Synthesis of sub-millimeter single-crystal grains of aligned hexagonal boron nitride on an epitaxial Ni film. 2019 , 11, 14668-14675	7
413	Two-dimensional layered materials: from mechanical and coupling properties towards applications in electronics. 2019 , 11, 13181-13212	47

412	Ab initio study of a 2D h-BAs monolayer: a promising anode material for alkali-metal ion batteries. <i>Physical Chemistry Chemical Physics</i> , 2019 , 21, 18328-18337	3.6	26
411	Simple correction to bandgap problems in IV and III-V semiconductors: an improved, local first-principles density functional theory. <i>Journal of Physics Condensed Matter</i> , 2019 , 31, 495502	1.8	3
410	Phonon Polaritons in Monolayers of Hexagonal Boron Nitride. 2019 , 31, e1806603		44
409	Electrical Atomic Force Microscopy for Nanoelectronics. 2019 ,		12
408	Synthesis, Characterization, and Properties of Graphene Analogs of 2D Material. 2019 , 91-143		7
407	In situ study of two-dimensional dendritic growth of hexagonal boron nitride. 2019 , 6, 045005		7
406	Edge-modulated dual spin-filter effect in zigzag-shaped buckling AgS nanoribbons. <i>Physical Chemistry Chemical Physics</i> , 2019 , 21, 15623-15629	3.6	2
405	Precise Vapor-Phase Synthesis of Two-Dimensional Atomic Single Crystals. 2019 , 20, 527-545		9
404	Depletion of VOC in wastewater by vacuum membrane distillation using a dual-layer membrane: mechanism of mass transfer and selectivity. 2019 , 5, 119-130		10
403	Recent progress in the controlled synthesis of 2D metallic transition metal dichalcogenides. <i>Nanotechnology</i> , 2019 , 30, 182002	3.4	34
402	Free-Molecular-Flow Modulated Synthesis of Hexagonal Boron Nitride Monolayers. 2019 , 19, 7007-7014		5
401	Band Structure Modifications in Beyond Graphene Materials. 2019 , 341-372		
400	Application of Taguchi design method for optimization of spark plasma sintering process parameters for Ti-6Al-4V/ h -BN binary composite. 2019 , 1, 025043		10
399	Growth Dynamics of Millimeter-Sized Single-Crystal Hexagonal Boron Nitride Monolayers on Secondary Recrystallized Ni (100) Substrates. 2019 , 6, 1901198		13
398	Improved hBN Single-Crystal Growth by Adding Carbon in the Metal Flux. 2019 , 19, 6252-6257		2
397	Height determination of single-layer graphene on mica at controlled humidity using atomic force microscopy. 2019 , 90, 103702		6
396	Passively Q-switched 2.9 μ m Er:YAP single crystal laser using graphene saturable absorber. 2019 , 12, 102006		10
395	Hexagonal boron nitride grown using high atomic boron emission during microwave plasma chemical vapor deposition. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2019 , 37, 061507	2.9	6

394	Large-area adlayer-free single-layer h-BN film achieved by controlling intercalation growth. 2019 , 498, 143851		8
393	Solvothermal synthesis of CuCoO ₂ nanoplates using zeolitic imidazolate framework-67 (ZIF-67) as a co-derived precursor. <i>New Journal of Chemistry</i> , 2019 , 43, 15233-15239	3.6	7
392	Tuning the properties of CVD-grown multiwalled carbon nanotubes by ex situ codoping with boron and nitrogen heteroatoms. 2019 , 21, 1		5
391	A novel electrochemiluminescence sensor based on resonance energy transfer system between nitrogen doped graphene quantum dots and boron nitride quantum dots for sensitive detection of folic acid. 2019 , 1090, 57-63		21
390	Ultrasound-Assisted Facile Green Synthesis of Hexagonal Boron Nitride Nanosheets and Their Applications. 2019 , 7, 17114-17125		38
389	Thickness-tunable growth of ultra-large, continuous and high-dielectric h-BN thin films. <i>Journal of Materials Chemistry C</i> , 2019 , 7, 1871-1879	7.1	9
388	Single-Layer Janus-Type Platinum Dichalcogenides and Their Heterostructures. 2019 , 123, 4549-4557		54
387	Broadband photodetectors based on 2D group IVA metal chalcogenides semiconductors. 2019 , 15, 115-138		50
386	Role of rough substrate on the growth of large single-crystal MoS ₂ by chemical vapor deposition. 2019 , 476, 1008-1015		18
385	Engineering and Tuning of Quantum Emitters in Few-Layer Hexagonal Boron Nitride. 2019 , 13, 3132-3140		65
384	Strain-induced rich magnetic phase transitions and enhancement of magnetic stability for O-terminated h-BN nanoribbons. <i>Journal of Physics Condensed Matter</i> , 2019 , 31, 145301	1.8	3
383	Engineering the magnetic properties of PtSe monolayer through transition metal doping. <i>Journal of Physics Condensed Matter</i> , 2019 , 31, 145502	1.8	28
382	Monitoring the crystal orientation of black-arsenic via vibrational spectra. <i>Journal of Materials Chemistry C</i> , 2019 , 7, 1228-1236	7.1	9
381	Two-dimensional (PEA) ₂ PbBr ₄ perovskite single crystals for a high performance UV-detector. <i>Journal of Materials Chemistry C</i> , 2019 , 7, 1584-1591	7.1	81
380	Graphene layer of hybrid graphene/hexagonal boron nitride model upon heating. 2019 , 29, 521-528		5
379	Adsorption and epitaxial growth of small organic semiconductors on hexagonal boron nitride. 2019 , 52, 383001		10
378	The geometry of hexagonal boron nitride clusters in the initial stages of chemical vapor deposition growth on a Cu(111) surface. 2019 , 11, 13366-13376		11
377	Tuning the Electronic and Magnetic Properties of Graphene Flake Embedded in Boron Nitride Nanoribbons with Transverse Electric Fields: First-Principles Calculations. 2019 , 4, 10293-10300		12

376	Recent progress of boron nitrides. 2019 , 347-419		3
375	Toward the Growth of High Mobility 2D Transition Metal Dichalcogenide Semiconductors. 2019 , 6, 1900220		23
374	Single-layer structures of a- and b-Gallene: a tight-binding approach. <i>Physical Chemistry Chemical Physics</i> , 2019 , 21, 15798-15804	3.6	6
373	Asymmetric carrier accumulation in van der Waals heterostructures of MoS ₂ /WS ₂ under an external electric field. 2019 , 12, 075008		7
372	Energetics and electronic structures of MoS ₂ nanoribbons. 2019 , 58, 075002		1
371	Construction of 2D Antimony(III) Selenide Nanosheets for Highly Efficient Photonic Cancer Theranostics. 2019 , 11, 19712-19723		11
370	Selective Defect Formation in Hexagonal Boron Nitride. 2019 , 7, 1900397		23
369	First-principles investigation of ternary two-dimensional (2D) Al _x B _{1-x} N monolayer alloys. 2019 , 130, 249-257		2
368	Monolayer boron-arsenide as a perfect anode for alkali-based batteries with large storage capacities and fast mobilities. 2019 , 119, e25975		8
367	Accurate Investigation on the Fluorescence Resonance Energy Transfer between Single Organic Molecules and Monolayer WSe by Quantum Coherent Modulation-Enhanced Single-Molecule Imaging Microscopy. <i>Journal of Physical Chemistry Letters</i> , 2019 , 10, 2849-2856	6.4	6
366	Controlled synthesis of uniform multilayer hexagonal boron nitride films on FeB alloy.. <i>RSC Advances</i> , 2019 , 9, 10155-10158	3.7	8
365	Remote heteroepitaxy of atomic layered hafnium disulfide on sapphire through hexagonal boron nitride. 2019 , 11, 9310-9318		10
364	Stacking stability of CN bilayer nanosheet. 2019 , 9, 6861		6
363	Stabilizing Solid Electrolyte-Anode Interface in Li-Metal Batteries by Boron Nitride-Based Nanocomposite Coating. 2019 , 3, 1510-1522		146
362	Wafer-scale and selective-area growth of high-quality hexagonal boron nitride on Ni(111) by metal-organic chemical vapor deposition. 2019 , 9, 5736		31
361	Boron ink assisted in situ boron nitride coatings for anti-oxidation and anti-corrosion applications. <i>Nanotechnology</i> , 2019 , 30, 335704	3.4	7
360	Spectroscopic signatures of edge states in hexagonal boron nitride. 2019 , 12, 1663-1667		6
359	Low temperature wafer-scale synthesis of hexagonal boron nitride by microwave assisted surface wave plasma chemical vapour deposition. 2019 , 9, 035043		7

358	Structure dependent optoelectronic properties of monolayer antimonene, bismuthene and their binary compound. <i>Physical Chemistry Chemical Physics</i> , 2019 , 21, 7907-7917	3.6	26
357	Predicting the preferred morphology of hexagonal boron nitride domain structure on nickel from ReaxFF-based molecular dynamics simulations. 2019 , 11, 5607-5616		12
356	Hexagonal Boron Nitride Growth on Cu-Si Alloy: Morphologies and Large Domains. 2019 , 15, e1805188		18
355	Double-Spiral Hexagonal Boron Nitride and Shear Strained Coalescence Boundary. <i>Nano Letters</i> , 2019 , 19, 4229-4236	11.5	9
354	Computational understanding of the structural and electronic properties of the GeS-graphene contact. <i>Physical Chemistry Chemical Physics</i> , 2019 , 21, 7447-7453	3.6	44
353	Ultrathin Magnetic 2D Single-Crystal CrSe. 2019 , 31, e1900056		78
352	Alternative stacking sequences in hexagonal boron nitride. 2019 , 6, 021006		43
351	Broad range thickness identification of hexagonal boron nitride by colors. 2019 , 12, 055007		9
350	Recent Progress on Two-Dimensional Heterostructures for Catalytic, Optoelectronic, and Energy Applications. 2019 , 6, 2841-2851		11
349	Conformal hexagonal-boron nitride dielectric interface for tungsten diselenide devices with improved mobility and thermal dissipation. <i>Nature Communications</i> , 2019 , 10, 1188	17.4	32
348	Quantitative analysis of the electronic decoupling of an organic semiconductor molecule at a metal interface by a monolayer of hexagonal boron nitride. <i>Physical Review B</i> , 2019 , 99,	3.3	7
347	Double-well potential energy surface in the interaction between h-BN and Ni(111). <i>Physical Chemistry Chemical Physics</i> , 2019 , 21, 10888-10894	3.6	3
346	Hexagonal Boron Nitride Nanosheets Grown via Chemical Vapor Deposition for Silver Protection. <i>ACS Applied Nano Materials</i> , 2019 , 2, 2830-2835	5.6	16
345	STS observations of deep defects within laser-illuminated graphene/MOVPE-h-BN heterostructures. 2019 , 114, 102103		2
344	Polymer Brushes on Hexagonal Boron Nitride. 2019 , 15, e1805228		12
343	Optical Refractive Index Sensors with Plasmonic and Photonic Structures: Promising and Inconvenient Truth. 2019 , 7, 1801433		156
342	An ab initio study for the formation of two-dimensional III-nitride compound ultrathin films: Effects of Ag(1 1 1) substrate. 2019 , 511, 89-92		5
341	Magneto-EELS of armchair boronitrene nanoribbons. <i>RSC Advances</i> , 2019 , 9, 2829-2835	3.7	4

340	Tuning the morphology and chemical composition of MoS ₂ nanostructures. 2019 , 54, 7768-7779	12
339	Electric dipole analogue phonon polaritons in monolayer hexagonal boron nitrides. 2019 ,	
338	Equilibrium shape of single-layer hexagonal boron nitride islands on iridium. 2019 , 9, 19553	2
337	Towards Control of Band Gap in Two-Dimensional Hexagonal Boron Nitride by Doping. 2019 ,	1
336	Van der Waals and Graphene-Like Layers of Silicon Nitride and Aluminum Nitride. 2019 ,	2
335	Control of highly anisotropic electrical conductance of tellurene by strain-engineering. 2019 , 11, 21775-21781	8
334	Progress, Challenges, and Opportunities for 2D Material Based Photodetectors. 2019 , 29, 1803807	481
333	From Self-Assembly Hierarchical h-BN Patterns to Centimeter-Scale Uniform Monolayer h-BN Film. 2019 , 6, 1801493	14
332	Self-Assembled, Ultrahigh Refractive Index Pseudo-Periodic Sn Nanostructures for Broad-Band Infrared Photon Management in Single Layer Graphene. 2019 , 6, 50-58	2
331	Enhanced thermal conductivity of polyurethane composites via engineering small/large sizes interconnected boron nitride nanosheets. 2019 , 170, 93-100	102
330	Fast water desalination by carbon-doped boron nitride monolayer: transport assisted by water clustering at pores. <i>Nanotechnology</i> , 2019 , 30, 055401	3-4 4
329	Layer-sliding-mediated controlled tuning of physical properties of intercalated silicene/hBN heterostructure. 2019 , 6, 035005	2
328	A roadmap for electronic grade 2D materials. 2019 , 6, 022001	133
327	Novel Porous Boron Nitride Nanosheet with Carbon Doping: Potential Metal-Free Photocatalyst for Visible-Light-Driven Overall Water Splitting. 2019 , 2, 1800174	16
326	Ultra-thin h-BN substrates for nanoscale plasmon spectroscopy. 2019 , 125, 023104	7
325	Thermal conductivity of 2D nano-structured boron nitride (BN) and its composites with polymers. 2019 , 100, 170-186	195
324	Growth of two-dimensional materials on hexagonal boron nitride (h-BN). <i>Nanotechnology</i> , 2019 , 30, 034003	11
323	Advanced synthesis of highly crystallized hexagonal boron nitride by coupling polymer-derived ceramics and spark plasma sintering processes-influence of the crystallization promoter and sintering temperature. <i>Nanotechnology</i> , 2019 , 30, 035604	3-4 5

322	Functionalization of B ₃₃ N ₃₃ H ₂₂ Nanosheets with Amidino Carboxylic Acids: A DFT Study. 2019 , 29, 1076-1083		0
321	Hexagonal boron nitride monolayers on metal supports: Versatile templates for atoms, molecules and nanostructures. 2019 , 74, 1-95		113
320	Growth of lateral graphene/h-BN heterostructure on copper foils by chemical vapor deposition. <i>Nanotechnology</i> , 2019 , 30, 03LT01	3-4	9
319	Kinetics of Graphene and 2D Materials Growth. 2019 , 31, e1801583		53
318	Hexagonal boron phosphide as a potential anode nominee for alkali-based batteries: A multi-flavor DFT study. 2019 , 471, 134-141		32
317	Restoring the photovoltaic effect in graphene-based van der Waals heterojunctions towards self-powered high-detectivity photodetectors. 2019 , 57, 214-221		46
316	Adsorption of mercaptopurine drug on the BN nanotube, nanosheet and nanocluster: a density functional theory study. 2019 , 117, 531-538		15
315	Two-Dimensional Magnets: Forgotten History and Recent Progress towards Spintronic Applications. 2020 , 30, 1901414		57
314	A review on thermo-mechanical properties of bi-crystalline and polycrystalline 2D nanomaterials. 2020 , 45, 134-170		26
313	ZrS ₃ /MS ₂ and ZrS ₃ /MX ₂ (M = Mo, W; X = S, Se, Te; X ≠ Y) type-II van der Waals hetero-bilayers: Prospective candidates in 2D excitonic solar cells. 2020 , 499, 143894		22
312	A study on silver nanoleaf-decorated PANI electrodes for improved electrochemical performance. 2020 , 77, 4587-4607		1
311	Scalable synthesis of multilayer h-BN on AlN by metalorganic vapor phase epitaxy: nucleation and growth mechanism. 2020 , 7, 015004		8
310	Preparation of boron nitride nanosheets using a chemical exfoliation method as a thermal conductive filler for the development of silicone thermal composites Part I: effect of single- and hybrid-filler additions on the silicone composite performance. 2020 , 90, 666-684		4
309	Nearly 90% Circularly Polarized Emission in Monolayer WS ₂ Single Crystals by Chemical Vapor Deposition. 2020 , 14, 1350-1359		23
308	Two-dimensional ultrathin BiOCl nanosheet/graphene heterojunction with enhanced photocatalytic activity. <i>Nanotechnology</i> , 2019 , 31, 085706	3-4	7
307	Chemical Vapor Deposition of Boron-Incorporated Graphitic Carbon Nitride Film for Carbon-Based Wide Bandgap Semiconductor Materials. 2020 , 257, 1900375		6
306	Tunable electric properties of bilayer MX ₂ (M = Ge, Sn; X = S, Se) with different strain and external electric field. 2020 , 581, 411673		2
305	Proton conductivity of a hexagonal boron nitride membrane and its energy applications. 2020 , 8, 2898-2912		9

304	Advances of 2D bismuth in energy sciences. 2020 , 49, 263-285		78
303	Spin magnetism of graphene nanoribbon modulated by triangular boron nitride flake. 2020 , 499, 166275		0
302	Large Elastic Deformation and Defect Tolerance of Hexagonal Boron Nitride Monolayers. 2020 , 1, 100172		8
301	An overview of boron nitride based polymer nanocomposites. 2020 , 58, 3115-3141		24
300	Polymer Grafting of Boron Nitride Nanosheets via Reduction Chemistry and Their Reinforcement for Polymeric Composite. 2020 , 305, 2000450		1
299	Investigation of the mono vacancy effects on the structural, electronic and magnetic properties of graphene hexagonal-boron nitride in-plane hybrid embracing diamond shaped graphene island. 2020 , 108, 106395		0
298	Healing Sulfur Vacancies in Monolayer MoS ₂ by High-Pressure Sulfur and Selenium Annealing: Implication for High-Performance Transistors. <i>ACS Applied Nano Materials</i> , 2020 , 3, 10462-10469	5.6	8
297	Enhanced nanoparticle rejection in aligned boron nitride nanotube membranes. 2020 , 12, 21138-21145		11
296	Atomic Layer Deposition of Layered Boron Nitride for Large-Area 2D Electronics. 2020 , 12, 36688-36694		11
295	In Situ Monitoring of Growth of Vertically Stacked h-BN/Graphene Heterostructures on Ni Substrates and Their Interface Interaction. 2020 , 3, 328-336		2
294	Characterizations of nanoscale two-dimensional materials and heterostructures. 2020 , 55-90		0
293	Optoelectronic properties of pristine antimonene, phosphorene and their binary compound. <i>Computational Condensed Matter</i> , 2020 , 24, e00488	1.7	1
292	Growth and Grain Boundaries in 2D Materials. 2020 , 14, 9320-9346		35
291	Water and air friendly alkali metals synthesis of the h-BN-C QDTs and the utilization in the non-volatile resistive switching memory devices. 2020 , 20, 1001-1007		1
290	Study of the phase nature of boron- and nitrogen-containing films by optical and photoelectron spectroscopy. 2020 , 38, 044009		2
289	Few-Layered Hexagonal Boron Nitride: Functionalization, Nanocomposites, and Physicochemical and Biological Properties. 2020 ,		
288	Substrate mediated electronic and excitonic reconstruction in a MoS ₂ monolayer. <i>Journal of Materials Chemistry C</i> , 2020 , 8, 11778-11785	7.1	4
287	Measurement of Exciton and Trion Energies in Multistacked hBN/WS Coupled Quantum Wells for Resonant Tunneling Diodes. 2020 , 14, 16114-16121		6

286	Machine learning-guided synthesis of advanced inorganic materials. 2020 , 41, 72-80		22
285	Structural and electronic transitions in few layers of isotopically pure hexagonal boron nitride. <i>Physical Review B</i> , 2020 , 102,	3-3	2
284	Ultra-thin films of solution-exfoliated hexagonal boron nitride by Langmuir deposition. <i>Journal of Materials Chemistry C</i> , 2020 , 8, 13695-13704	7.1	2
283	Solar-Blind Ultraviolet Photodetectors Based on Vertical Graphene-Hexagonal Boron Nitride Heterostructures. 2020 , 5, 1993-2002		4
282	Point defects in two-dimensional hexagonal boron nitride: A perspective. 2020 , 128, 100902		14
281	Chemical Vapor Deposition Growth of Uniform Multilayer Hexagonal Boron Nitride Driven by Structural Transformation of a Metal Thin Film. 2020 , 2, 3270-3278		8
280	Desolvation-Triggered Versatile Transfer-Printing of Pure BN Films with Thermal-Optical Dual Functionality. 2020 , 32, e2002099		4
279	Surface potential mapping of chemically synthesized boron nitride nanosheets. 2020 ,		1
278	Expeditious computation of nonlinear optical properties of arbitrary order with native electronic interactions in the time domain. <i>Physical Review B</i> , 2020 , 102,	3-3	1
277	Energy and Charge Transfer at the Boron Nitride Nanotube Catalyst Growth Interface. 2020 , 124, 11662-11668		1
276	Controlled CVD growth of lateral and vertical graphene/h-BN heterostructures. 2020 , 13, 065007		7
275	Comparative study of thermal and radical-enhanced methods for growing boron nitride films from diborane and ammonia. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2020 , 38, 033411	2.9	2
274	Strong chemisorption of E ₂ H ₂ and E ₂ H ₄ (E = C, Si) on B ₁₂ N ₁₂ nano-cage. 2020 , 10, 179-191		20
273	A high-throughput synthesis of large-sized single-crystal hexagonal boron nitride on a Cu-Ni gradient enclosure.. <i>RSC Advances</i> , 2020 , 10, 16088-16093	3-7	2
272	Spin-polarized current in wide bandgap hexagonal boron nitrides containing 4 8 line defects. 2020 , 183, 109799		3
271	Graphene Field-Effect Transistors on Hexagonal-Boron Nitride for Enhanced Interfacial Thermal Dissipation. 2020 , 6, 2000059		3
270	Recent breakthroughs in two-dimensional van der Waals magnetic materials and emerging applications. 2020 , 34, 100902		16
269	Vanishing Hysteresis in Carbon Nanotube Transistors Embedded in Boron Nitride/Polytetrafluoroethylene Heterolayers. 2020 , 14, 2000193		2

268	Surface-diffusion mechanism for synthesis of substrate-free and catalyst-free boron nitride nanosheets. 2020 , 40, 5324-5331		6
267	Nonconventional screening of Coulomb interaction in hexagonal boron nitride nanoribbons. <i>Physical Review B</i> , 2020 , 101,	3-3	3
266	Scalable Exfoliation and High-Efficiency Separation Membrane of Boron Nitride Nanosheets. 2020 , 5, 3567-3573		4
265	Improving Formation Conditions and Properties of BN Nanosheets Through BaF-assisted Polymer Derived Ceramics (PDCs) Technique. <i>Nanomaterials</i> , 2020 , 10,	5-4	4
264	Study of Direct Tunneling and Dielectric Breakdown in Molecular Beam Epitaxial Hexagonal Boron Nitride Monolayers Using Metal/Insulator/Metal Devices. 2020 , 2, 747-755		10
263	Tribological Characteristics of Single-Layer h-BN Measured by Colloidal Probe Atomic Force Microscopy. 2020 , 10, 530		0
262	Structural, electronic and optical properties of CdO monolayer and bilayers: Stacking effect investigations. 2020 , 145, 106644		8
261	On the recovery of 2DEG properties in vertically ordered h-BN deposited AlGaN/GaN heterostructures on Si substrate. 2020 , 13, 065508		4
260	Catalyst-Free Growth of Two-Dimensional BCN Materials on Dielectrics by Temperature-Dependent Plasma-Enhanced Chemical Vapor Deposition. 2020 , 12, 33113-33120		5
259	Epitaxially Grown Hexagonal Boron Nitride Films on Sapphire and Silicon Substrates. 2020 , 843, 90-96		2
258	Synthesis of two-dimensional hexagonal boron nitride. 2020 , 223-246		
257	Synthesis of heterostructures based on two-dimensional materials. 2020 , 265-287		1
256	Effect of substitutional and vacancy defects on the electrical and mechanical properties of 2D-hexagonal boron nitride. 2020 , 26, 192		3
255	Improving the Morphology and Crystal Quality of AlN Grown on Two-Dimensional hBN. 2020 , 20, 1811-1819		3
254	Ferromagnetism in two-dimensional materials via doping and defect engineering. 2020 , 95-124		
253	Morphological, optical and photovoltaic characteristics of MoSe/SiO/Si heterojunctions. 2020 , 10, 1215		4
252	Influence of hydrogen on growth and microstructure of boron nitride coatings obtained from BCl ₃ /NH ₃ /H ₂ system by chemical vapor infiltration. 2020 , 46, 13073-13081		0
251	Double-Layer Honeycomb AlP: A Promising Anode Material for Li-, Na-, and K-Ion Batteries. 2020 , 124, 2978-2986		5

250	Epitaxial optimization of atomically smooth Sr ₃ Al ₂ O ₆ for freestanding perovskite films by molecular beam epitaxy. 2020 , 697, 137815		11
249	Hematite at its thinnest limit. 2020 , 7, 025029		8
248	Production and processing of graphene and related materials. 2020 , 7, 022001		179
247	Revealing stable geometries and magic clusters of hexagonal boron nitride in the nucleation of chemical vapor deposition growth on Ni(111)/Cu(111) surfaces: a theoretical study. <i>Physical Chemistry Chemical Physics</i> , 2020 , 22, 4023-4031	3.6	5
246	Two-Dimensional Transition Metal Dichalcogenides: Synthesis, Biomedical Applications and Biosafety Evaluation. 2020 , 8, 236		34
245	Optoelectronic Properties of Monolayer Hexagonal Boron Nitride on Different Substrates Measured by Terahertz Time-Domain Spectroscopy. <i>Nanomaterials</i> , 2020 , 10,	5-4	11
244	Exploring the structure-property relationship of three-dimensional hexagonal boron nitride aerogels with gyroid surfaces. 2020 , 12, 10180-10188		3
243	First-principles calculations of monolayer hexagonal boron nitride: Possibility of superconductivity. <i>Physical Review B</i> , 2020 , 101,	3-3	5
242	Effect of Film Thickness on Structural Stability for BAlN and BGaN Alloys: Bond-Order Interatomic Potential Calculations. 2020 , 257, 2000205		0
241	Functionalization of single-layer TaS ₂ and formation of ultrathin Janus structures. 2020 , 35, 1397-1406		1
240	Piezoelectric boron nitride nanosheets for high performance energy harvesting devices. 2021 , 80, 105561		16
239	Recent progress in contact, mobility, and encapsulation engineering of InSe and GaSe. 2021 , 3, 662-693		15
238	Determination of band alignment in two-dimensional h-BN/WS ₂ van der waals heterojunction by X-ray photoelectron spectroscopy. 2021 , 854, 157301		1
237	Theoretical analysis of the HfS ₂ monolayer electronic structure and optical properties under vertical strain effects. 2021 , 225, 165718		6
236	In situ synthesis of polymer-modified boron nitride nanosheets via anionic polymerization. 2021 , 537, 147966		8
235	Boron nitride-based materials for water purification: Progress and outlook. 2021 , 263, 127970		22
234	Adsorption behaviour of metronidazole drug molecule on the surface of hydrogenated graphene, boron nitride and boron carbide nanosheets in gaseous and aqueous medium: A comparative DFT and QTAIM insight. 2021 , 126, 114483		26
233	Hexagonal boron phosphide monolayer exfoliation induced by arsenic incorporation in the BP (1 1 1) surface: A DFT study. 2021 , 538, 148163		4

232	Electrochemically Exfoliating MoS ₂ into Atomically Thin Planar-Stacking Through a Selective Lateral Reaction Pathway. 2021 , 31, 2007840		10
231	Strain engineered gas-consumption electroreduction reactions: Fundamentals and perspectives. 2021 , 429, 213649		1
230	Half metallicity and ferromagnetism of vanadium nitride nanoribbons: a first-principles study. <i>Physical Chemistry Chemical Physics</i> , 2021 , 23, 1127-1138	3.6	3
229	A sub-500 mV monolayer hexagonal boron nitride based memory device. 2021 , 198, 109366		5
228	Silicon carbide and III-Nitrides nanosheets: Promising anodes for Mg-ion batteries. <i>Materials Chemistry and Physics</i> , 2021 , 257, 123785	4.4	7
227	Two-dimensional Boron Nitride for Electronics and Energy Applications. 2021 ,		1
226	Atomically Thin Hexagonal Boron Nitride and Its Heterostructures. 2021 , 33, e2000769		31
225	Synthesis of magnetic two-dimensional materials by chemical vapor deposition. 2021 , 14, 1789-1801		9
224	Synthesis and Characterization of Cu ₂ -xS structures by Different Chemical Routes for Electronic Applications. 2021 , 24,		
223	Interface-assisted synthesis: a gateway to effective nanostructure tuning of conducting polymers. 2021 , 3, 918-941		5
222	Two-dimensional biomaterials: material science, biological effect and biomedical engineering applications. 2021 , 50, 11381-11485		23
221	A method to restore the intrinsic dielectric functions of 2D materials in periodic calculations. 2021 , 13, 17057-17067		3
220	Charge density wave and superconducting phase in monolayer InSe. <i>Physical Review B</i> , 2021 , 103,	3.3	1
219	Intriguing electronic, optical and mechanical properties of the vertical and lateral heterostructures on the boron phosphide and GaN monolayers. 2021 , 56, 7451-7463		1
218	A progressive journey into 2D-chalcogenide/carbide/nitride-based broadband photodetectors: recent developments and future perspectives. <i>Journal of Materials Chemistry C</i> ,	7.1	3
217	Large few-layer hexagonal boron nitride flakes for nonlinear optics. 2021 , 46, 564-567		4
216	Recent advances in 2D MXenes: preparation, intercalation and applications in flexible devices. 2021 , 9, 14147-14171		23
215	Computational study of X-doped hexagonal boron nitride (h-BN): structural and electronic properties (X = P, S, O, F, Cl). 2021 , 27, 31		4

214	The performance limits of hexagonal boron nitride as an insulator for scaled CMOS devices based on two-dimensional materials. 2021 , 4, 98-108	53
213	INTRODUCTION TO TWO-DIMENSIONAL MATERIALS. 2021 , 28, 2140005	6
212	Interaction of hydrogen-edged boron nitride flakes with lithium: boron nitride as a protecting layer for a lithium-ion battery and a spin-dependent photon emission device. <i>Nanotechnology</i> , 2021 , 32, 18000314	1
211	Nanoscale evaluation of the number of layers of hexagonal boron nitride by scattering-type scanning near-field optical microscopy. 2021 , 60, SBBH15	2
210	2D graphene and h-BN layers application in protective coatings. 2021 , 39, 93-107	9
209	Wafer-Scale Integration of Graphene-Based Photonic Devices. 2021 , 15, 3171-3187	24
208	Plasma-Enhanced Chemical Vapor Deposition of Two-Dimensional Materials for Applications. 2021 , 54, 1011-1022	22
207	Highly Efficient Osmotic Energy Harvesting in Charged Boron-Nitride-Nanopore Membranes. 2021 , 31, 2009586	18
206	2D Layered Materials for Ultraviolet Photodetection: A Review. 2021 , 9, 2002214	27
205	The Adatom Concentration Profile: A Paradigm for Understanding Two-Dimensional MoS Morphological Evolution in Chemical Vapor Deposition Growth. 2021 , 15, 6839-6848	5
204	Challenges and solutions in surface engineering and assembly of boron nitride nanosheets. 2021 , 44, 194-210	10
203	Terahertz optical Hall effect in p-type monolayer hexagonal boron nitride on fused silica substrate. 2021 , 46, 2196-2199	0
202	Synthesis of Wafer-Scale Graphene with Chemical Vapor Deposition for Electronic Device Applications. 2021 , 6, 2000744	16
201	An automated chemical vapor deposition setup for 2D materials.. 2021 , 9, e00165	
200	Impact of Polypyrrole Functionalization on the Anodic Performance of Boron Nitride Nanosheets: Insights From First-Principles Calculations. 2021 , 9, 670833	5
199	Two-dimensional nanomaterials with engineered bandgap: Synthesis, properties, applications. 2021 , 37, 101059	24
198	Mitigation of Electromigration in Metal Interconnects via Hexagonal Boron Nitride as an Atom-Thin Passivation Layer. 2021 , 7, 2100002	2
197	Turn of the decade: versatility of 2D hexagonal boron nitride. 2021 , 4,	7

196	Effect of employing chromium as a buffer layer on the crystallinity of hexagonal boron nitride films grown by LPCVD. 2021 , 32, 13961-13971		0
195	A multiscale insight into the growth of h-BN: effect of the enclosure. 2021 , 8, 035033		3
194	Impact of Bi Doping into Boron Nitride Nanosheets on Electronic and Optical Properties Using Theoretical Calculations and Experiments. 2021 , 16, 82		2
193	Synthesis of hexagonal boron nitride: From bulk crystals to atomically thin films. 2021 , 67, 100522		6
192	Strategies, Status, and Challenges in Wafer Scale Single Crystalline Two-Dimensional Materials Synthesis. 2021 , 121, 6321-6372		28
191	Growth of hexagonal boron nitride crystals at atmospheric pressure from CuCr flux. 2021 , 562, 126074		2
190	Atomically Precise Control of Carbon Insertion into hBN Monolayer Point Vacancies using a Focused Electron Beam Guide. 2021 , 17, e2100693		3
189	Advanced Data Encryption using 2D Materials. 2021 , 33, e2100185		35
188	Nitrogen doping and oxygen vacancy effects on the fundamental properties of BeO monolayer: a DFT study. <i>Journal of Physics Condensed Matter</i> , 2021 , 33,	1.8	3
187	Magnetizations and de Haas-van Alphen oscillations in massive Dirac fermions. <i>Physical Review B</i> , 2021 , 103,	3.3	0
186	Few-layer hexagonal boron nitride synthesized by chemical vapor deposition and its insulating properties.		0
185	The interaction between carboplatin anticancer drug and B12N12 nano-cluster: A computational investigation. 2021 , 1-10		3
184	Role of sublimation kinetics of ammonia borane in chemical vapor deposition of uniform, large-area hexagonal boron nitride. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2021 , 39, 042202	2.9	1
183	Point defects-induced adsorption and diffusion of lithium on monolayer titanium disulfide: A first-principles study. 2021 , 553, 149448		2
182	Narrow-bandgap materials for optoelectronics applications. 2022 , 17, 1		5
181	Controlled growth of in-plane graphene/h-BN heterostructure on a single crystal Ge substrate. 2021 , 554, 149655		5
180	Molecular beam epitaxial growth of hexagonal boron nitride on Ni foils. 2021 , 8, 045007		0
179	Investigating the Electrical Properties of Monolayer and Bilayer h-BNs via Atomic Force Microscopy. 2021 , 8, 2100447		0

178	Strain-driven modulation of the electronic, optical and thermoelectric properties of Antimonene monolayer: A hybrid functional study. <i>Materials Science in Semiconductor Processing</i> , 2021 , 131, 105878	4.3	1
177	Probing Electronic Properties of CVD Monolayer Hexagonal Boron Nitride by an Atomic Force Microscope. 2021 , 8,		
176	Effect of vacancy defects in 2D vdW graphene/h-BN heterostructure: First-principles study. 2021 , 11, 085218		4
175	Controllable electronic effect via deep eutectic solvents modification for boosted aerobic oxidative desulfurization. 2021 , 512, 111757		0
174	Adsorption behavior of mercaptopurine and 6-thioguanine drugs on the BN, AlBN and GaBN nanoclusters, a comparative DFT study. 2021 , 1-20		2
173	Monolayer Hexagonal Boron Nitride Nanosheets as Proton-Conductive Gas Barriers for Polymer Electrolyte Membrane Water Electrolysis. <i>ACS Applied Nano Materials</i> , 2021 , 4, 9104-9112	5.6	1
172	Epitaxial Intercalation Growth of Scalable Hexagonal Boron Nitride/Graphene Bilayer Moiré Materials with Highly Convergent Interlayer Angles. 2021 , 15, 14384-14393		5
171	Geometric structure and piezoelectric polarization of MoS ₂ nanoribbons under uniaxial strain. <i>FlatChem</i> , 2021 , 29, 100289	5.1	0
170	Controlled Vertically Aligned Structures in Polymer Composites: Natural Inspiration, Structural Processing, and Functional Application. 2021 , e2103495		8
169	Application-driven synthesis and characterization of hexagonal boron nitride deposited on metals and carbon nanotubes. 2021 , 8, 045024		1
168	Synthesis of hexagonal boron nitride films on silicon and sapphire substrates by low-pressure chemical vapor deposition. 2021 , 733, 138812		1
167	Structure, Properties and Applications of Two-Dimensional Hexagonal Boron Nitride. 2021 , 33, e2101589		4.2
166	Half-metallic ferromagnetism induced by TM-TM atom pair co-doping in 2D hexagonal boron nitride monolayer: A first principle study. 2021 , 271, 115247		3
165	Synthesis of hexagonal boron nitrides by chemical vapor deposition and their use as single photon emitters. 2021 , 3, 291-312		4
164	Toward growth of wafer-scale single-crystal hexagonal boron nitride sheets. 2021 , 2, 031004		1
163	First-principles calculations to investigate electronic structure and transport properties of CrC monolayers: A new horizon for spintronic application. 2021 , 272, 115379		1
162	Recent advances of atomically thin 2D heterostructures in sensing applications. 2021 , 40, 101287		14
161	Defect assisted optical limiting performance of hexagonal boron nitride nanosheets in aqueous suspension and PMMA nanocomposite films. 2021 , 121, 111630		1

160	Engineering the electronic and magnetic properties of nitrogene monolayer and bilayer by doping: A first-principles study. 2021 , 566, 150711		2
159	Two-dimensional quantum dots for highly efficient heterojunction solar cells. 2021 , 603, 48-57		7
158	Preparation of functionalized boron nitride nanosheets by high-gravity liquid phase exfoliation technology. 2021 , 169, 108602		2
157	Growth and characterization of 2D materials by chemical vapour deposition on liquid metal catalysts: a review. 2021 , 13, 3346-3373		12
156	Transition metal chalcogenideBased photocatalysts for small-molecule activation. 2021 , 297-331		1
155	Preparation of Two-Dimensional Metal-Organic Framework Membranes and Their Applications in Separation. 2021 , 79, 869		4
154	Vibrational and optical identification of GeO and GeO single layers: a first-principles study. <i>Physical Chemistry Chemical Physics</i> , 2021 , 23, 21307-21315	3.6	1
153	Synthesis of graphene and other two-dimensional materials. 2021 , 1-79		2
152	Methods of hexagonal boron nitride exfoliation and its functionalization: covalent and non-covalent approaches.. <i>RSC Advances</i> , 2021 , 11, 31284-31327	3.7	2
151	A photo-capacitive sensor operational from 6 K to 350 K with a solution printable, thermally-robust hexagonal boron nitride (h-BN) dielectric and conductive graphene electrodes. 2020 , 20, 100660		10
150	Band gap tuning in aluminum doped two-dimensional hexagonal boron nitride. <i>Materials Chemistry and Physics</i> , 2020 , 250, 123176	4.4	10
149	The recent advancement of low-dimensional nanostructured materials for drug delivery and drug sensing application: A brief review. 2020 , 320, 114427		29
148	Vapor-liquid-solid growth of large-area multilayer hexagonal boron nitride on dielectric substrates. <i>Nature Communications</i> , 2020 , 11, 849	17.4	36
147	Analogue switches made from boron nitride monolayers for application in 5G and terahertz communication systems. 2020 , 3, 479-485		42
146	Growth of GaN on monolayer hexagonal boron nitride by chemical vapor deposition for ultraviolet photodetectors. 2020 , 35, 125025		5
145	Heteroepitaxial growth of sp ² -hybridized boron nitride multilayer on nickel substrates by CVD: the key role of the substrate orientation. 2020 , 7, 045018		5
144	Two stage epitaxial growth of wafer-size multilayer h-BN by metal-organic vapor phase epitaxy  homoepitaxial approach. 2021 , 8, 015017		8
143	Rotationally aligned hexagonal boron nitride on sapphire by high-temperature molecular beam epitaxy. 2019 , 3,		15

142	Spatially indirect excitons in black and blue phosphorene double layers. 2020 , 4,		4
141	Second-harmonic generation in multilayer hexagonal boron nitride flakes. 2019 , 44, 5792-5795		19
140	Probing the Atomic Structures of Synthetic Monolayer and Bilayer Hexagonal Boron Nitride Using Electron Microscopy. 2016 , 46, 217-226		2
139	Interface engineering and integration of two-dimensional polymeric and inorganic materials for advanced hybrid structures. <i>New Journal of Chemistry</i> ,	3.6	
138	Improved Energy Storage Performance of P(VDF-TrFE-CFE) Multilayer Films by Utilizing Inorganic Functional Layers. <i>ACS Applied Energy Materials</i> , 2021 , 4, 11726-11734	6.1	2
137	Nanoscale layer of a minimized defect area of graphene and hexagonal boron nitride on copper for excellent anti-corrosion activity. <i>Nanotechnology</i> , 2021 , 33,	3.4	0
136	Structure evolution of hBN grown on molten Cu by regulating precursor flux during chemical vapor deposition. 2022 , 9, 015004		0
135	Developing feature-rich electronic and magnetic properties in the EAs monolayer for spintronic and optoelectronic applications by C and Si doping: A first-principles study. 2021 , 27, 101534		0
134	Electronic structure and spin-polarization of boron-nitride nanoflake. 2013 , 62, 057302		1
133	Nanoboron Nitrides. 2015 , 3-32		1
132	Scanning tunneling microscopy study of h-BN thin films grown on Cu foils. 2016 , 65, 116801		
131	Nanopowdered h-BN as a Wear-Reducing Eco-friendly Material. 2019 , 2389-2408		
130	Two-Dimensional Hexagonal Boron Nitride and Borophenes. 2020 , 303-336		1
129	Recent Advances in Structural Engineering of 2D Hexagonal Boron Nitride Electrocatalysts. 2021 , 91, 106661		6
128	Direct growth of hexagonal boron nitride on non-metallic substrates and its heterostructures with graphene. 2021 , 24, 103374		5
127	Mechanical and electronic properties of boron nitride nanosheets with graphene domains under strain.. <i>RSC Advances</i> , 2021 , 11, 35127-35140	3.7	
126	Third Harmonic Generation in Hexagonal Boron Nitride Flakes. 2020 ,		
125	Interactions in stanene centred van der Waals trilayers structures of boron-nitride and graphene: effect of mirror symmetry on electronic interactions. <i>Journal of Physics Condensed Matter</i> , 2020 , 32, 265001	1.8	1

124	Subatomic species transport through atomically thin membranes: Present and future applications. 2021 , 374, eabd7687		10
123	Low-Temperature and Facile Solution-Processed Two-Dimensional Materials as Electron Transport Layer for Highly Efficient Perovskite Solar Cells. 2021 , 247-271		
122	Role of defects and grain boundaries in the thermal response of wafer-scale hBN films. <i>Nanotechnology</i> , 2021 , 32, 075702	3-4	1
121	Synthesis, characterization, properties and applications of two-dimensional magnetic materials. 2022 , 42, 101338		8
120	Superatoms as Building Blocks of 2D Materials. 2021 , 209-255		
119	A Comprehensive Review on Recent Advances in Two-Dimensional (2D) Hexagonal Boron Nitride.		3
118	Controllable growth of two-dimensional materials on noble metal substrates.. 2021 , 24, 103432		2
117	First principles prediction of the stable MgFCl Janus monolayer with tunable properties. 2021 , 137, 115023		0
116	Mechanism of 2D Materials' Seamless Coalescence on a Liquid Substrate. 2021 ,		4
115	A theoretical study of allopurinol drug sensing by carbon and boron nitride nanostructures: DFT, QTAIM, RDG, NBO and PCM insights.. <i>RSC Advances</i> , 2021 , 11, 38457-38472	3-7	5
114	Mechanism of Lithium Dendrites Formation and Suppression Strategies in Li Metal Batteries. 2022 , 2152, 012026		
113	Molecular dynamics study on the crack propagation in carbon doped polycrystalline boron-nitride nanosheets. 2022 , 203, 111066		1
112	Far-UV spectroscopy of mono- and multilayer hexagonal boron nitrides.. 2022 , 270, 120849		0
111	Band Alignment of Ultrawide Bandgap β -Ga ₂ O ₃ /H-BCN Heterojunction Epitaxially Grown by Metalorganic Chemical Vapor Deposition.		
110	Rational Control on Quantum Emitter Formation in Carbon-Doped Monolayer Hexagonal Boron Nitride.. 2022 ,		0
109	Pt Decorated TiCT MXene with NIR-II Light Amplified Nanozyme Catalytic Activity for Efficient Phototheranostics.. 2022 ,		22
108	Liquid cooling system for battery modules with boron nitride based thermal conductivity silicone grease.. <i>RSC Advances</i> , 2022 , 12, 4311-4321	3-7	0
107	Evolution of adsorption heights in the on-surface synthesis and decoupling of covalent organic networks on Ag(111) by normal-incidence X-ray standing wave. 2021 ,		3

106	A van der Waals Integrated Damage-Free Memristor Based on Layered 2D Hexagonal Boron Nitride.. 2022 , e2106253		2
105	Scanning probe analysis of twisted graphene grown on a graphene/silicon carbide template.. <i>Nanotechnology</i> , 2021 ,	3-4	1
104	Controlling magnetic-semiconductor properties of the Si- and Al-doped blue phosphorene monolayer. 2022 , 55, 165302		0
103	Band alignment of ultrawide bandgap α -Ga ₂ O ₃ /h-BN heterojunction epitaxially grown by metalorganic chemical vapor deposition. 2022 , 583, 152502		0
102	Trigonal multivalent polonium monolayers with intrinsic quantum spin Hall effects.. 2022 , 12, 2129		0
101	Crossover from Linear Chains to a Honeycomb Network for the Nucleation of Hexagonal Boron Nitride Grown on the Ni(111) Surface. 2021 , 125, 26542-26551		21
100	Realization of electronic grade graphene and h-BN. 2022 , 119-157		
99	Atomic-level investigation on the oxidation efficiency and corrosion resistance of lithium enhanced by the addition of two dimensional materials.. <i>RSC Advances</i> , 2022 , 12, 5458-5465	3-7	
98	Synthetic Protocols. 2022 , 65-110		
97	Arsenene nanotubes adsorbed with various non-metallic atoms: Chemical bonding, odd-even effect, and electronic transport. 2022 , 207217		
96	Blade-Coatable Hexagonal Boron Nitride Ionogel Electrolytes for Scalable Production of Lithium Metal Batteries. 2022 , 7, 1558-1565		2
95	Effects of the Substrate Structure on the CVD Growth of Two-Dimensional Hexagonal Boron Nitride.		
94	One-pot synthesis of vertical graphene/h-BN heterostructure utilizing the passivation role of hydrogen. 2022 , 35, 105404		
93	Science of 2.5 dimensional materials: paradigm shift of materials science toward future social innovation.. 2022 , 23, 275-299		4
92	Near-field radiative heat transfer in hyperbolic materials.		1
91	First-principles calculations to investigate Structural, electronic, and optical properties of MgF ₂ monolayer in 1T-phase and 2H-phase using hybrid functional. 2022 , 557, 111473		
90	Study of vacancy, voids, atom adsorption and domain substitution in hexagonal gallium nitride monolayer. 2022 , 30, 101898		
89	A systematic review on 2D materials for volatile organic compound sensing. 2022 , 461, 214502		0

88	Synthesis of Atomically Thin h-BN Layers Using BCl and NH by Sequential-Pulsed Chemical Vapor Deposition on Cu Foil.. <i>Nanomaterials</i> , 2021 , 12,	5.4	1
87	Elasticity-based-exfoliability measure for high-throughput computational exfoliation of two-dimensional materials. <i>Npj Computational Materials</i> , 2021 , 7,	10.9	2
86	Silicon Nanosheets: An Emerging 2D Photonic Material with a Large Transient Nonlinear Optical Response beyond Graphene.. <i>Nanomaterials</i> , 2021 , 12,	5.4	1
85	Interaction between Phosgene and B ₁₂ N ₁₂ Nano-Cluster: A Computational Investigation. <i>Russian Journal of Physical Chemistry A</i> , 2021 , 95, S323-S330	0.7	0
84	Crystal Orientation Control of Hexagonal Boron Nitride/Graphene Heterostructure. <i>Vacuum and Surface Science</i> , 2022 , 65, 190-195	0	
83	Fundamentals of Chemical Vapor Deposition of Atomic Layer Materials. <i>Vacuum and Surface Science</i> , 2022 , 65, 169-176	0	
82	Room-temperature emitters in wafer-scale few-layer hBN by atmospheric pressure CVD. <i>FlatChem</i> , 2022 , 100366	5.1	1
81	Two-Dimensional Quantum Dot-Based Electrochemical Biosensors.. <i>Biosensors</i> , 2022 , 12,	5.9	1
80	Data_Sheet_1.PDF. 2019 ,		
79	Dissociation of ammonia borane and its subsequent nucleation on the Ru(0001) surface revealed by density functional theoretical simulations.. <i>Physical Chemistry Chemical Physics</i> , 2022 ,	3.6	1
78	2D GeP ₃ and blue P: promising thermoelectric materials for room- and high-temperature applications. <i>Materials Advances</i> ,	3.3	1
77	A Review of Ultrawide Bandgap Materials: Properties, Synthesis, and Devices.		1
76	Novel polymer nanocomposite based on polypyrrole and ZrO ₂ reinforced BN nanosheets: Prospective utilization as implant coatings for TiNbZr bio-implant alloy. <i>Materials Chemistry and Physics</i> , 2022 , 126205	4.4	0
75	Mechanical properties of 2D materials: A review on molecular dynamics based nanoindentation simulations. <i>Materials Today Communications</i> , 2022 , 31, 103623	2.5	1
74	Revealing initial nucleation of hexagonal boron nitride on Ru(0001) and Rh(111) surfaces by density functional theoretical simulations. <i>New Journal of Chemistry</i> ,	3.6	2
73	The carrier mobility and sizable bandgap in fluorinated armchair boron nitride nanoribbons. <i>Materials Today: Proceedings</i> , 2022 ,	1.4	
72	Synthesis of AAB-Stacked Single-Crystal Graphene/hBN/Graphene Trilayer van der Waals Heterostructures by In Situ CVD. <i>Advanced Science</i> , 2201324	13.6	0
71	Laser Patterning of the Sb ₂ O ₃ Atomic Thin Layer Assisted by Near Field Heating. <i>ACS Applied Nano Materials</i> ,	5.6	1

70	Theoretical prediction of superconductivity in monolayer B3N. <i>Physical Review B</i> , 2022 , 105,	3.3	0
69	Towards n-type conductivity in hexagonal boron nitride. <i>Nature Communications</i> , 2022 , 13,	17.4	4
68	Mechanistic Insights into Supersaturation mediated Large Area Growth of hexagonal Boron Nitride for Graphene Electronics. <i>Journal of Materials Chemistry C</i> ,	7.1	0
67	Antiferromagnetic ordering in the TM-adsorbed AlN monolayer (TM = V and Cr). <i>RSC Advances</i> , 2022 , 12, 16677-16683	3.7	1
66	Designing doping strategy in arsenene monolayer for spintronic and optoelectronic applications: A case study of germanium and nitrogen as dopants. <i>Journal of Physics Condensed Matter</i> ,	1.8	
65	Dirac Fermions in the Boron Nitride Monolayer with a Tetragon. <i>Journal of Physical Chemistry Letters</i> , 2022 , 13, 5508-5513	6.4	1
64	Large-Area Hexagonal Boron Nitride Layers by Chemical Vapor Deposition: Growth and Applications for Substrates, Encapsulation, and Membranes. <i>Accounts of Materials Research</i> ,	7.5	2
63	Hybrid nanocomposite coatings from PEDOT and BN-TiO ₂ nanosheets: Enhanced invitro corrosion resistance, wettability and biocompatibility for biomedical applications. <i>Progress in Organic Coatings</i> , 2022 , 170, 106946	4.8	0
62	Defective and doped MgO monolayer as promising 2D materials for optoelectronic and spintronic applications. <i>Materials Science in Semiconductor Processing</i> , 2022 , 149, 106876	4.3	0
61	Boron nitride materials as emerging catalysts for oxidative dehydrogenation of light alkanes. <i>Nanotechnology</i> ,	3.4	0
60	Thermal diffusivity measurement of boron nitride by photoacoustic spectroscopy. <i>Materials Today: Proceedings</i> , 2022 ,	1.4	
59	Chemical vapor deposition of sp ² -boron nitride on mechanically polished pyrolytic boron nitride substrates. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2022 , 40, 042203	2.9	
58	Tunable Schottky barrier in Janus-XGa ₂ Y/Graphene (X/Y = S, Se, Te; X ≠ Y) van der Waals heterostructures. <i>Nanotechnology</i> ,	3.4	0
57	Revealing structural, mechanical, and electronic properties of M ₄ C ₃ (M = Sc, Ti, Zr, Mo, Hf, and W) MXene monolayers based on first-princi. <i>Computational Condensed Matter</i> , 2022 , 32, e00713	1.7	0
56	Chemical functionalization of low-buckled SiGe monolayer: Effects on the electronic and magnetic properties. <i>Materials Science in Semiconductor Processing</i> , 2022 , 150, 106949	4.3	
55	Strain-tunable pure H ⁻ conduction in one-atom-thick hexagonal boron nitride for high-energy-density fuel cells. <i>Chemical Engineering Journal</i> , 2022 , 138223	14.7	0
54	Intermolecular Electron Transfer in Electrochemically Exfoliated BCN-Cu Nanosheet Electrocatalysts for Efficient Hydrogen Evolution. <i>ACS Applied Energy Materials</i> ,	6.1	0
53	Isolated Ni atoms induced edge stabilities and equilibrium shapes of CVD-prepared hexagonal boron nitride on Ni(111) surface.		5

52	Experimental demonstration of sub-nanosecond switching in 2D hexagonal Boron Nitride resistive memory devices. 2022 ,	
51	Planar Optical Cavities Hybridized with Low-Dimensional Light-Emitting Materials. 2203889	1
50	Study on high temperature energy loss mechanism of energy storage polymer composite based on interface structure regulation. 2022 ,	
49	2D Boron Nitride Nanosheets for Smart Thermal Management and Advanced Dielectrics. 2200610	1
48	Direct growth of hBN/Graphene heterostructure via surface deposition and segregation for independent thickness regulation.	
47	Conductive mechanism in memristor at the thinnest limit: The case based on monolayer boron nitride. 2022 , 121, 073505	0
46	Effect of buffer layer and substrate growth temperature on the microstructural evolution of hexagonal boron nitride thin films. 2022 , 447, 128805	0
45	Nucleation of CVD-prepared hexagonal boron nitride on Ni(100), Ni(110) and Ni(111) surfaces: A theoretical study. 2022 , 205, 111396	0
44	Strain engineering on the electronic properties and interface contact of graphene/GeN ₃ van der Waals heterostructure. 2022 , 604, 154540	1
43	Mid-Infrared Dual-Wavelength Passively Q-Switched Er: SrF ₂ Laser by CsPbCl ₃ Quantum Dots Absorber. 2022 , 12, 1265	1
42	Theoretical prediction of alkali oxide M ₂ O (M = Na and K) monolayers and formation of their Janus structure. 2022 , 46, 17386-17393	1
41	Formation of a One-Dimensional Hole Channel in Mos ₂ by Structural Corrugation and an External Electric Field.	0
40	Room-Temperature Deep-UV Photoluminescence from Low-Dimensional Hexagonal Boron Nitride Prepared Using a Facile Synthesis. 2022 , 7, 33926-33933	1
39	Resistive Switching Crossbar Arrays Based on Layered Materials. 2205402	2
38	Epitaxy of III-nitrides on two-dimensional materials and its applications.	0
37	"BNNSs-OH/CAB COMPOSITE COATINGS AS A NOVEL FILM FOR HIGHLY EFFICIENT WATER VAPOR BARRIER PROPERTY ". 2022 , 56, 787-794	0
36	High-Temperature Hybridized CopperBoron Nitride Materials from Additive Manufacturing. 2201056	0
35	Wrinkle-mediated CVD synthesis of wafer scale Graphene/h-BN heterostructures. 2023 , 34, 025601	0

34	Synthesis of Two-Dimensional Hexagonal Boron Nitride and Mid-Infrared Nanophotonics.	0
33	Facile preparation of BN coatings on graphite substrates and their binding strength. 2022 ,	0
32	Molecular beam epitaxial growth of multilayer 2D-boron nitride on Ni substrates from borazine and plasma-activated nitrogen.	0
31	Nanoscale infrared imaging and spectroscopy of few-layer hexagonal boron nitride. 2022 , 132, 174301	0
30	A Review of Scalable Hexagonal Boron Nitride (h-BN) Synthesis for Present and Future Applications. 2207374	2
29	Post-growth enhancement of CVD-grown hexagonal boron nitride films on sapphire. 2022 , 16, 100339	0
28	Exploring the role of Stone-Wales defect in boron nitride nano-sheet as a anode Mg-ion batteries. 2022 , 146, 110098	0
27	van der Waals SWCNT@BN Heterostructures Synthesized from Solution-Processed Chirality-Pure Single-Wall Carbon Nanotubes.	1
26	Evaluation of the role perfect and defect boron nitride monolayer in calcium ion batteries as a anode. 2022 , 113940	0
25	Dielectric Material Technologies for 2-D Semiconductor Transistor Scaling. 2022 , 1-20	2
24	C-PCM study on the electronic and optical properties of Fe(CO) ₄ B ₁₂ N ₁₂ complexes. 2022 , 1-11	0
23	Review of Boron Nitride Nanosheet-Based Composites for Construction Applications. 2022 , 5, 17356-17372	1
22	First-principles prediction of 1H-Na ₂ Se monolayer: Effects of external strain and point defects associated with constituent atoms.	0
21	First principles of Si-doped BC ₂ N single layer for hydrogen evolution reaction (HER). 2022 ,	0
20	Formation of a one-dimensional hole channel in MoS ₂ by structural corrugation.	0
19	2D Zinc Oxide Synthesis, Methodologies, Reaction Mechanism, and Applications. 2206063	1
18	Optical and Electrical Properties of Low-Dimensional Crystalline Materials: A Review. 2023 , 13, 108	0
17	Oxygen Activated CVD Growth of Large-Area Multilayer h-BN on Polycrystalline Copper Foils. 2023 , 127088	0

- 16 Computational investigation of interaction of a cycloplatinated thiosemicarbazone as antitumor and antiparasitic agents with B12N12 nano-cage. **2023**, 5, 100768 ○
- 15 Revealing the Modulation Effects on the Electronic Band Structures and Exciton Properties by Stacking Graphene/h-BN/MoS₂ Schottky Heterostructures. **2023**, 15, 2468-2478 ○
- 14 Scalable synthesis of 2D materials. **2023**, 1-54 ○
- 13 Electrochemical Synthesis of Functional Coatings and Nanomaterials in Molten Salts and Their Application. **2023**, 13, 352 1
- 12 Machine learning insight into h-BN growth on Pt(111) from atomic states. **2023**, 621, 156893 ○
- 11 Large wafer-level two-dimensional h-BN with unintentional carbon doping grown by metalorganic chemical vapor deposition. **2023**, 213, 112083 ○
- 10 Large-area synthesis and transfer of multilayer hexagonal boron nitride for enhanced graphene device arrays. **2023**, 6, 126-136 ○
- 9 Point vacancy defects in hexagonal boron nitride studied by first-principles. **2023**, 9, 011104-011104 ○
- 8 A DFT Based Approach for NO₂ Sensing Using Vander Wall Hetero Monolayer. 1-12 ○
- 7 Contemporary updates on bioremediation applications of graphene and its composites. **2023**, 30, 48854-48867○
- 6 Enhancing optical characteristics of mediator-assisted wafer-scale MoS₂ and WS₂ on h-BN. **2023**, 34, 255703 ○
- 5 A new two-dimensional MgI₂ Janus monolayer for optoelectronic applications. **2023**, 96, ○
- 4 Local dielectric function of hBN-encapsulated WS₂ flakes grown by chemical vapor deposition. **2023**, 35, 274001 ○
- 3 HfXO (X = S and Se) Janus monolayers as promising two-dimensional platforms for optoelectronic and spintronic applications. ○
- 2 High throughput calculations for a dataset of bilayer materials. **2023**, 10, ○
- 1 First-principles study of SiC and GeC monolayers with adsorbed non-metal atoms. **2023**, 13, 14879-14886 ○