

Yong-Wei Zhang

List of Publications by Year in Descending Order

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

496
papers

27,298
citations

78
h-index

150
g-index

521
ext. papers

31,006
ext. citations

6.4
avg, IF

7.53
L-index

#	Paper	IF	Citations
496	Visualizing crystal structure evolution of electrode materials upon doping and during charge/discharge cycles in lithium-ion batteries.. <i>STAR Protocols</i> , 2022 , 3, 101099	1.4	1
495	Simultaneously enhancing the strength and toughness of short fiber reinforced thermoplastic composites by fiber cross-linking. <i>Composites Science and Technology</i> , 2022 , 217, 109076	8.6	4
494	Reply to: Detectivities of WS/HfS heterojunctions.. <i>Nature Nanotechnology</i> , 2022 ,	28.7	2
493	Quantitative study on the dynamics of melt pool and keyhole and their controlling factors in metal laser melting. <i>Additive Manufacturing</i> , 2022 , 54, 102779	6.1	1
492	Explore the full temperature-composition space of 20 quinary CCAs for FCC and BCC single-phases by an iterative machine learning-CALPHAD method. <i>Acta Materialia</i> , 2022 , 231, 117865	8.4	1
491	Atomistic-scale analysis of the deformation and failure of polypropylene composites reinforced by functionalized silica nanoparticles. <i>Scientific Reports</i> , 2021 , 11, 23108	4.9	0
490	Entropy-Driven Ultratough Blends from Brittle Polymers.. <i>ACS Macro Letters</i> , 2021 , 10, 406-411	6.6	5
489	Chemical-Affinity Disparity and Exclusivity Drive Atomic Segregation, Short-Range Ordering, and Cluster Formation in High-Entropy Alloys. <i>Acta Materialia</i> , 2021 , 206, 116638	8.4	12
488	Modified embedded-atom method potentials for the plasticity and fracture behaviors of unary fcc metals. <i>Physical Review B</i> , 2021 , 103,	3.3	3
487	Revealing high-fidelity phase selection rules for high entropy alloys: A combined CALPHAD and machine learning study. <i>Materials and Design</i> , 2021 , 202, 109532	8.1	15
486	The role of flexural coupling in heat dissipation from a two-dimensional layered material to its hexagonal boron nitride substrate. <i>2D Materials</i> , 2021 , 8, 035032	5.9	0
485	Unravelling VO Diffusion Pathways CO Modification for High-Performance Zinc Ion Battery Cathode. <i>ACS Nano</i> , 2021 , 15, 1273-1281	16.7	21
484	Synergizing Cu dimers and N atoms in graphene towards an active catalyst for hydrogen evolution reaction. <i>Nanoscale Advances</i> , 2021 , 3, 5332-5338	5.1	
483	Rapid Estimation of Binding Constants for Cucurbit[8]uril Ternary Complexes Using Electrochemistry. <i>Analytical Chemistry</i> , 2021 , 93, 4223-4230	7.8	4
482	Simultaneously enhancing the ultimate strength and ductility of high-entropy alloys via short-range ordering. <i>Nature Communications</i> , 2021 , 12, 4953	17.4	13
481	Universal Zigzag Edge Reconstruction of an β -Phase Puckered Monolayer and Its Resulting Robust Spatial Charge Separation. <i>Nano Letters</i> , 2021 , 21, 8095-8102	11.5	0
480	Solid-state self-template synthesis of Ta-doped LiZnTiO spheres for efficient and durable lithium storage. <i>IScience</i> , 2021 , 24, 102991	6.1	3

479	Mid-infrared modulators integrating silicon and black phosphorus photonics. <i>Materials Today Advances</i> , 2021 , 12, 100170	7.4	0
478	Generalized small set of ordered structures method for the solid-solution phase of high-entropy alloys. <i>Physical Review B</i> , 2020 , 102,	3.3	2
477	Modified Timoshenko beam model for bending behaviors of layered materials and structures. <i>Extreme Mechanics Letters</i> , 2020 , 39, 100799	3.9	5
476	Etching mechanisms, kinetics, and pattern formation in multilayered WSe ₂ . <i>Materials Today Advances</i> , 2020 , 7, 100075	7.4	3
475	Ultrasensitive and robust two-dimensional indium selenide flexible electronics and sensors for human motion detection. <i>Nano Energy</i> , 2020 , 76, 105020	17.1	13
474	Hardening in Au-Ag nanoboxes from stacking fault-dislocation interactions. <i>Nature Communications</i> , 2020 , 11, 2923	17.4	11
473	A supertough electro-tendon based on spider silk composites. <i>Nature Communications</i> , 2020 , 11, 1332	17.4	42
472	Effect of temperature on small-scale deformation of individual face-centered-cubic and body-centered-cubic phases of an Al _{0.7} CoCrFeNi high-entropy alloy. <i>Materials and Design</i> , 2020 , 191, 108611	8.1	8
471	High oscillator strength interlayer excitons in two-dimensional heterostructures for mid-infrared photodetection. <i>Nature Nanotechnology</i> , 2020 , 15, 675-682	28.7	56
470	Neural network representation and optimization of thermoelectric states of multiple interacting quantum dots. <i>Physical Chemistry Chemical Physics</i> , 2020 , 22, 16165-16173	3.6	1
469	Shallow defects levels and extract detrapped charges to stabilize highly efficient and hysteresis-free perovskite photovoltaic devices. <i>Nano Energy</i> , 2020 , 71, 104556	17.1	28
468	Supramolecular Catalysis of <i>p</i> -Xylene Isomerization by Cucurbiturils: Transition State Stabilization, Vibrational Coupling, and Dynamic Binding Equilibrium. <i>Journal of Physical Chemistry C</i> , 2020 , 124, 11469 ² -11479 ³		
467	Gate-tunable cross-plane heat dissipation in single-layer transition metal dichalcogenides. <i>Physical Review Research</i> , 2020 , 2,	3.9	3
466	Failure in Two-Dimensional Materials: Defect Sensitivity and Failure Criteria. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2020 , 87,	2.7	8
465	Modelling of Defects and Failure in 2D Materials: Graphene and Beyond 2020 , 1869-1909		1
464	Hall-Petch and inverse Hall-Petch relations in high-entropy CoNiFeAl _x Cu _{1-x} alloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020 , 773, 138873	5.3	43
463	An all-atom kinetic Monte Carlo model for chemical vapor deposition growth of graphene on Cu(1 1 1) substrate. <i>Journal of Physics Condensed Matter</i> , 2020 , 32, 155401	1.8	5
462	Strain stabilized nickel hydroxide nanoribbons for efficient water splitting. <i>Energy and Environmental Science</i> , 2020 , 13, 229-237	35.4	43

461	Mechanical and failure behaviors of lattice-plate hybrid structures. <i>MRS Communications</i> , 2020 , 10, 42-54.	7	0
460	Numerical investigation of erosion characteristics of multiple-particle impact on ductile material with patterned surfaces. <i>Powder Technology</i> , 2020 , 362, 527-538	5.2	8
459	How Does Nature Evade the "Larger is Weaker" Fate of Ultralong Silk Sheet Nanocrystallites. <i>Nano Letters</i> , 2020 , 20, 8516-8523	11.5	6
458	Staggering transport of edge states and symmetry analysis of electronic and optical properties of stanene. <i>Nanoscale</i> , 2020 , 12, 20890-20897	7.7	1
457	Elastic properties of injection molded short glass fiber reinforced thermoplastic composites. <i>Composite Structures</i> , 2020 , 254, 112850	5.3	10
456	Remarkable Role of Grain Boundaries in the Thermal Transport Properties of Phosphorene. <i>ACS Omega</i> , 2020 , 5, 17416-17422	3.9	1
455	Remarkably high thermal-driven MoS grain boundary migration mobility and its implications on defect healing. <i>Nanoscale</i> , 2020 , 12, 17746-17753	7.7	3
454	Theoretical analysis of thermal boundary conductance of MoS-SiO and WS-SiO interface. <i>Nanotechnology</i> , 2020 ,	3.4	3
453	A Fully Printed Flexible MoS ₂ Memristive Artificial Synapse with Femtojoule Switching Energy. <i>Advanced Electronic Materials</i> , 2019 , 5, 1900740	6.4	71
452	Spontaneous directional motion of water molecules in single-walled carbon nanotubes with a stiffness gradient. <i>Nanoscale Advances</i> , 2019 , 1, 1175-1180	5.1	5
451	Ultrafast diffusive cross-sheet motion of lithium through antimonene with 2 + 1 dimensional kinetics. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 2901-2907	13	11
450	The mechanical and thermal properties of MoS-WSe lateral heterostructures. <i>Physical Chemistry Chemical Physics</i> , 2019 , 21, 15845-15853	3.6	15
449	A molecular dynamics study of the mechanical properties of h-BCN monolayer using a modified Tersoff interatomic potential. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2019 , 383, 2821-2827	2.3	17
448	Artificial Synapses Based on Multiterminal Memtransistors for Neuromorphic Application. <i>Advanced Functional Materials</i> , 2019 , 29, 1901106	15.6	121
447	Metal-organic framework-derived hierarchical MoS ₂ /CoS ₂ nanotube arrays as pH-universal electrocatalysts for efficient hydrogen evolution. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 13339-13346	13	81
446	Surface Reconstruction, Oxidation Mechanism, and Stability of Cd ₃ As ₂ . <i>Advanced Functional Materials</i> , 2019 , 29, 1900965	15.6	9
445	Atomistic modeling of nanoscale plasticity in high-entropy alloys. <i>Journal of Materials Research</i> , 2019 , 34, 1509-1532	2.5	23
444	Dynamics calibration of particle sandpile packing characteristics via discrete element method. <i>Powder Technology</i> , 2019 , 347, 220-226	5.2	11

443	Revealing the deformation twinning nucleation mechanism of BCC HEAs. <i>MRS Communications</i> , 2019 , 9, 406-412	2.7	12
442	First Demonstration of a Fully-Printed Mos2Rram on Flexible Substrate with Ultra-Low Switching Voltage and its Application as Electronic Synapse 2019 ,		5
441	Electronic-reconstruction-enhanced hydrogen evolution catalysis in oxide polymorphs. <i>Nature Communications</i> , 2019 , 10, 3149	17.4	20
440	Thermal transport in graphene-based layered materials: An analytical model validated with extensive molecular dynamics simulations. <i>Carbon</i> , 2019 , 155, 114-121	10.4	8
439	Design of Phosphorene for Hydrogen Evolution Performance Comparable to Platinum. <i>Chemistry of Materials</i> , 2019 , 31, 8948-8956	9.6	37
438	Revealing the Grain Boundary Formation Mechanism and Kinetics during Polycrystalline MoS Growth. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 46090-46100	9.5	17
437	A Kinetic Monte Carlo Study for Mono- and Bi-layer Growth of MoS2 during Chemical Vapor Deposition. <i>Wuli Huaxue Xuebao/Acta Physico-Chimica Sinica</i> , 2019 , 35, 1119-1127	3.8	8
436	Origin of ultrafast growth of monolayer WSe2 via chemical vapor deposition. <i>Npj Computational Materials</i> , 2019 , 5,	10.9	20
435	A kinetic Monte Carlo model for the growth and etching of graphene during chemical vapor deposition. <i>Carbon</i> , 2019 , 146, 399-405	10.4	14
434	Defect Engineering of Oxygen-Deficient Manganese Oxide to Achieve High-Performing Aqueous Zinc Ion Battery. <i>Advanced Energy Materials</i> , 2019 , 9, 1803815	21.8	285
433	Strain and defect engineered monolayer Ni-MoS for pH-universal hydrogen evolution catalysis. <i>Nanoscale</i> , 2019 , 11, 18329-18337	7.7	41
432	Evolution of intrinsic vacancies and prolonged lifetimes of vacancy clusters in black phosphorene. <i>Nanoscale</i> , 2019 , 11, 20987-20995	7.7	6
431	Design of the Hybrid Metal-Organic Frameworks as Potential Supramolecular Piezo-/Ferroelectrics. <i>Journal of Physical Chemistry C</i> , 2019 , 123, 3122-3129	3.8	16
430	The effects of curvature on the thermal conduction of bent silicon nanowire. <i>Journal of Applied Physics</i> , 2019 , 125, 082505	2.5	2
429	Unveiling the competitive role of etching in graphene growth during chemical vapor deposition. <i>2D Materials</i> , 2019 , 6, 015031	5.9	4
428	Discrete-Continuum Duality of Architected Materials: Failure, Flaws, and Fracture. <i>Advanced Functional Materials</i> , 2019 , 29, 1806772	15.6	18
427	Finite element analysis of anti-erosion characteristics of material with patterned surface impacted by particles. <i>Powder Technology</i> , 2019 , 342, 193-203	5.2	10
426	Direct n- to p-Type Channel Conversion in Monolayer/Few-Layer WS Field-Effect Transistors by Atomic Nitrogen Treatment. <i>ACS Nano</i> , 2018 , 12, 2506-2513	16.7	67

425	Strength and buckling behavior of defective phosphorene nanotubes under axial compression. <i>Journal of Materials Science</i> , 2018 , 53, 8355-8363	4.3	6
424	Multiscale modeling of keratin, collagen, elastin and related human diseases: Perspectives from atomistic to coarse-grained molecular dynamics simulations. <i>Extreme Mechanics Letters</i> , 2018 , 20, 112-124	3.9	19
423	Kinetic theory for the formation of diamond nanothreads with desired configurations: a strain-temperature controlled phase diagram. <i>Nanoscale</i> , 2018 , 10, 9664-9672	7.7	6
422	Effects of graphene/BN encapsulation, surface functionalization and molecular adsorption on the electronic properties of layered InSe: a first-principles study. <i>Physical Chemistry Chemical Physics</i> , 2018 , 20, 12939-12947	3.6	21
421	Anisotropic Wetting Characteristics of Water Droplets on Phosphorene: Roles of Layer and Defect Engineering. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 4622-4627	3.8	17
420	Anharmonic model for the elastic constants of bulk metallic glass across the glass transition. <i>Physical Review B</i> , 2018 , 97,	3.3	4
419	Temperature and strain-rate dependent mechanical properties of single-layer borophene. <i>Extreme Mechanics Letters</i> , 2018 , 19, 39-45	3.9	20
418	Large diffusion anisotropy and orientation sorting of phosphorene nanoflakes under a temperature gradient. <i>Nanoscale</i> , 2018 , 10, 1660-1666	7.7	12
417	Mechanical twinning in phosphorene. <i>Extreme Mechanics Letters</i> , 2018 , 19, 15-19	3.9	7
416	Thermal properties of transition-metal dichalcogenide. <i>Chinese Physics B</i> , 2018 , 27, 034402	1.2	8
415	Effect of vacancies on the mechanical properties of phosphorene nanotubes. <i>Nanotechnology</i> , 2018 , 29, 235707	3.4	6
414	On the controllability of phase formation in rapid solidification of high entropy alloys. <i>Journal of Alloys and Compounds</i> , 2018 , 748, 679-686	5.7	17
413	A first-principles study on the adsorption of small molecules on antimonene: oxidation tendency and stability. <i>Journal of Materials Chemistry C</i> , 2018 , 6, 4308-4317	7.1	50
412	Large-Aperture and Grain-Boundary Engineering through Template-Assisted Metal Dewetting for Resonances in the Short Wave Infrared. <i>ACS Photonics</i> , 2018 , 5, 511-519	6.3	1
411	Synergetically understanding the interaction between nano/microspheres and peptide for controllable drug loading via experimental and theoretical approaches. <i>Materials Science and Engineering C</i> , 2018 , 83, 169-176	8.3	11
410	Morphological Growth and Theoretical Understanding of Gold and Other Noble Metal Nanoplates. <i>Chemistry - A European Journal</i> , 2018 , 24, 15589-15595	4.8	8
409	Realizing Indirect-to-Direct Band Gap Transition in Few-Layer Two-Dimensional MX ₂ (M = Mo, W; X = S, Se). <i>ACS Applied Energy Materials</i> , 2018 , 1, 4115-4121	6.1	8
408	Self-assembled atomically thin hybrid conjugated polymer perovskites with two-dimensional structure. <i>Journal of Materials Chemistry C</i> , 2018 , 6, 8405-8410	7.1	3

407	Enhancing adsorption capacity while maintaining specific recognition performance of mesoporous silica: a novel imprinting strategy with amphiphilic ionic liquid as surfactant. <i>Nanotechnology</i> , 2018 , 29, 375604	3.4	19
406	Highly Efficient Mass Production of Boron Nitride Nanosheets via a Borate Nitridation Method. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 17370-17377	3.8	12
405	BSA-caged metal clusters to exfoliate MoS nanosheets towards their hybridized functionalization. <i>Nanoscale</i> , 2018 , 10, 10911-10917	7.7	12
404	Unraveling the Molecular Mechanisms of Thermo-responsive Properties of Silk-Elastin-Like Proteins by Integrating Multiscale Modeling and Experiment. <i>Journal of Materials Chemistry B</i> , 2018 , 6, 3727-3734	7.3	14
403	Oxygen-Promoted Chemical Vapor Deposition of Graphene on Copper: A Combined Modeling and Experimental Study. <i>ACS Nano</i> , 2018 , 12, 9372-9380	16.7	23
402	Mechanical properties of pristine and defective carbon-phosphide monolayers: a density functional tight-binding study. <i>Nanotechnology</i> , 2018 , 29, 435707	3.4	6
401	Computational Understanding of the Growth of 2D Materials. <i>Advanced Theory and Simulations</i> , 2018 , 1, 1800085	3.5	22
400	Modelling of Defects and Failure in 2D Materials: Graphene and Beyond 2018 , 1-41		1
399	Exploring the charge localization and band gap opening of borophene: a first-principles study. <i>Nanoscale</i> , 2018 , 10, 1403-1410	7.7	48
398	Atomic-scale mechanisms of defect- and light-induced oxidation and degradation of InSe. <i>Journal of Materials Chemistry C</i> , 2018 , 6, 518-525	7.1	34
397	Phase field simulation of powder bed-based additive manufacturing. <i>Acta Materialia</i> , 2018 , 144, 801-809	8.4	79
396	Aqueous and mechanical exfoliation, unique properties, and theoretical understanding of MoO ₃ nanosheets made from free-standing β -MoO ₃ crystals: Raman mode softening and absorption edge blue shift. <i>Nano Research</i> , 2018 , 11, 1193-1203	10	18
395	Simultaneous edge and electronic control of MoS nanosheets through Fe doping for an efficient oxygen evolution reaction. <i>Nanoscale</i> , 2018 , 10, 20113-20119	7.7	43
394	Highly Stable New Organic-Inorganic Hybrid 3D Perovskite CH ₃ NH ₃ PdI and 2D Perovskite (CH ₃ NH ₃)PdI: DFT Analysis, Synthesis, Structure, Transition Behavior, and Physical Properties. <i>Journal of Physical Chemistry Letters</i> , 2018 , 9, 5862-5872	6.4	16
393	Design of phosphorene/graphene heterojunctions for high and tunable interfacial thermal conductance. <i>Nanoscale</i> , 2018 , 10, 19854-19862	7.7	25
392	A nanolattice-plate hybrid structure to achieve a nearly linear relation between stiffness/strength and density. <i>Materials and Design</i> , 2018 , 160, 496-502	8.1	4
391	Interfacial Thermal Conductance and Thermal Rectification of Hexagonal BC _n N/Graphene In-Plane Heterojunctions. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 22783-22789	3.8	24
390	Sub-10-nm suspended nano-web formation by direct laser writing. <i>Nano Futures</i> , 2018 , 2, 025006	3.6	16

- 389 Black Phosphorus Carbide as a Tunable Anisotropic Plasmonic Metasurface. *ACS Photonics*, **2018**, 5, 3116-3123 39
- 388 Boosted electrochemical properties from the surface engineering of ultrathin interlaced Ni(OH) nanosheets with Co(OH) quantum dot modification. *Nanoscale*, **2018**, 10, 10554-10563 7.7 35
- 387 Predictive model for porosity in powder-bed fusion additive manufacturing at high beam energy regime. *Additive Manufacturing*, **2018**, 22, 817-822 6.1 41
- 386 Surface-Mediated Chemical Dissolution of Two-Dimensional Nanomaterials toward Hole Creation. *Chemistry of Materials*, **2018**, 30, 5108-5115 9.6 12
- 385 Mechanical properties and failure behavior of phosphorene with grain boundaries. *Nanotechnology*, **2017**, 28, 075704 3.4 16
- 384 A review on mechanics and mechanical properties of 2D materials (graphene and beyond). *Extreme Mechanics Letters*, **2017**, 13, 42-77 3.9 581
- 383 Probing the surface profile and friction behavior of heterogeneous polymers: a molecular dynamics study. *Modelling and Simulation in Materials Science and Engineering*, **2017**, 25, 035003 2 0
- 382 Vastly enhancing the chemical stability of phosphorene by employing an electric field. *Nanoscale*, **2017**, 9, 4219-4226 7.7 19
- 381 Bounds for the dynamic modulus of unidirectional composites with bioinspired staggered distributions of platelets. *Composite Structures*, **2017**, 167, 152-165 5.3 12
- 380 Thermal properties of two-dimensional materials. *Chinese Physics B*, **2017**, 26, 034401 1.2 45
- 379 Strain and water effects on the electronic structure and chemical activity of in-plane graphene/silicene heterostructure. *Journal of Physics Condensed Matter*, **2017**, 29, 095302 1.8 20
- 378 Few-Layer Black Phosphorus Carbide Field-Effect Transistor via Carbon Doping. *Advanced Materials*, **2017**, 29, 1700503 24 95
- 377 Charge Transfer and Functionalization of Monolayer InSe by Physisorption of Small Molecules for Gas Sensing. *Journal of Physical Chemistry C*, **2017**, 121, 10182-10193 3.8 65
- 376 Electrostatic-Driven Exfoliation and Hybridization of 2D Nanomaterials. *Advanced Materials*, **2017**, 29, 1700326 24 46
- 375 Remarkable enhancement in failure stress and strain of penta-graphene via chemical functionalization. *Nano Research*, **2017**, 10, 3865-3874 10 17
- 374 Thermal stability and thermal conductivity of phosphorene in phosphorene/graphene van der Waals heterostructures. *Physical Chemistry Chemical Physics*, **2017**, 19, 17180-17186 3.6 26
- 373 Carbon nanoscroll-silk crystallite hybrid structures with controllable hydration and mechanical properties. *Nanoscale*, **2017**, 9, 9181-9189 7.7 18
- 372 MoS₂-graphene in-plane contact for high interfacial thermal conduction. *Nano Research*, **2017**, 10, 2944-2953 44

371	Damping behavior investigation and optimization of the structural layout of load-bearing biological materials. <i>International Journal of Mechanical Sciences</i> , 2017 , 120, 263-275	5.5	9
370	Analyzing the Carrier Mobility in Transition-Metal Dichalcogenide MoS ₂ Field-Effect Transistors. <i>Advanced Functional Materials</i> , 2017 , 27, 1604093	15.6	178
369	Al-Doped Black Phosphorus p-n Homojunction Diode for High Performance Photovoltaic. <i>Advanced Functional Materials</i> , 2017 , 27, 1604638	15.6	120
368	Tuning magnetoresistance in molybdenum disulphide and graphene using a molecular spin transition. <i>Nature Communications</i> , 2017 , 8, 677	17.4	17
367	Theoretical Studies on the Growth Mechanism of Chemical Vapor Deposition of Graphene on Metal Surface 2017 , 205-241		
366	Enhancing Multifunctionalities of Transition-Metal Dichalcogenide Monolayers via Cation Intercalation. <i>ACS Nano</i> , 2017 , 11, 9390-9396	16.7	30
365	Active Control of Microstructure in Powder-Bed Fusion Additive Manufacturing of Ti6Al4V. <i>Advanced Engineering Materials</i> , 2017 , 19, 1700333	3.5	12
364	Structure, Stability, and Kinetics of Vacancy Defects in Monolayer PtSe: A First-Principles Study. <i>ACS Omega</i> , 2017 , 2, 8640-8648	3.9	31
363	Unusual Twisting Phonons and Breathing Modes in Tube-Terminated Phosphorene Nanoribbons and Their Effects on Thermal Conductivity. <i>Advanced Functional Materials</i> , 2017 , 27, 1702776	15.6	17
362	Superior lattice thermal conductance of single-layer borophene. <i>Npj 2D Materials and Applications</i> , 2017 , 1,	8.8	51
361	Mechanical properties and failure behaviour of graphene/silicene/graphene heterostructures. <i>Journal Physics D: Applied Physics</i> , 2017 , 50, 345302	3	27
360	Thermoelectric properties of two-dimensional transition metal dichalcogenides. <i>Journal of Materials Chemistry C</i> , 2017 , 5, 7684-7698	7.1	125
359	Thermal conductivity of penta-graphene: The role of chemical functionalization. <i>Computational Materials Science</i> , 2017 , 137, 195-200	3.2	23
358	From two-dimensional nano-sheets to roll-up structures: expanding the family of nanoscroll. <i>Nanotechnology</i> , 2017 , 28, 385704	3.4	18
357	Tuning deep dopants to shallow ones in 2D semiconductors by substrate screening: The case of XS (X = Cl, Br, I) in MoS ₂ . <i>Physical Review B</i> , 2017 , 95,	3.3	13
356	Effect of edge passivation on the mechanical properties of phosphorene nanoribbons. <i>Extreme Mechanics Letters</i> , 2017 , 14, 2-9	3.9	10
355	Effect of chemical composition and affinity on the short- and medium-range order structures and mechanical properties of Zr-Ni-Al metallic glass. <i>Journal of Non-Crystalline Solids</i> , 2017 , 456, 68-75	3.9	16
354	Black Phosphorus N-Type Field-Effect Transistor with Ultrahigh Electron Mobility via Aluminum Adatoms Doping. <i>Small</i> , 2017 , 13, 1602909	11	56

353	The role of H ₂ O and O ₂ molecules and phosphorus vacancies in the structure instability of phosphorene. <i>2D Materials</i> , 2017 , 4, 015010	5.9	78
352	Recent Advances in the Study of Phosphorene and its Nanostructures. <i>Critical Reviews in Solid State and Materials Sciences</i> , 2017 , 42, 1-82	10.1	113
351	Surface-Charge-Mediated Formation of H-TiO @Ni(OH) Heterostructures for High-Performance Supercapacitors. <i>Advanced Materials</i> , 2017 , 29, 1604164	24	169
350	Mechanical properties and fracture behaviour of defective phosphorene nanotubes under uniaxial tension. <i>Journal Physics D: Applied Physics</i> , 2017 , 50, 485303	3	4
349	Unusual phonon behavior and ultra-low thermal conductance of monolayer InSe. <i>Nanoscale</i> , 2017 , 10, 480-487	7.7	25
348	Mechanical properties of phosphorene nanotubes: a density functional tight-binding study. <i>Nanotechnology</i> , 2016 , 27, 395701	3.4	33
347	Phonon transport in a one-dimensional harmonic chain with long-range interaction and mass disorder. <i>Physical Review E</i> , 2016 , 94, 052123	2.4	2
346	Nanotube-terminated zigzag edges of phosphorene formed by self-rolling reconstruction. <i>Nanoscale</i> , 2016 , 8, 17940-17946	7.7	28
345	Strain-Robust and Electric Field Tunable Band Alignments in van der Waals WSe ₂ /Graphene Heterojunctions. <i>Journal of Physical Chemistry C</i> , 2016 , 120, 22702-22709	3.8	27
344	Controlling the thermal conductance of graphene/hBN lateral interface with strain and structure engineering. <i>Physical Review B</i> , 2016 , 93,	3.3	39
343	Highly Itinerant Atomic Vacancies in Phosphorene. <i>Journal of the American Chemical Society</i> , 2016 , 138, 10199-206	16.4	112
342	Quantum thermal transport in stanene. <i>Physical Review B</i> , 2016 , 94,	3.3	34
341	Modulating Carrier Density and Transport Properties of MoS ₂ by Organic Molecular Doping and Defect Engineering. <i>Chemistry of Materials</i> , 2016 , 28, 8611-8621	9.6	76
340	Effect of spin-orbit coupling on formation of native defects in Weyl fermion semimetals: The case of TX (T=Ta,Nb; X=As,P). <i>Physical Review B</i> , 2016 , 94,	3.3	5
339	Electronic properties of mutually embedded h-BN and graphene: A first principles study. <i>Chemical Physics Letters</i> , 2016 , 666, 33-37	2.5	9
338	Insensitivity to Flaws Leads to Damage Tolerance in Brittle Architected Meta-Materials. <i>Scientific Reports</i> , 2016 , 6, 20570	4.9	32
337	Engineering Substrate Interactions for High Luminescence Efficiency of Transition-Metal Dichalcogenide Monolayers. <i>Advanced Functional Materials</i> , 2016 , 26, 4733-4739	15.6	112
336	Realization of Room-Temperature Phonon-Limited Carrier Transport in Monolayer MoS ₂ by Dielectric and Carrier Screening. <i>Advanced Materials</i> , 2016 , 28, 547-52	24	161

335	High-Level Incorporation of Silver in Gold Nanoclusters: Fluorescence Redshift upon Interaction with Hydrogen Peroxide and Fluorescence Enhancement with Herbicide. <i>Chemistry - A European Journal</i> , 2016 , 22, 1675-81	4.8	18
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