Xiangfeng Duan

List of Publications by Year in Descending Order

353 papers	61,417 citations	114 h-index	245 g-index
386 ext. papers	70,599 ext. citations	17.9 avg, IF	8.06 L-index

#	Paper	IF	Citations
353	A Silicon Monoxide Lithium-Ion Battery Anode with Ultrahigh Areal Capacity.. *Nano-Micro Letters*, **2022**, 14, 50	19.5	8
352	Multiplexed nanomaterial-assisted laser desorption/ionization for pan-cancer diagnosis and classification.. *Nature Communications*, **2022**, 13, 617	17.4	6
351	2D Heterostructures for Ubiquitous Electronics and Optoelectronics: Principles, Opportunities, and Challenges.. *Chemical Reviews*, **2022**,	68.1	28
350	Combined anodic and cathodic hydrogen production from aldehyde oxidation and hydrogen evolution reaction. *Nature Catalysis*, **2022**, 5, 66-73	36.5	29
349	The promises, challenges and pathways to room-temperature sodium-sulfur batteries.. *National Science Review*, **2022**, 9, nwab050	10.8	13
348	Van der Waals superlattices.. *National Science Review*, **2022**, 9, nwab166	10.8	4
347	Highly stretchable van der Waals thin films for adaptable and breathable electronic membranes.. *Science*, **2022**, 375, 852-859	33.3	21
346	Importance of Multiple Excitation Wavelengths for TERS Characterization of TMDCs and Their Vertical Heterostructures. *Journal of Physical Chemistry C*, **2022**, 126, 5218-5223	3.8	2
345	Valence oscillation and dynamic active sites in monolayer NiCo hydroxides for water oxidation. *Nature Catalysis*, **2021**, 4, 1050-1058	36.5	46
344	Approaching the intrinsic exciton physics limit in two-dimensional semiconductor diodes. *Nature*, **2021**, 599, 404-410	50.4	7
343	Autobifunctional Mechanism of Jagged Pt Nanowires for Hydrogen Evolution Kinetics via End-to-End Simulation. *Journal of the American Chemical Society*, **2021**, 143, 5355-5363	16.4	7
342	Van der Waals epitaxial growth of air-stable CrSe nanosheets with thickness-tunable magnetic order. *Nature Materials*, **2021**, 20, 818-825	27	68
341	High-order superlattices by rolling up van der Waals heterostructures. *Nature*, **2021**, 591, 385-390	50.4	47
340	Toward Rational Design of Single-Atom Catalysts. *Journal of Physical Chemistry Letters*, **2021**, 12, 2837-2847	4	15
339	Promises and prospects of two-dimensional transistors. *Nature*, **2021**, 591, 43-53	50.4	143
338	Layered Intercalation Materials. *Advanced Materials*, **2021**, 33, e2004557	24	37
337	Probing and pushing the limit of emerging electronic materials via van der Waals integration. *MRS Bulletin*, **2021**, 46, 534-546	3.2	1

336	In-plane epitaxial growth of 2D CoSe-WSe2 metal-semiconductor lateral heterostructures with improved WSe2 transistors performance. *InformaⅡMaterⅡy*, **2021**, 3, 222-228	23.1	11
335	Elastic ceramic aerogels for thermal superinsulation under extreme conditions. *Materials Today*, **2021**, 42, 162-177	21.8	19
334	Ultra-Steep Slope Impact Ionization Transistors Based on Graphene/InAs Heterostructures. *Small Structures*, **2021**, 2, 2000039	8.7	6
333	Van der Waals Heterostructures by Design: From 1D and 2D to 3D. *Matter*, **2021**, 4, 552-581	12.7	19
332	High-yield exfoliation of 2D semiconductor monolayers and reassembly of organic/inorganic artificial superlattices. *CheM*, **2021**, 7, 1887-1902	16.2	8
331	Organic Semiconductor Single Crystals for X-ray Imaging. *Advanced Materials*, **2021**, 33, e2104749	24	14
330	Two-dimensional van der Waals thin film transistors as active matrix for spatially resolved pressure sensing. *Nano Research*, **2021**, 14, 3395-3401	10	1
329	Silver nanoparticles boost charge-extraction efficiency in microbial fuel cells. *Science*, **2021**, 373, 1336-1340	33.3	38
328	Tunable one-dimensional inorganic perovskite nanomeshes library for water splitting. *Nano Energy*, **2021**, 88, 106251	17.1	5
327	Large-Area Synthesis and Patterning of All-Inorganic Lead Halide Perovskite Thin Films and Heterostructures. *Nano Letters*, **2021**, 21, 1454-1460	11.5	12
326	Hidden Vacancy Benefit in Monolayer 2D Semiconductors. *Advanced Materials*, **2021**, 33, e2007051	24	27
325	Iridium single-atom catalyst on nitrogen-doped carbon for formic acid oxidation synthesized using a general host-guest strategy. *Nature Chemistry*, **2020**, 12, 764-772	17.6	207
324	Redox Control of Charge Transport in Vertical Ferrocene Molecular Tunnel Junctions. *CheM*, **2020**, 6, 1172-1182	16.2	18
323	Organosulfur Compounds Enable Uniform Lithium Plating and Long-Term Battery Cycling Stability. *Nano Letters*, **2020**, 20, 2594-2601	11.5	18
322	General synthesis of two-dimensional van der Waals heterostructure arrays. *Nature*, **2020**, 579, 368-374	50.4	195
321	Molecular Design of Single-Atom Catalysts for Oxygen Reduction Reaction. *Advanced Energy Materials*, **2020**, 10, 1903815	21.8	139
320	Efficient strain modulation of 2D materials via polymer encapsulation. *Nature Communications*, **2020**, 11, 1151	17.4	81
319	Highly Reliable Low-Voltage Memristive Switching and Artificial Synapse Enabled by van der Waals Integration. *Matter*, **2020**, 2, 965-976	12.7	22

318	Covalent Selenium Embedded in Hierarchical Carbon Nanofibers for Ultra-High Areal Capacity Li-Se Batteries. *IScience*, **2020**, 23, 100919	6.1	24
317	van der Waals Integrated Devices Based on Nanomembranes of 3D Materials. *Nano Letters*, **2020**, 20, 1410-1416	11.5	10
316	Sensitive pressure sensors based on conductive microstructured air-gap gates and two-dimensional semiconductor transistors. *Nature Electronics*, **2020**, 3, 59-69	28.4	69
315	Possible Luttinger liquid behavior of edge transport in monolayer transition metal dichalcogenide crystals. *Nature Communications*, **2020**, 11, 659	17.4	12
314	Pt3Ag alloy wavy nanowires as highly effective electrocatalysts for ethanol oxidation reaction. *Nano Research*, **2020**, 13, 1472-1478	10	25
313	Suppressed threshold voltage roll-off and ambipolar transport in multilayer transition metal dichalcogenide feed-back gate transistors. *Nano Research*, **2020**, 13, 1943-1947	10	4
312	Programmable devices based on reversible solid-state doping of two-dimensional semiconductors with superionic silver iodide. *Nature Electronics*, **2020**, 3, 630-637	28.4	26
311	Ultrafast growth of large single crystals of monolayer WS and WSe. *National Science Review*, **2020**, 7, 737-744	10.8	36
310	Boosting superconductivity in organic-inorganic superlattices. *Science Bulletin*, **2020**, 65, 177-178	10.6	2
309	A Fully Aqueous Hybrid Electrolyte Rechargeable Battery with High Voltage and High Energy Density. *Advanced Energy Materials*, **2020**, 10, 2001583	21.8	21
308	Beyond Extended Surfaces: Understanding the Oxygen Reduction Reaction on Nanocatalysts. *Journal of the American Chemical Society*, **2020**, 142, 17812-17827	16.4	54
307	Tailoring a Three-Phase Microenvironment for High-Performance Oxygen Reduction Reaction in Proton Exchange Membrane Fuel Cells. *Matter*, **2020**, 3, 1774-1790	12.7	30
306	Pushing the conductance and transparency limit of monolayer graphene electrodes for flexible organic light-emitting diodes. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 25991-25998	11.5	10
305	Black phosphorus composites with engineered interfaces for high-rate high-capacity lithium storage. *Science*, **2020**, 370, 192-197	33.3	156
304	High-Performance Flexible Bismuth Telluride Thin Film from Solution Processed Colloidal Nanoplates. *Advanced Materials Technologies*, **2020**, 5, 2000600	6.8	17
303	Probing photoelectrical transport in lead halide perovskites with van der Waals contacts. *Nature Nanotechnology*, **2020**, 15, 768-775	28.7	23
302	Graphene-based vertical thin film transistors. *Science China Information Sciences*, **2020**, 63, 1	3.4	14
301	Single Atoms at Crystal Ladder Steps. *CheM*, **2020**, 6, 3169-3171	16.2	

300	Enhancement of oxygen reduction reaction activity by grain boundaries in platinum nanostructures. *Nano Research*, **2020**, 13, 3310-3314	10	8
299	Manipulation of Valley Pseudospin by Selective Spin Injection in Chiral Two-Dimensional Perovskite/Monolayer Transition Metal Dichalcogenide Heterostructures. *ACS Nano*, **2020**, 14, 15154-15160	16.7	13
298	A fundamental look at electrocatalytic sulfur reduction reaction. *Nature Catalysis*, **2020**, 3, 762-770	36.5	206
297	Robust Flexible Pressure Sensors Made from Conductive Micropyramids for Manipulation Tasks. *ACS Nano*, **2020**, 14, 12866-12876	16.7	38
296	Highly active and stable stepped Cu surface for enhanced electrochemical CO2 reduction to C2H4. *Nature Catalysis*, **2020**, 3, 804-812	36.5	118
295	Hierarchical N-doping germanium/carbon nanofibers as anode for high-performance lithium-ion and sodium-ion batteries. *Nanotechnology*, **2020**, 31, 015402	3.4	14
294	Doping-free complementary WSe circuit via van der Waals metal integration. *Nature Communications*, **2020**, 11, 1866	17.4	68
293	In situ interface engineering for probing the limit of quantum dot photovoltaic devices. *Nature Nanotechnology*, **2019**, 14, 950-956	28.7	23
292	Ultra-high Areal Capacity Realized in Three-Dimensional Holey Graphene/SnO Composite Anodes. *IScience*, **2019**, 19, 728-736	6.1	25
291	In Situ Probing Molecular Intercalation in Two-Dimensional Layered Semiconductors. *Nano Letters*, **2019**, 19, 6819-6826	11.5	37
290	Microwave Shock Synthesis beyond Thermodynamic Equilibrium. *Matter*, **2019**, 1, 555-557	12.7	3
289	Van der Waals thin-film electronics. *Nature Electronics*, **2019**, 2, 378-388	28.4	67
288	Selective growth of wide band gap atomically thin Sb2O3 inorganic molecular crystal on WS2. *Nano Research*, **2019**, 12, 2781-2787	10	8
287	van der Waals Epitaxial Growth of Atomically Thin 2D Metals on Dangling-Bond-Free WSe2 and WS2. *Advanced Functional Materials*, **2019**, 29, 1806611	15.6	60
286	A field-effect approach to directly profiling the localized states in monolayer MoS2. *Science Bulletin* , **2019**, 64, 1049-1055	10.6	5
285	In Situ Transmission Electron Microscopy for Energy Materials and Devices. *Advanced Materials*, **2019**, 31, e1900608	24	53
284	Bacteria-Derived Biological Carbon Building Robust Li-S Batteries. *Nano Letters*, **2019**, 19, 4384-4390	11.5	57
283	Large-area graphene-nanomesh/carbon-nanotube hybrid membranes for ionic and molecular nanofiltration. *Science*, **2019**, 364, 1057-1062	33.3	291

282	Single-atom tailoring of platinum nanocatalysts for high-performance multifunctional electrocatalysis. *Nature Catalysis*, **2019**, 2, 495-503	36.5	258
281	Rational Kinetics Control toward Universal Growth of 2D Vertically Stacked Heterostructures. *Advanced Materials*, **2019**, 31, e1901351	24	53
280	Nanoscale electronic devices based on transition metal dichalcogenides. *2D Materials*, **2019**, 6, 032004	5.9	31
279	A scalable slurry process to fabricate a 3D lithiophilic and conductive framework for a high performance lithium metal anode. *Journal of Materials Chemistry A*, **2019**, 7, 13225-13233	13	31
278	Phase-Tunable Synthesis of Ultrathin Layered Tetragonal CoSe and Nonlayered Hexagonal CoSe Nanoplates. *Advanced Materials*, **2019**, 31, e1900901	24	37
277	Synthesis of surface controlled nickel/palladium hydride nanodendrites with high performance in benzyl alcohol oxidation. *Nano Research*, **2019**, 12, 1467-1472	10	15
276	Van der Waals integration before and beyond two-dimensional materials. *Nature*, **2019**, 567, 323-333	50.4	530
275	Direct van der Waals epitaxial growth of 1D/2D Sb2Se3/WS2 mixed-dimensional p-n heterojunctions. *Nano Research*, **2019**, 12, 1139-1145	10	28
274	Self-Assembled Molecular-Electronic Films Controlled by Room Temperature Quantum Interference. *CheM*, **2019**, 5, 474-484	16.2	28
273	Hierarchical Porous Carbon Derived from Covalent Triazine Frameworks for High Mass Loading Supercapacitors **2019**, 1, 320-326		19
272	PtCuNi Tetrahedra Catalysts with Tailored Surfaces for Efficient Alcohol Oxidation. *Nano Letters*, **2019**, 19, 5431-5436	11.5	56
271	Nanowire Electronics: From Nanoscale to Macroscale. *Chemical Reviews*, **2019**, 119, 9074-9135	68.1	105
270	Rapid Electrochemical Cleaning Silver Nanowire Thin Films for High-Performance Transparent Conductors. *Journal of the American Chemical Society*, **2019**, 141, 12251-12257	16.4	26
269	SnSe/MoS van der Waals Heterostructure Junction Field-Effect Transistors with Nearly Ideal Subthreshold Slope. *Advanced Materials*, **2019**, 31, e1902962	24	29
268	Differential Surface Elemental Distribution Leads to Significantly Enhanced Stability of PtNi-Based ORR Catalysts. *Matter*, **2019**, 1, 1567-1580	12.7	53
267	Nitrogen Doped Graphdiyne Enhances Oxygen Reduction Reactions. *Wuli Huaxue Xuebao/ Acta Physico - Chimica Sinica*, **2019**, 35, 559-560	3.8	2
266	The Blossoming of 2D Materials. *Wuli Huaxue Xuebao/ Acta Physico - Chimica Sinica*, **2019**, 35, 1039-1040	3.8	3
265	Quantitative Surface Plasmon Interferometry via Upconversion Photoluminescence Mapping. *Research*, **2019**, 2019, 8304824	7.8	2

264	Villiform carbon fiber paper as current collector for capacitive deionization devices with high areal electrosorption capacity. *Desalination*, **2019**, 459, 1-9	10.3	11
263	Self-trapped state enabled filterless narrowband photodetections in 2D layered perovskite single crystals. *Nature Communications*, **2019**, 10, 806	17.4	139
262	Double-negative-index ceramic aerogels for thermal superinsulation. *Science*, **2019**, 363, 723-727	33.3	229
261	Single atom electrocatalysts supported on graphene or graphene-like carbons. *Chemical Society Reviews*, **2019**, 48, 5207-5241	58.5	238
260	Uniform and ultrathin high-□ gate dielectrics for two-dimensional electronic devices. *Nature Electronics*, **2019**, 2, 563-571	28.4	93
259	Direct Observation of Nanoscale Light Confinement without Metal. *Advanced Materials*, **2019**, 31, e1806341	24	12
258	Nanoscale Structure Design for High-Performance Pt-Based ORR Catalysts. *Advanced Materials*, **2019**, 31, e1802234	24	286
257	Hierarchical 3D electrodes for electrochemical energy storage. *Nature Reviews Materials*, **2019**, 4, 45-60	73.3	360
256	Long-Range Hierarchical Nanocrystal Assembly Driven by Molecular Structural Transformation. *Journal of the American Chemical Society*, **2019**, 141, 1498-1505	16.4	14
255	Inhibiting Polysulfide Shuttling with a Graphene Composite Separator for Highly Robust Lithium-Sulfur Batteries. *Joule*, **2019**, 3, 303	27.8	10
254	Maximizing the Current Output in Self-Aligned Graphene-InAs-Metal Vertical Transistors. *ACS Nano*, **2019**, 13, 847-854	16.7	14
253	A Highly Active Star Decahedron Cu Nanocatalyst for Hydrocarbon Production at Low Overpotentials. *Advanced Materials*, **2019**, 31, e1805405	24	72
252	High-Performance Black Phosphorus Field-Effect Transistors with Long-Term Air Stability. *Nano Letters*, **2019**, 19, 331-337	11.5	46
251	Ultrathin wavy Rh nanowires as highly effective electrocatalysts for methanol oxidation reaction with ultrahigh ECSA. *Nano Research*, **2019**, 12, 211-215	10	50
250	Monolayer atomic crystal molecular superlattices. *Nature*, **2018**, 555, 231-236	50.4	220
249	A molecular cross-linking approach for hybrid metal oxides. *Nature Materials*, **2018**, 17, 341-348	27	66
248	On-Chip in Situ Monitoring of Competitive Interfacial Anionic Chemisorption as a Descriptor for Oxygen Reduction Kinetics. *ACS Central Science*, **2018**, 4, 590-599	16.8	19
247	Strain-Tuning Atomic Substitution in Two-Dimensional Atomic Crystals. *ACS Nano*, **2018**, 12, 4853-4860	16.7	64

246	Few-Layer GeAs Field-Effect Transistors and Infrared Photodetectors. *Advanced Materials*, **2018**, 30, e1705934	24	69
245	WSe2/GeSe heterojunction photodiode with giant gate tunability. *Nano Energy*, **2018**, 49, 103-108	17.1	49
244	Roles of Mo Surface Dopants in Enhancing the ORR Performance of Octahedral PtNi Nanoparticles. *Nano Letters*, **2018**, 18, 798-804	11.5	115
243	General synthesis and definitive structural identification of MN4C4 single-atom catalysts with tunable electrocatalytic activities. *Nature Catalysis*, **2018**, 1, 63-72	36.5	968
242	Metal@semiconductor core-shell nanocrystals with atomically organized interfaces for efficient hot electron-mediated photocatalysis. *Nano Energy*, **2018**, 48, 44-52	17.1	75
241	Chemical synthesis of two-dimensional atomic crystals, heterostructures and superlattices. *Chemical Society Reviews*, **2018**, 47, 3129-3151	58.5	99
240	Synthesis of Ultrathin Metallic MTe (M = V, Nb, Ta) Single-Crystalline Nanoplates. *Advanced Materials*, **2018**, 30, e1801043	24	111
239	Two-dimensional transistors beyond graphene and TMDCs. *Chemical Society Reviews*, **2018**, 47, 6388-6409	58.5	193
238	Improvement by Channel Recess of Contact Resistance and Gate Control in Large-Scale Spin-Coated MoS2 MOSFETs. *IEEE Electron Device Letters*, **2018**, 39, 1453-1456	4.4	4
237	Microwave-Assisted Rapid Synthesis of Graphene-Supported Single Atomic Metals. *Advanced Materials*, **2018**, 30, e1802146	24	172
236	Synthesis of ultrathin two-dimensional nanosheets and van der Waals heterostructures from non-layered □CuI. *Npj 2D Materials and Applications*, **2018**, 2,	8.8	21
235	Gate-tunable frequency combs in graphene-nitride microresonators. *Nature*, **2018**, 558, 410-414	50.4	101
234	Direct Room Temperature Welding and Chemical Protection of Silver Nanowire Thin Films for High Performance Transparent Conductors. *Journal of the American Chemical Society*, **2018**, 140, 193-199	16.4	103
233	Broadband gate-tunable terahertz plasmons in graphene heterostructures. *Nature Photonics*, **2018**, 12, 22-28	33.9	83
232	Highly-anisotropic optical and electrical properties in layered SnSe. *Nano Research*, **2018**, 11, 554-564	10	77
231	Building two-dimensional materials one row at a time: Avoiding the nucleation barrier. *Science*, **2018**, 362, 1135-1139	33.3	105
230	Chemical Vapor Deposition Growth of Single Crystalline CoTe2 Nanosheets with Tunable Thickness and Electronic Properties. *Chemistry of Materials*, **2018**, 30, 8891-8896	9.6	30
229	Solution-processable 2D semiconductors for high-performance large-area electronics. *Nature*, **2018**, 562, 254-258	50.4	404

228	Inhibiting Polysulfide Shuttling with a Graphene Composite Separator for Highly Robust Lithium-Sulfur Batteries. *Joule*, **2018**, 2, 2091-2104	27.8	226
227	Quantum interference mediated vertical molecular tunneling transistors. *Science Advances*, **2018**, 4, eaat8237	12.5	43
226	Synthetic Control of Two-Dimensional NiTe Single Crystals with Highly Uniform Thickness Distributions. *Journal of the American Chemical Society*, **2018**, 140, 14217-14223	16.4	74
225	Enhanced interlayer neutral excitons and trions in trilayer van der Waals heterostructures. *Npj 2D Materials and Applications*, **2018**, 2,	8.8	26
224	Composition modulation in one-dimensional and two-dimensional chalcogenide semiconductor nanostructures. *Chemical Society Reviews*, **2018**, 47, 7504-7521	58.5	72
223	Pt-Ni alloy catalysts for highly selective anti-Markovnikov alkene hydrosilylation. *Science China Materials*, **2018**, 61, 1339-1344	7.1	10
222	Thickness-Tunable Synthesis of Ultrathin Type-II Dirac Semimetal PtTe Single Crystals and Their Thickness-Dependent Electronic Properties. *Nano Letters*, **2018**, 18, 3523-3529	11.5	103
221	Approaching the Schottky-Mott limit in van der Waals metal-semiconductor junctions. *Nature*, **2018**, 557, 696-700	50.4	766
220	Strong Fluorescence Enhancement with Silica-Coated Au Nanoshell Dimers. *Plasmonics*, **2017**, 12, 263-269	2.4	5
219	Three-dimensional graphene/polyimide composite-derived flexible high-performance organic cathode for rechargeable lithium and sodium batteries. *Journal of Materials Chemistry A*, **2017**, 5, 2710-2716	13	89
218	Molecular ligand modulation of palladium nanocatalysts for highly efficient and robust heterogeneous oxidation of cyclohexenone to phenol. *Science Advances*, **2017**, 3, e1600615	14.3	18
217	Designing an Efficient Multimode Environmental Sensor Based on Graphene–Silicon Heterojunction. *Advanced Materials Technologies*, **2017**, 2, 1600262	6.8	38
216	Spatially composition-modulated two-dimensional WSSe nanosheets. *Nanoscale*, **2017**, 9, 4707-4712	7.7	32
215	Flexible Dielectric Nanocomposites with Ultrawide Zero-Temperature Coefficient Windows for Electrical Energy Storage and Conversion under Extreme Conditions. *ACS Applied Materials & Interfaces*, **2017**, 9, 7591-7600	9.5	19
214	Ambipolar Barristors for Reconfigurable Logic Circuits. *Nano Letters*, **2017**, 17, 1448-1454	11.5	18
213	Photodetectors: Solvent-Based Soft-Patterning of Graphene Lateral Heterostructures for Broadband High-Speed Metal–Semiconductor–Metal Photodetectors (Adv. Mater. Technol. 2/2017). *Advanced Materials Technologies*, **2017**, 2,	6.8	2
212	Broken Symmetry Induced Strong Nonlinear Optical Effects in Spiral WS Nanosheets. *ACS Nano*, **2017**, 11, 4892-4898	16.7	79
211	A self-powered high-performance graphene/silicon ultraviolet photodetector with ultra-shallow junction: breaking the limit of silicon?. *Npj 2D Materials and Applications*, **2017**, 1,	8.8	144

210	Three-dimensional holey-graphene/niobia composite architectures for ultrahigh-rate energy storage. *Science*, **2017**, 356, 599-604	33.3	965
209	Self-Optimization of the Active Site of Molybdenum Disulfide by an Irreversible Phase Transition during Photocatalytic Hydrogen Evolution. *Angewandte Chemie - International Edition*, **2017**, 56, 7610-7614	11.4	175
208	Self-Optimization of the Active Site of Molybdenum Disulfide by an Irreversible Phase Transition during Photocatalytic Hydrogen Evolution. *Angewandte Chemie*, **2017**, 129, 7718-7722	3.6	46
207	Nonlinear photoluminescence in monolayer WS: parabolic emission and excitation fluence-dependent recombination dynamics. *Nanoscale*, **2017**, 9, 7235-7241	7.7	30
206	Ultrafine Graphene Nanomesh with Large On/Off Ratio for High-Performance Flexible Biosensors. *Advanced Functional Materials*, **2017**, 27, 1604096	15.6	78
205	Photodetectors: A Broadband Fluorographene Photodetector (Adv. Mater. 22/2017). *Advanced Materials*, **2017**, 29,	24	1
204	A Broadband Fluorographene Photodetector. *Advanced Materials*, **2017**, 29, 1700463	24	72
203	A Solution Processable High-Performance Thermoelectric Copper Selenide Thin Film. *Advanced Materials*, **2017**, 29, 1606662	24	67
202	Growth of Single-Crystalline Cadmium Iodide Nanoplates, CdI/MoS (WS, WSe) van der Waals Heterostructures, and Patterned Arrays. *ACS Nano*, **2017**, 11, 3413-3419	16.7	45
201	Solvent-Based Soft-Patterning of Graphene Lateral Heterostructures for Broadband High-Speed Metal–Semiconductor–Metal Photodetectors. *Advanced Materials Technologies*, **2017**, 2, 1600241	6.8	43
200	Light welding nanoparticles: from metal colloids to free-standing conductive metallic nanoparticle film. *Science China Materials*, **2017**, 60, 39-48	7.1	11
199	Vapor growth and interfacial carrier dynamics of high-quality CdS-CdSSe-CdS axial nanowire heterostructures. *Nano Energy*, **2017**, 32, 28-35	17.1	53
198	Gate-Induced Insulator to Band-Like Transport Transition in Organolead Halide Perovskite. *Journal of Physical Chemistry Letters*, **2017**, 8, 429-434	6.4	20
197	Composition-Modulated Two-Dimensional Semiconductor Lateral Heterostructures via Layer-Selected Atomic Substitution. *ACS Nano*, **2017**, 11, 961-967	16.7	86
196	Nanoplates: Synthesis of 2D Layered BiI3 Nanoplates, BiI3/WSe2van der Waals Heterostructures and Their Electronic, Optoelectronic Properties (Small 38/2017). *Small*, **2017**, 13,	11	2
195	Vertical Charge Transport and Negative Transconductance in Multilayer Molybdenum Disulfides. *Nano Letters*, **2017**, 17, 5495-5501	11.5	35
194	Synthesis of 2D Layered BiI Nanoplates, BiI /WSe van der Waals Heterostructures and Their Electronic, Optoelectronic Properties. *Small*, **2017**, 13, 1701034	11	41
193	Robust epitaxial growth of two-dimensional heterostructures, multiheterostructures, and superlattices. *Science*, **2017**, 357, 788-792	33.3	388

192	Van der Waals epitaxial growth and optoelectronics of large-scale WSe/SnS vertical bilayer p-n junctions. *Nature Communications*, **2017**, 8, 1906	17.4	258
191	General Strategy for Two-Dimensional Transition Metal Dichalcogenides by Ion Exchange. *Chemistry of Materials*, **2017**, 29, 10019-10026	9.6	14
190	Layer-by-Layer Degradation of Methylammonium Lead Tri-iodide Perovskite Microplates. *Joule*, **2017**, 1, 548-562	27.8	142
189	Confined Pyrolysis within Metal-Organic Frameworks To Form Uniform Ru Clusters for Efficient Oxidation of Alcohols. *Journal of the American Chemical Society*, **2017**, 139, 9795-9798	16.4	157
188	Hot graphene sponge cleans viscous crude-oil spill. *Science China Materials*, **2017**, 60, 681-682	7.1	3
187	Chemical vapor deposition growth of single-crystalline cesium lead halide microplatelets and heterostructures for optoelectronic applications. *Nano Research*, **2017**, 10, 1223-1233	10	75
186	Highly Sensitive Chemical Detection with Tunable Sensitivity and Selectivity from Ultrathin Platinum Nanowires. *Small*, **2017**, 13, 1602969	11	14
185	The Effect of Thermal Annealing on Charge Transport in Organolead Halide Perovskite Microplate Field-Effect Transistors. *Advanced Materials*, **2017**, 29, 1601959	24	81
184	Three-dimensional graphene membrane cathode for high energy density rechargeable lithium-air batteries in ambient conditions. *Nano Research*, **2017**, 10, 472-482	10	23
183	Graphene Q-switched distributed feedback fiber lasers with narrow linewidth approaching the transform limit. *Optics Express*, **2017**, 25, 8202-8211	3.3	20
182	Pushing the Performance Limit of Sub-100 nm Molybdenum Disulfide Transistors. *Nano Letters*, **2016**, 16, 6337-6342	11.5	91
181	Composition tunable ternary Pt-Ni-Co octahedra for optimized oxygen reduction activity. *Chemical Communications*, **2016**, 52, 11215-11218	5.8	33
180	Tuning the Catalytic Activity of a Metal-Organic Framework Derived Copper and Nitrogen Co-Doped Carbon Composite for Oxygen Reduction Reaction. *ACS Applied Materials & Interfaces*, **2016**, 8, 26769-26774	9.5	55
179	Three-dimensional macro-structures of two-dimensional nanomaterials. *Chemical Society Reviews*, **2016**, 45, 5541-5588	58.5	231
178	Functional Three-Dimensional Graphene/Polymer Composites. *ACS Nano*, **2016**, 10, 7231-47	16.7	245
177	Mechanically Shaped Two-Dimensional Covalent Organic Frameworks Reveal Crystallographic Alignment and Fast Li-Ion Conductivity. *Journal of the American Chemical Society*, **2016**, 138, 9767-70	16.4	177
176	Van der Waals heterostructures and devices. *Nature Reviews Materials*, **2016**, 1,	73.3	1262
175	A hyperaccumulation pathway to three-dimensional hierarchical porous nanocomposites for highly robust high-power electrodes. *Nature Communications*, **2016**, 7, 13432	17.4	54

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