

Pulickel M Ajayan

List of Publications by Citations

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464
papers

47,025
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210
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486
ext. papers

55,045
ext. citations

12.5
avg, IF

7.62
L-index

#	Paper	IF	Citations
464	High-efficiency two-dimensional Ruddlesden-Popper perovskite solar cells. <i>Nature</i> , 2016 , 536, 312-6	50.4	2161
463	Large scale growth and characterization of atomic hexagonal boron nitride layers. <i>Nano Letters</i> , 2010 , 10, 3209-15	11.5	1961
462	Exfoliated graphitic carbon nitride nanosheets as efficient catalysts for hydrogen evolution under visible light. <i>Advanced Materials</i> , 2013 , 25, 2452-6	24	1859
461	Atomic layers of hybridized boron nitride and graphene domains. <i>Nature Materials</i> , 2010 , 9, 430-5	27	1764
460	Vertical and in-plane heterostructures from WS ₂ /MoS ₂ monolayers. <i>Nature Materials</i> , 2014 , 13, 1135-42	27	1580
459	Intrinsic structural defects in monolayer molybdenum disulfide. <i>Nano Letters</i> , 2013 , 13, 2615-22	11.5	1418
458	Large-area vapor-phase growth and characterization of MoS(2) atomic layers on a SiO(2) substrate. <i>Small</i> , 2012 , 8, 966-71	11	1394
457	Vapour phase growth and grain boundary structure of molybdenum disulphide atomic layers. <i>Nature Materials</i> , 2013 , 12, 754-9	27	1384
456	Atomic cobalt on nitrogen-doped graphene for hydrogen generation. <i>Nature Communications</i> , 2015 , 6, 8668	17.4	1077
455	Wetting transparency of graphene. <i>Nature Materials</i> , 2012 , 11, 217-22	27	831
454	Defects Engineered Monolayer MoS ₂ for Improved Hydrogen Evolution Reaction. <i>Nano Letters</i> , 2016 , 16, 1097-103	11.5	794
453	In-plane heterostructures of graphene and hexagonal boron nitride with controlled domain sizes. <i>Nature Nanotechnology</i> , 2013 , 8, 119-24	28.7	687
452	A subthermionic tunnel field-effect transistor with an atomically thin channel. <i>Nature</i> , 2015 , 526, 91-5	50.4	622
451	Chemical vapor deposition growth of crystalline monolayer MoSe ₂ . <i>ACS Nano</i> , 2014 , 8, 5125-31	16.7	566
450	High Efficiency Photocatalytic Water Splitting Using 2D Fe ₂ O ₃ /g-C ₃ N ₄ Z-Scheme Catalysts. <i>Advanced Energy Materials</i> , 2017 , 7, 1700025	21.8	501
449	Achieving Highly Efficient, Selective, and Stable CO ₂ Reduction on Nitrogen-Doped Carbon Nanotubes. <i>ACS Nano</i> , 2015 , 9, 5364-71	16.7	451
448	Fracture toughness of graphene. <i>Nature Communications</i> , 2014 , 5, 3782	17.4	433

447	Controlled nanocutting of graphene. <i>Nano Research</i> , 2008 , 1, 116-122	10	424
446	Second harmonic microscopy of monolayer MoS ₂ . <i>Physical Review B</i> , 2013 , 87,	3.3	423
445	Atomically dispersed platinum supported on curved carbon supports for efficient electrocatalytic hydrogen evolution. <i>Nature Energy</i> , 2019 , 4, 512-518	62.3	419
444	Ultrathin high-temperature oxidation-resistant coatings of hexagonal boron nitride. <i>Nature Communications</i> , 2013 , 4, 2541	17.4	418
443	Light-induced lattice expansion leads to high-efficiency perovskite solar cells. <i>Science</i> , 2018 , 360, 67-70	33.3	413
442	Direct growth of graphene/hexagonal boron nitride stacked layers. <i>Nano Letters</i> , 2011 , 11, 2032-7	11.5	413
441	Two-Step Growth of Two-Dimensional WSe ₂ /MoSe ₂ Heterostructures. <i>Nano Letters</i> , 2015 , 15, 6135-41	11.5	401
440	Composites with carbon nanotubes and graphene: An outlook. <i>Science</i> , 2018 , 362, 547-553	33.3	396
439	Charge-transfer-based gas sensing using atomic-layer MoS ₂ . <i>Scientific Reports</i> , 2015 , 5, 8052	4.9	395
438	Three-dimensionally bonded spongy graphene material with super compressive elasticity and near-zero Poisson's ratio. <i>Nature Communications</i> , 2015 , 6, 6141	17.4	389
437	Graphene-Based Standalone Solar Energy Converter for Water Desalination and Purification. <i>ACS Nano</i> , 2018 , 12, 829-835	16.7	387
436	A metal-free electrocatalyst for carbon dioxide reduction to multi-carbon hydrocarbons and oxygenates. <i>Nature Communications</i> , 2016 , 7, 13869	17.4	385
435	Band gap engineering and layer-by-layer mapping of selenium-doped molybdenum disulfide. <i>Nano Letters</i> , 2014 , 14, 442-9	11.5	378
434	Room-temperature ferroelectricity in CuInP ₂ S ₆ ultrathin flakes. <i>Nature Communications</i> , 2016 , 7, 12357	17.4	355
433	Strain and structure heterogeneity in MoS ₂ atomic layers grown by chemical vapour deposition. <i>Nature Communications</i> , 2014 , 5, 5246	17.4	352
432	Incorporation of Nitrogen Defects for Efficient Reduction of CO ₂ via Two-Electron Pathway on Three-Dimensional Graphene Foam. <i>Nano Letters</i> , 2016 , 16, 466-70	11.5	351
431	Liquid Phase Exfoliation of Two-Dimensional Materials by Directly Probing and Matching Surface Tension Components. <i>Nano Letters</i> , 2015 , 15, 5449-54	11.5	342
430	Nitrogen-Doped Carbon Nanotube Arrays for High-Efficiency Electrochemical Reduction of CO ₂ : On the Understanding of Defects, Defect Density, and Selectivity. <i>Angewandte Chemie - International Edition</i> , 2015 , 54, 13701-5	16.4	315

429	Oxygenated monolayer carbon nitride for excellent photocatalytic hydrogen evolution and external quantum efficiency. <i>Nano Energy</i> , 2016 , 27, 138-146	17.1	303
428	Pyridinic-Nitrogen-Dominated Graphene Aerogels with Fe ^{Ni} Coordination for Highly Efficient Oxygen Reduction Reaction. <i>Advanced Functional Materials</i> , 2016 , 26, 5708-5717	15.6	301
427	Multisegmented Au-MnO ₂ /Carbon Nanotube Hybrid Coaxial Arrays for High-Power Supercapacitor Applications. <i>Journal of Physical Chemistry C</i> , 2010 , 114, 658-663	3.8	288
426	Highly Sensitive Detection of Polarized Light Using Anisotropic 2D ReS ₂ . <i>Advanced Functional Materials</i> , 2016 , 26, 1169-1177	15.6	286
425	Electrochemical CO ₂ Reduction with Atomic Iron-Dispersed on Nitrogen-Doped Graphene. <i>Advanced Energy Materials</i> , 2018 , 8, 1703487	21.8	277
424	Two-dimensional van der Waals materials. <i>Physics Today</i> , 2016 , 69, 38-44	0.9	256
423	Ultrafast formation of interlayer hot excitons in atomically thin MoS ₂ /WS ₂ heterostructures. <i>Nature Communications</i> , 2016 , 7, 12512	17.4	240
422	Self-optimizing, highly surface-active layered metal dichalcogenide catalysts for hydrogen evolution. <i>Nature Energy</i> , 2017 , 2,	62.3	240
421	Optoelectronic crystal of artificial atoms in strain-textured molybdenum disulphide. <i>Nature Communications</i> , 2015 , 6, 7381	17.4	237
420	A Bottom-Up Approach to Build 3D Architectures from Nanosheets for Superior Lithium Storage. <i>Advanced Functional Materials</i> , 2014 , 24, 125-130	15.6	235
419	Design Considerations for Unconventional Electrochemical Energy Storage Architectures. <i>Advanced Energy Materials</i> , 2015 , 5, 1402115	21.8	224
418	Temperature dependence of radial breathing mode Raman frequency of single-walled carbon nanotubes. <i>Physical Review B</i> , 2002 , 66,	3.3	223
417	Stable Light-Emitting Diodes Using Phase-Pure Ruddlesden-Popper Layered Perovskites. <i>Advanced Materials</i> , 2018 , 30, 1704217	24	210
416	Novel Liquid Precursor-Based Facile Synthesis of Large-Area Continuous, Single, and Few-Layer Graphene Films. <i>Chemistry of Materials</i> , 2010 , 22, 3457-3461	9.6	209
415	Wafer-scale monodomain films of spontaneously aligned single-walled carbon nanotubes. <i>Nature Nanotechnology</i> , 2016 , 11, 633-8	28.7	209
414	Facile Synthesis of Single Crystal Vanadium Disulfide Nanosheets by Chemical Vapor Deposition for Efficient Hydrogen Evolution Reaction. <i>Advanced Materials</i> , 2015 , 27, 5605-9	24	202
413	Boron- and Nitrogen-Substituted Graphene Nanoribbons as Efficient Catalysts for Oxygen Reduction Reaction. <i>Chemistry of Materials</i> , 2015 , 27, 1181-1186	9.6	202
412	An Atomically Layered InSe Avalanche Photodetector. <i>Nano Letters</i> , 2015 , 15, 3048-55	11.5	201

411	Deep eutectic solvents for cathode recycling of Li-ion batteries. <i>Nature Energy</i> , 2019 , 4, 339-345	62.3	199
410	Binary and ternary atomic layers built from carbon, boron, and nitrogen. <i>Advanced Materials</i> , 2012 , 24, 4878-95	24	197
409	Two-dimensional non-volatile programmable p-n junctions. <i>Nature Nanotechnology</i> , 2017 , 12, 901-906	28.7	196
408	Electrically insulating thermal nano-oils using 2D fillers. <i>ACS Nano</i> , 2012 , 6, 1214-20	16.7	189
407	Unveiling Active Sites for the Hydrogen Evolution Reaction on Monolayer MoS. <i>Advanced Materials</i> , 2017 , 29, 1701955	24	184
406	High temperature electrical energy storage: advances, challenges, and frontiers. <i>Chemical Society Reviews</i> , 2016 , 45, 5848-5887	58.5	182
405	Electrical performance of monolayer MoS ₂ field-effect transistors prepared by chemical vapor deposition. <i>Applied Physics Letters</i> , 2013 , 102, 193107	3.4	182
404	Exfoliation of a non-van der Waals material from iron ore hematite. <i>Nature Nanotechnology</i> , 2018 , 13, 602-609	28.7	179
403	Chemical Vapor Deposition of Monolayer Rhenium Disulfide (ReS ₂). <i>Advanced Materials</i> , 2015 , 27, 4640-84	8.4	177
402	Direct chemical conversion of graphene to boron- and nitrogen- and carbon-containing atomic layers. <i>Nature Communications</i> , 2014 , 5, 3193	17.4	169
401	Temperature-dependent phonon shifts in monolayer MoS ₂ . <i>Applied Physics Letters</i> , 2013 , 103, 093102	3.4	167
400	Critical Role of Interface and Crystallinity on the Performance and Photostability of Perovskite Solar Cell on Nickel Oxide. <i>Advanced Materials</i> , 2018 , 30, 1703879	24	163
399	A Scalable Approach to Dendrite-Free Lithium Anodes via Spontaneous Reduction of Spray-Coated Graphene Oxide Layers. <i>Advanced Materials</i> , 2018 , 30, e1801213	24	163
398	Marine corrosion protective coatings of hexagonal boron nitride thin films on stainless steel. <i>ACS Applied Materials & Interfaces</i> , 2013 , 5, 4129-35	9.5	162
397	Superior Potassium Ion Storage via Vertical MoS "Nano-Rose" with Expanded Interlayers on Graphene. <i>Small</i> , 2017 , 13, 1701471	11	161
396	Emerging Applications of Elemental 2D Materials. <i>Advanced Materials</i> , 2020 , 32, e1904302	24	159
395	Strategies for Dendrite-Free Anode in Aqueous Rechargeable Zinc Ion Batteries. <i>Advanced Energy Materials</i> , 2020 , 10, 2001599	21.8	158
394	Anomalous piezoelectricity in two-dimensional graphene nitride nanosheets. <i>Nature Communications</i> , 2014 , 5, 4284	17.4	157

393	High thermal conductivity of suspended few-layer hexagonal boron nitride sheets. <i>Nano Research</i> , 2014 , 7, 1232-1240	10	157
392	Stable Metallic 1T-WS ₂ Nanoribbons Intercalated with Ammonia Ions: The Correlation between Structure and Electrical/Optical Properties. <i>Advanced Materials</i> , 2015 , 27, 4837-44	24	151
391	Transforming Nickel Hydroxide into 3D Prussian Blue Analogue Array to Obtain Ni ₂ P/Fe ₂ P for Efficient Hydrogen Evolution Reaction. <i>Advanced Energy Materials</i> , 2018 , 8, 1800484	21.8	150
390	Surface functionalization of two-dimensional metal chalcogenides by Lewis acid-base chemistry. <i>Nature Nanotechnology</i> , 2016 , 11, 465-71	28.7	150
389	Carbon Nanotube-Encapsulated Noble Metal Nanoparticle Hybrid as a Cathode Material for Li-Oxygen Batteries. <i>Advanced Functional Materials</i> , 2014 , 24, 6516-6523	15.6	143
388	Formation of CuPd and CuPt Bimetallic Nanotubes by Galvanic Replacement Reaction. <i>Journal of Physical Chemistry C</i> , 2011 , 115, 9403-9409	3.8	136
387	Effect of H ₂ O adsorption on electron transport in a carbon nanotube. <i>Applied Physics Letters</i> , 2002 , 81, 2638-2640	3.4	136
386	Recent developments of transition metal phosphides as catalysts in the energy conversion field. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 23220-23243	13	135
385	Power from nature: designing green battery materials from electroactive quinone derivatives and organic polymers. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 12370-12386	13	134
384	Emerging Carbon-Based Heterogeneous Catalysts for Electrochemical Reduction of Carbon Dioxide into Value-Added Chemicals. <i>Advanced Materials</i> , 2019 , 31, e1804257	24	134
383	Full-color fluorescent carbon quantum dots. <i>Science Advances</i> , 2020 , 6,	14.3	133
382	Re Doping in 2D Transition Metal Dichalcogenides as a New Route to Tailor Structural Phases and Induced Magnetism. <i>Advanced Materials</i> , 2017 , 29, 1703754	24	130
381	Atomic Cobalt Covalently Engineered Interlayers for Superior Lithium-Ion Storage. <i>Advanced Materials</i> , 2018 , 30, e1802525	24	129
380	Metallic 1T phase source/drain electrodes for field effect transistors from chemical vapor deposited MoS ₂ . <i>APL Materials</i> , 2014 , 2, 092516	5.7	126
379	Synthesis of Millimeter-Scale Transition Metal Dichalcogenides Single Crystals. <i>Advanced Functional Materials</i> , 2016 , 26, 2009-2015	15.6	126
378	Tracking Structural Self-Reconstruction and Identifying True Active Sites toward Cobalt Oxychloride Precatalyst of Oxygen Evolution Reaction. <i>Advanced Materials</i> , 2019 , 31, e1805127	24	126
377	Quaternary 2D Transition Metal Dichalcogenides (TMDs) with Tunable Bandgap. <i>Advanced Materials</i> , 2017 , 29, 1702457	24	124
376	High-Lithium-Affinity Chemically Exfoliated 2D Covalent Organic Frameworks. <i>Advanced Materials</i> , 2019 , 31, e1901640	24	123

375	Electron Transfer Directed Antibacterial Properties of Graphene Oxide on Metals. <i>Advanced Materials</i> , 2018 , 30, 1702149	24	122
374	CoNi ₂ S ₄ -Graphene-2D-MoSe ₂ as an Advanced Electrode Material for Supercapacitors. <i>Advanced Energy Materials</i> , 2016 , 6, 1600341	21.8	120
373	Nickel Vacancies Boost Reconstruction in Nickel Hydroxide Electrocatalyst. <i>ACS Energy Letters</i> , 2018 , 3, 1373-1380	20.1	119
372	Nanomechanical cleavage of molybdenum disulphide atomic layers. <i>Nature Communications</i> , 2014 , 5, 3631	17.4	118
371	Worm-Shape Pt Nanocrystals Grown on Nitrogen-Doped Low-Defect Graphene Sheets: Highly Efficient Electrocatalysts for Methanol Oxidation Reaction. <i>Small</i> , 2017 , 13, 1603013	11	117
370	Controllable Codoping of Nitrogen and Sulfur in Graphene for Highly Efficient Li-Oxygen Batteries and Direct Methanol Fuel Cells. <i>Chemistry of Materials</i> , 2016 , 28, 1737-1745	9.6	113
369	Mass and Charge Transfer Coenhanced Oxygen Evolution Behaviors in CoFe-Layered Double Hydroxide Assembled on Graphene. <i>Advanced Materials Interfaces</i> , 2016 , 3, 1500782	4.6	113
368	High Strain Tolerant EMI Shielding Using Carbon Nanotube Network Stabilized Rubber Composite. <i>Advanced Materials Technologies</i> , 2017 , 2, 1700078	6.8	112
367	Characterizing energy dissipation in single-walled carbon nanotube polycarbonate composites. <i>Applied Physics Letters</i> , 2005 , 87, 063102	3.4	112
366	Graphene-protein field effect biosensors: glucose sensing. <i>Materials Today</i> , 2015 , 18, 513-522	21.8	110
365	Rhenium-Doped and Stabilized MoS Atomic Layers with Basal-Plane Catalytic Activity. <i>Advanced Materials</i> , 2018 , 30, e1803477	24	110
364	Atomically thin gallium layers from solid-melt exfoliation. <i>Science Advances</i> , 2018 , 4, e1701373	14.3	109
363	Controlled synthesis of Mo-doped Ni ₃ S ₂ nano-rods: an efficient and stable electro-catalyst for water splitting. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 1595-1602	13	108
362	Lithium storage mechanisms in purpurin based organic lithium ion battery electrodes. <i>Scientific Reports</i> , 2012 , 2, 960	4.9	108
361	Design principles for electronic charge transport in solution-processed vertically stacked 2D perovskite quantum wells. <i>Nature Communications</i> , 2018 , 9, 2130	17.4	108
360	Tellurium-Assisted Low-Temperature Synthesis of MoS ₂ and WS ₂ Monolayers. <i>ACS Nano</i> , 2015 , 9, 11658-11667	16.7	107
359	Hexagonal Boron Nitride and Graphite Oxide Reinforced Multifunctional Porous Cement Composites. <i>Advanced Functional Materials</i> , 2013 , 23, 5624-5630	15.6	106
358	Three-dimensional mesostructures as high-temperature growth templates, electronic cellular scaffolds, and self-propelled microrobots. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, E9455-E9464	11.5	104

357	Probing the phonon dispersion relations of graphite from the double-resonance process of Stokes and anti-Stokes Raman scatterings in multiwalled carbon nanotubes. <i>Physical Review B</i> , 2002 , 66,	3.3	104
356	Exfoliated 2D Transition Metal Disulfides for Enhanced Electrocatalysis of Oxygen Evolution Reaction in Acidic Medium. <i>Advanced Materials Interfaces</i> , 2016 , 3, 1500669	4.6	104
355	Effect of Precursor Solution Aging on the Crystallinity and Photovoltaic Performance of Perovskite Solar Cells. <i>Advanced Energy Materials</i> , 2017 , 7, 1602159	21.8	103
354	Carbon Nitrogen Nanotubes as Efficient Bifunctional Electrocatalysts for Oxygen Reduction and Evolution Reactions. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 11991-2000	9.5	103
353	Gold Nanoparticles and g-C ₃ N ₄ -Intercalated Graphene Oxide Membrane for Recyclable Surface Enhanced Raman Scattering. <i>Advanced Functional Materials</i> , 2017 , 27, 1701714	15.6	102
352	Strain-Induced Electronic Structure Changes in Stacked van der Waals Heterostructures. <i>Nano Letters</i> , 2016 , 16, 3314-20	11.5	101
351	Boron nitride-graphene nanocapacitor and the origins of anomalous size-dependent increase of capacitance. <i>Nano Letters</i> , 2014 , 14, 1739-44	11.5	100
350	Synthesis of large-scale atomic-layer SnS ₂ through chemical vapor deposition. <i>Nano Research</i> , 2017 , 10, 2386-2394	10	97
349	Square selenene and tellurene: novel group VI elemental 2D materials with nontrivial topological properties. <i>2D Materials</i> , 2017 , 4, 041003	5.9	96
348	Brittle Fracture of 2D MoSe. <i>Advanced Materials</i> , 2017 , 29, 1604201	24	95
347	Surface Tension Components Based Selection of Cosolvents for Efficient Liquid Phase Exfoliation of 2D Materials. <i>Small</i> , 2016 , 12, 2741-9	11	93
346	Highly In-Plane Optical and Electrical Anisotropy of 2D Germanium Arsenide. <i>Advanced Functional Materials</i> , 2018 , 28, 1707379	15.6	92
345	How Nitrogen-Doped Graphene Quantum Dots Catalyze Electroreduction of CO ₂ to Hydrocarbons and Oxygenates. <i>ACS Catalysis</i> , 2017 , 7, 6245-6250	13.1	91
344	Spectroscopic Signatures of AA' and AB Stacking of Chemical Vapor Deposited Bilayer MoS ₂ . <i>ACS Nano</i> , 2015 , 9, 12246-54	16.7	90
343	Fluorinated h-BN as a magnetic semiconductor. <i>Science Advances</i> , 2017 , 3, e1700842	14.3	87
342	Imaging the motion of electrons across semiconductor heterojunctions. <i>Nature Nanotechnology</i> , 2017 , 12, 36-40	28.7	86
341	Low-density three-dimensional foam using self-reinforced hybrid two-dimensional atomic layers. <i>Nature Communications</i> , 2014 , 5, 4541	17.4	82
340	Ni filled flexible multi-walled carbon nanotube/polystyrene composite films as efficient microwave absorbers. <i>Applied Physics Letters</i> , 2011 , 99, 113116	3.4	81

339	Tuning the Electrochemical Reactivity of Boron- and Nitrogen-Substituted Graphene. <i>Advanced Materials</i> , 2016 , 28, 6239-46	24	80
338	Pronounced Photovoltaic Response from Multilayered Transition-Metal Dichalcogenides PN-Junctions. <i>Nano Letters</i> , 2015 , 15, 7532-8	11.5	79
337	Hexagonal Boron Nitride-Based Electrolyte Composite for Li-Ion Battery Operation from Room Temperature to 150 °C. <i>Advanced Energy Materials</i> , 2016 , 6, 1600218	21.8	78
336	Nitrogen-Doped Carbon Nanotube Arrays for High-Efficiency Electrochemical Reduction of CO ₂ : On the Understanding of Defects, Defect Density, and Selectivity. <i>Angewandte Chemie</i> , 2015 , 127, 13905-13909	36.78	78
335	Conversion of non-van der Waals solids to 2D transition-metal chalcogenides. <i>Nature</i> , 2020 , 577, 492-496	50.4	76
334	Utilizing interfaces in carbon nanotube reinforced polymer composites for structural damping. <i>Journal of Materials Science</i> , 2006 , 41, 7824-7829	4.3	75
333	Growth-substrate induced performance degradation in chemically synthesized monolayer MoS ₂ field effect transistors. <i>Applied Physics Letters</i> , 2014 , 104, 203506	3.4	74
332	Controlled Electrodeposition Synthesis of Co-Ni-P Film as a Flexible and Inexpensive Electrode for Efficient Overall Water Splitting. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 31887-31896	9.5	72
331	Cryo-mediated exfoliation and fracturing of layered materials into 2D quantum dots. <i>Science Advances</i> , 2017 , 3, e1701500	14.3	70
330	Metal-Oxide-Mediated Subtractive Manufacturing of Two-Dimensional Carbon Nitride for High-Efficiency and High-Yield Photocatalytic H Evolution. <i>ACS Nano</i> , 2019 , 13, 11294-11302	16.7	66
329	Alloyed 2D Metal-Semiconductor Atomic Layer Junctions. <i>Nano Letters</i> , 2016 , 16, 1890-5	11.5	66
328	Temperature dependent electrical transport of disordered reduced graphene oxide. <i>2D Materials</i> , 2014 , 1, 011008	5.9	65
327	Etching-Doping Sedimentation Equilibrium Strategy: Accelerating Kinetics on Hollow Rh-Doped CoFe-Layered Double Hydroxides for Water Splitting. <i>Advanced Functional Materials</i> , 2020 , 30, 2003556	15.6	64
326	Observation of dynamic strain hardening in polymer nanocomposites. <i>ACS Nano</i> , 2011 , 5, 2715-22	16.7	64
325	Aligned Carbon Nanotube Stationary Phases for Electrochromatographic Chip Separations. <i>Chromatographia</i> , 2009 , 69, 473-480	2.1	64
324	Tunable electronics in large-area atomic layers of boron-nitrogen-carbon. <i>Nano Letters</i> , 2013 , 13, 3476-81	11.5	63
323	Synthesis of Low-Density, Carbon-Doped, Porous Hexagonal Boron Nitride Solids. <i>ACS Nano</i> , 2015 , 9, 12088-95	16.7	61
322	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

321	Reversible Formation of g-C ₃ N ₄ 3D Hydrogels through Ionic Liquid Activation: Gelation Behavior and Room-Temperature Gas-Sensing Properties. <i>Advanced Functional Materials</i> , 2017 , 27, 1700653	15.6	59
320	Fatigue of graphene. <i>Nature Materials</i> , 2020 , 19, 405-411	27	59
319	Charge-injection-induced dynamic screening and origin of hysteresis in field-modulated transport in single-wall carbon nanotubes. <i>Applied Physics Letters</i> , 2006 , 89, 162108	3-4	59
318	Correlating the three-dimensional atomic defects and electronic properties of two-dimensional transition metal dichalcogenides. <i>Nature Materials</i> , 2020 , 19, 867-873	27	58
317	Electromechanically Responsive Liquid Crystal Elastomer Nanocomposites for Active Cell Culture. <i>ACS Macro Letters</i> , 2016 , 5, 1386-1390	6.6	56
316	Strong coupling and pressure engineering in WSe ₂ /MoSe ₂ heterobilayers. <i>Nature Physics</i> , 2021 , 17, 92-98	6.2	56
315	Active Control of Plasmon-Exciton Coupling in MoS ₂ /Ag Hybrid Nanostructures. <i>Advanced Optical Materials</i> , 2016 , 4, 1463-1469	8.1	55
314	Super-elasticity of three-dimensionally cross-linked graphene materials all the way to deep cryogenic temperatures. <i>Science Advances</i> , 2019 , 5, eaav2589	14.3	53
313	Layer Engineering of 2D Semiconductor Junctions. <i>Advanced Materials</i> , 2016 , 28, 5126-32	24	53
312	Designing nanoscaled hybrids from atomic layered boron nitride with silver nanoparticle deposition. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 3148	13	52
311	Highly versatile SPION encapsulated PLGA nanoparticles as photothermal ablaters of cancer cells and as multimodal imaging agents. <i>Biomaterials Science</i> , 2017 , 5, 432-443	7-4	51
310	Integrated Energy Aerogel of N,S-rGO/WSe/NiFe-LDH for Both Energy Conversion and Storage. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 32756-32766	9.5	50
309	Experimental Determination of the Ionization Energies of MoSe, WS, and MoS on SiO Using Photoemission Electron Microscopy. <i>ACS Nano</i> , 2017 , 11, 8223-8230	16.7	50
308	Spectral fingerprinting of structural defects in plasma-treated carbon nanotubes. <i>Journal of Materials Research</i> , 2003 , 18, 2515-2521	2.5	50
307	Carbon Dioxide Hydrogenation over a Metal-Free Carbon-Based Catalyst. <i>ACS Catalysis</i> , 2017 , 7, 4497-4503	3.1	49
306	2D TiS ₂ Layers: A Superior Nonlinear Optical Limiting Material. <i>Advanced Optical Materials</i> , 2017 , 5, 1700713	13	49
305	Nanosized Pt anchored onto 3D nitrogen-doped graphene nanoribbons towards efficient methanol electrooxidation. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 19696-19701	13	49
304	Graphene Supported MoS Structures with High Defect Density for an Efficient HER Electrocatalysts. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 12629-12638	9.5	49

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