

Mark C Hersam

List of Publications by Year in descending order

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553
papers

54,266
citations

1099

112
h-index

1676

214
g-index

570
all docs

570
docs citations

570
times ranked

52524
citing authors

#	ARTICLE	IF	CITATIONS
1	Emerging Device Applications for Semiconducting Two-Dimensional Transition Metal Dichalcogenides. ACS Nano, 2014, 8, 1102-1120.	14.6	2,307
2	Sorting carbon nanotubes by electronic structure using density differentiation. Nature Nanotechnology, 2006, 1, 60-65.	31.5	2,075
3	Synthesis of borophenes: Anisotropic, two-dimensional boron polymorphs. Science, 2015, 350, 1513-1516.	12.6	2,047
4	Effective Passivation of Exfoliated Black Phosphorus Transistors against Ambient Degradation. Nano Letters, 2014, 14, 6964-6970.	9.1	1,294
5	Mixed-dimensional van der Waals heterostructures. Nature Materials, 2017, 16, 170-181.	27.5	1,220
6	Carbon nanomaterials for electronics, optoelectronics, photovoltaics, and sensing. Chemical Society Reviews, 2013, 42, 2824-2860.	38.1	1,105
7	Diverse Applications of Nanomedicine. ACS Nano, 2017, 11, 2313-2381.	14.6	976
8	Progress towards monodisperse single-walled carbon nanotubes. Nature Nanotechnology, 2008, 3, 387-394.	31.5	861
9	Multi-terminal memtransistors from polycrystalline monolayer molybdenum disulfide. Nature, 2018, 554, 500-504.	27.8	705
10	Solution Phase Production of Graphene with Controlled Thickness via Density Differentiation. Nano Letters, 2009, 9, 4031-4036.	9.1	701
11	Covalent functionalization and passivation of exfoliated black phosphorus via aryl diazonium chemistry. Nature Chemistry, 2016, 8, 597-602.	13.6	687
12	Synthesis and chemistry of elemental 2D materials. Nature Reviews Chemistry, 2017, 1, .	30.2	671
13	Solvent Exfoliation of Electronic-Grade, Two-Dimensional Black Phosphorus. ACS Nano, 2015, 9, 3596-3604.	14.6	655
14	Three-Dimensional Printing of High-Content Graphene Scaffolds for Electronic and Biomedical Applications. ACS Nano, 2015, 9, 4636-4648.	14.6	609
15	Ultrahigh sensitivity and layer-dependent sensing performance of phosphorene-based gas sensors. Nature Communications, 2015, 6, 8632.	12.8	598
16	Current Saturation and Electrical Breakdown in Multiwalled Carbon Nanotubes. Physical Review Letters, 2001, 86, 3128-3131.	7.8	574
17	Inkjet Printing of High Conductivity, Flexible Graphene Patterns. Journal of Physical Chemistry Letters, 2013, 4, 1347-1351.	4.6	573
18	Gate-tunable memristive phenomena mediated by grain boundaries in single-layer MoS ₂ . Nature Nanotechnology, 2015, 10, 403-406.	31.5	564

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19	Minimizing Graphene Defects Enhances Titania Nanocomposite-Based Photocatalytic Reduction of CO ₂ for Improved Solar Fuel Production. Nano Letters, 2011, 11, 2865-2870.	9.1	529
20	Enrichment of Single-Walled Carbon Nanotubes by Diameter in Density Gradients. Nano Letters, 2005, 5, 713-718.	9.1	496
21	Colloidal Properties and Stability of Graphene Oxide Nanomaterials in the Aquatic Environment. Environmental Science & Technology, 2013, 47, 6288-6296.	10.0	492
22	Minimizing Oxidation and Stable Nanoscale Dispersion Improves the Biocompatibility of Graphene in the Lung. Nano Letters, 2011, 11, 5201-5207.	9.1	480
23	Thin Film Nanotube Transistors Based on Self-Assembled, Aligned, Semiconducting Carbon Nanotube Arrays. ACS Nano, 2008, 2, 2445-2452.	14.6	472
24	Neuromorphic nanoelectronic materials. Nature Nanotechnology, 2020, 15, 517-528.	31.5	464
25	High-Resolution Patterning of Graphene by Screen Printing with a Silicon Stencil for Highly Flexible Printed Electronics. Advanced Materials, 2015, 27, 109-115.	21.0	430
26	Room-temperature molecular-resolution characterization of self-assembled organic monolayers on epitaxial graphene. Nature Chemistry, 2009, 1, 206-211.	13.6	409
27	2D materials advances: from large scale synthesis and controlled heterostructures to improved characterization techniques, defects and applications. 2D Materials, 2016, 3, 042001.	4.4	408
28	Functional inks and printing of two-dimensional materials. Chemical Society Reviews, 2018, 47, 3265-3300.	38.1	401
29	Borophene as a prototype for synthetic 2D materials development. Nature Nanotechnology, 2018, 13, 444-450.	31.5	392
30	Gate-tunable carbon nanotube-MoS ₂ heterojunction p-n diode. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 18076-18080.	7.1	373
31	Room Temperature Negative Differential Resistance through Individual Organic Molecules on Silicon Surfaces. Nano Letters, 2004, 4, 55-59.	9.1	369
32	Printed, Sub-3V Digital Circuits on Plastic from Aqueous Carbon Nanotube Inks. ACS Nano, 2010, 4, 4388-4395.	14.6	362
33	Band-like transport in high mobility unencapsulated single-layer MoS ₂ transistors. Applied Physics Letters, 2013, 102, .	3.3	359
34	Polyelemental nanoparticle libraries. Science, 2016, 352, 1565-1569.	12.6	332
35	Colored Semitransparent Conductive Coatings Consisting of Monodisperse Metallic Single-Walled Carbon Nanotubes. Nano Letters, 2008, 8, 1417-1422.	9.1	328
36	Slip-Stacked Perylenediimides as an Alternative Strategy for High Efficiency Nonfullerene Acceptors in Organic Photovoltaics. Journal of the American Chemical Society, 2014, 136, 16345-16356.	13.7	320

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37	2D materials for quantum information science. Nature Reviews Materials, 2019, 4, 669-684.	48.7	305
38	Chemically homogeneous and thermally reversible oxidation of epitaxial graphene. Nature Chemistry, 2012, 4, 305-309.	13.6	300
39	Gravure Printing of Graphene for Large-area Flexible Electronics. Advanced Materials, 2014, 26, 4533-4538.	21.0	298
40	Hybrid, Gate-Tunable, van der Waals "n Heterojunctions from Pentacene and MoS ₂ . Nano Letters, 2016, 16, 497-503.	9.1	295
41	Influence of Stoichiometry on the Optical and Electrical Properties of Chemical Vapor Deposition Derived MoS ₂ . ACS Nano, 2014, 8, 10551-10558.	14.6	281
42	Photoactuators and motors based on carbon nanotubes with selective chirality distributions. Nature Communications, 2014, 5, 2983.	12.8	269
43	Borophene Synthesis on Au(111). ACS Nano, 2019, 13, 3816-3822.	14.6	261
44	Rapid and Versatile Photonic Annealing of Graphene Inks for Flexible Printed Electronics. Advanced Materials, 2015, 27, 6683-6688.	21.0	258
45	Nanotechnology research directions for societal needs in 2020: summary of international study. Journal of Nanoparticle Research, 2011, 13, 897-919.	1.9	240
46	Highly Concentrated Graphene Solutions via Polymer Enhanced Solvent Exfoliation and Iterative Solvent Exchange. Journal of the American Chemical Society, 2010, 132, 17661-17663.	13.7	239
47	In Situ Characterization of Lifetime and Morphology in Operating Bulk Heterojunction Organic Photovoltaic Devices by Impedance Spectroscopy. Advanced Energy Materials, 2012, 2, 120-128.	19.5	237
48	Chemically Tailoring Semiconducting Two-Dimensional Transition Metal Dichalcogenides and Black Phosphorus. ACS Nano, 2016, 10, 3900-3917.	14.6	232
49	Aggregation and Stability of Reduced Graphene Oxide: Complex Roles of Divalent Cations, pH, and Natural Organic Matter. Environmental Science & Technology, 2015, 49, 10886-10893.	10.0	230
50	Low-Frequency Electronic Noise in Single-Layer MoS ₂ Transistors. Nano Letters, 2013, 13, 4351-4355.	9.1	221
51	Anisotropic Thermal Conductivity of Exfoliated Black Phosphorus. Advanced Materials, 2015, 27, 8017-8022.	21.0	221
52	Surface Oxidation of Graphene Oxide Determines Membrane Damage, Lipid Peroxidation, and Cytotoxicity in Macrophages in a Pulmonary Toxicity Model. ACS Nano, 2018, 12, 1390-1402.	14.6	221
53	Electronic Transport in Two-Dimensional Materials. Annual Review of Physical Chemistry, 2018, 69, 299-325.	10.8	217
54	Silicon-based molecular nanotechnology. Nanotechnology, 2000, 11, 70-76.	2.6	214

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55	Crystallography, Morphology, Electronic Structure, and Transport in Non-Fullerene/Non-Indacenodithienothiophene Polymer:Y6 Solar Cells. Journal of the American Chemical Society, 2020, 142, 14532-14547.	13.7	214
56	The Future of Layer-by-Layer Assembly: A Tribute to <i>ACS Nano</i> Associate Editor Helmuth MÄ¶hwald. ACS Nano, 2019, 13, 6151-6169.	14.6	211
57	Atomic Covalent Functionalization of Graphene. Accounts of Chemical Research, 2013, 46, 77-86.	15.6	209
58	In Situ Thermal Decomposition of Exfoliated Two-Dimensional Black Phosphorus. Journal of Physical Chemistry Letters, 2015, 6, 773-778.	4.6	209
59	Aerosol Jet Printed, Low Voltage, Electrolyte Gated Carbon Nanotube Ring Oscillators with Sub-5 Î¼s Stage Delays. Nano Letters, 2013, 13, 954-960.	9.1	207
60	Stable aqueous dispersions of optically and electronically active phosphorene. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 11688-11693.	7.1	206
61	Nanotechnology Research Directions for Societal Needs in 2020. , 2011, , .		202
62	Emerging Methods for Producing Monodisperse Graphene Dispersions. Journal of Physical Chemistry Letters, 2010, 1, 544-549.	4.6	200
63	Ultrafast Exciton Dissociation and Long-Lived Charge Separation in a Photovoltaic Pentaceneâ€“MoS₂ van der Waals Heterojunction. Nano Letters, 2017, 17, 164-169.	9.1	195
64	Processing and properties of highly enriched double-wall carbon nanotubes. Nature Nanotechnology, 2009, 4, 64-70.	31.5	192
65	Elucidating the Photoresponse of Ultrathin MoS₂ Field-Effect Transistors by Scanning Photocurrent Microscopy. Journal of Physical Chemistry Letters, 2013, 4, 2508-2513.	4.6	190
66	Humidity Sensing through Reversible Isomerization of a Covalent Organic Framework. Journal of the American Chemical Society, 2020, 142, 783-791.	13.7	190
67	Solution-processed carbon nanotube thin-film complementary static random access memory. Nature Nanotechnology, 2015, 10, 944-948.	31.5	184
68	Biocompatible Nanoscale Dispersion of Single-Walled Carbon Nanotubes Minimizes in vivo Pulmonary Toxicity. Nano Letters, 2010, 10, 1664-1670.	9.1	183
69	Rotationally Commensurate Growth of MoS₂ on Epitaxial Graphene. ACS Nano, 2016, 10, 1067-1075.	14.6	176
70	Effect of Dimensionality on the Photocatalytic Behavior of Carbonâ€“Titania Nanosheet Composites: Charge Transfer at Nanomaterial Interfaces. Journal of Physical Chemistry Letters, 2012, 3, 1760-1765.	4.6	174
71	Identification and Optimization of Carbon Radicals on Hydrated Graphene Oxide for Ubiquitous Antibacterial Coatings. ACS Nano, 2016, 10, 10966-10980.	14.6	172
72	Solution-Based Processing of Monodisperse Two-Dimensional Nanomaterials. Accounts of Chemical Research, 2017, 50, 943-951.	15.6	172

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73	Nearly Single-Chirality Single-Walled Carbon Nanotubes Produced via Orthogonal Iterative Density Gradient Ultracentrifugation. <i>Advanced Materials</i> , 2011, 23, 2185-2190.	21.0	168
74	Ring-fusion as a perylene diimide dimer design concept for high-performance non-fullerene organic photovoltaic acceptors. <i>Chemical Science</i> , 2016, 7, 3543-3555.	7.4	168
75	Seeding Atomic Layer Deposition of High- κ Dielectrics on Epitaxial Graphene with Organic Self-Assembled Monolayers. <i>ACS Nano</i> , 2011, 5, 5223-5232.	14.6	167
76	Scalable, Self-Aligned Printing of Flexible Graphene Micro-Supercapacitors. <i>Advanced Energy Materials</i> , 2017, 7, 1700285.	19.5	167
77	High-Concentration Aqueous Dispersions of Graphene Using Nonionic, Biocompatible Block Copolymers. <i>Journal of Physical Chemistry Letters</i> , 2011, 2, 1004-1008.	4.6	161
78	Pluronic F108 Coating Decreases the Lung Fibrosis Potential of Multiwall Carbon Nanotubes by Reducing Lysosomal Injury. <i>Nano Letters</i> , 2012, 12, 3050-3061.	9.1	159
79	Isolation of single-walled carbon nanotube enantiomers by density differentiation. <i>Nano Research</i> , 2009, 2, 69-77.	10.4	158
80	Controlled Growth of Platinum Nanoparticles on Strontium Titanate Nanocubes by Atomic Layer Deposition. <i>Small</i> , 2009, 5, 750-757.	10.0	158
81	Thermally conductive ultra-low- κ dielectric layers based on two-dimensional covalent organic frameworks. <i>Nature Materials</i> , 2021, 20, 1142-1148.	27.5	158
82	Integrated Ultramicroelectrode-Nanopipet Probe for Concurrent Scanning Electrochemical Microscopy and Scanning Ion Conductance Microscopy. <i>Analytical Chemistry</i> , 2010, 82, 1270-1276.	6.5	157
83	Structural and Electrical Functionality of NiO Interfacial Films in Bulk Heterojunction Organic Solar Cells. <i>Chemistry of Materials</i> , 2011, 23, 2218-2226.	6.7	157
84	Direct oriented growth of armchair graphene nanoribbons on germanium. <i>Nature Communications</i> , 2015, 6, 8006.	12.8	157
85	Substrate-Induced Nanoscale Undulations of Borophene on Silver. <i>Nano Letters</i> , 2016, 16, 6622-6627.	9.1	155
86	Graphene Oxide Interlayers for Robust, High-Efficiency Organic Photovoltaics. <i>Journal of Physical Chemistry Letters</i> , 2011, 2, 3006-3012.	4.6	154
87	CdO as the Archetypical Transparent Conducting Oxide. Systematics of Dopant Ionic Radius and Electronic Structure Effects on Charge Transport and Band Structure. <i>Journal of the American Chemical Society</i> , 2005, 127, 8796-8804.	13.7	150
88	Scanning Tunneling Microscopy, Spectroscopy, and Nanolithography of Epitaxial Graphene Chemically Modified with Aryl Moieties. <i>Journal of the American Chemical Society</i> , 2010, 132, 15399-15403.	13.7	144
89	Fundamental Performance Limits of Carbon Nanotube Thin-Film Transistors Achieved Using Hybrid Molecular Dielectrics. <i>ACS Nano</i> , 2012, 6, 7480-7488.	14.6	142
90	Investigation of Band-Offsets at Monolayer-Multilayer MoS ₂ Junctions by Scanning Photocurrent Microscopy. <i>Nano Letters</i> , 2015, 15, 2278-2284.	9.1	141

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91	Encapsulation of Carbon Nanotubes by Self-Assembling Peptide Amphiphiles. <i>Langmuir</i> , 2005, 21, 4705-4709.	3.5	139
92	High-Performance Solid-State Supercapacitors and Microsupercapacitors Derived from Printable Graphene Inks. <i>Advanced Energy Materials</i> , 2016, 6, 1600909.	19.5	139
93	Borophene synthesis beyond the single-atomic-layer limit. <i>Nature Materials</i> , 2022, 21, 35-40.	27.5	137
94	Enhanced Conductivity, Adhesion, and Environmental Stability of Printed Graphene Inks with Nitrocellulose. <i>Chemistry of Materials</i> , 2017, 29, 2332-2340.	6.7	134
95	Interface Characterization and Control of 2D Materials and Heterostructures. <i>Advanced Materials</i> , 2018, 30, e1801586.	21.0	134
96	Flexible Gigahertz Transistors Derived from Solution-Based Single-Layer Graphene. <i>Nano Letters</i> , 2012, 12, 1184-1188.	9.1	133
97	High-Speed, Inkjet-Printed Carbon Nanotube/Zinc Tin Oxide Hybrid Complementary Ring Oscillators. <i>Nano Letters</i> , 2014, 14, 3683-3687.	9.1	133
98	All-Printed, Foldable Organic Thin-Film Transistors on Glassine Paper. <i>Advanced Materials</i> , 2015, 27, 7058-7064.	21.0	133
99	Emerging Opportunities for Two-Dimensional Materials in Lithium-Ion Batteries. <i>ACS Energy Letters</i> , 2017, 2, 2026-2034.	17.4	131
100	Intermixing and periodic self-assembly of borophene line defects. <i>Nature Materials</i> , 2018, 17, 783-788.	27.5	129
101	Synthesis of borophane polymorphs through hydrogenation of borophene. <i>Science</i> , 2021, 371, 1143-1148.	12.6	129
102	Ultrahigh-Vacuum Tip-Enhanced Raman Spectroscopy. <i>Chemical Reviews</i> , 2017, 117, 4961-4982.	47.7	128
103	Highly concentrated carbon nanotube admixture for nano-fiber reinforced cementitious materials. <i>Cement and Concrete Composites</i> , 2012, 34, 612-617.	10.7	126
104	Thickness sorting of two-dimensional transition metal dichalcogenides via copolymer-assisted density gradient ultracentrifugation. <i>Nature Communications</i> , 2014, 5, 5478.	12.8	126
105	Recent Advances in Tip-Enhanced Raman Spectroscopy. <i>Journal of Physical Chemistry Letters</i> , 2014, 5, 3125-3130.	4.6	125
106	Systematic Merging of Nonfullerene Acceptor –Extension and Tetrafluorination Strategies Affords Polymer Solar Cells with >16% Efficiency. <i>Journal of the American Chemical Society</i> , 2021, 143, 6123-6139.	13.7	125
107	Intramolecular Insight into Adsorbate–Substrate Interactions via Low-Temperature, Ultrahigh-Vacuum Tip-Enhanced Raman Spectroscopy. <i>Journal of the American Chemical Society</i> , 2014, 136, 3881-3887.	13.7	123
108	Emerging Carbon and Post-Carbon Nanomaterial Inks for Printed Electronics. <i>Journal of Physical Chemistry Letters</i> , 2015, 6, 620-626.	4.6	122

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109	Probing Out-of-Plane Charge Transport in Black Phosphorus with Graphene-Contacted Vertical Field-Effect Transistors. Nano Letters, 2016, 16, 2580-2585.	9.1	119
110	Exciton Energy Transfer in Pairs of Single-Walled Carbon Nanotubes. Nano Letters, 2008, 8, 1363-1367.	9.1	118
111	Hydrodynamic Characterization of Surfactant Encapsulated Carbon Nanotubes Using an Analytical Ultracentrifuge. ACS Nano, 2008, 2, 2291-2300.	14.6	118
112	High-Resolution Transfer Printing of Graphene Lines for Fully Printed, Flexible Electronics. ACS Nano, 2017, 11, 7431-7439.	14.6	116
113	In Situ X-ray Study of the Solid Electrolyte Interphase (SEI) Formation on Graphene as a Model Li-ion Battery Anode. Chemistry of Materials, 2012, 24, 3038-3043.	6.7	114
114	Recent Developments in Carbon Nanotube Sorting and Selective Growth. MRS Bulletin, 2010, 35, 315-321.	3.5	110
115	Polychiral Semiconducting Carbon Nanotubeâ€“Fullerene Solar Cells. Nano Letters, 2014, 14, 5308-5314.	9.1	109
116	Dispersion of CaCO ₃ nanoparticles by sonication and surfactant treatment for application in fly ashâ€“cement systems. Materials and Structures/Materiaux Et Constructions, 2014, 47, 1011-1023.	3.1	108
117	Solid-source growth and atomic-scale characterization of graphene on Ag(111). Nature Communications, 2013, 4, .	12.8	107
118	Use of a Pro-Fibrogenic Mechanism-Based Predictive Toxicological Approach for Tiered Testing and Decision Analysis of Carbonaceous Nanomaterials. ACS Nano, 2015, 9, 3032-3043.	14.6	107
119	Three-Dimensional Printing of Cytocompatible, Thermally Conductive Hexagonal Boron Nitride Nanocomposites. Nano Letters, 2018, 18, 3488-3493.	9.1	106
120	Pump-Probe Spectroscopy of Exciton Dynamics in (6,5) Carbon Nanotubes. Journal of Physical Chemistry C, 2007, 111, 3831-3835.	3.1	105
121	Differences in the Toxicological Potential of 2D versus Aggregated Molybdenum Disulfide in the Lung. Small, 2015, 11, 5079-5087.	10.0	105
122	Deposition and Release of Graphene Oxide Nanomaterials Using a Quartz Crystal Microbalance. Environmental Science & Technology, 2014, 48, 961-969.	10.0	103
123	Hybrid Gate Dielectric Materials for Unconventional Electronic Circuitry. Accounts of Chemical Research, 2014, 47, 1019-1028.	15.6	103
124	Electronic and Mechanical Properties of Grapheneâ€“Germanium Interfaces Grown by Chemical Vapor Deposition. Nano Letters, 2015, 15, 7414-7420.	9.1	103
125	Silicon Growth at the Two-Dimensional Limit on Ag(111). ACS Nano, 2014, 8, 7538-7547.	14.6	101
126	Solution-Processed Dielectrics Based on Thickness-Sorted Two-Dimensional Hexagonal Boron Nitride Nanosheets. Nano Letters, 2015, 15, 7029-7036.	9.1	101

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127	Fully Inkjet-Printed, Mechanically Flexible MoS ₂ Nanosheet Photodetectors. ACS Applied Materials & Interfaces, 2019, 11, 5675-5681.	8.0	100
128	Broad-Spectral-Response Nanocarbon Bulk-Heterojunction Excitonic Photodetectors. Advanced Materials, 2013, 25, 3433-3437.	21.0	99
129	Mutual Photoluminescence Quenching and Photovoltaic Effect in Large-Area Single-Layer MoS ₂ -Polymer Heterojunctions. ACS Nano, 2016, 10, 10573-10579.	14.6	99
130	Point Defects and Grain Boundaries in Rotationally Commensurate MoS ₂ on Epitaxial Graphene. Journal of Physical Chemistry C, 2016, 120, 20798-20805.	3.1	99
131	G-quadruplex organic frameworks. Nature Chemistry, 2017, 9, 466-472.	13.6	99
132	Novel ALD Chemistry Enabled Low-Temperature Synthesis of Lithium Fluoride Coatings for Durable Lithium Anodes. ACS Applied Materials & Interfaces, 2018, 10, 26972-26981.	8.0	99
133	Assembly and Electronic Applications of Colloidal Nanomaterials. Advanced Materials, 2017, 29, 1603895.	21.0	98
134	Multiscale, Hierarchical Patterning of Graphene by Conformal Wrinkling. Nano Letters, 2016, 16, 7121-7127.	9.1	96
135	Conformational Contrast of Surface-Mediated Molecular Switches Yields Ångstrom-Scale Spatial Resolution in Ultrahigh Vacuum Tip-Enhanced Raman Spectroscopy. Nano Letters, 2016, 16, 7774-7778.	9.1	96
136	High-frequency performance of scaled carbon nanotube array field-effect transistors. Applied Physics Letters, 2012, 101, 053123.	3.3	94
137	Interactions of Graphene Oxide Nanomaterials with Natural Organic Matter and Metal Oxide Surfaces. Environmental Science & Technology, 2014, 48, 9382-9390.	10.0	92
138	Subnanowatt Carbon Nanotube Complementary Logic Enabled by Threshold Voltage Control. Nano Letters, 2013, 13, 4810-4814.	9.1	91
139	Where Are We Heading in Nanotechnology Environmental Health and Safety and Materials Characterization?. ACS Nano, 2015, 9, 5627-5630.	14.6	91
140	Low-Voltage Complementary Electronics from Ion-Gel-Gated Vertical Van der Waals Heterostructures. Advanced Materials, 2016, 28, 3742-3748.	21.0	91
141	Borophene-graphene heterostructures. Science Advances, 2019, 5, eaax6444.	10.3	89
142	Probing charge transport at the single-molecule level on silicon by using cryogenic ultra-high vacuum scanning tunneling microscopy. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 8838-8843.	7.1	87
143	Tip-Enhanced Raman Imaging: An Emergent Tool for Probing Biology at the Nanoscale. ACS Nano, 2013, 7, 885-888.	14.6	87
144	Large-Area, Low-Voltage, Antiambipolar Heterojunctions from Solution-Processed Semiconductors. Nano Letters, 2015, 15, 416-421.	9.1	87

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145	Nanoscale Chemical Imaging of a Dynamic Molecular Phase Boundary with Ultrahigh Vacuum Tip-Enhanced Raman Spectroscopy. Nano Letters, 2016, 16, 3898-3904.	9.1	87
146	Aerosol-Jet-Printed Graphene Immunosensor for Label-Free Cytokine Monitoring in Serum. ACS Applied Materials & Interfaces, 2020, 12, 8592-8603.	8.0	87
147	Molecular-Resolution Interrogation of a Porphyrin Monolayer by Ultrahigh Vacuum Tip-Enhanced Raman and Fluorescence Spectroscopy. Nano Letters, 2015, 15, 4114-4120.	9.1	86
148	Comprehensive Enhancement of Nanostructured Lithium-Ion Battery Cathode Materials via Conformal Graphene Dispersion. Nano Letters, 2017, 17, 2539-2546.	9.1	81
149	Defect-Induced Photoluminescence from Dark Excitonic States in Individual Single-Walled Carbon Nanotubes. Nano Letters, 2009, 9, 2010-2014.	9.1	80
150	Properties and Application of Double-Walled Carbon Nanotubes Sorted by Outer-Wall Electronic Type. ACS Nano, 2011, 5, 1459-1467.	14.6	80
151	Sorting Single-Walled Carbon Nanotubes by Electronic Type Using Nonionic, Biocompatible Block Copolymers. ACS Nano, 2010, 4, 4725-4732.	14.6	79
152	Self-assembly of electronically abrupt borophene/organic lateral heterostructures. Science Advances, 2017, 3, e1602356.	10.3	79
153	Evaluating Single-Molecule Stokes and Anti-Stokes SERS for Nanoscale Thermometry. Journal of Physical Chemistry C, 2015, 119, 21116-21124.	3.1	78
154	Solution-Based Processing of Optoelectronically Active Indium Selenide. Advanced Materials, 2018, 30, e1802990.	21.0	78
155	Assessing and Mitigating the Hazard Potential of Two-Dimensional Materials. ACS Nano, 2018, 12, 6360-6377.	14.6	78
156	Expression of interfacial Seebeck coefficient through grain boundary engineering with multi-layer graphene nanoplatelets. Energy and Environmental Science, 2020, 13, 4114-4121.	30.8	78
157	Fluorinating π -Extended Molecular Acceptors Yields Highly Connected Crystal Structures and Low Reorganization Energies for Efficient Solar Cells. Advanced Energy Materials, 2020, 10, 2000635.	19.5	78
158	Nano Day: Celebrating the Next Decade of Nanoscience and Nanotechnology. ACS Nano, 2016, 10, 9093-9103.	14.6	77
159	Ultracentrifugation of single-walled nanotubes. Materials Today, 2007, 10, 59-60.	14.2	76
160	3D Anisotropic Thermal Conductivity of Exfoliated Rhenium Disulfide. Advanced Materials, 2017, 29, 1700650.	21.0	76
161	High-Efficiency All-Polymer Solar Cells with Poly-Small-Molecule Acceptors Having π -Extended Units with Broad Near-IR Absorption. ACS Energy Letters, 2021, 6, 728-738.	17.4	74
162	Resolving the In-Plane Anisotropic Properties of Black Phosphorus. Small Methods, 2017, 1, 1700143.	8.6	73

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163	Dual-Gated MoS ₂ Memtransistor Crossbar Array. <i>Advanced Functional Materials</i> , 2020, 30, 2003683.	14.9	73
164	Nanoscale In Situ Characterization of Li-ion Battery Electrochemistry Via Scanning Ion Conductance Microscopy. <i>Advanced Materials</i> , 2011, 23, 5613-5617.	21.0	72
165	Suppressing Manganese Dissolution from Lithium Manganese Oxide Spinel Cathodes with Single-Layer Graphene. <i>Advanced Energy Materials</i> , 2015, 5, 1500646.	19.5	72
166	Layer-by-Layer Assembled 2D Montmorillonite Dielectrics for Solution-Processed Electronics. <i>Advanced Materials</i> , 2016, 28, 63-68.	21.0	72
167	Chemical vapor deposition of monolayer MoS ₂ directly on ultrathin Al ₂ O ₃ for low-power electronics. <i>Applied Physics Letters</i> , 2017, 110, .	3.3	72
168	Atomic-Scale Templates Patterned by Ultrahigh Vacuum Scanning Tunneling Microscopy on Silicon. <i>Annual Review of Physical Chemistry</i> , 2009, 60, 193-216.	10.8	71
169	Probing Molecular-Scale Catalytic Interactions between Oxygen and Cobalt Phthalocyanine Using Tip-Enhanced Raman Spectroscopy. <i>Journal of the American Chemical Society</i> , 2018, 140, 5948-5954.	13.7	71
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