Mark C Hersam

List of Publications by Citations

515 papers	42,971 citations	102 h-index	192 g-index
570 ext. papers	48,755 ext. citations	12.4 avg, IF	8.02 L-index

#	Paper	IF	Citations
515	Emerging device applications for semiconducting two-dimensional transition metal dichalcogenides. *ACS Nano*, **2014**, 8, 1102-20	16.7	1909
514	Sorting carbon nanotubes by electronic structure using density differentiation. *Nature Nanotechnology*, **2006**, 1, 60-5	28.7	1870
513	Synthesis of borophenes: Anisotropic, two-dimensional boron polymorphs. *Science*, **2015**, 350, 1513-6	33.3	1479
512	Effective passivation of exfoliated black phosphorus transistors against ambient degradation. *Nano Letters*, **2014**, 14, 6964-70	11.5	1117
511	Carbon nanomaterials for electronics, optoelectronics, photovoltaics, and sensing. *Chemical Society Reviews*, **2013**, 42, 2824-60	58.5	941
510	Mixed-dimensional van der Waals heterostructures. *Nature Materials*, **2017**, 16, 170-181	27	897
509	Progress towards monodisperse single-walled carbon nanotubes. *Nature Nanotechnology*, **2008**, 3, 387-94	28.7	793
508	Diverse Applications of Nanomedicine. *ACS Nano*, **2017**, 11, 2313-2381	16.7	714
507	Solution phase production of graphene with controlled thickness via density differentiation. *Nano Letters*, **2009**, 9, 4031-6	11.5	643
506	Covalent functionalization and passivation of exfoliated black phosphorus via aryl diazonium chemistry. *Nature Chemistry*, **2016**, 8, 597-602	17.6	574
505	Solvent exfoliation of electronic-grade, two-dimensional black phosphorus. *ACS Nano*, **2015**, 9, 3596-604	16.7	561
504	Three-dimensional printing of high-content graphene scaffolds for electronic and biomedical applications. *ACS Nano*, **2015**, 9, 4636-48	16.7	508
503	Minimizing graphene defects enhances titania nanocomposite-based photocatalytic reduction of CO2 for improved solar fuel production. *Nano Letters*, **2011**, 11, 2865-70	11.5	499
502	Current saturation and electrical breakdown in multiwalled carbon nanotubes. *Physical Review Letters*, **2001**, 86, 3128-31	7.4	493
501	Ultrahigh sensitivity and layer-dependent sensing performance of phosphorene-based gas sensors. *Nature Communications*, **2015**, 6, 8632	17.4	491
500	Inkjet Printing of High Conductivity, Flexible Graphene Patterns. *Journal of Physical Chemistry Letters*, **2013**, 4, 1347-51	6.4	489
499	Synthesis and chemistry of elemental 2D materials. *Nature Reviews Chemistry*, **2017**, 1,	34.6	475

498	Multi-terminal memtransistors from polycrystalline monolayer molybdenum disulfide. *Nature*, **2018**, 554, 500-504	50.4	469
497	Enrichment of single-walled carbon nanotubes by diameter in density gradients. *Nano Letters*, **2005**, 5, 713-8	11.5	441
496	Minimizing oxidation and stable nanoscale dispersion improves the biocompatibility of graphene in the lung. *Nano Letters*, **2011**, 11, 5201-7	11.5	427
495	Gate-tunable memristive phenomena mediated by grain boundaries in single-layer MoS2. *Nature Nanotechnology*, **2015**, 10, 403-6	28.7	426
494	Thin film nanotube transistors based on self-assembled, aligned, semiconducting carbon nanotube arrays. *ACS Nano*, **2008**, 2, 2445-52	16.7	424
493	Colloidal properties and stability of graphene oxide nanomaterials in the aquatic environment. *Environmental Science & Technology*, **2013**, 47, 6288-96	10.3	410
492	Room-temperature molecular-resolution characterization of self-assembled organic monolayers on epitaxial graphene. *Nature Chemistry*, **2009**, 1, 206-11	17.6	373
491	Room Temperature Negative Differential Resistance through Individual Organic Molecules on Silicon Surfaces. *Nano Letters*, **2004**, 4, 55-59	11.5	344
490	High-resolution patterning of graphene by screen printing with a silicon stencil for highly flexible printed electronics. *Advanced Materials*, **2015**, 27, 109-15	24	336
489	Printed, sub-3V digital circuits on plastic from aqueous carbon nanotube inks. *ACS Nano*, **2010**, 4, 4388-95	16.7	323
488	Band-like transport in high mobility unencapsulated single-layer MoS2 transistors. *Applied Physics Letters*, **2013**, 102, 173107	3.4	316
487	Gate-tunable carbon nanotube-MoS2 heterojunction p-n diode. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 18076-80	11.5	304
486	2D materials advances: from large scale synthesis and controlled heterostructures to improved characterization techniques, defects and applications. *2D Materials*, **2016**, 3, 042001	5.9	297
485	Colored semitransparent conductive coatings consisting of monodisperse metallic single-walled carbon nanotubes. *Nano Letters*, **2008**, 8, 1417-22	11.5	294
484	Slip-stacked perylenediimides as an alternative strategy for high efficiency nonfullerene acceptors in organic photovoltaics. *Journal of the American Chemical Society*, **2014**, 136, 16345-56	16.4	290
483	Functional inks and printing of two-dimensional materials. *Chemical Society Reviews*, **2018**, 47, 3265-3300	38.5	268
482	Chemically homogeneous and thermally reversible oxidation of epitaxial graphene. *Nature Chemistry*, **2012**, 4, 305-9	17.6	260
481	Gravure printing of graphene for large-area flexible electronics. *Advanced Materials*, **2014**, 26, 4533-8	24	252

480	Polyelemental nanoparticle libraries. *Science*, **2016**, 352, 1565-9	33.3	244
479	Hybrid, Gate-Tunable, van der Waals p-n Heterojunctions from Pentacene and MoS2. *Nano Letters*, **2016**, 16, 497-503	11.5	240
478	Borophene as a prototype for synthetic 2D materials development. *Nature Nanotechnology*, **2018**, 13, 444-450	28.7	237
477	Photoactuators and motors based on carbon nanotubes with selective chirality distributions. *Nature Communications*, **2014**, 5, 2983	17.4	223
476	Rapid and Versatile Photonic Annealing of Graphene Inks for Flexible Printed Electronics. *Advanced Materials*, **2015**, 27, 6683-8	24	220
475	Highly concentrated graphene solutions via polymer enhanced solvent exfoliation and iterative solvent exchange. *Journal of the American Chemical Society*, **2010**, 132, 17661-3	16.4	215
474	Influence of stoichiometry on the optical and electrical properties of chemical vapor deposition derived MoS2. *ACS Nano*, **2014**, 8, 10551-8	16.7	209
473	Neuromorphic nanoelectronic materials. *Nature Nanotechnology*, **2020**, 15, 517-528	28.7	207
472	In Situ Characterization of Lifetime and Morphology in Operating Bulk Heterojunction Organic Photovoltaic Devices by Impedance Spectroscopy. *Advanced Energy Materials*, **2012**, 2, 120-128	21.8	207
471	Silicon-based molecular nanotechnology. *Nanotechnology*, **2000**, 11, 70-76	3.4	197
470	Chemically Tailoring Semiconducting Two-Dimensional Transition Metal Dichalcogenides and Black Phosphorus. *ACS Nano*, **2016**, 10, 3900-17	16.7	192
469	Low-frequency electronic noise in single-layer MoS2 transistors. *Nano Letters*, **2013**, 13, 4351-5	11.5	188
468	Aerosol jet printed, low voltage, electrolyte gated carbon nanotube ring oscillators with sub-5 ⊠ stage delays. *Nano Letters*, **2013**, 13, 954-60	11.5	187
467	Emerging Methods for Producing Monodisperse Graphene Dispersions. *Journal of Physical Chemistry Letters*, **2010**, 1, 544-549	6.4	183
466	Aggregation and Stability of Reduced Graphene Oxide: Complex Roles of Divalent Cations, pH, and Natural Organic Matter. *Environmental Science & Technology*, **2015**, 49, 10886-93	10.3	182
465	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	11.5	179
464	Anisotropic Thermal Conductivity of Exfoliated Black Phosphorus. *Advanced Materials*, **2015**, 27, 8017-2224		178
463	Processing and properties of highly enriched double-wall carbon nanotubes. *Nature Nanotechnology*, **2009**, 4, 64-70	28.7	176

462	Atomic covalent functionalization of graphene. *Accounts of Chemical Research*, **2013**, 46, 77-86	24.3	173
461	In Situ Thermal Decomposition of Exfoliated Two-Dimensional Black Phosphorus. *Journal of Physical Chemistry Letters*, **2015**, 6, 773-8	6.4	172
460	Elucidating the Photoresponse of Ultrathin MoS2 Field-Effect Transistors by Scanning Photocurrent Microscopy. *Journal of Physical Chemistry Letters*, **2013**, 4, 2508-2513	6.4	169
459	Biocompatible nanoscale dispersion of single-walled carbon nanotubes minimizes in vivo pulmonary toxicity. *Nano Letters*, **2010**, 10, 1664-70	11.5	168
458	Solution-processed carbon nanotube thin-film complementary static random access memory. *Nature Nanotechnology*, **2015**, 10, 944-8	28.7	163
457	Effect of Dimensionality on the Photocatalytic Behavior of Carbon-Titania Nanosheet Composites: Charge Transfer at Nanomaterial Interfaces. *Journal of Physical Chemistry Letters*, **2012**, 3, 1760-5	6.4	163
456	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	16.7	154
455	Rotationally Commensurate Growth of MoS2 on Epitaxial Graphene. *ACS Nano*, **2016**, 10, 1067-75	16.7	154
454	High-Concentration Aqueous Dispersions of Graphene Using Nonionic, Biocompatible Block Copolymers. *Journal of Physical Chemistry Letters*, **2011**, 2, 1004-1008	6.4	153
453	Nanotechnology Research Directions for Societal Needs in 2020 **2011**,		151
452	Ring-fusion as a perylenediimide dimer design concept for high-performance non-fullerene organic photovoltaic acceptors. *Chemical Science*, **2016**, 7, 3543-3555	9.4	149
451	Seeding atomic layer deposition of high-k dielectrics on epitaxial graphene with organic self-assembled monolayers. *ACS Nano*, **2011**, 5, 5223-32	16.7	149
450	Nearly single-chirality single-walled carbon nanotubes produced via orthogonal iterative density gradient ultracentrifugation. *Advanced Materials*, **2011**, 23, 2185-90	24	149
449	2D materials for quantum information science. *Nature Reviews Materials*, **2019**, 4, 669-684	73.3	146
448	Electronic Transport in Two-Dimensional Materials. *Annual Review of Physical Chemistry*, **2018**, 69, 299-325	15.7	145
447	Graphene Oxide Interlayers for Robust, High-Efficiency Organic Photovoltaics. *Journal of Physical Chemistry Letters*, **2011**, 2, 3006-3012	6.4	145
446	Controlled growth of platinum nanoparticles on strontium titanate nanocubes by atomic layer deposition. *Small*, **2009**, 5, 750-7	11	145
445	Pluronic F108 coating decreases the lung fibrosis potential of multiwall carbon nanotubes by reducing lysosomal injury. *Nano Letters*, **2012**, 12, 3050-61	11.5	142

444	Integrated ultramicroelectrode-nanopipet probe for concurrent scanning electrochemical microscopy and scanning ion conductance microscopy. *Analytical Chemistry*, **2010**, 82, 1270-6	7.8	141
443	Structural and Electrical Functionality of NiO Interfacial Films in Bulk Heterojunction Organic Solar Cells. *Chemistry of Materials*, **2011**, 23, 2218-2226	9.6	141
442	Isolation of single-walled carbon nanotube enantiomers by density differentiation. *Nano Research*, **2009**, 2, 69-77	10	138
441	Scalable, Self-Aligned Printing of Flexible Graphene Micro-Supercapacitors. *Advanced Energy Materials*, **2017**, 7, 1700285	21.8	137
440	Substrate-Induced Nanoscale Undulations of Borophene on Silver. *Nano Letters*, **2016**, 16, 6622-6627	11.5	136
439	Ultrafast Exciton Dissociation and Long-Lived Charge Separation in a Photovoltaic Pentacene-MoS van der Waals Heterojunction. *Nano Letters*, **2017**, 17, 164-169	11.5	135
438	Borophene Synthesis on Au(111). *ACS Nano*, **2019**, 13, 3816-3822	16.7	134
437	Direct oriented growth of armchair graphene nanoribbons on germanium. *Nature Communications*, **2015**, 6, 8006	17.4	134
436	Scanning tunneling microscopy, spectroscopy, and nanolithography of epitaxial graphene chemically modified with aryl moieties. *Journal of the American Chemical Society*, **2010**, 132, 15399-403	16.4	132
435	Solution-Based Processing of Monodisperse Two-Dimensional Nanomaterials. *Accounts of Chemical Research*, **2017**, 50, 943-951	24.3	131
434	CdO as the archetypical transparent conducting oxide. Systematics of dopant ionic radius and electronic structure effects on charge transport and band structure. *Journal of the American Chemical Society*, **2005**, 127, 8796-804	16.4	130
433	Fundamental performance limits of carbon nanotube thin-film transistors achieved using hybrid molecular dielectrics. *ACS Nano*, **2012**, 6, 7480-8	16.7	129
432	The Future of Layer-by-Layer Assembly: A Tribute to ACS Nano Associate Editor Helmuth Möwald. *ACS Nano*, **2019**, 13, 6151-6169	16.7	127
431	Identification and Optimization of Carbon Radicals on Hydrated Graphene Oxide for Ubiquitous Antibacterial Coatings. *ACS Nano*, **2016**, 10, 10966-10980	16.7	127
430	Encapsulation of carbon nanotubes by self-assembling peptide amphiphiles. *Langmuir*, **2005**, 21, 4705-9	4	127
429	High-speed, inkjet-printed carbon nanotube/zinc tin oxide hybrid complementary ring oscillators. *Nano Letters*, **2014**, 14, 3683-7	11.5	122
428	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	16.4	120
427	All-Printed, Foldable Organic Thin-Film Transistors on Glassine Paper. *Advanced Materials*, **2015**, 27, 7058-64	21	118

426	High-Performance Solid-State Supercapacitors and Microsupercapacitors Derived from Printable Graphene Inks. *Advanced Energy Materials*, **2016**, 6, 1600909	21.8	117
425	Flexible gigahertz transistors derived from solution-based single-layer graphene. *Nano Letters*, **2012**, 12, 1184-8	11.5	117
424	Investigation of band-offsets at monolayer-multilayer MoS$_2$ junctions by scanning photocurrent microscopy. *Nano Letters*, **2015**, 15, 2278-84	11.5	115
423	Enhanced Conductivity, Adhesion, and Environmental Stability of Printed Graphene Inks with Nitrocellulose. *Chemistry of Materials*, **2017**, 29, 2332-2340	9.6	111
422	Recent Advances in Tip-Enhanced Raman Spectroscopy. *Journal of Physical Chemistry Letters*, **2014**, 5, 3125-30	6.4	109
421	Emerging Carbon and Post-Carbon Nanomaterial Inks for Printed Electronics. *Journal of Physical Chemistry Letters*, **2015**, 6, 620-6	6.4	109
420	Intramolecular insight into adsorbate-substrate interactions via low-temperature, ultrahigh-vacuum tip-enhanced Raman spectroscopy. *Journal of the American Chemical Society*, **2014**, 136, 3881-7	16.4	108
419	Exciton energy transfer in pairs of single-walled carbon nanotubes. *Nano Letters*, **2008**, 8, 1363-7	11.5	107
418	Probing Out-of-Plane Charge Transport in Black Phosphorus with Graphene-Contacted Vertical Field-Effect Transistors. *Nano Letters*, **2016**, 16, 2580-5	11.5	106
417	Highly concentrated carbon nanotube admixture for nano-fiber reinforced cementitious materials. *Cement and Concrete Composites*, **2012**, 34, 612-617	8.6	105
416	Ultrahigh-Vacuum Tip-Enhanced Raman Spectroscopy. *Chemical Reviews*, **2017**, 117, 4961-4982	68.1	104
415	Hydrodynamic characterization of surfactant encapsulated carbon nanotubes using an analytical ultracentrifuge. *ACS Nano*, **2008**, 2, 2291-300	16.7	102
414	Polychiral semiconducting carbon nanotube-fullerene solar cells. *Nano Letters*, **2014**, 14, 5308-14	11.5	101
413	Recent Developments in Carbon Nanotube Sorting and Selective Growth. *MRS Bulletin*, **2010**, 35, 315-321	3.2	97
412	Thickness sorting of two-dimensional transition metal dichalcogenides via copolymer-assisted density gradient ultracentrifugation. *Nature Communications*, **2014**, 5, 5478	17.4	95
411	Solid-source growth and atomic-scale characterization of graphene on Ag(111). *Nature Communications*, **2013**, 4,	17.4	95
410	Hybrid gate dielectric materials for unconventional electronic circuitry. *Accounts of Chemical Research*, **2014**, 47, 1019-28	24.3	94
409	Silicon growth at the two-dimensional limit on Ag(111). *ACS Nano*, **2014**, 8, 7538-47	16.7	93

408	Pump-Probe Spectroscopy of Exciton Dynamics in (6,5) Carbon Nanotubes. *Journal of Physical Chemistry C*, **2007**, 111, 3831-3835	3.8	93
407	Deposition and release of graphene oxide nanomaterials using a quartz crystal microbalance. *Environmental Science & Technology*, **2014**, 48, 961-9	10.3	92
406	Broad-spectral-response nanocarbon bulk-heterojunction excitonic photodetectors. *Advanced Materials*, **2013**, 25, 3433-7	24	92
405	Intermixing and periodic self-assembly of borophene line defects. *Nature Materials*, **2018**, 17, 783-788	27	90
404	Use of a pro-fibrogenic mechanism-based predictive toxicological approach for tiered testing and decision analysis of carbonaceous nanomaterials. *ACS Nano*, **2015**, 9, 3032-43	16.7	90
403	Humidity Sensing through Reversible Isomerization of a Covalent Organic Framework. *Journal of the American Chemical Society*, **2020**, 142, 783-791	16.4	90
402	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	11.5	87
401	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	9.6	87
400	Interface Characterization and Control of 2D Materials and Heterostructures. *Advanced Materials*, **2018**, 30, e1801586	24	85
399	Point Defects and Grain Boundaries in Rotationally Commensurate MoS2 on Epitaxial Graphene. *Journal of Physical Chemistry C*, **2016**, 120, 20798-20805	3.8	84
398	Emerging Opportunities for Two-Dimensional Materials in Lithium-Ion Batteries. *ACS Energy Letters* , **2017**, 2, 2026-2034	20.1	84
397	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, 8838-43	11.5	84
396	Electronic and Mechanical Properties of Graphene-Germanium Interfaces Grown by Chemical Vapor Deposition. *Nano Letters*, **2015**, 15, 7414-20	11.5	83
395	High-Resolution Transfer Printing of Graphene Lines for Fully Printed, Flexible Electronics. *ACS Nano*, **2017**, 11, 7431-7439	16.7	83
394	High-frequency performance of scaled carbon nanotube array field-effect transistors. *Applied Physics Letters*, **2012**, 101, 053123	3.4	83
393	Subnanowatt carbon nanotube complementary logic enabled by threshold voltage control. *Nano Letters*, **2013**, 13, 4810-4	11.5	82
392	Nanoscale Chemical Imaging of a Dynamic Molecular Phase Boundary with Ultrahigh Vacuum Tip-Enhanced Raman Spectroscopy. *Nano Letters*, **2016**, 16, 3898-904	11.5	81
391	Tip-enhanced Raman imaging: an emergent tool for probing biology at the nanoscale. *ACS Nano*, **2013**, 7, 885-8	16.7	79

390	Solution-Processed Dielectrics Based on Thickness-Sorted Two-Dimensional Hexagonal Boron Nitride Nanosheets. *Nano Letters*, **2015**, 15, 7029-36	11.5	78
389	Interactions of graphene oxide nanomaterials with natural organic matter and metal oxide surfaces. *Environmental Science & Technology*, **2014**, 48, 9382-90	10.3	78
388	Assembly and Electronic Applications of Colloidal Nanomaterials. *Advanced Materials*, **2017**, 29, 1603895	24	78
387	Dispersion of CaCO3 nanoparticles by sonication and surfactant treatment for application in fly ashcement systems. *Materials and Structures/Materiaux Et Constructions*, **2014**, 47, 1011-1023	3.4	78
386	Differences in the Toxicological Potential of 2D versus Aggregated Molybdenum Disulfide in the Lung. *Small*, **2015**, 11, 5079-87	11	76
385	Multiscale, Hierarchical Patterning of Graphene by Conformal Wrinkling. *Nano Letters*, **2016**, 16, 7121-7127	11.5	75
384	Mutual Photoluminescence Quenching and Photovoltaic Effect in Large-Area Single-Layer MoS-Polymer Heterojunctions. *ACS Nano*, **2016**, 10, 10573-10579	16.7	74
383	Properties and application of double-walled carbon nanotubes sorted by outer-wall electronic type. *ACS Nano*, **2011**, 5, 1459-67	16.7	73
382	Sorting single-walled carbon nanotubes by electronic type using nonionic, biocompatible block copolymers. *ACS Nano*, **2010**, 4, 4725-32	16.7	73
381	G-quadruplex organic frameworks. *Nature Chemistry*, **2017**, 9, 466-472	17.6	72
380	Molecular-Resolution Interrogation of a Porphyrin Monolayer by Ultrahigh Vacuum Tip-Enhanced Raman and Fluorescence Spectroscopy. *Nano Letters*, **2015**, 15, 4114-20	11.5	71
379	Low-Voltage Complementary Electronics from Ion-Gel-Gated Vertical Van der Waals Heterostructures. *Advanced Materials*, **2016**, 28, 3742-8	24	70
378	Defect-induced photoluminescence from dark excitonic states in individual single-walled carbon nanotubes. *Nano Letters*, **2009**, 9, 2010-4	11.5	70
377	Large-area, low-voltage, antiambipolar heterojunctions from solution-processed semiconductors. *Nano Letters*, **2015**, 15, 416-21	11.5	68
376	Three-Dimensional Printing of Cytocompatible, Thermally Conductive Hexagonal Boron Nitride Nanocomposites. *Nano Letters*, **2018**, 18, 3488-3493	11.5	67
375	Comprehensive Enhancement of Nanostructured Lithium-Ion Battery Cathode Materials via Conformal Graphene Dispersion. *Nano Letters*, **2017**, 17, 2539-2546	11.5	66
374	Novel ALD Chemistry Enabled Low-Temperature Synthesis of Lithium Fluoride Coatings for Durable Lithium Anodes. *ACS Applied Materials & Interfaces*, **2018**, 10, 26972-26981	9.5	66
373	Atomic-scale templates patterned by ultrahigh vacuum scanning tunneling microscopy on silicon. *Annual Review of Physical Chemistry*, **2009**, 60, 193-216	15.7	66

372	Room temperature nanofabrication of atomically registeredheteromolecular organosilicon nanostructures using multistepfeedback controlled lithography. *Applied Physics Letters*, **2004**, 85, 2619-2621	3.4	66
371	Nanoscale in situ characterization of Li-ion battery electrochemistry via scanning ion conductance microscopy. *Advanced Materials*, **2011**, 23, 5613-7	24	65
370	Self-assembly of electronically abrupt borophene/organic lateral heterostructures. *Science Advances*, **2017**, 3, e1602356	14.3	64
369	Printed indium gallium zinc oxide transistors. Self-assembled nanodielectric effects on low-temperature combustion growth and carrier mobility. *ACS Applied Materials & Interfaces*, **2013**, 5, 11884-93	9.5	63
368	Ultracentrifugation of single-walled nanotubes. *Materials Today*, **2007**, 10, 59-60	21.8	63
367	Reduced contact resistance in inkjet printed high-performance amorphous indium gallium zinc oxide transistors. *ACS Applied Materials & Interfaces*, **2012**, 4, 1614-9	9.5	62
366	Nanoscale Structure and Morphology of Atomic Layer Deposition Platinum on SrTiO3 (001). *Chemistry of Materials*, **2009**, 21, 516-521	9.6	62
365	Quantifying the semiconducting fraction in single-walled carbon nanotube samples through comparative atomic force and photoluminescence microscopies. *Nano Letters*, **2009**, 9, 3203-8	11.5	62
364	Tuning the Properties of Transparent Oxide Conductors. Dopant Ion Size and Electronic Structure Effects on CdO-Based Transparent Conducting Oxides. Ga- and In-Doped CdO Thin Films Grown by MOCVD. *Chemistry of Materials*, **2008**, 20, 220-230	9.6	61
363	Evaluating Single-Molecule Stokes and Anti-Stokes SERS for Nanoscale Thermometry. *Journal of Physical Chemistry C*, **2015**, 119, 21116-21124	3.8	60
362	Suppressing Manganese Dissolution from Lithium Manganese Oxide Spinel Cathodes with Single-Layer Graphene. *Advanced Energy Materials*, **2015**, 5, 1500646	21.8	60
361	Covalently functionalized double-walled carbon nanotubes combine high sensitivity and selectivity in the electrical detection of small molecules. *Journal of the American Chemical Society*, **2013**, 135, 2306-12	16.4	60
360	Solution-Based Processing of Optoelectronically Active Indium Selenide. *Advanced Materials*, **2018**, 30, e1802990	24	59
359	Ambient-processable high capacitance hafnia-organic self-assembled nanodielectrics. *Journal of the American Chemical Society*, **2013**, 135, 8926-39	16.4	59
358	Large-area, electronically monodisperse, aligned single-walled carbon nanotube thin films fabricated by evaporation-driven self-assembly. *Small*, **2013**, 9, 45-51	11	59
357	Electronically Monodisperse Single-Walled Carbon Nanotube Thin Films as Transparent Conducting Anodes in Organic Photovoltaic Devices. *Advanced Energy Materials*, **2011**, 1, 785-791	21.8	59
356	Hot Microcontact Printing for Patterning ITO Surfaces. Methodology, Morphology, Microstructure, and OLED Charge Injection Barrier Imaging. *Langmuir*, **2003**, 19, 86-93	4	59
355	Self-assembly and photopolymerization of sub-2 nm one-dimensional organic nanostructures on graphene. *Journal of the American Chemical Society*, **2012**, 134, 16759-64	16.4	58

354	Observed suppression of room temperature negative differential resistance in organic monolayers on Si(100). *Nanotechnology*, **2004**, 15, S452-S458	3.4	58
353	Chemical vapor deposition of monolayer MoS2 directly on ultrathin Al2O3 for low-power electronics. *Applied Physics Letters*, **2017**, 110, 053101	3.4	57
352	Chemically resolved interface structure of epitaxial graphene on SiC(0001). *Physical Review Letters*, **2013**, 111, 215501	7.4	57
351	Quantitatively enhanced reliability and uniformity of high-□dielectrics on graphene enabled by self-assembled seeding layers. *Nano Letters*, **2013**, 13, 1162-7	11.5	57
350	Resolving the In-Plane Anisotropic Properties of Black Phosphorus. *Small Methods*, **2017**, 1, 1700143	12.8	56
349	Assessing and Mitigating the Hazard Potential of Two-Dimensional Materials. *ACS Nano*, **2018**, 12, 6360-6377	13.7	56
348	Nano Day: Celebrating the Next Decade of Nanoscience and Nanotechnology. *ACS Nano*, **2016**, 10, 9093-9103	13.9	56
347	Improved Monodispersity of Plasmonic Nanoantennas via Centrifugal Processing. *Journal of Physical Chemistry Letters*, **2011**, 2, 218-222	6.4	55
346	Fully Inkjet-Printed, Mechanically Flexible MoS Nanosheet Photodetectors. *ACS Applied Materials & Interfaces*, **2019**, 11, 5675-5681	9.5	53
345	3D Anisotropic Thermal Conductivity of Exfoliated Rhenium Disulfide. *Advanced Materials*, **2017**, 29, 1702650	24	53
344	Probing carbon nanotube-surfactant interactions with two-dimensional DOSY NMR. *Journal of the American Chemical Society*, **2013**, 135, 6750-3	16.4	53
343	Structural analysis of PTCDA monolayers on epitaxial graphene with ultra-high vacuum scanning tunneling microscopy and high-resolution X-ray reflectivity. *Surface Science*, **2011**, 605, 1685-1693	1.8	53
342	Aerosol-Jet-Printed Graphene Immunosensor for Label-Free Cytokine Monitoring in Serum. *ACS Applied Materials & Interfaces*, **2020**, 12, 8592-8603	9.5	52
341	Graphene oxide enhances cellular delivery of hydrophilic small molecules by co-incubation. *ACS Nano*, **2014**, 8, 10168-77	16.7	52
340	Layer-by-Layer Assembled 2D Montmorillonite Dielectrics for Solution-Processed Electronics. *Advanced Materials*, **2016**, 28, 63-8	24	52
339	Combustion-Assisted Photonic Annealing of Printable Graphene Inks via Exothermic Binders. *ACS Applied Materials & Interfaces*, **2017**, 9, 29418-29423	9.5	51
338	Tuning the Composition and Nanostructure of Pt/Ir Films via Anodized Aluminum Oxide Templated Atomic Layer Deposition. *Advanced Functional Materials*, **2010**, 20, 3099-3105	15.6	51
337	Rapid and Large-Area Characterization of Exfoliated Black Phosphorus Using Third-Harmonic Generation Microscopy. *Journal of Physical Chemistry Letters*, **2017**, 8, 1343-1350	6.4	50

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