Mauricio Terrones

List of Publications by Citations

694 papers	56,038 citations	116 h-index	216 g-index
751 ext. papers	62,022 ext. citations	9.2 avg, IF	7.57 L-index

#	Paper	IF	Citations
694	Progress, challenges, and opportunities in two-dimensional materials beyond graphene. *ACS Nano*, **2013**, 7, 2898-926	16.7	3414
693	Recent Advances in Two-Dimensional Materials beyond Graphene. *ACS Nano*, **2015**, 9, 11509-39	16.7	1581
692	Vertical and in-plane heterostructures from WS2/MoS2 monolayers. *Nature Materials*, **2014**, 13, 1135-4227		1580
691	Extraordinary room-temperature photoluminescence in triangular WS2 monolayers. *Nano Letters*, **2013**, 13, 3447-54	11.5	1145
690	Identification of individual and few layers of WS2 using Raman Spectroscopy. *Scientific Reports*, **2013**, 3,	4.9	911
689	Transition metal dichalcogenides and beyond: synthesis, properties, and applications of single- and few-layer nanosheets. *Accounts of Chemical Research*, **2015**, 48, 56-64	24.3	864
688	Science and Technology of the Twenty-First Century: Synthesis, Properties, and Applications of Carbon Nanotubes. *Annual Review of Materials Research*, **2003**, 33, 419-501	12.8	773
687	Evaluating the characteristics of multiwall carbon nanotubes. *Carbon*, **2011**, 49, 2581-2602	10.4	769
686	Graphene and graphite nanoribbons: Morphology, properties, synthesis, defects and applications. *Nano Today*, **2010**, 5, 351-372	17.9	695
685	Controlled production of aligned-nanotube bundles. *Nature*, **1997**, 388, 52-55	50.4	690
684	Identification of Electron Donor States in N-Doped Carbon Nanotubes. *Nano Letters*, **2001**, 1, 457-460	11.5	659
683	Controlled formation of sharp zigzag and armchair edges in graphitic nanoribbons. *Science*, **2009**, 323, 1701-5	33.3	592
682	Molecular junctions by joining single-walled carbon nanotubes. *Physical Review Letters*, **2002**, 89, 075505	7.4	584
681	Defect engineering of two-dimensional transition metal dichalcogenides. *2D Materials*, **2016**, 3, 022002	5.9	538
680	Bulk production of a new form of sp(2) carbon: crystalline graphene nanoribbons. *Nano Letters*, **2008**, 8, 2773-8	11.5	524
679	Nitrogen-doped graphene: beyond single substitution and enhanced molecular sensing. *Scientific Reports*, **2012**, 2, 586	4.9	517
678	Nanotechnology: 'buckypaper' from coaxial nanotubes. *Nature*, **2005**, 433, 476	50.4	503

677	Selective Attachment of Gold Nanoparticles to Nitrogen-Doped Carbon Nanotubes. *Nano Letters*, **2003**, 3, 275-277	11.5	486
676	Photosensor Device Based on Few-Layered WS2 Films. *Advanced Functional Materials*, **2013**, 23, 5511-5517	13.6	480
675	Fast and Efficient Preparation of Exfoliated 2H MoS2 Nanosheets by Sonication-Assisted Lithium Intercalation and Infrared Laser-Induced 1T to 2H Phase Reversion. *Nano Letters*, **2015**, 15, 5956-60	11.5	472
674	Controlled synthesis and transfer of large-area WS2 sheets: from single layer to few layers. *ACS Nano*, **2013**, 7, 5235-42	16.7	453
673	Effect of defects on the intrinsic strength and stiffness of graphene. *Nature Communications*, **2014**, 5, 3186	17.4	435
672	Structure and electronic properties of MoS2 nanotubes. *Physical Review Letters*, **2000**, 85, 146-9	7.4	432
671	Beyond Graphene: Progress in Novel Two-Dimensional Materials and van der Waals Solids. *Annual Review of Materials Research*, **2015**, 45, 1-27	12.8	430
670	Ultrahigh humidity sensitivity of graphene oxide. *Scientific Reports*, **2013**, 3, 2714	4.9	427
669	Coalescence of single-walled carbon nanotubes. *Science*, **2000**, 288, 1226-9	33.3	425
668	New metallic allotropes of planar and tubular carbon. *Physical Review Letters*, **2000**, 84, 1716-9	7.4	407
667	Three-dimensionally bonded spongy graphene material with super compressive elasticity and near-zero Poisson's ratio. *Nature Communications*, **2015**, 6, 6141	17.4	389
666	The role of defects and doping in 2D graphene sheets and 1D nanoribbons. *Reports on Progress in Physics*, **2012**, 75, 062501	14.4	383
665	Band gap engineering and layer-by-layer mapping of selenium-doped molybdenum disulfide. *Nano Letters*, **2014**, 14, 442-9	11.5	378
664	Novel hetero-layered materials with tunable direct band gaps by sandwiching different metal disulfides and diselenides. *Scientific Reports*, **2013**, 3, 1549	4.9	378
663	N-doping and coalescence of carbon nanotubes: synthesis and electronic properties. *Applied Physics A: Materials Science and Processing*, **2002**, 74, 355-361	2.6	367
662	Graphene edges: a review of their fabrication and characterization. *Nanoscale*, **2011**, 3, 86-95	7.7	353
661	Structural characterization of cup-stacked-type nanofibers with an entirely hollow core. *Applied Physics Letters*, **2002**, 80, 1267-1269	3.4	329
660	Ex-MWNTs: graphene sheets and ribbons produced by lithium intercalation and exfoliation of carbon nanotubes. *Nano Letters*, **2009**, 9, 1527-33	11.5	326

659	Protein immobilization on carbon nanotubes via a two-step process of diimide-activated amidation. *Journal of Materials Chemistry*, **2004**, 14, 37		317
658	Biocompatibility and toxicological studies of carbon nanotubes doped with nitrogen. *Nano Letters*, **2006**, 6, 1609-16	11.5	305
657	Covalently bonded three-dimensional carbon nanotube solids via boron induced nanojunctions. *Scientific Reports*, **2012**, 2, 363	4.9	300
656	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
655	New first order Raman-active modes in few layered transition metal dichalcogenides. *Scientific Reports*, **2014**, 4, 4215	4.9	289
654	Manganese Doping of Monolayer MoS2: The Substrate Is Critical. *Nano Letters*, **2015**, 15, 6586-91	11.5	285
653	Longitudinal cutting of pure and doped carbon nanotubes to form graphitic nanoribbons using metal clusters as nanoscalpels. *Nano Letters*, **2010**, 10, 366-72	11.5	284
652	Field-effect transistors based on few-layered □MoTe(2). *ACS Nano*, **2014**, 8, 5911-20	16.7	281
651	Flexible piezoelectric ZnO-paper nanocomposite strain sensor. *Small*, **2010**, 6, 1641-6	11	281
650	Enhanced magnetic coercivities in Fe nanowires. *Applied Physics Letters*, **1999**, 75, 3363-3365	3.4	276
649	Metal particle catalysed production of nanoscale BN structures. *Chemical Physics Letters*, **1996**, 259, 568-573	2.3	256
648	Carbon nanotubes as high-pressure cylinders and nanoextruders. *Science*, **2006**, 312, 1199-202	33.3	243
647	Carbon Nanotubes and Related Nanomaterials: Critical Advances and Challenges for Synthesis toward Mainstream Commercial Applications. *ACS Nano*, **2018**, 12, 11756-11784	16.7	239
646	Condensed-phase nanotubes. *Nature*, **1995**, 377, 687-687	50.4	238
645	Electron and phonon renormalization near charged defects in carbon nanotubes. *Nature Materials*, **2008**, 7, 878-83	27	236
644	Spectroscopic signatures for interlayer coupling in MoS2-WSe2 van der Waals stacking. *ACS Nano*, **2014**, 8, 9649-56	16.7	233
643	Carbon Nitride Nanocomposites: Formation of Aligned CxNy Nanofibers. *Advanced Materials*, **1999**, 11, 655-658	24	231
642	Efficient route to large arrays of CNx nanofibers by pyrolysis of ferrocene/melamine mixtures. *Applied Physics Letters*, **1999**, 75, 3932-3934	3.4	229

641	Defects and impurities in graphene-like materials. *Materials Today*, **2012**, 15, 98-109	21.8	228
640	Effective NaCl and dye rejection of hybrid graphene oxide/graphene layered membranes. *Nature Nanotechnology*, **2017**, 12, 1083-1088	28.7	227
639	Nanotubes in a flash--ignition and reconstruction. *Science*, **2002**, 296, 705	33.3	221
638	Direct synthesis of van der Waals solids. *ACS Nano*, **2014**, 8, 3715-23	16.7	218
637	Toxicity Evaluation for Safe Use of Nanomaterials: Recent Achievements and Technical Challenges. *Advanced Materials*, **2009**, 21, 1549-1559	24	216
636	Extraordinary Second Harmonic Generation in tungsten disulfide monolayers. *Scientific Reports*, **2014**, 4, 5530	4.9	214
635	Raman spectroscopy of boron-doped single-layer graphene. *ACS Nano*, **2012**, 6, 6293-300	16.7	209
634	Carbon nanotubes: synthesis and properties, electronic devices and other emerging applications. *International Materials Reviews*, **2004**, 49, 325-377	16.1	209
633	Carbon science in 2016: Status, challenges and perspectives. *Carbon*, **2016**, 98, 708-732	10.4	200
632	New direction in nanotube science. *Materials Today*, **2004**, 7, 30-45	21.8	200
631	Pyrolytically grown BxCyNz nanomaterials: nanofibres and nanotubes. *Chemical Physics Letters*, **1996**, 257, 576-582	2.5	200
630	Electrolytic formation of carbon nanostructures. *Chemical Physics Letters*, **1996**, 262, 161-166	2.5	196
629	In situ nucleation of carbon nanotubes by the injection of carbon atoms into metal particles. *Nature Nanotechnology*, **2007**, 2, 307-11	28.7	195
628	Selective and Efficient Impregnation of Metal Nanoparticles on Cup-Stacked-Type Carbon Nanofibers. *Nano Letters*, **2003**, 3, 723-726	11.5	193
627	Electronic transport and mechanical properties of phosphorus- and phosphorus-nitrogen-doped carbon nanotubes. *ACS Nano*, **2009**, 3, 1913-21	16.7	191
626	Covalent 2D and 3D networks from 1D nanostructures: designing new materials. *Nano Letters*, **2007**, 7, 570-6	11.5	191
625	Pyrolytic production of aligned carbon nanotubes from homogeneously dispersed benzene-based aerosols. *Chemical Physics Letters*, **2001**, 338, 101-107	2.5	186
624	Nitrogen-mediated carbon nanotube growth: diameter reduction, metallicity, bundle dispersability, and bamboo-like structure formation. *ACS Nano*, **2007**, 1, 369-75	16.7	185

623	Thermal stability and structural changes of double-walled carbon nanotubes by heat treatment. *Chemical Physics Letters*, **2004**, 398, 87-92	2.5	185
622	Applications of carbon nanotubes in the twenty-first century. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2004**, 362, 2223-38	3	185
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620	Synthesis and characterization of long strands of nitrogen-doped single-walled carbon nanotubes. *Chemical Physics Letters*, **2006**, 424, 345-352	2.5	173
619	Pure and doped boron nitride nanotubes. *Materials Today*, **2007**, 10, 30-38	21.8	171
618	CVD-grown monolayered MoS 2 as an effective photosensor operating at low-voltage. *2D Materials* , **2014**, 1, 011004	5.9	170
617	Towards new graphene materials: Doped graphene sheets and nanoribbons. *Materials Letters*, **2012** , 78, 209-218	3.3	168
616	Dislocation motion and grain boundary migration in two-dimensional tungsten disulphide. *Nature Communications*, **2014**, 5, 4867	17.4	167
615	Fullerene Coalescence in Nanopeapods: A Path to Novel Tubular Carbon. *Nano Letters*, **2003**, 3, 1037-1042	12.5	166
614	Controlled Exfoliation of MoS2 Crystals into Trilayer Nanosheets. *Journal of the American Chemical Society*, **2016**, 138, 5143-9	16.4	166
613	Heterodoped nanotubes: theory, synthesis, and characterization of phosphorus-nitrogen doped multiwalled carbon nanotubes. *ACS Nano*, **2008**, 2, 441-8	16.7	165
612	Metallic and ferromagnetic edges in molybdenum disulfide nanoribbons. *Nanotechnology*, **2009**, 20, 325703	3.4	164
611	Synthesis of thick and crystalline nanotube arrays by spray pyrolysis. *Applied Physics Letters*, **2000**, 77, 3385-3387	3.4	163
610	Fabrication of vapor and gas sensors using films of aligned CNx nanotubes. *Chemical Physics Letters*, **2004**, 386, 137-143	2.5	159
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608	Wetting of mono and few-layered WS2 and MoS2 films supported on Si/SiO2 substrates. *ACS Nano*, **2015**, 9, 3023-31	16.7	156
607	Optical identification of sulfur vacancies: Bound excitons at the edges of monolayer tungsten disulfide. *Science Advances*, **2017**, 3, e1602813	14.3	154
606	Non-oxidative intercalation and exfoliation of graphite by Brønsted acids. *Nature Chemistry*, **2014**, 6, 957-63	17.6	154

605	Excited excitonic states in 1L, 2L, 3L, and bulk WSe2 observed by resonant Raman spectroscopy. *ACS Nano*, **2014**, 8, 9629-35	16.7	154
604	Super-stretchable graphene oxide macroscopic fibers with outstanding knotability fabricated by dry film scrolling. *ACS Nano*, **2014**, 8, 5959-67	16.7	150
603	Production and characterization of single-crystal FeCo nanowires inside carbon nanotubes. *Nano Letters*, **2005**, 5, 467-72	11.5	150
602	Thermal stability studies of CVD-grown graphene nanoribbons: Defect annealing and loop formation. *Chemical Physics Letters*, **2009**, 469, 177-182	2.5	147
601	Synthesis of Mesoporous BN and BCN Exhibiting Large Surface Areas via Templating Methods. *Chemistry of Materials*, **2005**, 17, 5887-5890	9.6	147
600	Ultrasensitive gas detection of large-area boron-doped graphene. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 14527-32	11.5	146
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598	Intervalley scattering by acoustic phonons in two-dimensional MoS revealed by double-resonance Raman spectroscopy. *Nature Communications*, **2017**, 8, 14670	17.4	141
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596	Magnetic behavior in zinc oxide zigzag nanoribbons. *Nano Letters*, **2008**, 8, 1562-5	11.5	138
595	Efficient anchoring of silver nanoparticles on N-doped carbon nanotubes. *Small*, **2006**, 2, 346-50	11	138
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591	Graphene Shape Control by Multistage Cutting and Transfer. *Advanced Materials*, **2009**, 21, 4487-4491	24	133
590	A roadmap for electronic grade 2D materials. *2D Materials*, **2019**, 6, 022001	5.9	133
589	Rice husk-derived graphene with nano-sized domains and clean edges. *Small*, **2014**, 10, 2766-70, 2740	11	130
588	Ultrasensitive molecular sensor using N-doped graphene through enhanced Raman scattering. *Science Advances*, **2016**, 2, e1600322	14.3	125

587	Enhanced Electron Field Emission in B-doped Carbon Nanotubes. *Nano Letters*, **2002**, 2, 1191-1195	11.5	125
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585	Synthesis, electronic structure, and Raman scattering of phosphorus-doped single-wall carbon nanotubes. *Nano Letters*, **2009**, 9, 2267-72	11.5	121
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581	Novel nanoscale gas containers: encapsulation of N2 in CNx nanotubes. *Chemical Communications*, **2000**, 2335-2336	5.8	118
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578	Extraordinary toughening enhancement and flexural strength in Si3N4 composites using graphene sheets. *Journal of the European Ceramic Society*, **2014**, 34, 161-169	6	108
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573	Nanotubes: A Revolution in Materials Science and Electronics. *Topics in Current Chemistry*, **1999**, 189-234		106
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571	3D Silicon oxide nanostructures: from nanoflowers to radiolaria. *Journal of Materials Chemistry*, **1998**, 8, 1859-1864		102
570	Chemical vapor deposition synthesis of N-, P-, and Si-doped single-walled carbon nanotubes. *ACS Nano*, **2010**, 4, 1696-702	16.7	101

569	Extreme-Performance Rubber Nanocomposites for Probing and Excavating Deep Oil Resources Using Multi-Walled Carbon Nanotubes. *Advanced Functional Materials*, **2008**, 18, 3403-3409	15.6	101
568	Heterojunctions between metals and carbon nanotubes as ultimate nanocontacts. *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, 4591-5	11.5	100
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564	Intrinsic carrier mobility of multi-layered MoS2 field-effect transistors on SiO2. *Applied Physics Letters*, **2013**, 102, 123105	3.4	98
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561	SiOx-coating of carbon nanotubes at room temperature. *Chemical Physics Letters*, **2001**, 339, 41-46	2.5	97
560	Boron-doping effects in carbon nanotubes. *Journal of Materials Chemistry*, **2000**, 10, 1425-1429		95
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557	Preparation of aligned carbon nanotubes catalysed by laser-etched cobalt thin films. *Chemical Physics Letters*, **1998**, 285, 299-305	2.5	93
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555	Atypical Exciton-Phonon Interactions in WS2 and WSe2 Monolayers Revealed by Resonance Raman Spectroscopy. *Nano Letters*, **2016**, 16, 2363-8	11.5	91
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548	Formation and Interlayer Decoupling of Colloidal MoSe2Nanoflowers. *Chemistry of Materials*, **2015**, 27, 3167-3175	9.6	86
547	Angstrom-Size Defect Creation and Ionic Transport through Pores in Single-Layer MoS. *Nano Letters*, **2018**, 18, 1651-1659	11.5	86
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545	Two-dimensional transition metal dichalcogenides: Clusters, ribbons, sheets and more. *Nano Today*, **2015**, 10, 559-592	17.9	84
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543	Efficient anchorage of Pt clusters on N-doped carbon nanotubes and their catalytic activity. *Chemical Physics Letters*, **2008**, 463, 124-129	2.5	83
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