

Manish Chhowalla

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

99
papers

35,487
citations

52
h-index

108
g-index

108
ext. papers

40,240
ext. citations

18.1
avg, IF

7.66
L-index

#	Paper	IF	Citations
99	Smart textile lighting/display system with multifunctional fibre devices for large scale smart home and IoT applications.. <i>Nature Communications</i> , 2022 , 13, 814	17.4	8
98	3.4% Solar-to-Ammonia Efficiency from Nitrate Using Fe Single Atomic Catalyst Supported on MoS ₂ Nanosheets (Adv. Funct. Mater. 18/2022). <i>Advanced Functional Materials</i> , 2022 , 32, 2270106	15.6	0
97	Ferroelectricity in untwisted heterobilayers of transition metal dichalcogenides. <i>Science</i> , 2022 , 376, 973-978	37.8	7
96	Epitaxial single-crystal hexagonal boron nitride multilayers on Ni (111). <i>Nature</i> , 2022 , 606, 88-93	50.4	14
95	Recent Advances in Design of Electrocatalysts for High-Current-Density Water Splitting. <i>Advanced Materials</i> , 2021 , e2108133	24	43
94	2021 roadmap on lithium sulfur batteries. <i>JPhys Energy</i> , 2021 , 3, 031501	4.9	32
93	Synthesis of metallic mixed 3R and 2H NbS ₂ nanoflakes by chemical vapor deposition. <i>Faraday Discussions</i> , 2021 , 227, 332-340	3.6	0
92	Chemical vapour deposition. <i>Nature Reviews Methods Primers</i> , 2021 , 1,		80
91	Recent developments in 2D transition metal dichalcogenides: phase transition and applications of the (quasi-)metallic phases. <i>Chemical Society Reviews</i> , 2021 , 50, 10087-10115	58.5	25
90	Reply to: On the measured dielectric constant of amorphous boron nitride. <i>Nature</i> , 2021 , 590, E8-E10	50.4	1
89	InSitu Scanning Transmission Electron Microscopy Observations of Fracture at the Atomic Scale. <i>Physical Review Letters</i> , 2020 , 125, 246102	7.4	16
88	Ultralow-dielectric-constant amorphous boron nitride. <i>Nature</i> , 2020 , 582, 511-514	50.4	68
87	From bulk to molecularly thin hybrid perovskites. <i>Nature Reviews Materials</i> , 2020 , 5, 482-500	73.3	80
86	Water-resistant perovskite nanodots enable robust two-photon lasing in aqueous environment. <i>Nature Communications</i> , 2020 , 11, 1192	17.4	65
85	Electronic Polarizability as the Fundamental Variable in the Dielectric Properties of Two-Dimensional Materials. <i>Nano Letters</i> , 2020 , 20, 841-851	11.5	31
84	Interfacial Oxygen-Driven Charge Localization and Plasmon Excitation in Unconventional Superconductors. <i>Advanced Materials</i> , 2020 , 32, e2000153	24	6
83	Biomimetic electro-oxidation of alkyl sulfides from exfoliated molybdenum disulfide nanosheets. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 25053-25060	13	2

82	Nitrogen and Phosphorus Co-doped Nanoporous Carbons from Phosphoprotein/Silica Self-Assemblies for Energy Storage in Supercapacitors. <i>ChemElectroChem</i> , 2020 , 7, 4773-4781	4.3	2
81	Cuprate Thin Films: Interfacial Oxygen-Driven Charge Localization and Plasmon Excitation in Unconventional Superconductors (Adv. Mater. 34/2020). <i>Advanced Materials</i> , 2020 , 32, 2070257	24	
80	Quantum Transport in Two-Dimensional WS with High-Efficiency Carrier Injection through Indium Alloy Contacts. <i>ACS Nano</i> , 2020 , 14, 13700-13708	16.7	7
79	Evidence of Rotational Fröhlich Coupling in Polaronic Trions. <i>Physical Review Letters</i> , 2020 , 125, 086803	7.4	8
78	Ultrahigh-current-density niobium disulfide catalysts for hydrogen evolution. <i>Nature Materials</i> , 2019 , 18, 1309-1314	27	148
77	Role of Sulfur Vacancies and Undercoordinated Mo Regions in MoS Nanosheets toward the Evolution of Hydrogen. <i>ACS Nano</i> , 2019 , 13, 6824-6834	16.7	229
76	Charge transfer dynamics in conjugated polymer/MoS2 organic/2D heterojunctions. <i>Molecular Systems Design and Engineering</i> , 2019 , 4, 929-938	4.6	11
75	Effects Of Structural Phase Transition On Thermoelectric Performance in Lithium-Intercalated Molybdenum Disulfide (Li MoS). <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 12184-12189	9.5	20
74	Van der Waals contacts between three-dimensional metals and two-dimensional semiconductors. <i>Nature</i> , 2019 , 568, 70-74	50.4	293
73	Single Atomic Vacancy Catalysis. <i>ACS Nano</i> , 2019 , 13, 9958-9964	16.7	57
72	Excitons: Modulation of New Excitons in Transition Metal Dichalcogenide-Perovskite Oxide System (Adv. Sci. 12/2019). <i>Advanced Science</i> , 2019 , 6, 1970073	13.6	2
71	Non-Polar and Complementary Resistive Switching Characteristics in Graphene Oxide devices with Gold Nanoparticles: Diverse Approach for Device Fabrication. <i>Scientific Reports</i> , 2019 , 9, 15103	4.9	15
70	Dynamically tuned non-classical light emission from atomic defects in hexagonal boron nitride. <i>Communications Physics</i> , 2019 , 2,	5.4	21
69	Visualizing the metal-MoS2 contacts in two-dimensional field-effect transistors with atomic resolution. <i>Physical Review Materials</i> , 2019 , 3,	3.2	13
68	Hyperbolic 3D architectures with 2D ceramics. <i>Science</i> , 2019 , 363, 694-695	33.3	8
67	Revealing molecular-level surface redox sites of controllably oxidized black phosphorus nanosheets. <i>Nature Materials</i> , 2019 , 18, 156-162	27	150
66	Low-dimensional catalysts for hydrogen evolution and CO2 reduction. <i>Nature Reviews Chemistry</i> , 2018 , 2,	34.6	441
65	Molecularly thin two-dimensional hybrid perovskites with tunable optoelectronic properties due to reversible surface relaxation. <i>Nature Materials</i> , 2018 , 17, 908-914	27	207

64	Enzymatic Biodegradability of Pristine and Functionalized Transition Metal Dichalcogenide MoS ₂ Nanosheets. <i>Advanced Functional Materials</i> , 2017 , 27, 1605176	15.6	81
63	Electron-Doped 1T-MoS ₂ via Interface Engineering for Enhanced Electrocatalytic Hydrogen Evolution. <i>Chemistry of Materials</i> , 2017 , 29, 4738-4744	9.6	200
62	Metallic molybdenum disulfide nanosheet-based electrochemical actuators. <i>Nature</i> , 2017 , 549, 370-373	50.4	162
61	Structural and quantum-state phase transitions in van der Waals layered materials. <i>Nature Physics</i> , 2017 , 13, 931-937	16.2	187
60	Solution-Processed MoS ₂ /Organolead Trihalide Perovskite Photodetectors. <i>Advanced Materials</i> , 2017 , 29, 1603995	24	149
59	High-quality graphene via microwave reduction of solution-exfoliated graphene oxide. <i>Science</i> , 2016 , 353, 1413-1416	33.3	521
58	Two-dimensional semiconductors for transistors. <i>Nature Reviews Materials</i> , 2016 , 1,	73.3	670
57	N- and O-doped mesoporous carbons derived from rice grains: efficient metal-free electrocatalysts for hydrazine oxidation. <i>Chemical Communications</i> , 2016 , 52, 13588-13591	5.8	33
56	Ultrafast Charge Transfer and Enhanced Absorption in MoS ₂ -Organic van der Waals Heterojunctions Using Plasmonic Metasurfaces. <i>ACS Nano</i> , 2016 , 10, 9899-9908	16.7	55
55	Efficient hydrogen evolution in transition metal dichalcogenides via a simple one-step hydrazine reaction. <i>Nature Communications</i> , 2016 , 7, 11857	17.4	154
54	Light-activated photocurrent degradation and self-healing in perovskite solar cells. <i>Nature Communications</i> , 2016 , 7, 11574	17.4	461
53	Production of Two-Dimensional Nanomaterials via Liquid-Based Direct Exfoliation. <i>Small</i> , 2016 , 12, 272-281		339
52	The role of electronic coupling between substrate and 2D MoS ₂ nanosheets in electrocatalytic production of hydrogen. <i>Nature Materials</i> , 2016 , 15, 1003-9	27	549
51	Engineering Chemically Exfoliated Large-Area Two-Dimensional MoS ₂ Nanolayers with Porphyrins for Improved Light Harvesting. <i>ChemPhysChem</i> , 2016 , 17, 2854-62	3.2	25
50	Recent Strategies for Improving the Catalytic Activity of 2D TMD Nanosheets Toward the Hydrogen Evolution Reaction. <i>Advanced Materials</i> , 2016 , 28, 6197-206	24	630
49	Valence-band electronic structure evolution of graphene oxide upon thermal annealing for optoelectronics. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2016 , 213, 2380-2386	1.6	7
48	Design, synthesis, and characterization of graphene-nanoparticle hybrid materials for bioapplications. <i>Chemical Reviews</i> , 2015 , 115, 2483-531	68.1	514
47	Copper nanoparticles stabilized by reduced graphene oxide for CO ₂ reduction reaction. <i>Materials for Renewable and Sustainable Energy</i> , 2015 , 4, 1	4.7	49

46	Phase engineering of transition metal dichalcogenides. <i>Chemical Society Reviews</i> , 2015 , 44, 2702-12	58.5	655
45	Metallic 1T phase MoS ₂ nanosheets as supercapacitor electrode materials. <i>Nature Nanotechnology</i> , 2015 , 10, 313-8	28.7	1800
44	Covalent functionalization of monolayered transition metal dichalcogenides by phase engineering. <i>Nature Chemistry</i> , 2015 , 7, 45-9	17.6	524
43	Phase-engineered transition-metal dichalcogenides for energy and electronics. <i>MRS Bulletin</i> , 2015 , 40, 585-591	3.2	49
42	Solar cells. High-efficiency solution-processed perovskite solar cells with millimeter-scale grains. <i>Science</i> , 2015 , 347, 522-5	33.3	2602
41	Reduced Graphene Oxide Thin Films as Ultrabarrriers for Organic Electronics. <i>Advanced Energy Materials</i> , 2014 , 4, 1300986	21.8	49
40	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
39	N-doped ordered mesoporous carbons with improved charge storage capacity by tailoring N-dopant density with solvent-assisted synthesis. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 15181-15190 ¹³		45
38	Phase-engineered low-resistance contacts for ultrathin MoS ₂ transistors. <i>Nature Materials</i> , 2014 , 13, 1128-34	27	1153
37	Photocatalytic performance of Sn-doped TiO ₂ /reduced graphene oxide composite materials. <i>Applied Catalysis A: General</i> , 2014 , 473, 21-30	5.1	29
36	Photoelectrochemical properties of chemically exfoliated MoS ₂ . <i>Journal of Materials Chemistry A</i> , 2013 , 1, 8935	13	124
35	Hierarchical macrochanneled layered titanates with house-of-cards type titanate nanosheets and their superior photocatalytic activity. <i>Journal of Materials Chemistry A</i> , 2013 , 1, 7690	13	14
34	Conducting MoS ₂ nanosheets as catalysts for hydrogen evolution reaction. <i>Nano Letters</i> , 2013 , 13, 6222-711.5	11.5	1613
33	Liquid Exfoliation of Layered Materials. <i>Science</i> , 2013 , 340, 1226419-1226419	33.3	2604
32	Graphene oxide gate dielectric for graphene-based monolithic field effect transistors. <i>Applied Physics Letters</i> , 2013 , 102, 133108	3.4	37
31	The chemistry of two-dimensional layered transition metal dichalcogenide nanosheets. <i>Nature Chemistry</i> , 2013 , 5, 263-75	17.6	6689
30	Enhanced catalytic activity in strained chemically exfoliated WS ₂ nanosheets for hydrogen evolution. <i>Nature Materials</i> , 2013 , 12, 850-5	27	2039
29	Two-Dimensional Hybrid Nanosheets of Tungsten Disulfide and Reduced Graphene Oxide as Catalysts for Enhanced Hydrogen Evolution. <i>Angewandte Chemie</i> , 2013 , 125, 13996-13999	3.6	69

28	Bionanotechnology: Axonal Alignment and Enhanced Neuronal Differentiation of Neural Stem Cells on Graphene-Nanoparticle Hybrid Structures (Adv. Mater. 38/2013). <i>Advanced Materials</i> , 2013 , 25, 5476-5476		
27	Plasma-Assisted Reduction of Graphene Oxide at Low Temperature and Atmospheric Pressure for Flexible Conductor Applications. <i>Journal of Physical Chemistry Letters</i> , 2012 , 3, 772-7	6.4	109
26	Coherent atomic and electronic heterostructures of single-layer MoS ₂ . <i>ACS Nano</i> , 2012 , 6, 7311-7	16.7	696
25	Tunable Photoluminescence from Graphene Oxide. <i>Angewandte Chemie</i> , 2012 , 124, 6766-6770	3.6	28
24	The Role of Oxygen during Thermal Reduction of Graphene Oxide Studied by Infrared Absorption Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2011 , 115, 19761-19781	3.8	641
23	Boron Carbide: Structure, Properties, and Stability under Stress. <i>Journal of the American Ceramic Society</i> , 2011 , 94, 3605-3628	3.8	604
22	Photoluminescence from chemically exfoliated MoS ₂ . <i>Nano Letters</i> , 2011 , 11, 5111-6	11.5	2897
21	Synthesis and characterization of cadmium hydroxide nanowires by arc discharge method in de-ionized water. <i>Journal of Nanoparticle Research</i> , 2011 , 13, 4673-4680	2.3	23
20	Direct white light emission from inorganic-organic hybrid semiconductor bulk materials. <i>Journal of Materials Chemistry</i> , 2010 , 20, 10676		49
19	Silicon Effect on the Hardness of r.f. Sputtered B ₁₀ C:Si Amorphous Films. <i>Plasma Processes and Polymers</i> , 2009 , 6, S141-S145	3.4	4
18	Zinc oxide nanowire networks for macroelectronic devices. <i>Applied Physics Letters</i> , 2009 , 94, 163501	3.4	45
17	Insulator to Semimetal Transition in Graphene Oxide. <i>Journal of Physical Chemistry C</i> , 2009 , 113, 15768-15871	3.5	504
16	Transparent and conducting electrodes for organic electronics from reduced graphene oxide. <i>Applied Physics Letters</i> , 2008 , 92, 233305	3.4	336
15	Field emission from graphene based composite thin films. <i>Applied Physics Letters</i> , 2008 , 93, 233502	3.4	226
14	Investigation of nanoscale morphological changes in organic photovoltaics during solvent vapor annealing. <i>Journal of Materials Chemistry</i> , 2008 , 18, 306-312		269
13	Flexible organic photovoltaics from zinc oxide nanowires grown on transparent and conducting single walled carbon nanotube thin films. <i>Journal of Materials Chemistry</i> , 2008 , 18, 5909		84
12	In Situ Monitoring of Structural Changes in Boron Carbide Under Electric Fields. <i>Journal of the American Ceramic Society</i> , 2008 , 91, 2666-2669	3.8	29
11	Modification of transparent and conducting single wall carbon nanotube thin films via bromine functionalization. <i>Applied Physics Letters</i> , 2007 , 90, 092114	3.4	42

10	A fullerene-single wall carbon nanotube complex for polymer bulk heterojunction photovoltaic cells. <i>Journal of Materials Chemistry</i> , 2007 , 17, 2406-2411		182
9	Improved conductivity of transparent single-wall carbon nanotube thin films via stable postdeposition functionalization. <i>Applied Physics Letters</i> , 2007 , 90, 121913	3-4	203
8	Optoelectronic properties of transparent and conducting single-wall carbon nanotube thin films. <i>Applied Physics Letters</i> , 2006 , 88, 191919	3-4	46
7	Conducting and transparent single-wall carbon nanotube electrodes for polymer-fullerene solar cells. <i>Applied Physics Letters</i> , 2005 , 87, 203511	3-4	440
6	The Role of Multiple Polytypes in Determining the Catastrophic Failure of Boron Carbide at High Shock Velocities. <i>Materials Research Society Symposia Proceedings</i> , 2005 , 904, 1		1
5	Nanoscale Measurements in Organic Memory Devices from C60 in Insulating Polymers. <i>Materials Research Society Symposia Proceedings</i> , 2005 , 905, 1		1
4	Root Causes of the Performance of Boron Carbide Under Stress. <i>Ceramic Engineering and Science Proceedings</i> , 179-188	0.1	4
3	3.4% Solar-to-Ammonia Efficiency from Nitrate Using Fe Single Atomic Catalyst Supported on MoS ₂ Nanosheets. <i>Advanced Functional Materials</i> , 2108316	15.6	14
2	Making clean electrical contacts on 2D transition metal dichalcogenides. <i>Nature Reviews Physics</i> ,	23.6	15
1	Ultrahigh Pt-Mass-Activity Hydrogen Evolution Catalyst Electrodeposited from Bulk Pt. <i>Advanced Functional Materials</i> , 2112207	15.6	8