Manish Chhowalla

List of Publications by Year
in descending order

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105	45,007	17440	30087
papers	citations	63 h-index	103 g-index

108	108	108	45200
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Recent Advances in Design of Electrocatalysts for Highâ€Currentâ€Density Water Splitting. Advanced Materials, 2022, 34, e2108133.	21.0	293
2	Making clean electrical contacts on 2D transition metal dichalcogenides. Nature Reviews Physics, 2022, 4, 101-112.	26.6	91
3	Smart textile lighting/display system with multifunctional fibre devices for large scale smart home and IoT applications. Nature Communications, 2022, 13, 814.	12.8	80
4	3.4% Solarâ€toâ€Ammonia Efficiency from Nitrate Using Fe Single Atomic Catalyst Supported on MoS₂ Nanosheets. Advanced Functional Materials, 2022, 32, .	14.9	71
5	Ultrahigh Ptâ€Massâ€Activity Hydrogen Evolution Catalyst Electrodeposited from Bulk Pt. Advanced Functional Materials, 2022, 32, .	14.9	50
6	Tanks and Truth. ACS Nano, 2022, 16, 4975-4976.	14.6	0
7	3.4% Solarâ€toâ€Ammonia Efficiency from Nitrate Using Fe Single Atomic Catalyst Supported on MoS₂ Nanosheets (Adv. Funct. Mater. 18/2022). Advanced Functional Materials, 2022, 32, .	14.9	1
8	Ferroelectricity in untwisted heterobilayers of transition metal dichalcogenides. Science, 2022, 376, 973-978.	12.6	105
9	Epitaxial single-crystal hexagonal boron nitride multilayers on Ni (111). Nature, 2022, 606, 88-93.	27.8	97
10	Topological phase change transistors based on tellurium Weyl semiconductor. Science Advances, 2022, 8, .	10.3	17
11	Synthesis of metallic mixed 3R and 2H Nb_{1+x}S₂ nanoflakes by chemical vapor deposition. Faraday Discussions, 2021, 227, 332-340.	3.2	2
12	Chemical vapour deposition. Nature Reviews Methods Primers, 2021, 1, .	21.2	244
13	Recent developments in 2D transition metal dichalcogenides: phase transition and applications of the (quasi-)metallic phases. Chemical Society Reviews, 2021, 50, 10087-10115.	38.1	135
14	Reply to: On the measured dielectric constant of amorphous boron nitride. Nature, 2021, 590, E8-E10.	27.8	1
15	2021 roadmap on lithium sulfur batteries. JPhys Energy, 2021, 3, 031501.	5.3	74
16	Electronic Polarizability as the Fundamental Variable in the Dielectric Properties of Two-Dimensional Materials. Nano Letters, 2020, 20, 841-851.	9.1	70
17	Interfacial Oxygenâ€Driven Charge Localization and Plasmon Excitation in Unconventional Superconductors. Advanced Materials, 2020, 32, 2000153.	21.0	10
18	Biomimetic electro-oxidation of alkyl sulfides from exfoliated molybdenum disulfide nanosheets. Journal of Materials Chemistry A, 2020, 8, 25053-25060.	10.3	6

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19	Nitrogen and Phosphorus Coâ€doped Nanoporous Carbons from Phosphoprotein/Silica Selfâ€Assemblies for Energy Storage in Supercapacitors. ChemElectroChem, 2020, 7, 4773-4781.	3.4	6
20	Cuprate Thin Films: Interfacial Oxygenâ€Driven Charge Localization and Plasmon Excitation in Unconventional Superconductors (Adv. Mater. 34/2020). Advanced Materials, 2020, 32, 2070257.	21.0	0
21	Tutorials and Articles on Best Practices. ACS Nano, 2020, 14, 10751-10753.	14.6	1
22	Quantum Transport in Two-Dimensional WS₂ with High-Efficiency Carrier Injection through Indium Alloy Contacts. ACS Nano, 2020, 14, 13700-13708.	14.6	26
23	Evidence of Rotational FrÃ¶hlich Coupling in Polaronic Trions. Physical Review Letters, 2020, 125, 086803.	7.8	14
24	InÂSitu Scanning Transmission Electron Microscopy Observations of Fracture at the Atomic Scale. Physical Review Letters, 2020, 125, 246102.	7.8	34
25	Ultralow-dielectric-constant amorphous boron nitride. Nature, 2020, 582, 511-514.	27.8	173
26	From bulk to molecularly thin hybrid perovskites. Nature Reviews Materials, 2020, 5, 482-500.	48.7	164
27	Water-resistant perovskite nanodots enable robust two-photon lasing in aqueous environment. Nature Communications, 2020, 11, 1192.	12.8	123
28	Growing Contributions of Nano in 2020. ACS Nano, 2020, 14, 16163-16164.	14.6	1
29	Single Atomic Vacancy Catalysis. ACS Nano, 2019, 13, 9958-9964.	14.6	111
30	Excitons: Modulation of New Excitons in Transition Metal Dichalcogenideâ€Perovskite Oxide System (Adv. Sci. 12/2019). Advanced Science, 2019, 6, 1970073.	11.2	3
31	Non-Polar and Complementary Resistive Switching Characteristics in Graphene Oxide devices with Gold Nanoparticles: Diverse Approach for Device Fabrication. Scientific Reports, 2019, 9, 15103.	3.3	28
32	Dynamically tuned non-classical light emission from atomic defects in hexagonal boron nitride. Communications Physics, 2019, 2, .	5.3	35
33	Ultrahigh-current-density niobium disulfide catalysts for hydrogen evolution. Nature Materials, 2019, 18, 1309-1314.	27.5	280
34	Role of Sulfur Vacancies and Undercoordinated Mo Regions in MoS₂ Nanosheets toward the Evolution of Hydrogen. ACS Nano, 2019, 13, 6824-6834.	14.6	402
35	Charge transfer dynamics in conjugated polymer/MoS₂organic/2D heterojunctions. Molecular Systems Design and Engineering, 2019, 4, 929-938.	3.4	18
36	Effects Of Structural Phase Transition On Thermoelectric Performance in Lithium-Intercalated Molybdenum Disulfide (Li_xMoS₂). ACS Applied Materials & Interfaces, 2019, 11, 12184-12189.	8.0	31

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37	Van der Waals contacts between three-dimensional metals and two-dimensional semiconductors. Nature, 2019, 568, 70-74.	27.8	551
38	Hyperbolic 3D architectures with 2D ceramics. Science, 2019, 363, 694-695.	12.6	16
39	Revealing molecular-level surface redox sites of controllably oxidized black phosphorus nanosheets. Nature Materials, 2019, 18, 156-162.	27.5	215
40	Visualizing the metal- <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Mo</mml:mi><mml:msub><mml:mi mathvariant="normal">S</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math> contacts in two-dimensional field-effect transistors with atomic resolution. Physical Review Materials, 2019, 3, .	2.4	25
41	Low-dimensional catalysts for hydrogen evolution and CO2 reduction. Nature Reviews Chemistry, 2018, 2, .	30.2	631
42	Best Practices for Reporting Electrocatalytic Performance of Nanomaterials. ACS Nano, 2018, 12, 9635-9638.	14.6	537
43	Molecularly thin two-dimensional hybrid perovskites with tunable optoelectronic properties due to reversible surface relaxation. Nature Materials, 2018, 17, 908-914.	27.5	295
44	Enzymatic Biodegradability of Pristine and Functionalized Transition Metal Dichalcogenide MoS₂ Nanosheets. Advanced Functional Materials, 2017, 27, 1605176.	14.9	109
45	Slow Release Nanofertilizers for Bumper Crops. ACS Central Science, 2017, 3, 156-157.	11.3	23
46	Electron-Doped 1T-MoS₂ via Interface Engineering for Enhanced Electrocatalytic Hydrogen Evolution. Chemistry of Materials, 2017, 29, 4738-4744.	6.7	270
47	Themed issue on 2D materials. Journal of Materials Chemistry C, 2017, 5, 11156-11157.	5.5	4
48	Metallic molybdenum disulfide nanosheet-based electrochemical actuators. Nature, 2017, 549, 370-373.	27.8	216
49	Structural and quantum-state phase transitions in van der Waals layered materials. Nature Physics, 2017, 13, 931-937.	16.7	280
50	Solutionâ€Processed MoS₂/Organolead Trihalide Perovskite Photodetectors. Advanced Materials, 2017, 29, 1603995.	21.0	187
51	Engineering Chemically Exfoliated Largeâ€Area Twoâ€Dimensional MoS₂ Nanolayers with Porphyrins for Improved Light Harvesting. ChemPhysChem, 2016, 17, 2854-2862.	2.1	32
52	Recent Strategies for Improving the Catalytic Activity of 2D TMD Nanosheets Toward the Hydrogen Evolution Reaction. Advanced Materials, 2016, 28, 6197-6206.	21.0	769
53	Valenceâ€band electronic structure evolution of graphene oxide upon thermal annealing for optoelectronics. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 2380-2386.	1.8	13
54	High-quality graphene via microwave reduction of solution-exfoliated graphene oxide. Science, 2016, 353, 1413-1416.	12.6	670

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55	Two-dimensional semiconductors for transistors. Nature Reviews Materials, 2016, 1, .	48.7	1,020
56	N- and O-doped mesoporous carbons derived from rice grains: efficient metal-free electrocatalysts for hydrazine oxidation. Chemical Communications, 2016, 52, 13588-13591.	4.1	45
57	Ultrafast Charge Transfer and Enhanced Absorption in MoS₂â€“Organic van der Waals Heterojunctions Using Plasmonic Metasurfaces. ACS Nano, 2016, 10, 9899-9908.	14.6	71
58	Efficient hydrogen evolution in transition metal dichalcogenides via a simple one-step hydrazine reaction. Nature Communications, 2016, 7, 11857.	12.8	179
59	Light-activated photocurrent degradation and self-healing in perovskite solar cells. Nature Communications, 2016, 7, 11574.	12.8	584
60	Production of Twoâ€Dimensional Nanomaterials via Liquidâ€Based Direct Exfoliation. Small, 2016, 12, 272-293.	10.0	407
61	The role of electronic coupling between substrate and 2D MoS2 nanosheets in electrocatalytic production of hydrogen. Nature Materials, 2016, 15, 1003-1009.	27.5	687
62	Phase-engineered transition-metal dichalcogenides for energy and electronics. MRS Bulletin, 2015, 40, 585-591.	3.5	71
63	High-efficiency solution-processed perovskite solar cells with millimeter-scale grains. Science, 2015, 347, 522-525.	12.6	2,978
64	Design, Synthesis, and Characterization of Grapheneâ€“Nanoparticle Hybrid Materials for Bioapplications. Chemical Reviews, 2015, 115, 2483-2531.	47.7	603
65	Copper nanoparticles stabilized by reduced graphene oxide for CO2 reduction reaction. Materials for Renewable and Sustainable Energy, 2015, 4, 1.	3.6	68
66	Phase engineering of transition metal dichalcogenides. Chemical Society Reviews, 2015, 44, 2702-2712.	38.1	915
67	Two-dimensional transition metal dichalcogenide (TMD) nanosheets. Chemical Society Reviews, 2015, 44, 2584-2586.	38.1	699
68	Metallic 1T phase MoS2 nanosheets as supercapacitor electrode materials. Nature Nanotechnology, 2015, 10, 313-318.	31.5	2,278
69	Covalent functionalization of monolayered transition metal dichalcogenides by phase engineering. Nature Chemistry, 2015, 7, 45-49.	13.6	637
70	Reduced Graphene Oxide Thin Films as Ultrabarriers for Organic Electronics. Advanced Energy Materials, 2014, 4, 1300986.	19.5	59
71	Metallic 1T phase source/drain electrodes for field effect transistors from chemical vapor deposited MoS2. APL Materials, 2014, 2, .	5.1	155
72	N-doped ordered mesoporous carbons with improved charge storage capacity by tailoring N-dopant density with solvent-assisted synthesis. Journal of Materials Chemistry A, 2014, 2, 15181-15190.	10.3	50

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73	Phase-engineered low-resistance contacts for ultrathin MoS2 transistors. Nature Materials, 2014, 13, 1128-1134.	27.5	1,463
74	Photocatalytic performance of Sn-doped TiO2/reduced graphene oxide composite materials. Applied Catalysis A: General, 2014, 473, 21-30.	4.3	34
75	Photoelectrochemical properties of chemically exfoliated MoS2. Journal of Materials Chemistry A, 2013, 1, 8935.	10.3	137
76	Hierarchical macrochanneled layered titanates with â€œhouse-of-cardsâ€•type titanate nanosheets and their superior photocatalytic activity. Journal of Materials Chemistry A, 2013, 1, 7690.	10.3	16
77	Conducting MoS₂ Nanosheets as Catalysts for Hydrogen Evolution Reaction. Nano Letters, 2013, 13, 6222-6227.	9.1	1,948
78	Liquid Exfoliation of Layered Materials. Science, 2013, 340, .	12.6	3,109
79	Graphene oxide gate dielectric for graphene-based monolithic field effect transistors. Applied Physics Letters, 2013, 102, .	3.3	43
80	The chemistry of two-dimensional layered transition metal dichalcogenide nanosheets. Nature Chemistry, 2013, 5, 263-275.	13.6	8,051
81	Enhanced catalytic activity in strained chemically exfoliated WS2 nanosheets for hydrogen evolution. Nature Materials, 2013, 12, 850-855.	27.5	2,326
82	Bionanotechnology: Axonal Alignment and Enhanced Neuronal Differentiation of Neural Stem Cells on Graphene-Nanoparticle Hybrid Structures (Adv. Mater. 38/2013). Advanced Materials, 2013, 25, 5476-5476.	21.0	0
83	Plasma-Assisted Reduction of Graphene Oxide at Low Temperature and Atmospheric Pressure for Flexible Conductor Applications. Journal of Physical Chemistry Letters, 2012, 3, 772-777.	4.6	122
84	Coherent Atomic and Electronic Heterostructures of Single-Layer MoS₂. ACS Nano, 2012, 6, 7311-7317.	14.6	806
85	The Role of Oxygen during Thermal Reduction of Graphene Oxide Studied by Infrared Absorption Spectroscopy. Journal of Physical Chemistry C, 2011, 115, 19761-19781.	3.1	776
86	Boron Carbide: Structure, Properties, and Stability under Stress. Journal of the American Ceramic Society, 2011, 94, 3605-3628.	3.8	772
87	Photoluminescence from Chemically Exfoliated MoS₂. Nano Letters, 2011, 11, 5111-5116.	9.1	3,402
88	Synthesis and characterization of cadmium hydroxide nanowires by arc discharge method in de-ionized water. Journal of Nanoparticle Research, 2011, 13, 4673-4680.	1.9	28
89	Direct white light emission from inorganicâ€“organic hybrid semiconductor bulk materials. Journal of Materials Chemistry, 2010, 20, 10676.	6.7	58
90	Silicon Effect on the Hardness of r.f. Sputtered Bâ€“C:Si Amorphous Films. Plasma Processes and Polymers, 2009, 6, S141.	3.0	4

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91	Zinc oxide nanowire networks for macroelectronic devices. Applied Physics Letters, 2009, 94, .	3.3	49
92	Insulator to Semimetal Transition in Graphene Oxide. Journal of Physical Chemistry C, 2009, 113, 15768-15771.	3.1	577
93	In Situ Monitoring of Structural Changes in Boron Carbide Under Electric Fields. Journal of the American Ceramic Society, 2008, 91, 2666-2669.	3.8	33
94	Transparent and conducting electrodes for organic electronics from reduced graphene oxide. Applied Physics Letters, 2008, 92, .	3.3	368
95	Field emission from graphene based composite thin films. Applied Physics Letters, 2008, 93, .	3.3	258
96	Investigation of nanoscale morphological changes in organic photovoltaics during solvent vapor annealing. Journal of Materials Chemistry, 2008, 18, 306-312.	6.7	288
97	Flexible organic photovoltaics from zinc oxide nanowires grown on transparent and conducting single walled carbon nanotube thin films. Journal of Materials Chemistry, 2008, 18, 5909.	6.7	94
98	A fullereneâ€“single wall carbon nanotube complex for polymer bulk heterojunction photovoltaic cells. Journal of Materials Chemistry, 2007, 17, 2406-2411.	6.7	190
99	Improved conductivity of transparent single-wall carbon nanotube thin films via stable postdeposition functionalization. Applied Physics Letters, 2007, 90, 121913.	3.3	219
100	Modification of transparent and conducting single wall carbon nanotube thin films via bromine functionalization. Applied Physics Letters, 2007, 90, 092114.	3.3	42
101	Optoelectronic properties of transparent and conducting single-wall carbon nanotube thin films. Applied Physics Letters, 2006, 88, 191919.	3.3	47
102	The Role of Multiple Polytypes in Determining the Catastrophic Failure of Boron Carbide at High Shock Velocities. Materials Research Society Symposia Proceedings, 2005, 904, 1.	0.1	1
103	Nanoscale Measurements in Organic Memory Devices from C60 in Insulating Polymers. Materials Research Society Symposia Proceedings, 2005, 905, 1.	0.1	1
104	Conducting and transparent single-wall carbon nanotube electrodes for polymer-fullerene solar cells. Applied Physics Letters, 2005, 87, 203511.	3.3	480
105	Root Causes of the Performance of Boron Carbide Under Stress. Ceramic Engineering and Science Proceedings, 0, , 179-188.	0.1	5