Weichun Huang

List of Publications by Year
in descending order

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83 papers	6,051 citations	70961 41 h-index	71532 76 g-index
83 all docs	83 docs citations	83 times ranked	4812 citing authors

#	Article	IF	Citations
1	MXene/Polymer Membranes: Synthesis, Properties, and Emerging Applications. Chemistry of Materials, 2020, 32, 1703-1747.	3.2	429
2	Ultrathin 2D Nonlayered Tellurium Nanosheets: Facile Liquidâ€Phase Exfoliation, Characterization, and Photoresponse with High Performance and Enhanced Stability. Advanced Functional Materials, 2018, 28, 1705833.	7.8	348
3	Recent advances in two-dimensional-material-based sensing technology toward health and environmental monitoring applications. Nanoscale, 2020, 12, 3535-3559.	2.8	318
4	Ultrasmall Bismuth Quantum Dots: Facile Liquid-Phase Exfoliation, Characterization, and Application in High-Performance UVâ€“Vis Photodetector. ACS Photonics, 2018, 5, 621-629.	3.2	230
5	Recent Advances in Functional 2D MXeneâ€Based Nanostructures for Nextâ€Generation Devices. Advanced Functional Materials, 2020, 30, 2005223.	7.8	216
6	Kerr Nonlinearity in 2D Graphdiyne for Passive Photonic Diodes. Advanced Materials, 2019, 31, e1807981.	11.1	187
7	Graphdiyneâ€Based Flexible Photodetectors with High Responsivity and Detectivity. Advanced Materials, 2020, 32, e2001082.	11.1	171
8	Facile fabrication and characterization of two-dimensional bismuth(<scp>iii</scp>) sulfide nanosheets for high-performance photodetector applications under ambient conditions. Nanoscale, 2018, 10, 2404-2412.	2.8	166
9	2D Tellurium Based Highâ€Performance Allâ€Optical Nonlinear Photonic Devices. Advanced Functional Materials, 2019, 29, 1806346.	7.8	165
10	Two-dimensional non-layered selenium nanoflakes: facile fabrications and applications for self-powered photo-detector. Nanotechnology, 2019, 30, 114002.	1.3	161
11	Allâ€Optical Phosphorene Phase Modulator with Enhanced Stability Under Ambient Conditions. Laser and Photonics Reviews, 2018, 12, 1800016.	4.4	155
12	Black-phosphorus-analogue tin monosulfide: an emerging optoelectronic two-dimensional material for high-performance photodetection with improved stability under ambient/harsh conditions. Journal of Materials Chemistry C, 2018, 6, 9582-9593.	2.7	153
13	An Allâ€Optical, Actively Qâ€Switched Fiber Laser by an Antimoneneâ€Based Optical Modulator. Laser and Photonics Reviews, 2019, 13, 1800313.	4.4	122
14	Enhanced Photodetection Properties of Tellurium@Selenium Rollâ€toâ€Roll Nanotube Heterojunctions. Small, 2019, 15, e1900902.	5.2	120
15	MXeneâ€Based Nonlinear Optical Information Converter for Allâ€Optical Modulator and Switcher. Laser and Photonics Reviews, 2018, 12, 1800215.	4.4	117
16	2D MXene-containing polymer electrolytes for all-solid-state lithium metal batteries. Nanoscale Advances, 2019, 1, 395-402.	2.2	117
17	MXene Ti₃C₂T_x: A Promising Photothermal Conversion Material and Application in Allâ€Optical Modulation and Allâ€Optical Information Loading. Advanced Optical Materials, 2019, 7, 1900060.	3.6	115
18	Ultrathin GeSe Nanosheets: From Systematic Synthesis to Studies of Carrier Dynamics and Applications for a High-Performance UVâ€“Vis Photodetector. ACS Applied Materials & Interfaces, 2019, 11, 4278-4287.	4.0	105

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19	Aqueous Zincâ€“Tellurium Batteries with Ultraflat Discharge Plateau and High Volumetric Capacity. Advanced Materials, 2020, 32, e2001469.	11.1	104
20	Emerging Monoâ€Elemental Bismuth Nanostructures: Controlled Synthesis and Their Versatile Applications. Advanced Functional Materials, 2021, 31, 2007584.	7.8	102
21	Recent Advances in Semiconducting Monoelemental Selenium Nanostructures for Device Applications. Advanced Functional Materials, 2020, 30, 2003301.	7.8	93
22	Recent advances in doping engineering of black phosphorus. Journal of Materials Chemistry A, 2020, 8, 5421-5441.	5.2	93
23	Two-Dimensional Borophene: Properties, Fabrication, and Promising Applications. Research, 2020, 2020, 2624617.	2.8	93
24	Perovskite CsPbX₃: A Promising Nonlinear Optical Material and Its Applications for Ambient Allâ€Optical Switching with Enhanced Stability. Advanced Optical Materials, 2018, 6, 1800400.	3.6	90
25	Ultrafast Relaxation Dynamics and Nonlinear Response of Fewâ€Layer Niobium Carbide MXene. Small Methods, 2020, 4, 2000250.	4.6	84
26	Highly stable MXene (V₂CT_x)-based harmonic pulse generation. Nanophotonics, 2020, 9, 2577-2585.	2.9	83
27	Two-Dimensional Black Phosphorus Nanomaterials: Emerging Advances in Electrochemical Energy Storage Science. Nano-Micro Letters, 2020, 12, 179.	14.4	82
28	From phosphorus to phosphorene: Applications in disease theranostics. Coordination Chemistry Reviews, 2021, 446, 214110.	9.5	77
29	Refractive Index Sensors Based on Ti₃C₂T_x MXene Fibers. ACS Applied Nano Materials, 2020, 3, 303-311.	2.4	74
30	Functional two-dimensional black phosphorus nanostructures towards next-generation devices. Journal of Materials Chemistry A, 2021, 9, 12433-12473.	5.2	73
31	Recent advances in solution-processed photodetectors based on inorganic and hybrid photo-active materials. Nanoscale, 2020, 12, 2201-2227.	2.8	71
32	A bismuthene-based multifunctional all-optical phase and intensity modulator enabled by photothermal effect. Journal of Materials Chemistry C, 2019, 7, 871-878.	2.7	67
33	3D MXene Sponge: Facile Synthesis, Excellent Hydrophobicity, and High Photothermal Efficiency for Waste Oil Collection and Purification. ACS Applied Materials & Interfaces, 2021, 13, 47302-47312.	4.0	67
34	Recent Progress, Challenges, and Prospects in Two-Dimensional Photo-Catalyst Materials and Environmental Remediation. Nano-Micro Letters, 2020, 12, 167.	14.4	57
35	Construction of super-hydrophobic PDMS@MOF@Cu mesh for reduced drag, anti-fouling and self-cleaning towards marine vehicle applications. Chemical Engineering Journal, 2021, 417, 129265.	6.6	56
36	In situ preparation of a CsPbBr₃/black phosphorus heterostructure with an optimized interface and photodetector application. Nanoscale, 2019, 11, 16852-16859.	2.8	55

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37	Emerging black phosphorus analogue nanomaterials for high-performance device applications. Journal of Materials Chemistry C, 2020, 8, 1172-1197.	2.7	54
38	MXene saturable absorber enabled hybrid mode-locking technology: a new routine of advancing femtosecond fiber lasers performance. Nanophotonics, 2020, 9, 2451-2458.	2.9	50
39	Two-dimensional beta-lead oxide quantum dots. Nanoscale, 2018, 10, 20540-20547.	2.8	49
40	Selfâ€Healable Black Phosphorus Photodetectors. Advanced Functional Materials, 2019, 29, 1906610.	7.8	48
41	Two-Dimensional Lead Monoxide: Facile Liquid Phase Exfoliation, Excellent Photoresponse Performance, and Theoretical Investigation. ACS Photonics, 2018, 5, 5055-5067.	3.2	47
42	Epitaxial Growth of Topological Insulators on Semiconductors (Bi₂Se₃/Te@Se) toward Highâ€Performance Photodetectors. Small Methods, 2019, 3, 1900349.	4.6	45
43	Van der Waals Integration of Bismuth Quantum Dotsâ€"Decorated Tellurium Nanotubes (Te@Bi) Heterojunctions and Plasmaâ€Enhanced Optoelectronic Applications. Small, 2019, 15, e1903233.	5.2	45
44	MXene (Ti2NTx): Synthesis, characteristics and application as a thermo-optical switcher for all-optical wavelength tuning laser. Science China Materials, 2021, 64, 259-265.	3.5	40
45	Nanoengineering of Tin Monosulfide (SnS)â€Based Structures for Emerging Applications. Small Science, 2022, 2, .	5.8	40
46	Allâ€Optical Control of Microfiber Knot Resonator Based on 2D Ti₂CT_x MXene. Advanced Optical Materials, 2020, 8, 1900977.	3.6	39
47	Two-dimensional semiconducting antimonene in nanophotonic applications â€" A review. Chemical Engineering Journal, 2021, 406, 126876.	6.6	38
48	Recent Advances of Spatial Selfâ€Phase Modulation in 2D Materials and Passive Photonic Device Applications. Small, 2020, 16, e2002252.	5.2	35
49	Recent advances in real-time spectrum measurement of soliton dynamics by dispersive Fourier transformation. Reports on Progress in Physics, 2020, 83, 116401.	8.1	35
50	One Pot, One Feeding Step, Two-Stage Polymerization Synthesis and Characterization of (PTT-b-PTMO-b-PTT)_n Multiblock Copolymers. Macromolecules, 2013, 46, 7274-7281.	2.2	34
51	Beta-lead oxide quantum dot (Î²-PbO QD)/polystyrene (PS) composite films and their applications in ultrafast photonics. Nanoscale, 2019, 11, 6828-6837.	2.8	33
52	Few-layer hexagonal bismuth telluride (Bi₂Te₃) nanoplates with high-performance UV-Vis photodetection. Nanoscale Advances, 2020, 2, 1333-1339.	2.2	33
53	Emerging 2D pnictogens for catalytic applications: status and challenges. Journal of Materials Chemistry A, 2020, 8, 12887-12927.	5.2	32
54	MXene-based high-performance all-optical modulators for actively Q-switched pulse generation. Photonics Research, 2020, 8, 1140.	3.4	30

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55	Synthesis and optoelectronics of mixed-dimensional Bi/Te binary heterostructures. Nanoscale Horizons, 2020, 5, 847-856.	4.1	28
56	CdS@CdSe Core/Shell Quantum Dots for Highly Improved Self-Powered Photodetection Performance. Inorganic Chemistry, 2021, 60, 18608-18613.	1.9	28
57	Synthesis and characterization of well-defined poly(l-lactide) functionalized graphene oxide sheets with high grafting ratio prepared through click chemistry and supramolecular interactions. Polymer, 2014, 55, 4619-4626.	1.8	27
58	One pot synthesis and characterization of novel poly(ether ester) mutiblock copolymers containing poly(tetramethylene oxide) and poly(ethylene terephthalate). Polymer Chemistry, 2014, 5, 945-954.	1.9	25
59	Poly(butylene terephthalate)-b-poly(ethylene oxide) alternating multiblock copolymers: Synthesis and application in solid polymer electrolytes. Polymer, 2017, 128, 188-199.	1.8	25
60	A one pot facile synthesis of Poly(butylene terephthalate)-block-poly(tetramethylene oxide) alternative multiblock copolymers via PROP method. Polymer, 2016, 107, 29-36.	1.8	24
61	Facile liquid-phase exfoliated few-layer GeP nanosheets and their optoelectronic device applications. Journal of Materials Chemistry C, 2020, 8, 5547-5553.	2.7	24
62	Photocarrier relaxation pathways in selenium quantum dots and their application in UV-Vis photodetection. Nanoscale, 2020, 12, 11232-11241.	2.8	23
63	Passively Q-switched near-infrared lasers with bismuthene quantum dots as the saturable absorber. Optics and Laser Technology, 2020, 128, 106219.	2.2	23
64	2D materials for bone therapy. Advanced Drug Delivery Reviews, 2021, 178, 113970.	6.6	23
65	Broadband acoustic absorbing metamaterial via deep learning approach. Applied Physics Letters, 2022, 120, .	1.5	23
66	Bismuthene quantum dots based optical modulator for MIR lasers at 2ÂÎ¼m. Optical Materials, 2020, 102, 109830.	1.7	22
67	Quantum confinement-induced enhanced nonlinearity and carrier lifetime modulation in two-dimensional tin sulfide. Nanophotonics, 2020, 9, 1963-1972.	2.9	22
68	From ultratough artificial nacre to elastomer: Poly(n-butyl acrylate) grafted graphene oxide nanocomposites. Composites Part A: Applied Science and Manufacturing, 2016, 88, 156-164.	3.8	19
69	1D@0D hybrid dimensional heterojunction-based photonics logical gate and isolator. Applied Materials Today, 2020, 19, 100589.	2.3	19
70	PBT-b-PEO-b-PBT triblock copolymers: Synthesis, characterization andÂdouble-crystalline properties. Polymer, 2013, 54, 6725-6731.	1.8	18
71	Unveiling the Stimulated Robust Carrier Lifetime of Surfaceâ€Bound Excitons and Their Photoresponse in InSe. Advanced Materials Interfaces, 2019, 6, 1900171.	1.9	18
72	Synergistic toughening of bioinspired artificial nacre by polystyrene grafted graphene oxide. RSC Advances, 2015, 5, 28085-28091.	1.7	17

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73	Tin Oxide (SnO2) Nanoparticles: Facile Fabrication, Characterization, and Application in UV Photodetectors. Nanomaterials, 2022, 12, 632.	1.9	15
74	Photodetectors: Enhanced Photodetection Properties of Tellurium@Selenium Rollâ€toâ€Roll Nanotube Heterojunctions (Small 23/2019). Small, 2019, 15, 1970125.	5.2	14
75	Characteristics, properties, synthesis and advanced applications of 2D graphdiyne versus graphene. Materials Chemistry Frontiers, 2022, 6, 528-552.	3.2	14
76	Functionalized hybridization of bismuth nanostructures for highly improved nanophotonics. APL Materials, 2022, 10, .	2.2	13
77	Customized Three-Dimensional-Printed Orthopedic Close Contact Casts for the Treatment of Stable Ankle Fractures: Finite Element Analysis and a Pilot Study. ACS Omega, 2021, 6, 3418-3426.	1.6	11
78	DABCO as a practical catalyst for aromatic halogenation with N-halosuccinimides. RSC Advances, 2022, 12, 7115-7119.	1.7	10
79	MXene-PVA thin film for efficient all-optical modulator and all-optical signal processing with high performances. JPhys Photonics, 2020, 2, 045004.	2.2	8
80	Photodetectors: Graphdiyneâ€Based Flexible Photodetectors with High Responsivity and Detectivity (Adv. Mater. 23/2020). Advanced Materials, 2020, 32, 2070175.	11.1	5
81	Auâ€“Nitrogen-Doped Graphene Quantum Dot Composites as â€œOnâ€“Offâ€•Nanosensors for Sensitive Photo-Electrochemical Detection of Caffeic Acid. Nanomaterials, 2020, 10, 1972.	1.9	4
82	Nonlayered 2D Materials: Ultrathin 2D Nonlayered Tellurium Nanosheets: Facile Liquid-Phase Exfoliation, Characterization, and Photoresponse with High Performance and Enhanced Stability (Adv.) Tj ETQq0 0 0 rgBT /Overlock 10 T	0.8	3
83	New insights to atherosclerosis management: Role of nanomaterials. Applied Materials Today, 2022, 27, 101466.	2.3	3