Ping-An Hu

List of Publications by Citations

123 papers	6,745 citations	45 h-index	80 g-index
128 ext. papers	8,038 ext. citations	9.5 avg, IF	6.09 L-index

#	Paper	IF	Citations
123	Synthesis of few-layer GaSe nanosheets for high performance photodetectors. *ACS Nano*, **2012**, 6, 5988-94	14.7	658
122	Highly responsive ultrathin GaS nanosheet photodetectors on rigid and flexible substrates. *Nano Letters*, **2013**, 13, 1649-54	11.5	573
121	Back gated multilayer InSe transistors with enhanced carrier mobilities via the suppression of carrier scattering from a dielectric interface. *Advanced Materials*, **2014**, 26, 6587-93	24	331
120	Advances in designs and mechanisms of semiconducting metal oxide nanostructures for high-precision gas sensors operated at room temperature. *Materials Horizons*, **2019**, 6, 470-506	14.4	292
119	Monolayer hexagonal boron nitride films with large domain size and clean interface for enhancing the mobility of graphene-based field-effect transistors. *Advanced Materials*, **2014**, 26, 1559-64	24	178
118	Intrinsic Two-Dimensional Ferroelectricity with Dipole Locking. *Physical Review Letters*, **2018**, 120, 227601	7.4	170
117	Ultrahigh photo-responsivity and detectivity in multilayer InSe nanosheets phototransistors with broadband response. *Journal of Materials Chemistry C*, **2015**, 3, 7022-7028	7.1	162
116	Synthesis of two-dimensional □Ga2O3 nanosheets for high-performance solar blind photodetectors. *Journal of Materials Chemistry C*, **2014**, 2, 3254-3259	7.1	139
115	Gate Tuning of High-Performance InSe-Based Photodetectors Using Graphene Electrodes. *Advanced Optical Materials*, **2015**, 3, 1418-1423	8.1	137
114	Vertical 2D MoO2/MoSe2 Core□Shell Nanosheet Arrays as High-Performance Electrocatalysts for Hydrogen Evolution Reaction. *Advanced Functional Materials*, **2016**, 26, 8537-8544	15.6	134
113	Fast, multicolor photodetection with graphene-contacted p-GaSe/n-InSe van der Waals heterostructures. *Nanotechnology*, **2017**, 28, 27LT01	3.4	133
112	Carbon nanostructure-based field-effect transistors for label-free chemical/biological sensors. *Sensors*, **2010**, 10, 5133-59	3.8	129
111	Highly sensitive phototransistors based on two-dimensional GaTe nanosheets with direct bandgap. *Nano Research*, **2014**, 7, 694-703	10	124
110	A Dual-Band Multilayer InSe Self-Powered Photodetector with High Performance Induced by Surface Plasmon Resonance and Asymmetric Schottky Junction. *ACS Nano*, **2018**, 12, 8739-8747	16.7	120
109	Sensitive Electronic-Skin Strain Sensor Array Based on the Patterned Two-Dimensional □n2Se3. *Chemistry of Materials*, **2016**, 28, 4278-4283	9.6	112
108	3D graphene/ZnO nanorods composite networks as supercapacitor electrodes. *Journal of Alloys and Compounds*, **2015**, 620, 31-37	5.7	107
107	Vertically aligned two-dimensional SnS2 nanosheets with a strong photon capturing capability for efficient photoelectrochemical water splitting. *Journal of Materials Chemistry A*, **2017**, 5, 1989-1995	13	100

106	Highly Stretchable and Conductive Core-Sheath Chemical Vapor Deposition Graphene Fibers and Their Applications in Safe Strain Sensors. *Chemistry of Materials*, **2015**, 27, 6969-6975	9.6	93
105	Performance improvement of multilayer InSe transistors with optimized metal contacts. *Physical Chemistry Chemical Physics*, **2015**, 17, 3653-8	3.6	92
104	Strong enhancement of photoresponsivity with shrinking the electrodes spacing in few layer GaSe photodetectors. *Scientific Reports*, **2015**, 5, 8130	4.9	91
103	Mesocrystalline Ti3+TiO2 hybridized g-C3N4 for efficient visible-light photocatalysis. *Carbon*, **2018**, 128, 21-30	10.4	87
102	Moir Phonons in Twisted Bilayer MoS. *ACS Nano*, **2018**, 12, 8770-8780	16.7	85
101	3D Graphene Functionalized by Covalent Organic Framework Thin Film as Capacitive Electrode in Alkaline Media. *ACS Applied Materials & Interfaces*, **2015**, 7, 17837-43	9.5	83
100	Nitrogen and sulfur co-doped porous carbon derived from bio-waste as a promising electrocatalyst for zinc-air battery. *Energy*, **2018**, 143, 43-55	7.9	79
99	Effective Synergistic Effect of Dipeptide-Polyoxometalate-Graphene Oxide Ternary Hybrid Materials on Peroxidase-like Mimics with Enhanced Performance. *ACS Applied Materials & Interfaces*, **2015**, 7, 22036-45	9.5	77
98	Low-Temperature Growth of Large-Area Heteroatom-Doped Graphene Film. *Chemistry of Materials*, **2014**, 26, 2460-2466	9.6	77
97	Multiwall carbon nanotube encapsulated Co grown on vertically oriented graphene modified carbon cloth as bifunctional electrocatalysts for solid-state Zn-air battery. *Carbon*, **2019**, 144, 370-381	10.4	76
96	Growth and Etching of Monolayer Hexagonal Boron Nitride. *Advanced Materials*, **2015**, 27, 4858-64	24	75
95	Two-Dimensional van der Waals Materials with Aligned In-Plane Polarization and Large Piezoelectric Effect for Self-Powered Piezoelectric Sensors. *Nano Letters*, **2019**, 19, 5410-5416	11.5	74
94	Environmentally benign magnetic chitosan/Fe3O4 composites as reductant and stabilizer for anchoring Au NPs and their catalytic reduction of 4-nitrophenol. *Journal of Materials Chemistry A*, **2014**, 2, 13471-13478	13	74
93	Black reduced porous SnO2 nanosheets for CO2 electroreduction with high formate selectivity and low overpotential. *Applied Catalysis B: Environmental*, **2020**, 260, 118134	21.8	67
92	Defect engineered Ta2O5 nanorod: One-pot synthesis, visible-light driven hydrogen generation and mechanism. *Applied Catalysis B: Environmental*, **2017**, 217, 48-56	21.8	65
91	Robust Piezo-Phototronic Effect in Multilayer nSe for High-Performance Self-Powered Flexible Photodetectors. *ACS Nano*, **2019**, 13, 7291-7299	16.7	65
90	In-Plane Mosaic Potential Growth of Large-Area 2D Layered Semiconductors MoS-MoSe Lateral Heterostructures and Photodetector Application. *ACS Applied Materials & Interfaces*, **2017**, 9, 1684-1691	9.5	63
89	Controlled growth of vertical 3D MoS2(1)Se2x nanosheets for an efficient and stable hydrogen evolution reaction. *Journal of Materials Chemistry A*, **2016**, 4, 18060-18066	13	61

88	Enhanced pyroelectric property in (1−x)(Bi0.5Na0.5)TiO3-xBa(Zr0.055Ti0.945)O3: Role of morphotropic phase boundary and ferroelectric-antiferroelectric phase transition. *Applied Physics Letters*, **2013**, 103, 182906	3.4	59
87	Highly sensitive flexible three-axis tactile sensors based on the interface contact resistance of microstructured graphene. *Nanoscale*, **2018**, 10, 7387-7395	7.7	58
86	CVD growth of large area and uniform graphene on tilted copper foil for high performance flexible transparent conductive film. *Journal of Materials Chemistry*, **2012**, 22, 18283		58
85	Ultrafast and Sensitive Self-Powered Photodetector Featuring Self-Limited Depletion Region and Fully Depleted Channel with van der Waals Contacts. *ACS Nano*, **2020**, 14, 9098-9106	16.7	57
84	TaOC chemical bond enhancing charge separation between Ta4+ doped Ta2O5 quantum dots and cotton-like g-C3N4. *Applied Catalysis B: Environmental*, **2017**, 205, 271-280	21.8	56
83	Efficiently Synergistic Hydrogen Evolution Realized by Trace Amount of Pt-Decorated Defect-Rich SnS Nanosheets. *ACS Applied Materials & Interfaces*, **2017**, 9, 37750-37759	9.5	54
82	Kirigami-Inspired Highly Stretchable Nanoscale Devices Using Multidimensional Deformation of Monolayer MoS2. *Chemistry of Materials*, **2018**, 30, 6063-6070	9.6	49
81	Non-planar vertical photodetectors based on free standing two-dimensional SnS nanosheets. *Nanoscale*, **2017**, 9, 9167-9174	7.7	46
80	An efficient WSe2/Co0.85Se/graphene hybrid catalyst for electrochemical hydrogen evolution reaction. *RSC Advances*, **2016**, 6, 51725-51731	3.7	46
79	Solid-State Reaction Synthesis of a InSe/CuInSe2 Lateral p□ Heterojunction and Application in High Performance Optoelectronic Devices. *Chemistry of Materials*, **2015**, 27, 983-989	9.6	45
78	Effects of Organic Molecules with Different Structures and Absorption Bandwidth on Modulating Photoresponse of MoS2 Photodetector. *ACS Applied Materials & Interfaces*, **2016**, 8, 23362-70	9.5	44
77	A mixed-dimensional 1D Se-2D InSe van der Waals heterojunction for high responsivity self-powered photodetectors. *Nanoscale Horizons*, **2020**, 5, 564-572	10.8	43
76	Tuning electrochemical catalytic activity of defective 2D terrace MoSe2 heterogeneous catalyst via cobalt doping. *Journal of Materials Chemistry A*, **2017**, 5, 11357-11363	13	41
75	Hollow Spherical Nanoshell Arrays of 2D Layered Semiconductor for High-Performance Photodetector Device. *Advanced Functional Materials*, **2018**, 28, 1705153	15.6	39
74	Gate Modulation of Threshold Voltage Instability in Multilayer InSe Field Effect Transistors. *ACS Applied Materials & Interfaces*, **2015**, 7, 26691-5	9.5	38
73	Interfacial Engineering for Fabricating High-Performance Field-Effect Transistors Based on 2D Materials. *Small Methods*, **2018**, 2, 1700384	12.8	38
72	Tunable electronic properties of graphene through controlling bonding configurations of doped nitrogen atoms. *Scientific Reports*, **2016**, 6, 28330	4.9	38
71	Ternary SnS(2-x)Se(x) Alloys Nanosheets and Nanosheet Assemblies with Tunable Chemical Compositions and Band Gaps for Photodetector Applications. *Scientific Reports*, **2015**, 5, 17109	4.9	37

70	Enhanced Piezoelectric Effect Derived from Grain Boundary in MoS Monolayers. *Nano Letters*, **2020**, 20, 201-207	11.5	35
69	High-performance and flexible photodetectors based on chemical vapor deposition grown two-dimensional InSe nanosheets. *Nanotechnology*, **2018**, 29, 445205	3.4	34
68	Soft-lithographic processed soluble micropatterns of reduced graphene oxide for wafer-scale thin film transistors and gas sensors. *Journal of Materials Chemistry*, **2012**, 22, 714-718		32
67	Poor crystalline MoS2 with highly exposed active sites for the improved hydrogen evolution reaction performance. *Journal of Alloys and Compounds*, **2019**, 777, 514-523	5.7	31
66	Atomically Thin Hexagonal Boron Nitride and Its Heterostructures. *Advanced Materials*, **2021**, 33, e2000769	27	31
65	Phase-Engineering-Driven Enhanced Electronic and Optoelectronic Performance of Multilayer InSe Nanosheets. *ACS Applied Materials & Interfaces*, **2018**, 10, 27584-27588	9.5	30
64	Perspective of graphene-based electronic devices: Graphene synthesis and diverse applications. *APL Materials*, **2019**, 7, 020901	5.7	29
63	Roll-to-Roll Manufacturing of Robust Superhydrophobic Coating on Metallic Engineering Materials. *ACS Applied Materials & Interfaces*, **2018**, 10, 2174-2184	9.5	29
62	Lateral Monolayer MoSe -WSe p-n Heterojunctions with Giant Built-In Potentials. *Small*, **2020**, 16, e2002263	13	29
61	Water-assisted growth of large-sized single crystal hexagonal boron nitride grains. *Materials Chemistry Frontiers*, **2017**, 1, 1836-1840	7.8	27
60	Patterned Growth of P-Type MoS2 Atomic Layers Using Sol-Gel as Precursor. *Advanced Functional Materials*, **2016**, 26, 6371-6379	15.6	26
59	Electrostatic Assembly Preparation of High-Toughness Zirconium Diboride-Based Ceramic Composites with Enhanced Thermal Shock Resistance Performance. *ACS Applied Materials & Interfaces*, **2016**, 8, 11675-81	9.5	21
58	Multilayer InSe-Te van der Waals Heterostructures with an Ultrahigh Rectification Ratio and Ultrasensitive Photoresponse. *ACS Applied Materials & Interfaces*, **2020**, 12, 37313-37319	9.5	20
57	Photoresponse Enhancement in Monolayer ReS Phototransistor Decorated with CdSe-CdS-ZnS Quantum Dots. *ACS Applied Materials & Interfaces*, **2017**, 9, 39456-39463	9.5	19
56	Iron-Doped Ni5P4 Ultrathin Nanoporous Nanosheets for Water Splitting and On-Demand Hydrogen Release via NaBH4 Hydrolysis. *ACS Applied Nano Materials*, **2019**, 2, 3091-3099	5.6	19
55	Mesocrystalline Ta2O5 nanosheets supported PdPt nanoparticles for efficient photocatalytic hydrogen production. *International Journal of Hydrogen Energy*, **2018**, 43, 8232-8242	6.7	19
54	Fabrication of highly oriented reduced graphene oxide microbelts array for massive production of sensitive ammonia gas sensors. *Journal of Micromechanics and Microengineering*, **2013**, 23, 095031	2	19
53	Intrinsic Dipole Coupling in 2D van der Waals Ferroelectrics for Gate-Controlled Switchable Rectifier. *Advanced Electronic Materials*, **2020**, 6, 1900975	6.4	19

52	Superstructure TaO mesocrystals derived from (NH)TaOF mesocrystals with efficient photocatalytic activity. *Dalton Transactions*, **2018**, 47, 1948-1957	4.3	18
51	Shape evolution of two dimensional hexagonal boron nitride single domains on Cu/Ni alloy and its applications in ultraviolet detection. *Nanotechnology*, **2019**, 30, 245706	3.4	17
50	Sputtered ZnO film on aluminium foils for flexible ultrasonic transducers. *Ultrasonics*, **2014**, 54, 1991-8	3.5	17
49	Role of Sulfites in the Water Splitting Reaction. *Journal of Solution Chemistry*, **2016**, 45, 67-80	1.8	16
48	High-Performance Broadband Photoelectrochemical Photodetectors Based on Ultrathin BiOS Nanosheets.. *ACS Applied Materials & Interfaces*, **2022**, 14, 7175-7183	9.5	16
47	MoC based Mott□Schottky electrocatalyst for boosting the hydrogen evolution reaction performance. *Sustainable Energy and Fuels*, **2020**, 4, 407-416	5.8	16
46	High-Performance van der Waals Metal-Insulator-Semiconductor Photodetector Optimized with Valence Band Matching. *Advanced Functional Materials*, **2021**, 31, 2104359	15.6	15
45	Synchronous Enhancement for Responsivity and Response Speed in InSe Photodetector Modulated by Piezoresistive Effect. *ACS Applied Materials & Interfaces*, **2019**, 11, 47098-47105	9.5	15
44	Modulation of opto-electronic properties of InSe thin layers via phase transformation. *RSC Advances*, **2016**, 6, 70452-70459	3.7	14
43	Controlled growth of six-point stars MoS by chemical vapor deposition and its shape evolution mechanism. *Nanotechnology*, **2017**, 28, 395601	3.4	14
42	Bifunctional hydrogen evolution and oxygen evolution catalysis using CoP-embedded N-doped nanoporous carbon synthesized via TEOS-assisted method. *Energy*, **2018**, 165, 537-548	7.9	14
41	Temperature-dependent growth of few layer □nSe and □n2Se3 single crystals for optoelectronic device. *Semiconductor Science and Technology*, **2018**, 33, 125002	1.8	14
40	Two-Dimensional Nonlayered CuInSe2 Nanosheets for High-Performance Photodetectors. *ACS Applied Nano Materials*, **2018**, 1, 5414-5418	5.6	14
39	Carbon nanomaterials: controlled growth and field-effect transistor biosensors. *Frontiers of Materials Science*, **2012**, 6, 26-46	2.5	13
38	Performance Improvement of Multilayered SnS2 Field Effect Transistors through Synergistic Effect of Vacancy Repairing and Electron Doping Introduced by EDTA. *ACS Applied Electronic Materials*, **2019**, 1, 2380-2388	4	12
37	Enhanced photoresponse of monolayer MoS 2 through hybridization with carbon quantum dots as efficient photosensitizer. *2D Materials*, **2019**, 6, 035025	5.9	12
36	Enhanced thermal shock resistance of ultra-high temperature ceramic by biomimetic surface modification. *Journal of Materials Chemistry A*, **2015**, 3, 2199-2206	13	12
35	Synthesis of High-Quality Multilayer Hexagonal Boron Nitride Films on Au Foils for Ultrahigh Rejection Ratio Solar-Blind Photodetection. *ACS Applied Materials & Interfaces*, **2020**, 12, 28351-28359	9.5	12

34	Hierarchical Assembly of Tungsten Spheres and Epoxy Composites in Three-Dimensional Graphene Foam and Its Enhanced Acoustic Performance as a Backing Material. *ACS Applied Materials & Interfaces*, **2016**, 8, 18496-504	9.5	12
33	Chitosan assisted synthesis of 3D graphene@Au nanosheet composites: catalytic reduction of 4-nitrophenol. *RSC Advances*, **2015**, 5, 79456-79462	3.7	11
32	Synthesis of Superlattice InSe Nanosheets with Enhanced Electronic and Optoelectronic Performance. *ACS Applied Materials & Interfaces*, **2019**, 11, 18511-18516	9.5	10
31	Ultralow Power Optical Synapses Based on MoS Layers by Indium-Induced Surface Charge Doping for Biomimetic Eyes. *Advanced Materials*, **2021**, 33, e2104960	24	10
30	Monolayer hydrophilic MoS2 with strong charge trapping for atomically thin neuromorphic vision systems. *Materials Horizons*, **2020**, 7, 3316-3324	14.4	10
29	Fast growth of graphene on SiO2/Si substrates by atmospheric pressure chemical vapor deposition with floating metal catalysts. *Science China Chemistry*, **2016**, 59, 707-712	7.9	10
28	Synthesis of Two-Dimensional Alloy GaInSe Nanosheets for High-Performance Photodetector. *ACS Applied Materials & Interfaces*, **2018**, 10, 43299-43304	9.5	10
27	Low temperature growth of clean single layer hexagonal boron nitride flakes and film for graphene-based field-effect transistors. *Science China Materials*, **2019**, 62, 1218-1225	7.1	9
26	Engineering inclined orientations of piezoelectric films for integrated acoustofluidics and lab-on-a-chip operated in liquid environments. *Lab on A Chip*, **2021**, 21, 254-271	7.2	9
25	Vertical MoSe-MoO p-n heterojunction and its application in optoelectronics. *Nanotechnology*, **2018** , 29, 045202	3.4	9
24	Graphene oxide-stimulated acoustic attenuating performance of tungsten based epoxy films. *Journal of Materials Chemistry C*, **2015**, 3, 10848-10855	7.1	8
23	Contact engineering high-performance ambipolar multilayer tellurium transistors. *Nanotechnology*, **2020**, 31, 115204	3.4	7
22	High-Performance Devices Based on InSe-InGaSe Van der Waals Heterojunctions. *ACS Applied Materials & Interfaces*, **2020**, 12, 24978-24983	9.5	6
21	Design of carbon sources: starting point for chemical vapor deposition of graphene. *2D Materials*, **2019**, 6, 042003	5.9	6
20	Low Optical Writing Energy Multibit Optoelectronic Memory Based on SnS /h-BN/Graphene Heterostructure. *Small*, **2021**, 17, e2104459	11	5
19	Tunable electronic properties of multilayer InSe by alloy engineering for high performance self-powered photodetector. *Journal of Colloid and Interface Science*, **2020**, 565, 239-244	9.3	5
18	Novel Hollow Graphene Flowers Synthesized by Cu-Assisted Chemical Vapor Deposition. *Advanced Materials Interfaces*, **2018**, 5, 1800347	4.6	4
17	Synthesis of Multilayer InSe0.82Te0.18 alloy for high performance near-infrared photodetector. *Journal of Alloys and Compounds*, **2020**, 815, 152375	5.7	4

16	Graphene Oxide Film Based Moisture-driven Nanogenerator and Its Application as Self-powered Relative Humidity Sensor. *Chemistry Letters*, **2018**, 47, 853-856	1.7	4
15	Skin-inspired tactile sensor based on gradient pore structure enable broad range response and ultrahigh pressure resolution. *Chemical Engineering Journal*, **2022**, 136446	14.7	4
14	The role of hybrid dielectric interfaces in improving the performance of multilayer InSe transistors. *Journal of Materials Chemistry C*, **2020**, 8, 6701-6709	7.1	3
13	Site-Selective Chlorination of Graphene through Laser-Induced In Situ Decomposition of AgCl Nanoparticles. *ChemNanoMat*, **2016**, 2, 515-519	3.5	3
12	Asymmetrically synchronous reduction and assembly of graphene oxide film on metal foil for moisture responsive actuator. *Nanotechnology*, **2019**, 30, 445601	3.4	3
11	Graphene nanoparticle strain sensors with modulated sensitivity through tunneling types transition. *Nanotechnology*, **2019**, 30, 425501	3.4	3
10	CVD growth of large□scale hexagon-like shaped MoSe2 monolayers with sawtooth edge. *Chemical Physics Letters*, **2019**, 733, 136663	2.5	2
9	Growth and Etching Kinetics: Growth and Etching of Monolayer Hexagonal Boron Nitride (Adv. Mater. 33/2015). *Advanced Materials*, **2015**, 27, 4948-4948	24	2
8	Lowering the Contact Barriers of 2D Organic F CuPc Field-Effect Transistors by Introducing Van der Waals Contacts. *Small*, **2021**, 17, e2007739	11	2
7	Ultralow Power Optical Synapses Based on MoS 2 Layers by Indium-Induced Surface Charge Doping for Biomimetic Eyes (Adv. Mater. 52/2021). *Advanced Materials*, **2021**, 33, 2170409	24	2
6	A Capacitive and Piezoresistive Hybrid Sensor for Long-Distance Proximity and Wide-Range Force Detection in Human□Robot Collaboration. *Advanced Intelligent Systems*,2100213	6	1
5	Charge Transfer at the Hetero-Interface of WSe2/InSe Induces Efficient Doping to Achieve Multi-Functional Lateral Homo-Junctions. *Advanced Electronic Materials*, **2021**, 7, 2100584	6.4	1
4	Transparent and High-Absolute-Effectiveness Electromagnetic Interference Shielding Film Based on Single-Crystal Graphene. *Advanced Materials Technologies*,2101465	6.8	1
3	Mixed-Dimensional InSe□Si Heterojunction Nanostructures for Self-Powered Broadband Photodetectors. *ACS Applied Nano Materials*,	5.6	0
2	A Capacitive and Piezoresistive Hybrid Sensor for Long-Distance Proximity and Wide-Range Force Detection in Human□Robot Collaboration. *Advanced Intelligent Systems*, **2022**, 4, 2270011	6	0
1	Patterned Growth: Patterned Growth of P-Type MoS2 Atomic Layers Using Sol□el as Precursor (Adv. Funct. Mater. 35/2016). *Advanced Functional Materials*, **2016**, 26, 6495-6495	15.6	