Yihui He

List of Publications by Year
in descending order

61 papers	3,029 citations	257450 24 h-index	168389 53 g-index
63 all docs	63 docs citations	63 times ranked	2858 citing authors

#	Article	IF	Citations
1	Study of Annihilation Photon Pair Coincidence Time Resolution Using Prompt Photon Emissions in New Perovskite Bulk Crystals. IEEE Transactions on Radiation and Plasma Medical Sciences, 2022, 6, 804-810.	3.7	2
2	Sensitivity and Detection Limit of Spectroscopicâ€Grade Perovskite CsPbBr₃ Crystal for Hard Xâ€Ray Detection. Advanced Functional Materials, 2022, 32, .	14.9	32
3	Detecting ionizing radiation using halide perovskite semiconductors processed through solution and alternative methods. Nature Photonics, 2022, 16, 14-26.	31.4	122
4	CsPbBr3 perovskite detectors with 1.4% energy resolution for high-energy Î3-rays. Nature Photonics, 2021, 15, 36-42.	31.4	210
5	Enhanced Photocurrent of All-Inorganic Two-Dimensional Perovskite Cs₂PbI₂Cl₂ via Pressure-Regulated Excitonic Features. Journal of the American Chemical Society, 2021, 143, 2545-2551.	13.7	79
6	Demonstration of Energy-Resolved Î3-Ray Detection at Room Temperature by the CsPbCl₃ Perovskite Semiconductor. Journal of the American Chemical Society, 2021, 143, 2068-2077.	13.7	62
7	Tripleâ€Cation and Mixedâ€Halide Perovskite Single Crystal for Highâ€Performance Xâ€ray Imaging. Advanced Materials, 2021, 33, e2006010.	21.0	163
8	Amorphous to Crystal Phase Change Memory Effect with Two-Fold Bandgap Difference in Semiconducting K₂Bi₈Se₁₃. Journal of the American Chemical Society, 2021, 143, 6221-6228.	13.7	9
9	Excitons in CsPbBr₃ Halide Perovskite. Journal of Physical Chemistry Letters, 2021, 12, 9301-9307.	4.6	8
10	Nucleation-controlled growth of superior lead-free perovskite Cs3Bi2I9 single-crystals for high-performance X-ray detection. Nature Communications, 2020, 11, 2304.	12.8	286
11	Inch-Size 0D-Structured Lead-Free Perovskite Single Crystals for Highly Sensitive Stable X-Ray Imaging. Matter, 2020, 3, 180-196.	10.0	202
12	Three-Dimensional Lead Iodide Perovskitoid Hybrids with High X-ray Photoresponse. Journal of the American Chemical Society, 2020, 142, 6625-6637.	13.7	82
13	Direct thermal neutron detection by the 2D semiconductor 6LiInP2Se6. Nature, 2020, 577, 346-349.	27.8	59
14	Thermoplastic Membranes Incorporating Semiconductive Metalâ€"Organic Frameworks: An Advance on Flexible Xâ€ray Detectors. Angewandte Chemie, 2020, 132, 11954-11958.	2.0	46
15	Thermoplastic Membranes Incorporating Semiconductive Metalâ€"Organic Frameworks: An Advance on Flexible Xâ€ray Detectors. Angewandte Chemie - International Edition, 2020, 59, 11856-11860.	13.8	60
16	Organic Cation Alloying on Intralayer A and Interlayer Aâ€™ sites in 2D Hybrid Dionâ€"Jacobson Lead Bromide Perovskites (Aâ€™)(A)Pb₂Br₇. Journal of the American Chemical Society, 2020, 142, 8342-8351.	13.7	64
17	Monte Carlo simulation of transport properties in wide gap Hg3Se2I2. Semiconductor Science and Technology, 2019, 34, 115003.	2.0	1
18	Antiferromagnetic Semiconductor BaFMn_{0.5}Te with Unique Mn Ordering and Red Photoluminescence. Journal of the American Chemical Society, 2019, 141, 17421-17430.	13.7	10

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19	Ultrafast correlated charge and lattice motion in a hybrid metal halide perovskite. Science Advances, 2019, 5, eaaw5558.	10.3	66
20	Purification and Improved Nuclear Radiation Detection of Tl₆SI₄ Semiconductor. Crystal Growth and Design, 2019, 19, 4738-4744.	3.0	4
21	Controlling the Vapor Transport Crystal Growth of Hg₃Se₂I₂ Hard Radiation Detector Using Organic Polymer. Crystal Growth and Design, 2019, 19, 2074-2080.	3.0	7
22	Uniaxial Expansion of the 2D Ruddlesdenâ€“Popper Perovskite Family for Improved Environmental Stability. Journal of the American Chemical Society, 2019, 141, 5518-5534.	13.7	193
23	Study of the Coincidence Time Resolution of New Perovskite Bulk Crystals. , 2019, , .		3
24	Carrier recombination mechanism in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>CsPbB</mml:mi><mml:msub><mml:mi mathvariant="normal">r</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:mrow></mml:math> revealed by time-resolved photoluminescence spectroscopy. Physical Review B, 2019, 100, .	3.2	14
25	Coherent charge-phonon correlations and exciton dynamics in orthorhombic CH3NH3PbI3 measured by ultrafast multi-THz spectroscopy. Journal of Chemical Physics, 2019, 151, 214201.	3.0	6
26	Zero-Dimensional Cs₂TeI₆ Perovskite: Solution-Processed Thick Films with High X-ray Sensitivity. ACS Photonics, 2019, 6, 196-203.	6.6	70
27	Noise sources and their limitations on the performance of compound semiconductor hard radiation detectors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2019, 916, 133-140.	1.6	4
28	Perovskite CsPbBr3 single crystal detector for alpha-particle spectroscopy. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2019, 922, 217-221.	1.6	83
29	High spectral resolution of gamma-rays at room temperature by perovskite CsPbBr3 single crystals. Nature Communications, 2018, 9, 1609.	12.8	381
30	Stoichiometric Effects on the Photoelectric Properties of LiInSe₂ Crystals for Neutron Detection. Crystal Growth and Design, 2018, 18, 2864-2870.	3.0	16
31	An Effective Purification Process for the Nuclear Radiation Detector Tl₆SeI₄. Crystal Growth and Design, 2018, 18, 3484-3493.	3.0	9
32	Cu₂I₂Se₆: A Metalâ€“Inorganic Framework Wide-Bandgap Semiconductor for Photon Detection at Room Temperature. Journal of the American Chemical Society, 2018, 140, 1894-1899.	13.7	19
33	Role of Stoichiometry in the Growth of Large Pb₂P₂Se₆ Crystals for Nuclear Radiation Detection. ACS Photonics, 2018, 5, 566-573.	6.6	15
34	Abrupt Thermal Shock of (NH₄)₂Mo₃S₁₃ Leads to Ultrafast Synthesis of Porous Ensembles of MoS₂ Nanocrystals for High Gain Photodetectors. ACS Applied Materials & Interfaces, 2018, 10, 38193-38200.	8.0	5
35	Deep Level and Nearâ€Bandâ€Edge Recombination in Semiconducting Antiperovskite Hg₃Se₂I₂ Single Crystals. Advanced Optical Materials, 2018, 6, 1800328.	7.3	2
36	Resolving the Energy of Î³-Ray Photons with MAPbI₃ Single Crystals. ACS Photonics, 2018, 5, 4132-4138.	6.6	100

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37	Conversion of Single Crystal (NH4)2Mo3S13Â·H2O to Isomorphic Pseudocrystals of MoS2Nanoparticles. Chemistry of Materials, 2018, 30, 3847-3853.	6.7	14
38	Cs₂PbI₂Cl₂, All-Inorganic Two-Dimensional Ruddlesdenâ€"Popper Mixed Halide Perovskite with Optoelectronic Response. Journal of the American Chemical Society, 2018, 140, 11085-11090.	13.7	167
39	Î±-Particle Detection and Charge Transport Characteristics in the A₃M₂I₉ Defect Perovskites (A = Cs, Rb; M = Bi, Sb). ACS Photonics, 2018, 5, 3748-3762.	6.6	88
40	Defect Antiperovskite Compounds Hg₃Q₂I₂ (Q = S, Se, and Te) for Room-Temperature Hard Radiation Detection. Journal of the American Chemical Society, 2017, 139, 7939-7951.	13.7	45
41	TlSn₂I₅, a Robust Halide Antiperovskite Semiconductor for Î³-Ray Detection at Room Temperature. ACS Photonics, 2017, 4, 1805-1813.	6.6	33
42	Improvement of the THz response of Zn_{1â^'x}Mn_xTe bulk crystals grown by a temperature gradient solution method. CrystEngComm, 2017, 19, 3051-3057.	2.6	2
43	Electronic defects in the halide antiperovskite semiconductor <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Hg</mml:mi><mml:mn>3</mml:mn></mml: mathvariant="normal">I</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2017, 96, .	3.2	3
44	Improved Crystal Growth of Tl₆SeI₄ for Î³-Ray Detection Material by Oxide Impurity Removal. Crystal Growth and Design, 2017, 17, 6096-6104.	3.0	6
45	Refined Synthesis and Crystal Growth of Pb₂P₂Se₆ for Hard Radiation Detectors. Crystal Growth and Design, 2016, 16, 5100-5109.	3.0	12
46	Te inclusion-induced electrical field perturbation in CdZnTe single crystals revealed by Kelvin probe force microscopy. Micron, 2016, 88, 48-53.	2.2	6
47	Calculation of the High-Temperature Point Defects Structure in Te-Rich CdTe. Journal of Electronic Materials, 2016, 45, 4747-4754.	2.2	1
48	Comparison of In doped and In, Pb co-doped Cd0.9Zn0.1Te. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2015, 790, 10-13.	1.6	4
49	Interplay mechanism between secondary phase particles and extended dislocations in CdZnTe crystals. CrystEngComm, 2015, 17, 8639-8644.	2.6	10
50	Characterization of CdZnTe co-doped with indium and lead. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2015, 770, 48-51.	1.6	5
51	Migration of Te inclusions in CdZnTe single crystals under the temperature gradient annealing. Journal of Crystal Growth, 2014, 402, 15-21.	1.5	16
52	TEM study on HgIn2Te4 precipitates in Hg3In2Te6 crystals grown by the Bridgman method. CrystEngComm, 2014, 16, 7660-7666.	2.6	2
53	HRTEM study on the ordered phases in Hg₃In₂Te₆ crystals grown by Bridgman method. CrystEngComm, 2014, 16, 5073-5079.	2.6	4
54	Dislocation-mediated coupling mechanism between the microstructural defects and Te inclusions in CdZnTe single crystals. Scripta Materialia, 2014, 82, 17-20.	5.2	18

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55	Research into the electrical property variation of undoped CdTe and ZnTe crystals grown under Te-rich conditions. Journal of Alloys and Compounds, 2014, 612, 392-397.	5.5	17
56	Correlation of dislocations and Te inclusions in detector-grade CdZnTe crystals grown by MVB method. , 2012, , .		0
57	Investigation of Te inclusion induced glides and the corresponding dislocations in CdZnTe crystal. CrystEngComm, 2012, 14, 417-420.	2.6	20
58	Study of Te aggregation at the initial growth stage of CdZnTe films deposited by CSS. Applied Physics A: Materials Science and Processing, 2012, 108, 447-450.	2.3	6
59	Matrix-controlled morphology evolution of Te inclusions in CdZnTe single crystal. Scripta Materialia, 2012, 67, 5-8.	5.2	26
60	Morphology evolution of micron-scale secondary phases in CdZnTe crystals grown by vertical Bridgman method. Journal of Alloys and Compounds, 2011, 509, 2338-2342.	5.5	15
61	Characterization of detector-grade CdZnTe:Al crystals obtained by annealing. Journal of Crystal Growth, 2011, 324, 22-25.	1.5	5