

# Zhong He

## List of Publications by Citations

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121  
papers

1,570  
citations

19  
h-index

37  
g-index

158  
ext. papers

1,937  
ext. citations

2.1  
avg, IF

4.76  
L-index

#	Paper	IF	Citations
121	Review of the ShockleyBamo theorem and its application in semiconductor gamma-ray detectors. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2001</b> , 463, 250-267	1.2	288
120	1-D position sensitive single carrier semiconductor detectors. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>1996</b> , 380, 228-231	1.2	94
119	The Polaris-H imaging spectrometer. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2015</b> , 784, 377-381	1.2	87
118	4-spl pi/ Compton imaging using a 3-D position-sensitive CdZnTe detector via weighted list-mode maximum likelihood. <i>IEEE Transactions on Nuclear Science</i> , <b>2004</b> , 51, 1618-1624	1.7	80
117	CsPbBr3 perovskite detectors with 1.4% energy resolution for high-energy $\gamma$ -rays. <i>Nature Photonics</i> , <b>2021</b> , 15, 36-42	33.9	79
116	Charge sharing in common-grid pixelated CdZnTe detectors. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2011</b> , 654, 233-243	1.2	64
115	A Prototype Three-Dimensional Position Sensitive CdZnTe Detector Array. <i>IEEE Transactions on Nuclear Science</i> , <b>2007</b> , 54, 843-848	1.7	61
114	3-D position sensitive CdZnTe spectrometer performance using third generation VAS/TAT readout electronics. <i>IEEE Transactions on Nuclear Science</i> , <b>2005</b> , 52, 2009-2016	1.7	56
113	. <i>IEEE Transactions on Nuclear Science</i> , <b>2012</b> , 59, 236-242	1.7	52
112	4-pi Compton imaging with single 3D position-sensitive CdZnTe detector <b>2004</b> ,		45
111	Improved resolution for 3-D position sensitive CdZnTe spectrometers. <i>IEEE Transactions on Nuclear Science</i> , <b>2004</b> , 51, 2427-2431	1.7	38
110	Sub-Pixel Position Sensing for Pixelated, 3-D Position Sensitive, Wide Band-Gap, Semiconductor, Gamma-Ray Detectors. <i>IEEE Transactions on Nuclear Science</i> , <b>2011</b> , 58, 1400-1409	1.7	35
109	Detection of gamma ray polarization using a 3-D position-sensitive CdZnTe detector. <i>IEEE Transactions on Nuclear Science</i> , <b>2005</b> , 52, 1160-1164	1.7	33
108	. <i>IEEE Transactions on Nuclear Science</i> , <b>2008</b> , 55, 1593-1603	1.7	31
107	ASIC for High Rate 3D Position Sensitive Detectors. <i>IEEE Transactions on Nuclear Science</i> , <b>2010</b> , 57, 1536-1542		21
106	Investigation of pixellated $\gamma$ -ray spectrometers. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2002</b> , 492, 387-401	1.2	21
105	. <i>IEEE Transactions on Nuclear Science</i> , <b>2003</b> , 50, 1090-1097	1.7	21

104	The stability of TlBr detectors at low temperature. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2010</b> , 623, 1024-1029	1.3	20
103	TlBr Gamma-Ray Spectrometers Using the Depth Sensitive Single Polarity Charge Sensing Technique. <i>IEEE Transactions on Nuclear Science</i> , <b>2008</b> , 55, 1781-1784	1.7	20
102	Investigation of the asymmetric characteristics and temperature effects of CdZnTe detectors. <i>IEEE Transactions on Nuclear Science</i> , <b>2005</b> , 52, 2068-2075	1.7	19
101	Comparison of 5 and 10mm thick HgI <sub>2</sub> pixelated $\gamma$ -ray spectrometers. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2003</b> , 505, 191-194	1.2	19
100	Special Nuclear Material Characterization Using Digital 3-D Position Sensitive CdZnTe Detectors and High Purity Germanium Spectrometers. <i>IEEE Transactions on Nuclear Science</i> , <b>2016</b> , 63, 2649-2656	1.7	17
99	3D position-sensitive CdZnTe gamma-ray spectrometers: improved performance with new ASICs <b>2004</b> ,		15
98	Pixelated TlBr detectors with the depth sensing technique. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2007</b> , 578, 235-238	1.2	14
97	. <i>IEEE Transactions on Nuclear Science</i> , <b>2012</b> , 59, 469-478	1.7	13
96	Analysis of detector response using 3-D position-sensitive CZT gamma-ray spectrometers. <i>IEEE Transactions on Nuclear Science</i> , <b>2004</b> , 51, 3098-3104	1.7	13
95	. <i>IEEE Transactions on Nuclear Science</i> , <b>2005</b> , 52, 2932-2939	1.7	12
94	Spectroscopy on thick HgI <sub>2</sub> /sub 2/ detectors: a comparison between planar and pixelated electrodes. <i>IEEE Transactions on Nuclear Science</i> , <b>2003</b> , 50, 1220-1224	1.7	12
93	New measurement technique for the product of the electron mobility and mean free drift time for pixelated semiconductor detectors. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2012</b> , 671, 1-5	1.2	10
92	Impact of drift time variation on the Compton image from large-volume CdZnTe crystals. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2012</b> , 683, 53-62	1.2	10
91	Sub-pixel position resolution in pixelated semiconductor detectors <b>2007</b> ,		10
90	Stability and characteristics of large CZT coplanar electrode detectors. <i>IEEE Transactions on Nuclear Science</i> , <b>2001</b> , 48, 272-277	1.7	10
89	Gamma-Ray Point-Source Detection in Unknown Background Using 3D-Position-Sensitive Semiconductor Detectors. <i>IEEE Transactions on Nuclear Science</i> , <b>2011</b> , 58, 605-613	1.7	9
88	A Method to Estimate the Atomic Number and Mass Thickness of Intervening Materials in Uranium and Plutonium Gamma-Ray Spectroscopy Measurements. <i>IEEE Transactions on Nuclear Science</i> , <b>2016</b> , 63, 2639-2648	1.7	9
87	Transient Behavior in TlBr Gamma-Ray Detectors and Its Analysis Using 3-D Position Sensing. <i>IEEE Transactions on Nuclear Science</i> , <b>2013</b> , 60, 1162-1167	1.7	8

86	Performance of a 2-keV digitizer ASIC for 3-D position-sensitive pixellated semiconductor detectors <b>2012</b> ,		8
85	Signal modeling of charge sharing effect in simple pixelated CdZnTe detector. <i>Journal of the Korean Physical Society</i> , <b>2014</b> , 64, 1336-1345	0.6	7
84	Benefits of Position-Sensitive Detectors for Radioactive Source Detection. <i>IEEE Transactions on Signal Processing</i> , <b>2010</b> , 58, 4473-4483	4.8	7
83	Development of large-volume high-performance monolithic CZT radiation detector <b>2018</b> ,		7
82	Computational model for detector timing effects in Compton-camera based prompt-gamma imaging for proton radiotherapy. <i>Physics in Medicine and Biology</i> , <b>2020</b> , 65, 125004	3.8	6
81	Results From Testing of 145 3D Position-Sensitive, Pixelated CdZnTe Detectors. <i>IEEE Transactions on Nuclear Science</i> , <b>2012</b> , 59, 3332-3338	1.7	6
80	Fast Neutron Detection Using Pixelated CdZnTe Spectrometers. <i>IEEE Transactions on Nuclear Science</i> , <b>2017</b> , 64, 1920-1926	1.7	5
79	Unbiased Filtered Back-Projection in $4\pi$ Compton Imaging With 3D Position Sensitive Detectors. <i>IEEE Transactions on Nuclear Science</i> , <b>2016</b> , 63, 2750-2756	1.7	5
78	Calibration and operation of the polaris 18-detector CdZnTe array <b>2010</b> ,		5
77	Detecting shielded sources using 3-D CdZnTe detectors <b>2008</b> ,		5
76	<b>2007</b> ,		5
75	Long-term stability of 1-cm thick pixelated HgI/sub 2/ gamma-ray spectrometers operating at room temperature. <i>IEEE Transactions on Nuclear Science</i> , <b>2004</b> , 51, 1886-1894	1.7	5
74	Artifacts in High-Energy Compton Imaging With 3-D Position-Sensitive CdZnTe. <i>IEEE Transactions on Nuclear Science</i> , <b>2020</b> , 67, 1920-1928	1.7	4
73	Thallium Bromide Gamma-Ray Spectrometers and Pixel Arrays. <i>Frontiers in Physics</i> , <b>2020</b> , 8,	3.9	4
72	Accurate Determination of the Ionization Energy in Pixelated TlBr Correcting for Charge Collection Efficiency. <i>IEEE Transactions on Nuclear Science</i> , <b>2018</b> , 65, 950-954	1.7	4
71	Quantification of the Conditioning Phase in Cooled Pixelated TlBr Detectors. <i>IEEE Transactions on Nuclear Science</i> , <b>2015</b> , 62, 1785-1790	1.7	4
70	Quantitative Investigation of Room-Temperature Breakdown Effects in Pixelated TlBr Detectors. <i>IEEE Transactions on Nuclear Science</i> , <b>2014</b> , 61, 2573-2578	1.7	4
69	Improvement of Compton imaging efficiency by using side-neighbor events. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2012</b> , 687, 62-68	1.2	4

68	Performance of five-or-more-pixel event sequence reconstruction for 3-D semiconductor gamma-ray-imaging spectrometers <b>2008</b> ,		4
67	Sensitivity of gamma-ray source detection using 3D-position-sensitive semiconductor detectors <b>2008</b> ,		4
66	Intrinsic photopeak efficiency measurement and simulation for pixelated CdZnTe detector. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2020</b> , 980, 164501	1.2	4
65	A Correction Factor to the Two-Bias Method for Determining Mobility-Lifetime Products in Pixelated Detectors. <i>IEEE Transactions on Nuclear Science</i> , <b>2016</b> , 63, 1832-1838	1.7	3
64	Study of Long-Term CdZnTe Stability Using the Polaris System. <i>IEEE Transactions on Nuclear Science</i> , <b>2013</b> , 60, 1086-1093	1.7	3
63	Improvement of Sub-Pixel Position Sensing in Nonuniform Large-Volume Pixelated CdZnTe Crystals. <i>IEEE Transactions on Nuclear Science</i> , <b>2013</b> , 60, 1201-1207	1.7	3
62	1-D Fast Neutron Source Localization Using Digital Pixelated 3-D Position-Sensitive CdZnTe Detectors. <i>IEEE Transactions on Nuclear Science</i> , <b>2017</b> , 64, 2531-2535	1.7	3
61	UMImaging: A Software Package for Image Reconstruction From 3D-Position-Sensitive Gamma-Ray Detectors. <i>IEEE Transactions on Nuclear Science</i> , <b>2012</b> , 59, 1672-1680	1.7	3
60	Investigation of polarization effect with TlBr detectors at different operating temperatures <b>2010</b> ,		3
59	Model-based reconstruction of spectral and spatial source distribution from objects with known motion <b>2010</b> ,		3
58	Asymptotic Source Detection Performance of Gamma-Ray Imaging Systems Under Model Mismatch. <i>IEEE Transactions on Signal Processing</i> , <b>2011</b> , 59, 5141-5151	4.8	3
57	ASIC for high rate 3D position sensitive detectors <b>2009</b> ,		3
56	Performance of 3-D position sensitive CdZnTe detectors for gamma-ray energies above 1 MeV <b>2009</b> ,		3
55	Experimental demonstration of coded aperture imaging using thick 3D-position-sensitive CdZnTe detectors <b>2009</b> ,		3
54	Maximum likelihood estimation maximization deconvolution in spatial and combined spatial-energy domains for a detector array system <b>2007</b> ,		3
53	Study of Detection Deficiency of 3D Position-Sensitive Pixelated CdZnTe Detectors <b>2006</b> ,		3
52	Analysis of detector response using 3-D position sensitive CZT gamma-ray spectrometers		3
51	Gamma-ray energy-imaging integrated deconvolution		3

50	Gamma-ray tracking for high energy gamma-ray imaging in pixelated CdZnTe. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2020</b> , 954, 161443	1.2	3
49	Qualitative measurement of spatial shielding isotopics via Compton imaging neutron-induced gamma rays using 3-D CdZnTe detectors. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2019</b> , 935, 214-221	1.2	2
48	Angular Detection and Shielding Characterization of Simulated 235U Using Time Encoded Imaging and 3D Position Sensitive CdZnTe Detectors <b>2017</b> ,		2
47	Identification and Reconstruction of Single-Pixel Incomplete Charge Collection Events. <i>IEEE Transactions on Nuclear Science</i> , <b>2013</b> , 60, 1243-1247	1.7	2
46	Improvements in room temperature lifetime of pixelated TlBr detectors from surface etching <b>2015</b> ,		2
45	Efficiency measurement on 6.0 cm <sup>3</sup> 3-D CdZnTe detectors <b>2010</b> ,		2
44	Experimental limitations of coded aperture imaging using thick 3D-position-sensitive CdZnTe detectors <b>2010</b> ,		2
43	3D Monte Carlo simulations of pixelated CdZnTe detectors under high photon fluxes <b>2010</b> ,		2
42	Including pair-production events in the system response function for energy-imaging integrated deconvolution algorithm <b>2011</b> ,		2
41	Event classification in 3D position sensitive pixelated CdZnTe detectors <b>2011</b> ,		2
40	Characterization of the polarization process in thallium-bromide detectors <b>2012</b> ,		2
39	Spectroscopic performance of recent TlBr detectors <b>2012</b> ,		2
38	Investigation of pixellated TlBr detectors using digital signal processing techniques <b>2008</b> ,		2
37	4 <sup>th</sup> coded aperture imaging using 3d position-sensitive CdZnTe detectors <b>2008</b> ,		2
36	Gamma-ray source location by attenuation measurements <b>2007</b> ,		2
35	Development of a model for gamma-ray spectra generation using pixelated mercuric iodide detectors <b>2003</b> , 4784, 119		2
34	Hand-Held Gamma-Ray Imaging Sensors Using Room-Temperature 3-Dimensional Position-Sensitive Semiconductor Spectrometers. <i>AIP Conference Proceedings</i> , <b>2002</b> ,	0	2
33	Time-Encoded Gamma-Ray Imaging Using a 3-D Position-Sensitive CdZnTe Detector Array. <i>IEEE Transactions on Nuclear Science</i> , <b>2020</b> , 67, 464-472	1.7	2

32	Comparison of a large area CZT detector to a spectroscopic CdTe detector for X-ray fluorescence computed tomography <b>2016</b> ,		2
31	Efficient temperature corrections for gamma-ray energy reconstruction in 3-D position-sensitive CdZnTe detectors. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2020</b> , 954, 161340	1.2	2
30	Measurement of Electron Mobility-Lifetime Product in 3-D Position-Sensitive CdZnTe Detectors Using the VAD_UMv2.2 Digital Readout System. <i>IEEE Transactions on Nuclear Science</i> , <b>2018</b> , 65, 2834-2837	1.7	2
29	Coded-Aperture Imaging with High-Resolution Large-Volume CZT <b>2018</b> ,		2
28	Evaluation of Compton Imaging Efficiency Degradation Factors in Large Volume, Pixelated CdZnTe Sensors <b>2017</b> ,		1
27	Identification of Intervening Materials in Gamma-Ray Spectroscopy Measurements Using Angularly Deconvolved Spectra With Multiple Sources in the Field of View. <i>IEEE Transactions on Nuclear Science</i> , <b>2018</b> , 65, 924-931	1.7	1
26	Analysis of High-Energy Tailing in TlBr Detectors. <i>IEEE Transactions on Nuclear Science</i> , <b>2018</b> , 65, 955-960	1.7	1
25	Characterization of a digital ASIC readout system for 11x11 pixelated TlBr detectors <b>2014</b> ,		1
24	New nonlinearity calibration method for 3-D position-sensitive CdZnTe detectors <b>2014</b> ,		1
23	Source Detection Performance Prediction for a CdZnTe Array. <i>IEEE Transactions on Nuclear Science</i> , <b>2013</b> , 60, 204-212	1.7	1
22	CdZnTe gamma-ray spectroscopy in high flux environments using digital pulse processing techniques <b>2015</b> ,		1
21	Low electronic noise digital ASIC array system and its non-linearity <b>2013</b> ,		1
20	Predicting ROC curves for source detection under model mismatch <b>2010</b> ,		1
19	Study on effect of charge sharing events in common-grid pixelated CdZnTe detectors <b>2009</b> ,		1
18	Point-source detection using energy and imaging information from 3D-position-sensitive semiconductor detectors <b>2009</b> ,		1
17	High-flux experiments and simulations of pulse-mode 3D-position-sensitive CdZnTe pixelated detectors <b>2011</b> ,		1
16	Impact of electric field non-uniformity on large CdZnTe crystals <b>2011</b> ,		1
15	Measurements of gamma rays above 3 MeV using 3D position-sensitive 20x20x5 mm <sup>3</sup> CdZnTe detectors <b>2011</b> ,		1

14	Radial position sensing in a coplanar-grid high-pressure xenon gamma-ray spectrometer. <i>IEEE Transactions on Nuclear Science</i> , <b>2006</b> , 53, 1380-1384	1.7	1
13	Digital waveform analysis techniques for pixelated semiconductor detectors <b>2007</b> ,		1
12	3D position sensing on UltraPeRL CdZnTe detectors <b>2007</b> ,		1
11	Calibration strategy for 3-D position sensitive CdZnTe spectrometer arrays <b>2007</b> ,		1
10	VAS/spl I.bar/UM/TAT4 ASIC readout systems for 3D CdZnTe/Hgl/sub 2/ detector arrays		1
9	Image artifacts resulting from gamma-ray tracking algorithms used with Compton imagers		1
8	FRAM v5.2 estimation of plutonium and uranium isotopics using digitized 3-D position-sensitive CdZnTe detectors. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2020</b> , 954, 161339	1.2	1
7	Performance of Larger-Volume 40 [40 [10- and 40 [40 [15-mm[ CdZnTe Detectors. <i>IEEE Transactions on Nuclear Science</i> , <b>2021</b> , 68, 250-255	1.7	1
6	Filtered Backprojection in Compton Imaging Using a Spherical Harmonic Wiener Filter With Pixelated CdZnTe. <i>IEEE Transactions on Nuclear Science</i> , <b>2021</b> , 68, 211-219	1.7	0
5	Model-Based Reconstruction of Spectral and Spatial Source Distribution for Objects With Known Motion. <i>IEEE Transactions on Nuclear Science</i> , <b>2013</b> , 60, 3981-3989	1.7	
4	Three-Dimensional Position-Sensitive Wide Bandgap Semiconductor Gamma-Ray Imaging Detectors <b>2010</b> , 321-329		
3	Cram[er-Rao Bound Evaluations of Compton Imager Designs for Proton Beam Range Verification. <i>IEEE Transactions on Radiation and Plasma Medical Sciences</i> , <b>2021</b> , 1-1	4.2	
2	Region of Interest Image Reconstruction for Compton Imaging Using 3D Position Sensing CdZnTe. <i>IEEE Transactions on Nuclear Science</i> , <b>2022</b> , 1-1	1.7	
1	Sub-Pixel Sensing for Charge Sharing Events in Pixelated CdZnTe Detectors. <i>IEEE Transactions on Nuclear Science</i> , <b>2022</b> , 1-1	1.7	