

Sandeep K Chaudhuri

List of Publications by Year in descending order

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54
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54
times ranked

464
citing authors

#	ARTICLE	IF	CITATIONS
1	High resolution alpha particle detection using 4H-SiC epitaxial layers: Fabrication, characterization, and noise analysis. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2013, 728, 97-101.	1.6	67
2	Experimental determination of electron-hole pair creation energy in 4H-SiC epitaxial layer: An absolute calibration approach. Applied Physics Letters, 2013, 102, .	3.3	57
3	Low Energy X-Ray and γ -Ray Detectors Fabricated on n-Type 4H-SiC Epitaxial Layer. IEEE Transactions on Nuclear Science, 2013, 60, 2888-2893.	2.0	50
4	Characterization of defects in ZnO nanocrystals: Photoluminescence and positron annihilation spectroscopic studies. Journal of Applied Physics, 2007, 102, 103514.	2.5	46
5	Effect of Z1/2, EH5, and Ci1 deep defects on the performance of n-type 4H-SiC epitaxial layers Schottky detectors: Alpha spectroscopy and deep level transient spectroscopy studies. Journal of Applied Physics, 2014, 115, .	2.5	40
6	Correlation of Deep Levels With Detector Performance in 4H-SiC Epitaxial Schottky Barrier Alpha Detectors. IEEE Transactions on Nuclear Science, 2014, 61, 2338-2344.	2.0	40
7	Advances in High-Resolution Radiation Detection Using 4H-SiC Epitaxial Layer Devices. Micromachines, 2020, 11, 254.	2.9	40
8	Defect levels in Cu ₂ ZnSn(SxSe ^{1-x}) ₄ solar cells probed by current-mode deep level transient spectroscopy. Applied Physics Letters, 2014, 104, .	3.3	39
9	Defect characterization and charge transport measurements in high-resolution Ni/n-4H-SiC Schottky barrier radiation detectors fabricated on 250- μm epitaxial layers. Journal of Applied Physics, 2021, 129, .	2.5	34
10	Large Area $\text{Cd}_{0.9}\text{Zn}_{0.1}\text{Te}$ Pixelated Detector: Fabrication and Characterization. IEEE Transactions on Nuclear Science, 2014, 61, 793-798.	2.0	30
11	Charge transport properties in CdZnTe semiconductor room-temperature γ -ray detectors. Journal of Applied Physics, 2020, 127, .	2.5	25
12	Radiation detection using fully depleted 50- μm thick Ni/n-4H-SiC epitaxial layer Schottky diodes with ultra-low concentration of Z1/2 and EH6/7 deep defects. Journal of Applied Physics, 2020, 128, .	2.5	24
13	Quaternary Semiconductor Cd ^x Zn ^y Se _{1-x-y} for High-Resolution, Room-Temperature Gamma-Ray Detection. Crystals, 2021, 11, 827.	2.2	20
14	Cd _{0.9} Zn _{0.1} Te Crystal Growth and Fabrication of Large Volume Single-Polarity Charge Sensing Gamma Detectors. IEEE Transactions on Nuclear Science, 2013, 60, 2853-2858.	2.0	19
15	Role of deep levels and barrier height lowering in current-flow mechanism in 150- μm thick epitaxial n-type 4H-SiC Schottky barrier radiation detectors. Applied Physics Letters, 2021, 119, .	3.3	19
16	High-resolution radiation detection using Ni/SiO ₂ /n-4H-SiC vertical metal-oxide-semiconductor capacitor. Journal of Applied Physics, 2021, 130, .	2.5	17
17	Effect of gamma irradiation on the polymer electrolyte PEO-NH ₄ ClO ₄ . Ionics, 2008, 14, 323-327.	2.4	16
18	Microstructural changes and effect of variation of lattice strain on positron annihilation lifetime parameters of zinc ferrite nanocomposites prepared by high energy ball-milling. Materials Research, 2012, 15, 1022-1028.	1.3	16

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19	Pulse-shape analysis in Cd _{0.9} Zn _{0.1} Te _{0.98} Se _{0.02} room-temperature radiation detectors. Applied Physics Letters, 2020, 116, .	3.3	15
20	Correlation of Space Charge Limited Current and $\hat{\text{I}}^3$ -Ray Response of Cd _x Zn _{1-x} Te _y Se _{1-y} Room-Temperature Radiation Detectors. IEEE Electron Device Letters, 2020, 41, 1336-1339.	3.9	14
21	Digital pulse height correction in HgI ₂ $\hat{\text{I}}^3$ -ray detectors. Journal of Instrumentation, 2012, 7, T04002-T04002.	1.2	13
22	X-Ray Beam Studies of Charge Sharing in Small Pixel, Spectroscopic, CdZnTe Detectors. IEEE Transactions on Nuclear Science, 2012, 59, 1563-1568.	2.0	13
23	Biparametric analyses of charge trapping in Cd _{0.9} Zn _{0.1} Te based virtual Frisch grid detectors. Journal of Applied Physics, 2013, 113, .	2.5	12
24	Growth of Large-Area Cd _{0.9} Zn _{0.1} Te Single Crystals and Fabrication of Pixelated Guard-Ring Detector for Room-Temperature $\hat{\text{I}}^3$ -Ray Detection. IEEE Transactions on Nuclear Science, 2020, 67, 1946-1951.	2.0	11
25	Growth of Cd _{0.9} Zn _{0.1} Te _{1-y} Se _y Single Crystals for Room-Temperature Gamma Ray Detection. IEEE Transactions on Nuclear Science, 2021, 68, 2429-2434.	2.0	11
26	Nanocrystalline Spinel Mn _x Cu _{1-x} Fe ₂ O ₄ Ferritesâ€”Synthesis and Structural Elucidation Using X-Ray Diffraction and Positron Annihilation Techniques. IEEE Transactions on Magnetism, 2010, 46, 847-851.	2.1	9
27	Fabrication of high resolution n-type 4H-SiC epitaxial layer alpha particle detectors, defect characterization and electronic noise analysis. Proceedings of SPIE, 2013, , .	0.8	9
28	Radiation Detection Using n-Type 4H-SiC Epitaxial Layer Surface Barrier Detectors. , 2022, , 183-209.		9
29	Influence of carrier trapping on radiation detection properties in CVD grown 4H-SiC epitaxial layers with varying thickness up to 250Åµm. Journal of Crystal Growth, 2022, 583, 126532.	1.5	9
30	Behavioral Contrast of Electron and Hole Transport in High-Resolution Diamond Detectors: A Biparametric Correlation Study. IEEE Electron Device Letters, 2021, 42, 200-203.	3.9	7
31	Enhanced Hole Transport in Ni/Y ₂ O ₃ /n-4H-SiC MOS for Self-Biased Radiation Detection. IEEE Electron Device Letters, 2022, 43, 1416-1419.	3.9	7
32	Enhancement of radiation detection performance with reduction of EH6/7 deep levels in n-type 4H-SiC through thermal oxidation. Applied Physics Letters, 2022, 121, .	3.3	6
33	Deep Level Studies in High-Resistive Gallium Phosphide Single Crystals. ECS Journal of Solid State Science and Technology, 2016, 5, P3059-P3063.	1.8	5
34	Characterization of vertical Bridgman grown Cd _{0.9} Zn _{0.1} Te _{0.97} Se _{0.03} single crystal for room-temperature radiation detection. Journal of Materials Science: Materials in Electronics, 2021, 32, 26740-26749.	2.2	5
35	Assessment of 4H-SiC epitaxial layers and high resistivity bulk crystals for radiation detectors. Proceedings of SPIE, 2012, , .	0.8	4
36	Characterization of amorphous selenium alloy detectors for x-rays and high energy nuclear radiation detection. Proceedings of SPIE, 2013, , .	0.8	4

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37	Room-Temperature Radiation Detectors Based on Large-Volume CdZnTe Single Crystals. , 2022, , 211-234.		3
38	Thick 4H-SiC epitaxial detectors for high-resolution radiation detection in harsh environment. , 2020, , .		3
39	Effect of oxide layer growth conditions on radiation detection performance of Ni/SiO ₂ /epi-4H-SiC MOS capacitors. Journal of Crystal Growth, 2022, 584, 126566.	1.5	3
40	Performance-Improved Vertical Ni/SiO ₂ /4H-SiC Metal-Oxide-Semiconductor Capacitors for High-Resolution Radiation Detection. IEEE Transactions on Nuclear Science, 2022, 69, 1965-1971.	2.0	3
41	Performance of Cd _{0.9} Zn _{0.1} Te based high-energy gamma detectors in various single polarity sensing device geometries. , 2012, , .		2
42	Current Transient Spectroscopic Study of Vacancy Complexes in Diamond Schottky p-i-n Diode. IEEE Transactions on Electron Devices, 2022, 69, 4469-4473.	3.0	2
43	An overview of application of 4H-SiC n-type epitaxial Schottky barrier detector for high resolution nuclear detection. , 2013, , .		1
44	Fabrication of High-Resolution Nuclear Detectors Using 4H-SiC n-type Epitaxial Layers. Materials Research Society Symposia Proceedings, 2013, 1576, 1.	0.1	1
45	High-resolution 4H-SiC Schottky barrier detectors on 250 micron epitaxial layers for harsh environment applications. , 2021, , .		1
46	Synthesis of CdZnTeSe single crystals for room temperature radiation detector fabrication: mitigation of hole trapping effects using a convolutional neural network. Journal of Materials Science: Materials in Electronics, 2022, 33, 1452-1463.	2.2	1
47	High energy γ -ray detection using CZT detectors with virtual Frisch grid. , 2012, , .		0
48	Gamma Ray Detection with Cd _{0.9} Zn _{0.1} Te Based Detectors Grown Using a Te Solvent Method. Materials Research Society Symposia Proceedings, 2013, 1576, 1.	0.1	0
49	Fabrication and characterization of large area Cd _{0.9} Zn _{0.1} Te guarded pixelated detector. , 2013, , .		0
50	Investigation of low leakage current radiation detectors on n-type 4H-SiC epitaxial layers. , 2014, , .		0
51	A CdZnTeSe gamma spectrometer trained by deep convolutional neural network for radioisotope identification. , 2021, , .		0
52	Observation of minority carrier traps using C-DLTS in Au/SiO ₂ /n-4H-SiC vertical MOS capacitor. , 2021, , .		0
53	First Principle Defect Analysis in 150 Åm 4H-SiC Epitaxial Layer Schottky Barrier Detectors. , 2020, , .		0
54	Real-Time Pulse Height Spectroscopy Using Cd _{0.9} Zn _{0.1} Te Coplanar Grid Digital Spectrometer. , 2020, , .		0