Sandeep K Chaudhuri

List of Publications by Year
in descending order

54	782	586496 16	591227 27
papers	citations	h-index	g-index

54	54	54	517
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Room-Temperature Radiation Detectors Based on Large-Volume CdZnTe Single Crystals. , 2022, , 211-234.		3
2	Radiation Detection Using n-Type 4H-SiC Epitaxial Layer Surface Barrier Detectors. , 2022, , 183-209.		9
3	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.	1.1	1
4	Effect of oxide layer growth conditions on radiation detection performance of Ni/SiO2/epi-4H-SiC MOS capacitors. Journal of Crystal Growth, 2022, 584, 126566.	0.7	3
5	Influence of carrier trapping on radiation detection properties in CVD grown 4H-SiC epitaxial layers with varying thickness up to 250ÂÂµm. Journal of Crystal Growth, 2022, 583, 126532.	0.7	9
6	Performance-Improved Vertical Ni/SiOâ„/4H-SiC Metalâ€“Oxideâ€“Semiconductor Capacitors for High-Resolution Radiation Detection. IEEE Transactions on Nuclear Science, 2022, 69, 1965-1971.	1.2	3
7	Current Transient Spectroscopic Study of Vacancy Complexes in Diamond Schottky p-i-n Diode. IEEE Transactions on Electron Devices, 2022, 69, 4469-4473.	1.6	2
8	Enhanced Hole Transport in Ni/Yâ„Oâ„ƒ/n-4H-SiC MOS for Self-Biased Radiation Detection. IEEE Electron Device Letters, 2022, 43, 1416-1419.	2.2	7
9	Enhancement of radiation detection performance with reduction of EH6/7 deep levels in n-type 4Hâ€“SiC through thermal oxidation. Applied Physics Letters, 2022, 121, .	1.5	6
10	Behavioral Contrast of Electron and Hole Transport in High-Resolution Diamond Detectors: A Biparametric Correlation Study. IEEE Electron Device Letters, 2021, 42, 200-203.	2.2	7
11	Defect characterization and charge transport measurements in high-resolution Ni/n-4H-SiC Schottky barrier radiation detectors fabricated on 250â€‰Î¼m epitaxial layers. Journal of Applied Physics, 2021, 129, .	1.1	34
12	Quaternary Semiconductor Cd1â^'xZnxTe1â^'ySey for High-Resolution, Room-Temperature Gamma-Ray Detection. Crystals, 2021, 11, 827.	1.0	20
13	Role of deep levels and barrier height lowering in current-flow mechanism in 150 Î¼m thick epitaxial n-type 4Hâ€“SiC Schottky barrier radiation detectors. Applied Physics Letters, 2021, 119, .	1.5	19
14	High-resolution radiation detection using Ni/SiO2/n-4H-SiC vertical metal-oxide-semiconductor capacitor. Journal of Applied Physics, 2021, 130, .	1.1	17
15	Characterization of vertical Bridgman grown Cd0.9Zn0.1Te0.97Se0.03 single crystal for room-temperature radiation detection. Journal of Materials Science: Materials in Electronics, 2021, 32, 26740-26749.	1.1	5
16	A CdZnTeSe gamma spectrometer trained by deep convolutional neural network for radioisotope identification. , 2021, , .		0
17	Observation of minority carrier traps using C-DLTS in Au/SiO2/n-4H-SiC vertical MOS capacitor. , 2021, , .		0
18	Growth of Cd_{0.9}Zn_{0.1}Te_{1â€“y}Se_y Single Crystals for Room-Temperature Gamma Ray Detection. IEEE Transactions on Nuclear Science, 2021, 68, 2429-2434.	1.2	11

#	Article	IF	Citations
19	High-resolution 4H-SiC Schottky barrier detectors on 250 micron epitaxial layers for harsh environment applications. , 2021, , .		1
20	Radiation detection using fully depleted 50â€‰Î¼m 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, .	1.1	24
21	Growth of Large-Area Cdâ‚€.â‚‰Znâ‚€.â‚Te Single Crystals and Fabrication of Pixelated Guard-Ring Detector for Room-Temperature Î³-Ray Detection. IEEE Transactions on Nuclear Science, 2020, 67, 1946-1951.	1.2	11
22	Charge transport properties in CdZnTeSe semiconductor room-temperature Î³-ray detectors. Journal of Applied Physics, 2020, 127, .	1.1	25
23	Correlation of Space Charge Limited Current and Î³-Ray Response of Cd_xZn_{1-x}Te_{1-y}Se_y Room-Temperature Radiation Detectors. IEEE Electron Device Letters, 2020, 41, 1336-1339.	2.2	14
24	Advances in High-Resolution Radiation Detection Using 4H-SiC Epitaxial Layer Devices. Micromachines, 2020, 11, 254.	1.4	40
25	Pulse-shape analysis in Cd0.9Zn0.1Te0.98Se0.02 room-temperature radiation detectors. Applied Physics Letters, 2020, 116, .	1.5	15
26	Thick 4H-SiC epitaxial detectors for high-resolution radiation detection in harsh environment. , 2020, , .		3
27	First Principle Defect Analysis in 150 Âµm 4H-SiC Epitaxial Layer Schottky Barrier Detectors. , 2020, , .		0
28	Real-Time Pulse Height Spectroscopy Using Cd0.9Zn0.lTe Coplanar Grid Digital Spectrometer. , 2020, , .		0
29	Deep Level Studies in High-Resistive Gallium Phosphide Single Crystals. ECS Journal of Solid State Science and Technology, 2016, 5, P3059-P3063.	0.9	5
30	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, .	1.1	40
31	Investigation of low leakage current radiation detectors on n-type 4H-SiC epitaxial layers. , 2014, , .		0
32	Correlation of Deep Levels With Detector Performance in 4H-SiC Epitaxial Schottky Barrier Alpha Detectors. IEEE Transactions on Nuclear Science, 2014, 61, 2338-2344.	1.2	40
33	Large Area <formula formulatype="inline"><tex Notation="TeX">${m Cd}_{0.9}{m Zn}_{0.1}{m Te}$</tex></formula> Pixelated Detector: Fabrication and Characterization. IEEE Transactions on Nuclear Science, 2014, 61, 793-798.	1.2	30
34	Defect levels in Cu2ZnSn(SxSe1â^'x)4 solar cells probed by current-mode deep level transient spectroscopy. Applied Physics Letters, 2014, 104, .	1.5	39
35	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.	1.2	19
36	Low Energy X-Ray and $gamma$-Ray Detectors Fabricated on n-Type 4H-SiC Epitaxial Layer. IEEE Transactions on Nuclear Science, 2013, 60, 2888-2893.	1.2	50

#	Article	IF	Citations
37	High resolution alpha particle detection using 4Hâ€“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.	0.7	67
38	An overview of application of 4H-SiC n-type epitaxial Schottky barrier detector for high resolution nuclear detection. , 2013, , .		1
39	Characterization of amorphous selenium alloy detectors for x-rays and high energy nuclear radiation detection. Proceedings of SPIE, 2013, , .	0.8	4
40	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
41	Fabrication of High-Resolution Nuclear Detectors Using 4H-SiC n-type Epitaxial Layers. Materials Research Society Symposia Proceedings, 2013, 1576, 1.	0.1	1
42	Gamma Ray Detection with Cd0.9Zn0.1Te Based Detectors Grown Using a Te Solvent Method. Materials Research Society Symposia Proceedings, 2013, 1576, 1.	0.1	0
43	Experimental determination of electron-hole pair creation energy in 4H-SiC epitaxial layer: An absolute calibration approach. Applied Physics Letters, 2013, 102, .	1.5	57
44	Fabrication and characterization of large area Cd<inf>0.9</inf>Zn<inf>0.1</inf>Te guarded pixelated detector. , 2013, , .		0
45	Biparametric analyses of charge trapping in Cd0.9Zn0.1Te based virtual Frisch grid detectors. Journal of Applied Physics, 2013, 113, .	1.1	12
46	Performance of Cd<inf>0.9</inf>Zn<inf>0.1</inf>Te based high-energy gamma detectors in various single polarity sensing device geometries. , 2012, , .		2
47	High energy Î³-ray detection using CZT detectors with virtual Frisch grid. , 2012, , .		0
48	Assessment of 4H-SiC epitaxial layers and high resistivity bulk crystals for radiation detectors. Proceedings of SPIE, 2012, , .	0.8	4
49	Digital pulse height correction in HgI₂Î³-ray detectors. Journal of Instrumentation, 2012, 7, T04002-T04002.	0.5	13
50	X-Ray Beam Studies of Charge Sharing in Small Pixel, Spectroscopic, CdZnTe Detectors. IEEE Transactions on Nuclear Science, 2012, 59, 1563-1568.	1.2	13
51	Microstructural changes and effect of variation of lattice strain on positron annihilation lifetime parameters of zinc ferrite nanocomposites prepared by high enegy ball-milling. Materials Research, 2012, 15, 1022-1028.	0.6	16
52	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 Magnetics, 2010, 46, 847-851.	1.2	9
53	Effect of gamma irradiation on the polymer electrolyte PEO-NH4ClO4. Ionics, 2008, 14, 323-327.	1.2	16
54	Characterization of defects in ZnO nanocrystals: Photoluminescence and positron annihilation spectroscopic studies. Journal of Applied Physics, 2007, 102, 103514.	1.1	46