Sorina Lazanu

List of Publications by Year
in descending order

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86 papers	738 citations	566801 15 h-index	642321 23 g-index
86 all docs	86 docs citations	86 times ranked	486 citing authors

#	Article	IF	Citations
1	GeSn/SiO₂ Multilayers by Magnetron Sputtering Deposition for Short-Wave Infrared Photonics. ACS Applied Materials & Interfaces, 2020, 12, 56161-56171.	4.0	20
2	Epitaxial GeSn Obtained by High Power Impulse Magnetron Sputtering and the Heterojunction with Embedded GeSn Nanocrystals for Shortwave Infrared Detection. ACS Applied Materials & Interfaces, 2020, 12, 33879-33886.	4.0	17
3	About detecting very low mass black holes in LAr detectors. Journal of Cosmology and Astroparticle Physics, 2020, 2020, 046-046.	1.9	3
4	Orthorhombic HfO₂ with embedded Ge nanoparticles in nonvolatile memories used for the detection of ionizing radiation. Nanotechnology, 2019, 30, 445501.	1.3	15
5	GeSn Nanocrystals in GeSnSiO₂ by Magnetron Sputtering for Short-Wave Infrared Detection. ACS Applied Nano Materials, 2019, 2, 3626-3635.	2.4	19
6	Controlling SWIR photosensitivity limit by composition engineering: from Ge to GeSi nanocrystals embedded in TiO2. , 2019, , .		0
7	Dense Ge nanocrystals embedded in TiO2 with exponentially increased photoconduction by field effect. Scientific Reports, 2018, 8, 4898.	1.6	32
8	Material parameters from frequency dispersion simulation of floating gate memory with Ge nanocrystals in HfO2. Applied Surface Science, 2018, 428, 698-702.	3.1	10
9	Enhanced Photocurrent in GeSi NCs / TiO<inf>2</inf>Multilayers. , 2018, , .		0
10	MOS Dosimeter Based on Ge Nanocrystals in Hfo<inf>2</inf>. , 2018, , .		0
11	Optoelectric charging-discharging of Ge nanocrystals in floating gate memory. Applied Physics Letters, 2018, 113, 213106.	1.5	6
12	Single layer of Ge quantum dots in HfO₂ for floating gate memory capacitors. Nanotechnology, 2017, 28, 175707.	1.3	21
13	Photosensitive GeSi/TiO<inf>2</inf> multilayers in VIS-NIR. , 2017, , .		2
14	Light illumination effects on floating gate memory with Ge nanocrystals in HfO<inf>2</inf>. , 2017, , .		1
15	Non-volatile memory structures with Ge NCs-HfO<inf>2</inf> intermediate layer. , 2016, , .		0
16	Contribution of the electronâ€“phonon interaction to Lindhard energy partition at low energy in Ge and Si detectors for astroparticle physics applications. Astroparticle Physics, 2016, 75, 44-54.	1.9	10
17	Correlation between strain and defects in Bi implanted Si. Journal of Physics and Chemistry of Solids, 2016, 93, 27-32.	1.9	0
18	How morphology determines the charge storage properties of Ge nanocrystals in HfO 2. Scripta Materialia, 2016, 113, 135-138.	2.6	25

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19	Influence of strain field on nanoscale electronic processes in silicon-based semiconductors. , 2015, , .		0
20	Strain-induced modification of trap parameters due to the stopped ions in Bi-irradiated Si. Europhysics Letters, 2014, 108, 36004.	0.7	4
21	Stress influenced trapping processes in Si based multi-quantum well structures and heavy ions implanted Si. , 2014, , .		2
22	Trapping centers in heavy ion irradiated silicon. , 2014, , .		1
23	Analysis of defect formation in semiconductor cryogenic bolometric detectors created by heavy dark matter. Astroparticle Physics, 2013, 44, 9-14.	1.9	4
24	Effect of bismuth irradiation on crystalline silicon. , 2013, , .		0
25	Effects produced by iodine irradiation on high resistivity silicon. Applied Physics Letters, 2012, 101, 242106.	1.5	7
26	Energy loss and transient phenomena induced by exotic particles in materials for detectors. Journal of Physics: Conference Series, 2012, 388, 072015.	0.3	0
27	Iodine irradiation induced defects in crystalline silicon. , 2012, , .		0
28	Interactions of exotic particles with ordinary matter. Nuclear Instruments & Methods in Physics Research B, 2012, 278, 70-77.	0.6	4
29	Studies of long time and transient effects induced by radiation in crystalline materials. , 2011, , .		0
30	Stress-induced traps in multilayered structures. Journal of Applied Physics, 2011, 109, 013717.	1.1	35
31	Silicon detectors for the sLHC. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 658, 11-16.	0.7	21
32	Modelling the transient processes produced under heavy particle irradiation. Nuclear Instruments & Methods in Physics Research B, 2011, 269, 498-503.	0.6	7
33	Transient thermal effects in solid noble gases as materials for the detection of Dark Matter. Journal of Cosmology and Astroparticle Physics, 2011, 2011, 013-013.	1.9	5
34	Transient processes induced by heavy projectiles in silicon. Nuclear Instruments & Methods in Physics Research B, 2010, 268, 2241-2245.	0.6	11
35	Temperature dependence of capture coefficients in trapping phenomena. , 2010, , .		1
36	Study of the interactions of ions in silicon: Transient processes and defect production. , 2010, , .		1

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37	Point and extended defects in irradiated silicon and consequences for detectors. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, 1974-1978.	0.8	0
38	Defect production in silicon and germanium by low temperature irradiation. , 2009, , .		0
39	ENERGY LOSS AND DAMAGE PRODUCTION BY HEAVY IONS AND STRANGE QUARK MATTER IN SILICON. , 2008, , .		0
40	Some Contributions to the Understanding of the Puzzle of Physical Processes of Degradation in Irradiated Silicon. Semiconductor Conference, 2009 CAS 2009 International, 2007, , .	0.0	1
41	Correlation between radiation processes in silicon and long-time degradation of detectors for high-energy physics experiments. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 580, 46-49.	0.7	1
42	Modelling spatial distribution of defects and estimation of electrical degradation of silicon detectors in radiation fields at high luminosity. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 583, 165-168.	0.7	0
43	Silicon detectors: Damage, modelling and expected long-time behaviour in physics experiments at ultra high energy. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 572, 297-299.	0.7	2
44	The role of primary point defects in the degradation of silicon detectors due to hadron and lepton irradiation. Physica Scripta, 2006, 74, 201-207.	1.2	15
45	Development of radiation tolerant semiconductor detectors for the Super-LHC. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2005, 546, 99-107.	0.7	29
46	Radiation-hard semiconductor detectors for SuperLHC. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2005, 541, 189-201.	0.7	55
47	Recent advancements in the development of radiation hard semiconductor detectors for S-LHC. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2005, 552, 7-19.	0.7	33
48	Scenarios about the Longtime Damage of Silicon as Material and Detectors Operating Beyond LHC Collider Conditions. Physica Scripta, 2005, 71, 31-38.	1.2	3
49	Systematic Study Related to the Role of Initial Impurities and Irradiation Rates in the Formation and Evolution of Complex Defects in Silicon for Detectors in HEP Experiments*. Physica Scripta, 2004, 69, 376-384.	1.2	12
50	The influence of initial impurities and irradiation conditions on defect production and annealing in silicon for particle detectors. Nuclear Instruments & Methods in Physics Research B, 2003, 201, 491-502.	0.6	11
51	Microscopic modelling of defects production and their annealing after irradiation in silicon for HEP particle detectors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2003, 514, 9-17.	0.7	10
52	Long-term Damage Induced by Hadrons in Silicon Detectors for Uses at the LHC-accelerator and in Space Missions. Physica Scripta, 2003, 67, 388-394.	1.2	6
53	Radiation Defects in Silicon due to Hadrons and Leptons, their Annealing and Influence on Detector Performance. Physica Scripta, 2002, 66, 125-132.	1.2	7
54	Theoretical calculations of the primary defects induced by pions and protons in SiC. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2002, 485, 768-773.	0.7	16

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55	Characterization of anodic oxide for GaAs-based laser diodes. , 2001, , .		0
56	Analytical approximations of the Lindhard equations describing radiation effects. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2001, 462, 530-535.	0.7	15
57	Annealing of radiation-induced defects in silicon in a simplified phenomenological model. Nuclear Instruments & Methods in Physics Research B, 2001, 183, 383-390.	0.6	8
58	Trapping levels in nanocrystalline porous silicon. Applied Physics Letters, 2000, 76, 3067-3069.	1.5	21
59	Hall effect analysis in irradiated silicon samples with different resistivities. IEEE Transactions on Nuclear Science, 1999, 46, 834-838.	1.2	10
60	Comparative energy dependence of proton and pion degradation in diamond. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1999, 432, 374-378.	0.7	5
61	Radiation damage on p-type silicon detectors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1999, 426, 126-130.	0.7	14
62	Diamond degradation in hadron fields. Nuclear Physics, Section B, Proceedings Supplements, 1999, 78, 683-688.	0.5	1
63	Contribution to the failure analysis of AlGaAs/GaAs laser diodes. , 1999, 3578, 359.		2
64	Rutherford backscattering spectroscopy analysis of Au/Cr/GaAs. , 1999, , .		0
65	Electrical behaviour of fresh and stored porous silicon films. Thin Solid Films, 1998, 325, 271-277.	0.8	34
66	Theoretical calculations of diamond damage by Ï€+/Ï€â^' mesons in the Î”33 resonance energy range. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1998, 406, 259-266.	0.7	7
67	Non-ionising energy deposition of pions in GaAs and Si for radiation damage studies. Nuclear Physics, Section B, Proceedings Supplements, 1998, 61, 409-414.	0.5	9
68	Theoretical study of pion damage in A3B5 compounds. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1998, 413, 242-248.	0.7	10
69	Si, GaAs and diamond damage in pion fields with application to LHC. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1998, 419, 570-576.	0.7	14
70	Theoretical calculation of diamond damage by ?+/?? mesons in the ?33 resonance energy range. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1998, 406, 259-266.	0.7	2
71	Non-ionising energy loss of pions in thin silicon samples. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1997, 388, 370-374.	0.7	11
72	CV and Hall effect analysis on neutron irradiated silicon detectors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1997, 388, 330-334.	0.7	12

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73	Evaluation of charged pions induced damage in the CMS silicon forward detectors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1997, 388, 345-349.	0.7	1
74	Model predictions for the NIEL of high energy pions in Si and GaAs. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1997, 394, 232-234.	0.7	5
75	Hall effect measurements on proton-irradiated ROSE samples. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1997, 400, 113-123.	0.7	10
76	A phenomenological model for the macroscopic characteristics of irradiated silicon. Il Nuovo Cimento A, 1996, 109, 1333-1341.	0.2	1
77	Influence of radiation-induced clusters on transport properties of silicon. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1996, 18, 621-633.	0.4	0
78	Self annealing effect on neutron irradiated silicon detectors by Hall effect analysis. IEEE Transactions on Nuclear Science, 1996, 43, 1599-1604.	1.2	12
79	Annealing effects on resistivity and hall coefficient of neutron irradiated silicon. Nuclear Physics, Section B, Proceedings Supplements, 1995, 44, 496-502.	0.5	1
80	Hall effect analysis on neutron irradiated high resistivity silicon. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1995, 360, 131-133.	0.7	10
81	Radiation hardness studies on silicon detectors in fast neutron fields. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1995, 357, 55-63.	0.7	3
82	Deep levels profile in neutron irradiated silicon detectors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1995, 360, 134-136.	0.7	1
83	A neutron irradiation facility for damage studies. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1994, 345, 303-307.	0.7	10
84	Studies of deep levels in high resistivity silicon detectors irradiated by high fluence fast neutrons using a thermally stimulated current spectrometer. IEEE Transactions on Nuclear Science, 1994, 41, 964-970.	1.2	24
85	Electrical properties of porous silicon stabilised by storage in ambient. , 0, , .		0
86	Influence of crystal growth technology on the tolerance to radiation of silicon for detectors at future accelerators. , 0, , .		0