

Szymon Niedźwiecki

List of Publications by Year in descending order

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53
papers

1,245
citations

394286

19
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377752

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55
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55
docs citations

55
times ranked

373
citing authors

#	ARTICLE	IF	CITATIONS
1	Synchronization and Calibration of the 24-Modules J-PET Prototype With 300-mm Axial Field of View. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-10.	2.4	8
2	The J-PET detector—a tool for precision studies of ortho-positronium decays. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2021, 1008, 165452.	0.7	19
3	Simulating NEMA characteristics of the modular total-body J-PET scanner—an economic total-body PET from plastic scintillators. Physics in Medicine and Biology, 2021, 66, 175015.	1.6	48
4	Optimisation of the event-based TOF filtered back-projection for online imaging in total-body J-PET. Medical Image Analysis, 2021, 73, 102199.	7.0	10
5	Positronium imaging with the novel multiphoton PET scanner. Science Advances, 2021, 7, eabh4394.	4.7	79
6	Silicon Drift Detectors's™ Spectroscopic Response during the SIDDHARTA-2 Kaonic Helium Run at the DAΦNE Collider. Condensed Matter, 2021, 6, 47.	0.8	7
7	3D TOF-PET image reconstruction using total variation regularization. Physica Medica, 2020, 80, 230-242.	0.4	13
8	Hit-Time and Hit-Position Reconstruction in Strips of Plastic Scintillators Using Multithreshold Readouts. IEEE Transactions on Radiation and Plasma Medical Sciences, 2020, 4, 528-537.	2.7	3
9	Kaonic Atoms to Investigate Global Symmetry Breaking. Symmetry, 2020, 12, 547.	1.1	16
10	Estimating relationship between the time over threshold and energy loss by photons in plastic scintillators used in the J-PET scanner. EJNMMI Physics, 2020, 7, 39.	1.3	21
11	Performance assessment of the 2 $\hat{1}^3$ positronium imaging with the total-body PET scanners. EJNMMI Physics, 2020, 7, 44.	1.3	44
12	Monte Carlo N-Particle simulations of an underwater chemical threats detection system using neutron activation analysis. Journal of Instrumentation, 2019, 14, P09001-P09001.	0.5	6
13	Simulation studies of annihilation-photon's™ polarisation via Compton scattering with the J-PET tomograph. Hyperfine Interactions, 2019, 240, 1.	0.2	1
14	X-ray Detectors for Kaonic Atoms Research at DAΦNE. Condensed Matter, 2019, 4, 42.	0.8	4
15	Feasibility study of the positronium imaging with the J-PET tomograph. Physics in Medicine and Biology, 2019, 64, 055017.	1.6	97
16	Feasibility studies of the polarization of photons beyond the optical wavelength regime with the J-PET detector. European Physical Journal C, 2018, 78, 970.	1.4	32
17	A feasibility study of the time reversal violation test based on polarization of annihilation photons from the decay of ortho-Positronium with the J-PET detector. Hyperfine Interactions, 2018, 239, 1.	0.2	2
18	Commissioning of the J-PET detector in view of the positron annihilation lifetime spectroscopy. Hyperfine Interactions, 2018, 239, 1.	0.2	10

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19	Evaluation of Single-Chip, Real-Time Tomographic Data Processing on FPGA SoC Devices. IEEE Transactions on Medical Imaging, 2018, 37, 2526-2535.	5.4	57
20	Measurement of gamma quantum interaction point in plastic scintillator with WLS strips. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2017, 851, 39-42.	0.7	25
21	Multichannel FPGA based MVT system for high precision time (20 ps RMS) and charge measurement. Journal of Instrumentation, 2017, 12, P08001-P08001.	0.5	56
22	Novel scintillating material 2-(4-styrylphenyl)benzoxazole for the fully digital and MRI compatible J-PET tomograph based on plastic scintillators. PLoS ONE, 2017, 12, e0186728.	1.1	13
23	J-PET: A Novel TOF-PET Detector based on Plastic Scintillators. , 2016, , .		3
24	Application of the compress sensing theory for improvement of the TOF resolution in a novel J-PET instrument. Nukleonika, 2016, 61, 35-39.	0.3	3
25	A feasibility study of ortho-positronium decays measurement with the J-PET scanner based on plastic scintillators. European Physical Journal C, 2016, 76, 445.	1.4	52
26	Time resolution of the plastic scintillator strips with matrix photomultiplier readout for J-PET tomograph. Physics in Medicine and Biology, 2016, 61, 2025-2047.	1.6	99
27	Sampling FEE and Trigger-less DAQ for the J-PET Scanner. Acta Physica Polonica B, 2016, 47, 491.	0.3	36
28	Scatter Fraction of the J-PET Tomography Scanner. Acta Physica Polonica B, 2016, 47, 549.	0.3	21
29	A novel TOF-PET detector based on plastic scintillators. , 2015, , .		1
30	Studies of unicellular microorganisms <i>Saccharomyces cerevisiae</i> by means of positron annihilation lifetime spectroscopy. Nukleonika, 2015, 60, 749-753.	0.3	13
31	Processing optimization with parallel computing for the J-PET scanner. Nukleonika, 2015, 60, 745-748.	0.3	5
32	PALS investigations of free volumes thermal expansion of J-PET plastic scintillator synthesized in polystyrene matrix. Nukleonika, 2015, 60, 777-781.	0.3	4
33	GPU Accelerated Image Reconstruction in a Two-Strip J-PET Tomograph. Acta Physica Polonica A, 2015, 127, 1500-1504.	0.2	5
34	A novel method for the line-of-response and time-of-flight reconstruction in TOF-PET detectors based on a library of synchronized model signals. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2015, 775, 54-62.	0.7	73
35	Hit Time and Hit Position Reconstruction in the J-PET Detector Based on a Library of Averaged Model Signals. Acta Physica Polonica A, 2015, 127, 1495-1499.	0.2	13
36	Compressive sensing of signals generated in plastic scintillators in a novel J-PET instrument. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2015, 786, 105-112.	0.7	46

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37	Searches for discrete symmetries violation in ortho-positronium decay using the J-PET detector. Nukleonika, 2015, 60, 729-732.	0.3	3
38	Reconstruction of hit time and hit position of annihilation quanta in the J-PET detector using the Mahalanobis distance. Nukleonika, 2015, 60, 765-769.	0.3	11
39	A novel method based solely on field programmable gate array (FPGA) units enabling measurement of time and charge of analog signals in positron emission tomography (PET). Bio-Algorithms and Med-Systems, 2014, 10, 41-45.	1.0	31
40	3D PET image reconstruction based on the maximum likelihood estimation method (MLEM) algorithm. Bio-Algorithms and Med-Systems, 2014, 10, 1-7.	1.0	13
41	Computing support for advanced medical data analysis and imaging. Bio-Algorithms and Med-Systems, 2014, 10, 53-58.	1.0	3
42	Simulations of $\hat{1}^3$ quanta scattering in a single module of the J-PET detector. Bio-Algorithms and Med-Systems, 2014, 10, 71-77.	1.0	5
43	Trigger-less and reconfigurable data acquisition system for positron emission tomography. Bio-Algorithms and Med-Systems, 2014, 10, 37-40.	1.0	20
44	Determination of the map of efficiency of the Jagiellonian Positron Emission Tomograph (J-PET) detector with the GATE package. Bio-Algorithms and Med-Systems, 2014, 10, 85-90.	1.0	3
45	J-PET analysis framework for the prototype TOF-PET detector. Bio-Algorithms and Med-Systems, 2014, 10, 33-36.	1.0	7
46	A novel method for calibration and monitoring of time synchronization of TOF-PET scanners by means of cosmic rays. Bio-Algorithms and Med-Systems, 2014, 10, 19-25.	1.0	3
47	Plastic scintillators for positron emission tomography obtained by the bulk polymerization method. Bio-Algorithms and Med-Systems, 2014, 10, 27-31.	1.0	19
48	Database and data structure for the novel TOF-PET detector developed for the J-PET project. Bio-Algorithms and Med-Systems, 2014, 10, 79-83.	1.0	4
49	Application of WLS strips for position determination in strip PET tomograph based on plastic scintillators. Bio-Algorithms and Med-Systems, 2014, 10, 59-63.	1.0	5
50	Calibration of photomultipliers gain used in the J-PET detector. Bio-Algorithms and Med-Systems, 2014, 10, 13-17.	1.0	5
51	List-mode reconstruction in 2D strip PET. Bio-Algorithms and Med-Systems, 2014, 10, 9-12.	1.0	2
52	Test of a single module of the J-PET scanner based on plastic scintillators. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2014, 764, 317-321.	0.7	109
53	Novel method for hit-position reconstruction using voltage signals in plastic scintillators and its application to Positron Emission Tomography. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2014, 764, 186-192.	0.7	51