

Itzhak Orion

List of Publications by Year in descending order

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79
papers

933
citations

623734

14
h-index

477307

29
g-index

80
all docs

80
docs citations

80
times ranked

847
citing authors

#	ARTICLE	IF	CITATIONS
1	Computed tomography of x-ray index of refraction using the diffraction enhanced imaging method. <i>Physics in Medicine and Biology</i> , 2000, 45, 933-946.	3.0	241
2	The performance of a novel ion-counting nanodosimeter. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2002, 492, 212-235.	1.6	81
3	Spectroscopic studies of polaronic and bipolaronic species in doped poly(paraphenylenevinylene). <i>Physical Review B</i> , 1998, 57, 7050-7065.	3.2	73
4	Monte Carlo simulation of dose distributions from a synchrotron-produced microplanar beam array using the EGS4 code system. <i>Physics in Medicine and Biology</i> , 2000, 45, 2497-2508.	3.0	55
5	Sol-gel derived nanocomposite hybrids for full colour displays. <i>Journal of Luminescence</i> , 2000, 87-89, 702-705.	3.1	39
6	Basic considerations for Monte Carlo calculations in soil. <i>Applied Radiation and Isotopes</i> , 2005, 62, 97-107.	1.5	38
7	MOSFET dosimetry of an X-ray microbeam. <i>IEEE Transactions on Nuclear Science</i> , 1999, 46, 1774-1780.	2.0	35
8	Soil carbon measurements using inelastic neutron scattering. <i>IEEE Transactions on Nuclear Science</i> , 2000, 47, 914-917.	2.0	31
9	Wall-less Ion-counting Nanodosimetry Applied to Protons. <i>Radiation Protection Dosimetry</i> , 2002, 99, 325-330.	0.8	24
10	The dependence of the virtual point-detector on the HPGc detector dimensions. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2006, 557, 544-553.	1.6	23
11	Thermoluminescence characteristics of Israeli household salts for retrospective dosimetry in radiological events. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2016, 377, 67-76.	1.4	23
12	Optimization of ${}^6\text{LiF:ZnS(Ag)}$ scintillator light yield using GEANT4. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2018, 892, 59-69.	1.6	20
13	TVF-NMCRCA: A powerful program for writing and executing simulation inputs for the Fluka Monte Carlo Code system. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2007, 572, 929-934.	1.6	17
14	Dosimetric characterization of Elekta stereotactic cones. <i>Journal of Applied Clinical Medical Physics</i> , 2018, 19, 194-203.	1.9	15
15	Investigation of the optical absorption dose response of LiF:Mg,Ti (TLD-100) and the role of V centers in F center (5.08 eV) bleaching. <i>Radiation Measurements</i> , 2016, 90, 113-116.	1.4	14
16	Limitations in the PHOTON Monte Carlo gamma transport code. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2002, 480, 729-733.	1.6	12
17	Structural, electronic, and magnetic characteristics of NpCo_2 . <i>Physical Review B</i> , 2012, 85, .	3.2	11
18	STUDY OF THE SUITABILITY OF ISRAELI HOUSEHOLD SALT FOR RETROSPECTIVE DOSIMETRY. <i>Radiation Protection Dosimetry</i> , 2016, 170, 407-411.	0.8	11

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19	Study of combinations of TL/OSL single dosimeters for mixed high/low ionization density radiation fields. <i>Radiation Measurements</i> , 2013, 56, 320-323.	1.4	10
20	Highly accurate prediction of specific activity using deep learning. <i>Applied Radiation and Isotopes</i> , 2017, 130, 115-120.	1.5	10
21	Novel high dose rate lip brachytherapy technique to improve dose homogeneity and reduce toxicity by customized mold. <i>Radiation Oncology</i> , 2014, 9, 271.	2.7	9
22	Thermoluminescence dose response of photon irradiated NaCl: Unified interaction model analysis of the dependence of the supralinearity on photon energy. <i>Radiation Measurements</i> , 2017, 106, 455-458.	1.4	8
23	Nucleic acid fragmentation on the millisecond timescale using a conventional X-ray rotating anode source: application to protein-DNA footprinting. <i>Nucleic Acids Research</i> , 2001, 29, 122e-122.	14.5	7
24	NNICâ€™ neural network image compressor for satellite positioning system. <i>Acta Astronautica</i> , 2007, 60, 622-630.	3.2	7
25	Gamma scintillator system using boron carbide for neutron detection. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2014, 756, 62-67.	1.6	7
26	Detectors for the gamma-ray resonant absorption (GRA) method of explosives detection in cargo: a comparative study. , 2004, , .		6
27	Radon concentrations in different types of dwellings in Israel. <i>Radiation Protection Dosimetry</i> , 2014, 162, 605-608.	0.8	6
28	Dosimetric evaluation of the gantry sag effect in clinical SRS plans. <i>BJR Open</i> , 2019, 1, 20180026.	0.6	6
29	Effects of Gas Pressure during Electron Beam Energy Deposition in the EBM Additive Manufacturing Process. <i>Metals</i> , 2021, 11, 601.	2.3	6
30	Applications of a Self-Collimating BGO Detector System to Radiological Emergency Response. <i>Health Physics</i> , 1997, 72, 136-140.	0.5	5
31	Design and dosimetry characteristics of a commercial applicator system for intraâ€™operative electron beam therapy utilizing ELEKTA Precise accelerator. <i>Journal of Applied Clinical Medical Physics</i> , 2010, 11, 57-69.	1.9	5
32	Low-temperature magnetic properties of $NpNi_5$. <i>Physical Review B</i> , 2014, 90, .	3.2	5
33	Small Volume Ionization Chambers Angular Dependence and Its Influence on Point-Dose Measurements. <i>International Journal of Medical Physics, Clinical Engineering and Radiation Oncology</i> , 2016, 05, 26-32.	0.1	5
34	Double giant resonances in pion double charge exchange on V_{51} , In_{115} , and Au_{197} . <i>Physical Review C</i> , 1993, 47, 1466-1473.	2.9	4
35	Single phase domain occurrence in the $Rh_{1-x}Te_2$ (0.15â€™xâ€™0.84) system. <i>Journal of Alloys and Compounds</i> , 1998, 268, 50-59.	5.5	4
36	The determination of a neutron source position in an unknown homogeneous medium: The planar case. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2005, 548, 555-563.	1.6	4

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37	Response Function of the BGO and NaI(Tl) Detectors Using Monte Carlo Simulations. Annals of the New York Academy of Sciences, 2000, 904, 271-275.	3.8	4
38	Small Size Integrated CsI(Tl) Spectrometer Efficiency and Properties Dependence on Temperature. IEEE Transactions on Nuclear Science, 2008, 55, 1237-1240.	2.0	4
39	Algorithm for evaluating layer thickness based on electron average energy shift analysis. Nuclear Instruments & Methods in Physics Research B, 2012, 288, 23-27.	1.4	4
40	Site-selective magnetic order of neptunium in Np_2Co_7 . Physical Review B, 2015, 92, .	2.1	4
41	Shielding calculations for industrial 5/7.5MeV electron accelerators using the MCNP Monte Carlo Code. EPJ Web of Conferences, 2017, 153, 03011.	0.3	4
42	Selective Shielding of Bone Marrow. Health Physics, 2017, 113, 195-208.	0.5	3
43	AN ESTIMATION OF THE EXPOSURE OF THE POPULATION OF ISRAEL TO NATURAL SOURCES OF IONIZING RADIATION. Radiation Protection Dosimetry, 2017, 176, 264-268.	0.8	3
44	Electron inelastic mean free path in carbon and polycarbonate using a newly developed wide spectrum measurement method. Journal of Electron Spectroscopy and Related Phenomena, 2018, 229, 85-93.	1.7	3
45	DNA Topoisomerase IB as a Potential Ionizing Radiation Exposure and Dose Biomarker. Radiation Research, 2018, 189, 652.	1.5	3
46	Characterization of novel polydiacetylene gel dosimeter for radiotherapy. Biomedical Physics and Engineering Express, 2020, 6, 055017.	1.2	3
47	Neutron Detection Module Based on Li-Glass Scintillator and Array of SiPMs. IEEE Transactions on Nuclear Science, 2020, 67, 599-602.	2.0	3
48	Technical Report: Monte Carlo Simulations for Soft X-ray Microspectroscopy Using the Upgraded EGS4 Code System. Synchrotron Radiation News, 2006, 19, 18-22.	0.8	2
49	Film dosimetry calibration method for pulsed-dose-rate brachytherapy with an Ir192 source. Medical Physics, 2007, 34, 1678-1683.	3.0	2
50	Using the Doppler broadened \hat{I}^3 line of the $^{10}\text{B}(n, \hat{I}^3)^7\text{Li}$ reaction for thermal neutron detection. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 810, 140-143.	1.6	2
51	Synchrotron X-ray Irradiation of a Rat's Head Model: Monte Carlo Study of Chromatic Gel Dosimetry. Applied Sciences (Switzerland), 2021, 11, 7389.	2.5	2
52	Why are Three-dimensional Organisms Composed of Two-dimensional Layers?. Foundations of Science, 2007, 12, 1-7.	0.7	1
53	A Concept for a Compton Effect Based Dosimeter Calibration System. IEEE Transactions on Nuclear Science, 2008, 55, 1093-1096.	2.0	1
54	Structural investigation of $\text{Np}_2\text{Co}_{17}$ and analogue compounds under pressure. Physical Review B, 2014, 90, .	3.2	1

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55	PD-0574: Dose distributions in pelvic intra-operative radiation therapy (IOERT). Radiotherapy and Oncology, 2015, 115, S280-S281.	0.6	1
56	Optimization of Neutron Detection Module based on Li-Glass scintillator and an array of SIPMs. EPJ Web of Conferences, 2020, 225, 07012.	0.3	1
57	Cyclotron-produced neutrons measurements using chlorine activation. Nuclear Instruments & Methods in Physics Research B, 2021, 503, 1-5.	1.4	1
58	Energy Deposited by Electrons in DNA Following n+Gd Interaction. , 2001, , 1411-1415.		1
59	Volume-Shape Dose Dependence for Gamma Radiation Brachytherapy: A Monte Carlo Study. , 2017, , 1-5.		1
60	Reconstruction of the electron source intensity distribution of a clinical linear accelerator using in-air measurements and a genetic algorithm. Physics and Imaging in Radiation Oncology, 2019, 12, 67-73.	2.9	1
61	Initial estimates of continuous positive airway pressure (CPAP) on heart volume, position and motion in patients receiving chest radiation. Medical Dosimetry, 2022, , .	0.9	1
62	Detection system response for burst events on a spherical surface: comparison of three different monitoring algorithms using Monte Carlo modeling. , 2003, , .		0
63	A Compton scattering based system for the examination of nuclear fuel cladding interface. , 2008, , .		0
64	Detection unit optimization of a neutron searching detector using Monte Carlo Simulations. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 660, 154-161.	1.6	0
65	A New Beam and Delivery System for Radiation Therapy. International Journal of Radiation Oncology Biology Physics, 2012, 84, S850-S851.	0.8	0
66	EP-1445: Monte Carlo simulation of electron beams from medical linac using EGS5. Radiotherapy and Oncology, 2014, 111, S138-S139.	0.6	0
67	PD-0573: Dosimetry verification of an applicator system for intraoperative radiation therapy by Monte Carlo simulation. Radiotherapy and Oncology, 2015, 115, S280.	0.6	0
68	High pressure neutron powder diffraction study of Fe ¹⁵⁵ Cr with and without hydrogen exposure. Hyperfine Interactions, 2015, 231, 29-36.	0.5	0
69	Magnetic sublattices in Np ₂ Co ₁₇ and Np ₂ Ni ₁₇ . Hyperfine Interactions, 2016, 237, 1.	0.5	0
70	Effects of Continuous Positive Airway Pressure (CPAP) Used for Respiratory Motion Management in Patients Receiving Chest Radiation to the Heart: An Analysis of Size, Position, and Motion. International Journal of Radiation Oncology Biology Physics, 2016, 96, E658.	0.8	0
71	Alpha-β monitoring system based on pair of simultaneous Multi-Wire Proportional Counters. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 827, 118-123.	1.6	0
72	Optimization of a Multiline Neutron Source Based on a ²³² Th Filter. Journal of Nuclear Engineering and Radiation Science, 2017, 3, .	0.4	0

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73	PO-0892: Dosimetric evaluation of the gantry sag effect. Radiotherapy and Oncology, 2018, 127, S473-S474.	0.6	0
74	EP-2073 Reconstruction of the electron source distribution using in-air measurements and genetic algorithm. Radiotherapy and Oncology, 2019, 133, S1143.	0.6	0
75	Simulations for X-Ray Synchrotron Beams Using the EGS4 Code System in Medical Applications. , 2001, , 93-98.		0
76	Monte Carlo Modeling for Gamma Rays Bursts Detection Monitoring Algorithms. Journal of Applied Sciences, 2006, 6, 1631-1634.	0.3	0
77	SU-E-T-279: A Novel Electron-Beam Combined with Magnetic Field Application for Radiotherapy. Medical Physics, 2012, 39, 3767-3768.	3.0	0
78	Neutral and Doped States of Polymers with Aromatic Rings Studied by Resonance Spectroscopies. , 1998, , 365-373.		0
79	Low-Atomic-Number Nanometric Film Production Method for keV Electron Scattering Measurements. Journal of Chemistry and Chemical Engineering, 2016, 10, .	0.3	0