## Zdenka Kuncic

List of Publications by Year in descending order

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140 papers 3,049 citations

172457 29 h-index 214800 47 g-index

141 all docs

141 docs citations

141 times ranked

3765 citing authors

#	Article	IF	CITATIONS
1	Opportunities and Challenges for Nanotherapeutics for the Aging Population. Frontiers in Nanotechnology, 2022, 4, .	4.8	8
2	Investigation of Micron-Scale Radiotherapy Dose Deposition in the Lung: Effect of Magnetic Field and Nanoparticles—a Monte Carlo Simulation. Frontiers in Physics, 2022, 10, .	2.1	2
3	Particle detection and tracking with DNA. European Physical Journal C, 2022, 82, 1.	3.9	2
4	Optimization of detector modules for measuring gamma-ray polarization in Positron Emission Tomography. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2022, 1040, 167186.	1.6	3
5	Neuromorphic nanowire networks: principles, progress and future prospects for neuro-inspired information processing. Advances in Physics: X, 2021, 6, .	4.1	17
6	Quantum Dot Nanomedicine Formulations Dramatically Improve Pharmacological Properties and Alter Uptake Pathways of Metformin and Nicotinamide Mononucleotide in Aging Mice. ACS Nano, 2021, 15, 4710-4727.	14.6	12
7	Avalanches and edge-of-chaos learning in neuromorphic nanowire networks. Nature Communications, 2021, 12, 4008.	12.8	91
8	Information dynamics in neuromorphic nanowire networks. Scientific Reports, 2021, 11, 13047.	3.3	30
9	Modularity and multitasking in neuro-memristive reservoir networks. Neuromorphic Computing and Engineering, 2021, 1, 014003.	5.9	23
10	MNIST classification using Neuromorphic Nanowire Networks. , 2021, , .		7
11	Nanoscale neuromorphic networks and criticality: a perspective. Journal of Physics Complexity, 2021, 2, 042001.	2.2	16
12	Study of Multi-Pixel Scintillator Detector Configurations for Measuring Polarized Gamma Radiation. Condensed Matter, 2021, 6, 43.	1.8	7
13	Reservoir Computing with Neuromemristive Nanowire Networks. , 2020, , .		20
14	High-sensitivity in vivo contrast for ultra-low field magnetic resonance imaging using superparamagnetic iron oxide nanoparticles. Science Advances, 2020, 6, eabb0998.	10.3	57
15	Dynamic Electrical Pathway Tuning in Neuromorphic Nanowire Networks. Advanced Functional Materials, 2020, 30, 2003679.	14.9	28
16	Positron annihilation localization by nanoscale magnetization. Scientific Reports, 2020, 10, 20262.	3.3	2
17	Roadmap for metal nanoparticles in radiation therapy: current status, translational challenges, and future directions. Physics in Medicine and Biology, 2020, 65, 21RM02.	3.0	101
18	Clustering effects in nanoparticle-enhanced $\hat{1}^2\hat{a}^2$ emitting internal radionuclide therapy: a Monte Carlo study. Physics in Medicine and Biology, 2020, 65, 125007.	3.0	1

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19	Topological Properties of Neuromorphic Nanowire Networks. Frontiers in Neuroscience, 2020, 14, 184.	2.8	37
20	A Radio-Nano-Platform for T1/T2 Dual-Mode PET-MR Imaging. International Journal of Nanomedicine, 2020, Volume 15, 1253-1266.	6.7	10
21	Rapid Intestinal Uptake and Targeted Delivery to the Liver Endothelium Using Orally Administered Silver Sulfide Quantum Dots. ACS Nano, 2020, 14, 1492-1507.	14.6	32
22	<p>A Chelate-Free Nano-Platform for Incorporation of Diagnostic and Therapeutic Isotopes</p> . International Journal of Nanomedicine, 2020, Volume 15, 31-47.	6.7	9
23	Harnessing adaptive dynamics in neuro-memristive nanowire networks for transfer learning. , 2020, , .		9
24	Neuromorphic Information Processing with Nanowire Networks. , 2020, , .		9
25	Radio-enhancement by gold nanoparticles and their impact on water radiolysis for x-ray, proton and carbon-ion beams. Physics in Medicine and Biology, 2019, 64, 175005.	3.0	36
26	Emergent dynamics of neuromorphic nanowire networks. Scientific Reports, 2019, 9, 14920.	3.3	93
27	Radio-enhancement effects by radiolabeled nanoparticles. Scientific Reports, 2019, 9, 14346.	3.3	26
28	Technical Note: The first live treatment on a 1.0 Tesla inline ⟨scp⟩MRI⟨/scp⟩â€linac. Medical Physics, 2019, 46, 3254-3258.	3.0	13
29	IMPACT OF NANOPARTICLE CLUSTERING ON DOSE RADIO-ENHANCEMENT. Radiation Protection Dosimetry, 2019, 183, 50-54.	0.8	10
30	A high DQE waterâ€equivalent EPID employing an array of plasticâ€scintillating fibers for simultaneous imaging and dosimetry in radiotherapy. Medical Physics, 2018, 45, 2154-2168.	3.0	5
31	The transcriptional response to oxidative stress is part of, but not sufficient for, insulin resistance in adipocytes. Scientific Reports, 2018, 8, 1774.	3.3	9
32	Nanoparticle radio-enhancement: principles, progress and application to cancer treatment. Physics in Medicine and Biology, 2018, 63, 02TR01.	3.0	163
33	Emergent brain-like complexity from nanowire atomic switch networks: Towards neuromorphic synthetic intelligence., 2018,,.		9
34	Comparison of radiobiological parameters for 90Y radionuclide therapy (RNT) and external beam radiotherapy (EBRT) in vitro. EJNMMI Physics, 2018, 5, 18.	2.7	23
35	A New Standard DNA Damage (SDD) Data Format. Radiation Research, 2018, 191, 76.	1.5	49
36	First Investigation of Gadolinium-Based Nanoparticles for Radiosensitization and Enhanced Imaging on the Australian MRI-linac. , 2018, , .		0

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37	Towards a next-generation plastic scintillating fiber array with improved sensitivity for radiotherapy imaging and dosimetry. , $2018, \ldots$		1
38	A data-driven, knowledge-based approach to biomarker discovery: application to circulating microRNA markers of colorectal cancer prognosis. Npj Systems Biology and Applications, 2018, 4, 20.	3.0	47
39	Impact of fluorescence emission from gold atoms on surrounding biological tissueâ€"implications for nanoparticle radio-enhancement. Physics in Medicine and Biology, 2017, 62, 3097-3110.	3.0	11
40	Computational study of the activity, dynamics, energetics and conformations of insulin analogues using molecular dynamics simulations: Application to hyperinsulinemia and the critical residue B26. Biochemistry and Biophysics Reports, 2017, 11, 182-190.	1.3	4
41	Toward Personalized Dosimetry with 32 P Microparticle Therapy for Advanced Pancreatic Cancer. International Journal of Radiation Oncology Biology Physics, 2017, 99, 1029-1038.	0.8	8
42	A novel water-equivalent electronic portal imaging device for radiotherapy with improved detective quantum efficiency: Proof of concept., 2017,,.		0
43	Light output enhancement for a plastic scintillator using nanofibers. , 2017, , .		0
44	Elucidating the Activation Mechanism of the Insulin-Family Proteins with Molecular Dynamics Simulations. PLoS ONE, 2016, 11, e0161459.	2.5	7
45	Correction for human head motion in helical x-ray CT. Physics in Medicine and Biology, 2016, 61, 1416-1438.	3.0	14
46	Polarisation-based coincidence event discrimination: an <i>in silico</i> scheme for Compton-PET. Physics in Medicine and Biology, 2016, 61, 5803-5817.	3.0	19
47	Dose enhancement effects to the nucleus and mitochondria from gold nanoparticles in the cytosol. Physics in Medicine and Biology, 2016, 61, 5993-6010.	3.0	49
48	In silico investigation of factors affecting the MV imaging performance of a novel water-equivalent EPID. Physica Medica, 2016, 32, 1819-1826.	0.7	7
49	Advances in Computational Radiation Biophysics for Cancer Therapy: Simulating Nano-Scale Damage by Low-Energy Electrons., 2016,, 43-54.		0
50	Unraveling the mechanistic complexity of Alzheimer's disease through systems biology. Alzheimer's and Dementia, 2016, 12, 708-718.	0.8	22
51	Unraveling Kinase Activation Dynamics Using Kinase-Substrate Relationships from Temporal Large-Scale Phosphoproteomics Studies. PLoS ONE, 2016, 11, e0157763.	2.5	14
52	ORTI: An Open-Access Repository of Transcriptional Interactions for Interrogating Mammalian Gene Expression Data. PLoS ONE, 2016, 11, e0164535.	2.5	19
53	Markerless tumor tracking using short kilovoltage imaging arcs for lung image-guided radiotherapy. Physics in Medicine and Biology, 2015, 60, 9437-9454.	3.0	25
54	Cancer nanomedicine: challenges and opportunities. Medical Journal of Australia, 2015, 203, 204-205.	1.7	8

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55	A rigid motion correction method for helical computed tomography (CT). Physics in Medicine and Biology, 2015, 60, 2047-2073.	3.0	41
56	Improving thoracic four-dimensional cone-beam CT reconstruction with anatomical-adaptive image regularization (AAIR). Physics in Medicine and Biology, 2015, 60, 841-868.	3.0	9
57	Advances in Computational Radiation Biophysics for Cancer Therapy: Simulating Nano-Scale Damage by Low-Energy Electrons. Biophysical Reviews and Letters, 2015, 10, 25-36.	0.8	6
58	A generalised enzyme kinetic model for predicting the behaviour of complex biochemical systems. FEBS Open Bio, 2015, 5, 226-239.	2.3	14
59	Issues involved in the quantitative 3D imaging of proton doses using optical CT and chemical dosimeters. Physics in Medicine and Biology, 2015, 60, 709-726.	3.0	17
60	The cytoplasm as a radiation target: an in silico study of microbeam cell irradiation. Physics in Medicine and Biology, 2015, 60, 2325-2337.	3.0	10
61	Stochastic simulation of radium-223 dichloride therapy at the sub-cellular level. Physics in Medicine and Biology, 2015, 60, 6087-6096.	3.0	12
62	Molecular Dynamics Simulations of Insulin: Elucidating the Conformational Changes that Enable Its Binding. PLoS ONE, 2015, 10, e0144058.	2.5	23
63	Image quality in thoracic 4D cone-beam CT: A sensitivity analysis of respiratory signal, binning method, reconstruction algorithm, and projection angular spacing. Medical Physics, 2014, 41, 041912.	3.0	34
64	Optimisation of the imaging and dosimetric characteristics of an electronic portal imaging device employing plastic scintillating fibres using Monte Carlo simulations. Physics in Medicine and Biology, 2014, 59, 6827-6840.	3.0	6
65	Advances in kilovoltage x-ray beam dosimetry. Physics in Medicine and Biology, 2014, 59, R183-R231.	3.0	133
66	Simulation of real-time EPID images during IMRT using Monte-Carlo. Physica Medica, 2014, 30, 326-330.	0.7	2
67	Water equivalence of NIPAM based polymer gel dosimeters with enhanced sensitivity for x-ray CT. Radiation Physics and Chemistry, 2013, 91, 60-69.	2.8	10
68	Predicted ionisation in mitochondria and observed acute changes in the mitochondrial transcriptome after gamma irradiation: A Monte Carlo simulation and quantitative PCR study. Mitochondrion, 2013, 13, 736-742.	3.4	23
69	The feasibility of head motion tracking in helical CT: A step toward motion correction. Medical Physics, 2013, 40, 041903.	3.0	13
70	Positron emission tomography coincidence detection with photon polarization correlation. Proceedings of SPIE, 2013, , .	0.8	3
71	Evaluating radiation damage to scintillating plastic fibers with Monte Carlo simulations. Proceedings of SPIE, 2013, , .	0.8	0
72	Estimation of effective imaging dose for kilovoltage intratreatment monitoring of the prostate position during cancer radiotherapy. Physics in Medicine and Biology, 2013, 58, 5983-5996.	3.0	14

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73	Characterization of a novel EPID designed for simultaneous imaging and dose verification in radiotherapy. Medical Physics, 2013, 40, 091902.	3.0	23
74	Characterization of optical transport effects on EPID dosimetry using Geant4. Medical Physics, 2013, 40, 041708.	3.0	22
75	A system for EPIDâ€based realâ€time treatment delivery verification during dynamic IMRT treatment. Medical Physics, 2013, 40, 091907.	3.0	34
76	Nanoparticles in Cancer Imaging and Therapy. Journal of Nanomaterials, 2012, 2012, 1-7.	2.7	51
77	Characterization of a Novel Diamond-Based Microdosimeter Prototype for Radioprotection Applications in Space Environments. IEEE Transactions on Nuclear Science, 2012, 59, 3110-3116.	2.0	17
78	<i>In Silico</i> Nanodosimetry: New Insights into Nontargeted Biological Responses to Radiation. Computational and Mathematical Methods in Medicine, 2012, 2012, 1-9.	1.3	15
79	A study of surface dosimetry for breast cancer radiotherapy treatments using Gafchromic EBT2 film. Journal of Applied Clinical Medical Physics, 2012, 13, 83-97.	1.9	48
80	Kilovoltage Intrafraction Monitoring for Prostate Intensity Modulated Arc Therapy: First Clinical Results. International Journal of Radiation Oncology Biology Physics, 2012, 84, e655-e661.	0.8	94
81	Practical considerations for reporting surface dose in external beam radiotherapy: a 6ÂMV X-ray beam study. Australasian Physical and Engineering Sciences in Medicine, 2012, 35, 271-282.	1.3	15
82	An evaluation of calculation parameters in the EGSnrc/BEAMnrc Monte Carlo codes and their effect on surface dose calculation. Physics in Medicine and Biology, 2012, 57, N267-N278.	3.0	18
83	Water and tissue equivalence of a new PRESAGE® formulation for 3D proton beam dosimetry: A Monte Carlo study. Medical Physics, 2012, 39, 7071-7079.	3.0	31
84	Water equivalence evaluation of PRESAGE® formulations for megavoltage electron beams: a Monte Carlo study. Australasian Physical and Engineering Sciences in Medicine, 2012, 35, 455-463.	1.3	4
85	Radiological characterization and water equivalency of genipin gel for x-ray and electron beam dosimetry. Physics in Medicine and Biology, 2011, 56, 4685-4699.	3.0	30
86	Investigation of radiological properties and water equivalency of PRESAGE (sup) $\hat{A}^{\otimes}$ (sup) dosimeters. Medical Physics, 2011, 38, 2265-2274.	3.0	79
87	A method of motion tracking during CT for motion correction. , 2011, , .		1
88	Direct dose to water dosimetry for pretreatment IMRT verification using a modified EPID. Medical Physics, 2011, 38, 6257-6264.	3.0	17
89	Radio and X-ray emission from disc winds in radio-quiet quasars. Monthly Notices of the Royal Astronomical Society, 2011, 413, 1735-1743.	4.4	11
90	Polarization enhanced X-ray imaging for biomedicine. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 648, S208-S210.	1.6	9

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91	Plasma nanofabrication and nanomaterials safety. Journal Physics D: Applied Physics, 2011, 44, 174019.	2.8	22
92	The measurement of backscatter factors of kilovoltage X-ray beams using Gafchromicâ,,¢ EBT2 film. Australasian Physical and Engineering Sciences in Medicine, 2011, 34, 261-266.	1.3	16
93	Study of dosimetric water equivalency of PRESAGE (sup) $\hat{A}^{\otimes}$ (sup) for megavoltage and kilovoltage x-ray beams. Journal of Physics: Conference Series, 2010, 250, 012053.	0.4	11
94	An evaluation of Genipin gel as a water equivalent dosimeter for megavoltage electron beams and kilovoltage x-ray beams. Journal of Physics: Conference Series, 2010, 250, 012036.	0.4	4
95	The water equivalence of solid phantoms for low energy photon beams. Medical Physics, 2010, 37, 4355-4363.	3.0	87
96	Water equivalency evaluation of PRESAGE (sup) $\hat{A}^{\otimes}$ (sup) dosimeters for dosimetry of Cs-137 and Ir-192 brachytherapy sources. Journal of Physics: Conference Series, 2010, 250, 012093.	0.4	9
97	An investigation of backscatter factors for kilovoltage x-rays: a comparison between Monte Carlo simulations and Gafchromic EBT film measurements. Physics in Medicine and Biology, 2010, 55, 783-797.	3.0	35
98	THEXMM-NEWTONLONG LOOK OF NGC 1365: LACK OF A HIGH/SOFT STATE IN ITS ULTRALUMINOUS X-RAY SOURCES. Astrophysical Journal, 2009, 695, 1614-1622.	4.5	26
99	Enhanced MHD Transport in Astrophysical Accretion Flows: Turbulence, Winds and Jets. Plasma and Fusion Research, 2009, 4, 017-017.	0.7	2
100	X-ray polarization in relativistic jets. Monthly Notices of the Royal Astronomical Society, 2009, 395, 1507-1514.	4.4	44
101	Accretion discs in blazars. Monthly Notices of the Royal Astronomical Society, 2009, 400, 1521-1526.	4.4	22
102	Terrestrial foreshock Langmuir waves: STEREO observations, theoretical modeling, and quasiâ€linear simulations. Journal of Geophysical Research, 2009, 114, .	3.3	9
103	EPID dosimetry: Effect of different layers of materials on absorbed dose response. Medical Physics, 2009, 36, 5665-5674.	3.0	22
104	Black hole mass estimates from soft X-ray spectra. Advances in Space Research, 2008, 42, 517-522.	2.6	3
105	Jet-enhanced accretion growth of supermassive black holes. Monthly Notices of the Royal Astronomical Society, 2008, 386, 989-994.	4.4	30
106	X-ray polarization signatures of Compton scattering in magnetic cataclysmic variables. Monthly Notices of the Royal Astronomical Society, 2008, 386, 2167-2172.	4.4	12
107	Black hole masses and accretion states in ULXs. AIP Conference Proceedings, 2008, , .	0.4	0
108	New global 3D MHD simulations of black hole disk accretion and outflows. Proceedings of the International Astronomical Union, 2008, 4, 129-130.	0.0	3

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109	Ionization Cone in the X-Ray Binary LMC X-1. Astrophysical Journal, 2008, 687, L29-L32.	4.5	13
110	Constraints on Jetâ€driven Disk Accretion in Sagittarius A*. Astrophysical Journal, 2008, 676, 351-360.	4.5	6
111	TOWARDS A NEW STANDARD THEORY FOR ASTROPHYSICAL DISK ACCRETION. Modern Physics Letters A, 2007, 22, 1685-1700.	1.2	12
112	Spectacular Trailing Streamers near LMC X-1: The First Evidence of a Jet?. Astrophysical Journal, 2007, 667, L163-L166.	4.5	12
113	On the Origin of Radio Core Emission in Radio-quiet Quasars. Astrophysical Journal, 2007, 668, L103-L106.	4.5	53
114	Effects of overshoots on electron distributions upstream and downstream of quasi-perpendicular collisionless shocks. Journal of Geophysical Research, 2007, 112, n/a-n/a.	3.3	6
115	Towards a new standard model for black hole accretion. Astrophysics and Space Science, 2007, 311, 127-135.	1.4	21
116	Jet-driven disk accretion in low luminosity AGN?. Astrophysics and Space Science, 2007, 310, 327-332.	1.4	7
117	Ultra-luminous X-ray sources: X-ray binaries in a high/hard state?. Proceedings of the International Astronomical Union, 2006, 2, 247-250.	0.0	1
118	Chilled disks in ultraluminous X-ray sources. Proceedings of the International Astronomical Union, 2006, 2, 453-454.	0.0	0
119	Radio and X-ray properties of relativistic beaming models for ultraluminous X-ray sources. Monthly Notices of the Royal Astronomical Society, 2006, 372, 630-638.	4.4	28
120	Compton Scattering of Fe Kα Lines from Accreting White Dwarfs. Publications of the Astronomical Society of Australia, 2005, 22, 56-61.	3.4	4
121	Black Holes in Galactic Nuclei, X-Ray Binaries and Ultraluminous X-Ray Sources. Publications of the Astronomical Society of Australia, 2005, 22, 195-198.	3.4	1
122	Magnetic Fields on Different Scales in AGN. AIP Conference Proceedings, 2005, , .	0.4	0
123	Planetary foreshock radio emissions. Journal of Geophysical Research, 2005, 110, .	3.3	9
124	A Quantitative model for terrestrial foreshock radio emissions: 1. Predicted properties. Journal of Geophysical Research, 2004, 109, .	3.3	14
125	Radio emission from mini-magnetospheres on the Moon. Geophysical Research Letters, 2004, 31, n/a-n/a.	4.0	5
126	Radio Emission from Ultrashort-Period Double Degenerate Binaries. Publications of the Astronomical Society of Australia, 2004, 21, 248-251.	3.4	3

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127	Dynamics and Energetics of Turbulent, Magnetized Disk Accretion around Black Holes: A Firstâ€Principles Approach to Diskâ€Coronaâ€Outflow Coupling. Astrophysical Journal, 2004, 616, 669-687.	4.5	64
128	Type II Solar Radio Bursts: Theory and Space Weather Implications. Space Science Reviews, 2003, 107, 27-34.	8.1	74
129	Theoretically predicted properties of type II radio emission from an interplanetary foreshock. Journal of Geophysical Research, 2003, 108, .	3.3	55
130	Submillimeter Observations of a Sample of Broad Absorption Line Quasars. Astrophysical Journal, 2003, 596, L35-L38.	4.5	20
131	Analytic model for the electrostatic potential jump across collisionless shocks, with application to Earth's bow shock. Journal of Geophysical Research, 2002, 107, SSH 11-1-SSH 11-10.	3.3	18
132	Broad Absorption Line Quasars and the Radio‣oud/Radioâ€Quiet Dichotomy. Publications of the Astronomical Society of the Pacific, 1999, 111, 954-963.	3.1	13
133	Magnetic Fields in Accretion Disks. Publications of the Astronomical Society of Australia, 1999, 16, 225-233.	3.4	9
134	Thermal material in relativistic jets. Monthly Notices of the Royal Astronomical Society, 1998, 293, 288-298.	4.4	27
135	Induced Compton Scattering in Gigahertz Peak Spectrum Radio Sources. Astrophysical Journal, 1998, 495, L35-L38.	4.5	21
136	Dense, thin clouds and reprocessed radiation in the central regions of active galactic nuclei. Monthly Notices of the Royal Astronomical Society, 1997, 284, 717-730.	4.4	33
137	Physical constraints on the sizes of dense clouds in the central magnetospheres of active galactic nuclei. Monthly Notices of the Royal Astronomical Society, 1996, 283, 1322-1330.	4.4	22
138	Propagation and absorption of cyclotron maser radiation in solar microwave spike bursts. Solar Physics, 1993, 145, 317-338.	2.5	5
139	Multiband study of NGC 7424 and its two newly discovered ultraluminous X-ray sources. Monthly Notices of the Royal Astronomical Society, 0, 370, 1666-1676.	4.4	17
140	Compton scattering of Fe $\hat{\text{Kl}}$ ± lines in magnetic cataclysmic variables. Monthly Notices of the Royal Astronomical Society, 0, 383, 962-970.	4.4	6