

Zdenka Kuncic

List of Publications by Year in descending order

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Version: 2024-02-01

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	Nanoparticle radio-enhancement: principles, progress and application to cancer treatment. <i>Physics in Medicine and Biology</i> , 2018, 63, 02TR01.	3.0	163
2	Advances in kilovoltage x-ray beam dosimetry. <i>Physics in Medicine and Biology</i> , 2014, 59, R183-R231.	3.0	133
3	Roadmap for metal nanoparticles in radiation therapy: current status, translational challenges, and future directions. <i>Physics in Medicine and Biology</i> , 2020, 65, 21RM02.	3.0	101
4	Kilovoltage Intrafraction Monitoring for Prostate Intensity Modulated Arc Therapy: First Clinical Results. <i>International Journal of Radiation Oncology Biology Physics</i> , 2012, 84, e655-e661.	0.8	94
5	Emergent dynamics of neuromorphic nanowire networks. <i>Scientific Reports</i> , 2019, 9, 14920.	3.3	93
6	Avalanches and edge-of-chaos learning in neuromorphic nanowire networks. <i>Nature Communications</i> , 2021, 12, 4008.	12.8	91
7	The water equivalence of solid phantoms for low energy photon beams. <i>Medical Physics</i> , 2010, 37, 4355-4363.	3.0	87
8	Investigation of radiological properties and water equivalency of PRESAGE [®] dosimeters. <i>Medical Physics</i> , 2011, 38, 2265-2274.	3.0	79
9	Type II Solar Radio Bursts: Theory and Space Weather Implications. <i>Space Science Reviews</i> , 2003, 107, 27-34.	8.1	74
10	Dynamics and Energetics of Turbulent, Magnetized Disk Accretion around Black Holes: A First Principles Approach to Disk-Corona Outflow Coupling. <i>Astrophysical Journal</i> , 2004, 616, 669-687.	4.5	64
11	High-sensitivity in vivo contrast for ultra-low field magnetic resonance imaging using superparamagnetic iron oxide nanoparticles. <i>Science Advances</i> , 2020, 6, eabb0998.	10.3	57
12	Theoretically predicted properties of type II radio emission from an interplanetary foreshock. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	55
13	On the Origin of Radio Core Emission in Radio-quiet Quasars. <i>Astrophysical Journal</i> , 2007, 668, L103-L106.	4.5	53
14	Nanoparticles in Cancer Imaging and Therapy. <i>Journal of Nanomaterials</i> , 2012, 2012, 1-7.	2.7	51
15	Dose enhancement effects to the nucleus and mitochondria from gold nanoparticles in the cytosol. <i>Physics in Medicine and Biology</i> , 2016, 61, 5993-6010.	3.0	49
16	A New Standard DNA Damage (SDD) Data Format. <i>Radiation Research</i> , 2018, 191, 76.	1.5	49
17	A study of surface dosimetry for breast cancer radiotherapy treatments using Gafchromic EBT2 film. <i>Journal of Applied Clinical Medical Physics</i> , 2012, 13, 83-97.	1.9	48
18	A data-driven, knowledge-based approach to biomarker discovery: application to circulating microRNA markers of colorectal cancer prognosis. <i>Npj Systems Biology and Applications</i> , 2018, 4, 20.	3.0	47

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19	X-ray polarization in relativistic jets. Monthly Notices of the Royal Astronomical Society, 2009, 395, 1507-1514.	4.4	44
20	A rigid motion correction method for helical computed tomography (CT). Physics in Medicine and Biology, 2015, 60, 2047-2073.	3.0	41
21	Topological Properties of Neuromorphic Nanowire Networks. Frontiers in Neuroscience, 2020, 14, 184.	2.8	37
22	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
23	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
24	A system for EPID ₂ -based real-time treatment delivery verification during dynamic IMRT treatment. Medical Physics, 2013, 40, 091907.	3.0	34
25	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
26	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
27	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
28	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
29	Jet-enhanced accretion growth of supermassive black holes. Monthly Notices of the Royal Astronomical Society, 2008, 386, 989-994.	4.4	30
30	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
31	Information dynamics in neuromorphic nanowire networks. Scientific Reports, 2021, 11, 13047.	3.3	30
32	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
33	Dynamic Electrical Pathway Tuning in Neuromorphic Nanowire Networks. Advanced Functional Materials, 2020, 30, 2003679.	14.9	28
34	Thermal material in relativistic jets. Monthly Notices of the Royal Astronomical Society, 1998, 293, 288-298.	4.4	27
35	THEXMM-NEWTON LONG 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
36	Radio-enhancement effects by radiolabeled nanoparticles. Scientific Reports, 2019, 9, 14346.	3.3	26

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37	Markerless tumor tracking using short kilovoltage imaging arcs for lung image-guided radiotherapy. <i>Physics in Medicine and Biology</i> , 2015, 60, 9437-9454.	3.0	25
38	Predicted ionisation in mitochondria and observed acute changes in the mitochondrial transcriptome after gamma irradiation: A Monte Carlo simulation and quantitative PCR study. <i>Mitochondrion</i> , 2013, 13, 736-742.	3.4	23
39	Characterization of a novel EPID designed for simultaneous imaging and dose verification in radiotherapy. <i>Medical Physics</i> , 2013, 40, 091902.	3.0	23
40	Comparison of radiobiological parameters for 90Y radionuclide therapy (RNT) and external beam radiotherapy (EBRT) in vitro. <i>EJNMMI Physics</i> , 2018, 5, 18.	2.7	23
41	Modularity and multitasking in neuro-memristive reservoir networks. <i>Neuromorphic Computing and Engineering</i> , 2021, 1, 014003.	5.9	23
42	Molecular Dynamics Simulations of Insulin: Elucidating the Conformational Changes that Enable Its Binding. <i>PLoS ONE</i> , 2015, 10, e0144058.	2.5	23
43	Physical constraints on the sizes of dense clouds in the central magnetospheres of active galactic nuclei. <i>Monthly Notices of the Royal Astronomical Society</i> , 1996, 283, 1322-1330.	4.4	22
44	Accretion discs in blazars. <i>Monthly Notices of the Royal Astronomical Society</i> , 2009, 400, 1521-1526.	4.4	22
45	EPID dosimetry: Effect of different layers of materials on absorbed dose response. <i>Medical Physics</i> , 2009, 36, 5665-5674.	3.0	22
46	Plasma nanofabrication and nanomaterials safety. <i>Journal Physics D: Applied Physics</i> , 2011, 44, 174019.	2.8	22
47	Characterization of optical transport effects on EPID dosimetry using Geant4. <i>Medical Physics</i> , 2013, 40, 041708.	3.0	22
48	Unraveling the mechanistic complexity of Alzheimer's disease through systems biology. <i>Alzheimer's and Dementia</i> , 2016, 12, 708-718.	0.8	22
49	Towards a new standard model for black hole accretion. <i>Astrophysics and Space Science</i> , 2007, 311, 127-135.	1.4	21
50	Induced Compton Scattering in Gigahertz Peak Spectrum Radio Sources. <i>Astrophysical Journal</i> , 1998, 495, L35-L38.	4.5	21
51	Submillimeter Observations of a Sample of Broad Absorption Line Quasars. <i>Astrophysical Journal</i> , 2003, 596, L35-L38.	4.5	20
52	Reservoir Computing with Neuromemristive Nanowire Networks. , 2020, , .		20
53	Polarisation-based coincidence event discrimination: an <i>in silico</i> study towards a feasible scheme for Compton-PET. <i>Physics in Medicine and Biology</i> , 2016, 61, 5803-5817.	3.0	19
54	ORTI: An Open-Access Repository of Transcriptional Interactions for Interrogating Mammalian Gene Expression Data. <i>PLoS ONE</i> , 2016, 11, e0164535.	2.5	19

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55	Analytic model for the electrostatic potential jump across collisionless shocks, with application to Earth's bow shock. <i>Journal of Geophysical Research</i> , 2002, 107, SSH 11-1-SSH 11-10.	3.3	18
56	An evaluation of calculation parameters in the EGSnrc/BEAMnrc Monte Carlo codes and their effect on surface dose calculation. <i>Physics in Medicine and Biology</i> , 2012, 57, N267-N278.	3.0	18
57	Multiband study of NGC 7424 and its two newly discovered ultraluminous X-ray sources. <i>Monthly Notices of the Royal Astronomical Society</i> , 0, 370, 1666-1676.	4.4	17
58	Direct dose to water dosimetry for pretreatment IMRT verification using a modified EPID. <i>Medical Physics</i> , 2011, 38, 6257-6264.	3.0	17
59	Characterization of a Novel Diamond-Based Microdosimeter Prototype for Radioprotection Applications in Space Environments. <i>IEEE Transactions on Nuclear Science</i> , 2012, 59, 3110-3116.	2.0	17
60	Issues involved in the quantitative 3D imaging of proton doses using optical CT and chemical dosimeters. <i>Physics in Medicine and Biology</i> , 2015, 60, 709-726.	3.0	17
61	Neuromorphic nanowire networks: principles, progress and future prospects for neuro-inspired information processing. <i>Advances in Physics: X</i> , 2021, 6, .	4.1	17
62	The measurement of backscatter factors of kilovoltage X-ray beams using Gafchromic EBT2 film. <i>Australasian Physical and Engineering Sciences in Medicine</i> , 2011, 34, 261-266.	1.3	16
63	Nanoscale neuromorphic networks and criticality: a perspective. <i>Journal of Physics Complexity</i> , 2021, 2, 042001.	2.2	16
64	<i>In Silico</i> Nanodosimetry: New Insights into Nontargeted Biological Responses to Radiation. <i>Computational and Mathematical Methods in Medicine</i> , 2012, 2012, 1-9.	1.3	15
65	Practical considerations for reporting surface dose in external beam radiotherapy: a 6 MV X-ray beam study. <i>Australasian Physical and Engineering Sciences in Medicine</i> , 2012, 35, 271-282.	1.3	15
66	A Quantitative model for terrestrial foreshock radio emissions: 1. Predicted properties. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	14
67	Estimation of effective imaging dose for kilovoltage intratreatment monitoring of the prostate position during cancer radiotherapy. <i>Physics in Medicine and Biology</i> , 2013, 58, 5983-5996.	3.0	14
68	A generalised enzyme kinetic model for predicting the behaviour of complex biochemical systems. <i>FEBS Open Bio</i> , 2015, 5, 226-239.	2.3	14
69	Correction for human head motion in helical x-ray CT. <i>Physics in Medicine and Biology</i> , 2016, 61, 1416-1438.	3.0	14
70	Unraveling Kinase Activation Dynamics Using Kinase-Substrate Relationships from Temporal Large-Scale Phosphoproteomics Studies. <i>PLoS ONE</i> , 2016, 11, e0157763.	2.5	14
71	Broad Absorption Line Quasars and the Radio-Loud/Radio-Quiet Dichotomy. <i>Publications of the Astronomical Society of the Pacific</i> , 1999, 111, 954-963.	3.1	13
72	Ionization Cone in the X-Ray Binary LMC X-1. <i>Astrophysical Journal</i> , 2008, 687, L29-L32.	4.5	13

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73	The feasibility of head motion tracking in helical CT: A step toward motion correction. Medical Physics, 2013, 40, 041903.	3.0	13
74	Technical Note: The first live treatment on a 1.0 Tesla inline $\text{MRI} \rightarrow \text{linac}$. Medical Physics, 2019, 46, 3254-3258.	3.0	13
75	TOWARDS A NEW STANDARD THEORY FOR ASTROPHYSICAL DISK ACCRETION. Modern Physics Letters A, 2007, 22, 1685-1700.	1.2	12
76	Spectacular Trailing Streamers near LMC X-1: The First Evidence of a Jet?. Astrophysical Journal, 2007, 667, L163-L166.	4.5	12
77	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
78	Stochastic simulation of radium-223 dichloride therapy at the sub-cellular level. Physics in Medicine and Biology, 2015, 60, 6087-6096.	3.0	12
79	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
80	Study of dosimetric water equivalency of PRESAGE [®] for megavoltage and kilovoltage x-ray beams. Journal of Physics: Conference Series, 2010, 250, 012053.	0.4	11
81	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
82	Impact of fluorescence emission from gold atoms on surrounding biological tissue – implications for nanoparticle radio-enhancement. Physics in Medicine and Biology, 2017, 62, 3097-3110.	3.0	11
83	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
84	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
85	IMPACT OF NANOPARTICLE CLUSTERING ON DOSE RADIO-ENHANCEMENT. Radiation Protection Dosimetry, 2019, 183, 50-54.	0.8	10
86	<p>A Radio-Nano-Platform for T1/T2 Dual-Mode PET-MR Imaging</p> . International Journal of Nanomedicine, 2020, Volume 15, 1253-1266.	6.7	10
87	Magnetic Fields in Accretion Disks. Publications of the Astronomical Society of Australia, 1999, 16, 225-233.	3.4	9
88	Planetary foreshock radio emissions. Journal of Geophysical Research, 2005, 110, .	3.3	9
89	Terrestrial foreshock Langmuir waves: STEREO observations, theoretical modeling, and quasi-linear simulations. Journal of Geophysical Research, 2009, 114, .	3.3	9
90	Water equivalency evaluation of PRESAGE [®] dosimeters for dosimetry of Cs-137 and Ir-192 brachytherapy sources. Journal of Physics: Conference Series, 2010, 250, 012093.	0.4	9

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91	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
92	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
93	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
94	Emergent brain-like complexity from nanowire atomic switch networks: Towards neuromorphic synthetic intelligence. , 2018, , .		9
95	<p></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
96	Harnessing adaptive dynamics in neuro-memristive nanowire networks for transfer learning. , 2020, , .		9
97	Neuromorphic Information Processing with Nanowire Networks. , 2020, , .		9
98	Cancer nanomedicine: challenges and opportunities. Medical Journal of Australia, 2015, 203, 204-205.	1.7	8
99	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
100	Opportunities and Challenges for Nanotherapeutics for the Aging Population. Frontiers in Nanotechnology, 2022, 4, .	4.8	8
101	Jet-driven disk accretion in low luminosity AGN?. Astrophysics and Space Science, 2007, 310, 327-332.	1.4	7
102	Elucidating the Activation Mechanism of the Insulin-Family Proteins with Molecular Dynamics Simulations. PLoS ONE, 2016, 11, e0161459.	2.5	7
103	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
104	MNIST classification using Neuromorphic Nanowire Networks. , 2021, , .		7
105	Study of Multi-Pixel Scintillator Detector Configurations for Measuring Polarized Gamma Radiation. Condensed Matter, 2021, 6, 43.	1.8	7
106	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
107	Compton scattering of Fe K α lines in magnetic cataclysmic variables. Monthly Notices of the Royal Astronomical Society, 0, 383, 962-970.	4.4	6
108	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

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109	Advances in Computational Radiation Biophysics for Cancer Therapy: Simulating Nano-Scale Damage by Low-Energy Electrons. <i>Biophysical Reviews and Letters</i> , 2015, 10, 25-36.	0.8	6
110	Constraints on Jet-driven Disk Accretion in Sagittarius A*. <i>Astrophysical Journal</i> , 2008, 676, 351-360.	4.5	6
111	Propagation and absorption of cyclotron maser radiation in solar microwave spike bursts. <i>Solar Physics</i> , 1993, 145, 317-338.	2.5	5
112	Radio emission from mini-magnetospheres on the Moon. <i>Geophysical Research Letters</i> , 2004, 31, n/a-n/a.	4.0	5
113	A high DQE water-equivalent EPID employing an array of plastic-scintillating fibers for simultaneous imaging and dosimetry in radiotherapy. <i>Medical Physics</i> , 2018, 45, 2154-2168.	3.0	5
114	Compton Scattering of Fe K \pm Lines from Accreting White Dwarfs. <i>Publications of the Astronomical Society of Australia</i> , 2005, 22, 56-61.	3.4	4
115	An evaluation of Genipin gel as a water equivalent dosimeter for megavoltage electron beams and kilovoltage x-ray beams. <i>Journal of Physics: Conference Series</i> , 2010, 250, 012036.	0.4	4
116	Water equivalence evaluation of PRESAGE [®] formulations for megavoltage electron beams: a Monte Carlo study. <i>Australasian Physical and Engineering Sciences in Medicine</i> , 2012, 35, 455-463.	1.3	4
117	Computational study of the activity, dynamics, energetics and conformations of insulin analogues using molecular dynamics simulations: Application to hyperinsulinemia and the critical residue B26. <i>Biochemistry and Biophysics Reports</i> , 2017, 11, 182-190.	1.3	4
118	Radio Emission from Ultrashort-Period Double Degenerate Binaries. <i>Publications of the Astronomical Society of Australia</i> , 2004, 21, 248-251.	3.4	3
119	Black hole mass estimates from soft X-ray spectra. <i>Advances in Space Research</i> , 2008, 42, 517-522.	2.6	3
120	New global 3D MHD simulations of black hole disk accretion and outflows. <i>Proceedings of the International Astronomical Union</i> , 2008, 4, 129-130.	0.0	3
121	Positron emission tomography coincidence detection with photon polarization correlation. <i>Proceedings of SPIE</i> , 2013, , .	0.8	3
122	Optimization of detector modules for measuring gamma-ray polarization in Positron Emission Tomography. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2022, 1040, 167186.	1.6	3
123	Enhanced MHD Transport in Astrophysical Accretion Flows: Turbulence, Winds and Jets. <i>Plasma and Fusion Research</i> , 2009, 4, 017-017.	0.7	2
124	Simulation of real-time EPID images during IMRT using Monte-Carlo. <i>Physica Medica</i> , 2014, 30, 326-330.	0.7	2
125	Positron annihilation localization by nanoscale magnetization. <i>Scientific Reports</i> , 2020, 10, 20262.	3.3	2
126	Investigation of Micron-Scale Radiotherapy Dose Deposition in the Lung: Effect of Magnetic Field and Nanoparticles—a Monte Carlo Simulation. <i>Frontiers in Physics</i> , 2022, 10, .	2.1	2

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127	Particle detection and tracking with DNA. European Physical Journal C, 2022, 82, 1.	3.9	2
128	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
129	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
130	A method of motion tracking during CT for motion correction. , 2011, , .		1
131	Towards a next-generation plastic scintillating fiber array with improved sensitivity for radiotherapy imaging and dosimetry. , 2018, , .		1
132	Clustering effects in nanoparticle-enhanced ^{225}Ac emitting internal radionuclide therapy: a Monte Carlo study. Physics in Medicine and Biology, 2020, 65, 125007.	3.0	1
133	Magnetic Fields on Different Scales in AGN. AIP Conference Proceedings, 2005, , .	0.4	0
134	Chilled disks in ultraluminous X-ray sources. Proceedings of the International Astronomical Union, 2006, 2, 453-454.	0.0	0
135	Black hole masses and accretion states in ULXs. AIP Conference Proceedings, 2008, , .	0.4	0
136	Evaluating radiation damage to scintillating plastic fibers with Monte Carlo simulations. Proceedings of SPIE, 2013, , .	0.8	0
137	Advances in Computational Radiation Biophysics for Cancer Therapy: Simulating Nano-Scale Damage by Low-Energy Electrons. , 2016, , 43-54.		0
138	A novel water-equivalent electronic portal imaging device for radiotherapy with improved detective quantum efficiency: Proof of concept. , 2017, , .		0
139	First Investigation of Gadolinium-Based Nanoparticles for Radiosensitization and Enhanced Imaging on the Australian MRI-linac. , 2018, , .		0
140	Light output enhancement for a plastic scintillator using nanofibers. , 2017, , .		0