Magdalena Bazalova-Carter

List of Publications by Year
in descending order

109 papers	2,296 citations	236925 25 h-index	233421 45 g-index
110 all docs	110 docs citations	110 times ranked	2360 citing authors

#	Article	IF	Citations
1	FLASH radiotherapy with photon beams. Medical Physics, 2022, 49, 2055-2067.	3.0	28
2	Multi-contrast CT imaging using a high energy resolution CdTe detector and a CZT photon-counting detector. Journal of Instrumentation, 2022, 17, P01004.	1.2	6
3	Investigation of image quality of MV and kV CBCT with lowâ€Z beams and high DQE detector. Medical Physics, 2022, , .	3.0	0
4	Dose calculations for preclinical radiobiology experiments conducted with singleâ€field cabinet irradiators. Medical Physics, 2022, , .	3.0	3
5	Design optimization of an electron-to-photon conversion target for ultra-high dose rate x-ray (FLASH) experiments at TRIUMF. Physics in Medicine and Biology, 2022, 67, 105003.	3.0	9
6	Lead-doped scintillator dosimeters for detection of ultrahigh dose-rate x-rays. Physics in Medicine and Biology, 2022, 67, 105007.	3.0	2
7	Orthorhombic Nonâ€Perovskite CsPbI₃ Microwires for Stable Highâ€Resolution Xâ€Ray Detectors. Advanced Optical Materials, 2022, 10, .	7.3	14
8	Contaminant detection using a CZT photon counting detector with TDI image reconstruction. Journal of Instrumentation, 2022, 17, P05010.	1.2	1
9	Contaminant detection in non-destructive testing using a CZT photon-counting detector. Journal of Instrumentation, 2021, 16, P01011-P01011.	1.2	15
10	High length-to-width aspect ratio lead bromide microwires via perovskite-induced local concentration gradient for X-ray detection. CrystEngComm, 2021, 23, 2215-2221.	2.6	3
11	fastCAT: Fast cone beam CT (CBCT) simulation. Medical Physics, 2021, 48, 4448-4458.	3.0	11
12	Dosimetry of a novel converging Xâ€ray source for kilovoltage radiotherapy. Medical Physics, 2021, 48, 5947-5958.	3.0	0
13	Characterization of an xâ€ray tubeâ€based ultrahigh doseâ€rate system for in vitro irradiations. Medical Physics, 2021, 48, 7399-7409.	3.0	9
14	A detective quantum efficiency for spectroscopic Xâ€ray imaging detectors. Medical Physics, 2021, 48, 6781-6799.	3.0	4
15	Experimental validation of Fastcat kV and MV cone beam CT (CBCT) simulator. Medical Physics, 2021, 48, 6869-6880.	3.0	4
16	Single-Crystal Bismuth Thiophosphate, BiPS₄, as a Nontoxic and Mechanically Robust X-ray Detector. ACS Applied Materials & Interfaces, 2021, 13, 56296-56301.	8.0	1
17	Optimization of a CZT photon counting detector for contaminant detection. Journal of Instrumentation, 2021, 16, P11015.	1.2	8
18	External beam radiation therapy with kilovoltage x-rays. Physica Medica, 2020, 79, 103-112.	0.7	14

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19	Optimization of radiochromic film stacks to diagnose high-flux laser-accelerated proton beams. Review of Scientific Instruments, 2020, 91, 093303.	1.3	8
20	Technical Note: Synthesizing of lung tumors in computed tomography images. Medical Physics, 2020, 47, 5070-5076.	3.0	2
21	Monte Carlo simulations of EBT3 film dose deposition for percentage depth dose (PDD) curve evaluation. Journal of Applied Clinical Medical Physics, 2020, 21, 314-324.	1.9	9
22	A failure modes and effects analysis quality management framework for imageâ€guided small animal irradiators: A change in paradigm for radiation biology. Medical Physics, 2020, 47, 2013-2022.	3.0	4
23	Design of a combined X-ray fluorescence Computed Tomography (CT) and photon-counting CT table-top imaging system. Journal of Instrumentation, 2020, 15, P06031-P06031.	1.2	5
24	Initial Evaluation of the Performance of Novel Inorganic Scintillating Detectors for Small Animal Irradiation Dosimetry. IEEE Sensors Journal, 2020, 20, 4704-4712.	4.7	9
25	Physics and biology of ultrahigh dose-rate (FLASH) radiotherapy: a topical review. Physics in Medicine and Biology, 2020, 65, 23TR03.	3.0	135
26	Multi-contrast K-edge imaging on a bench-top photon-counting CT system: acquisition parameter study. Journal of Instrumentation, 2020, 15, P10029-P10029.	1.2	17
27	Photon-counting computed tomography of lanthanide contrast agents with a high-flux 330-Î¼m-pitch cadmium zinc telluride detector in a table-top system. Journal of Medical Imaging, 2020, 7, 1.	1.5	13
28	Optimizing Novel Inorganic Scintillation Detectors for Applications in Medical Physics. , 2020, , .		2
29	Characterization of a plastic scintillating detector for the Small Animal Radiation Research Platform (<scp>SARRP</scp>). Medical Physics, 2019, 46, 394-404.	3.0	15
30	Preclinical dose verification using a 3D printed mouse phantom for radiobiology experiments. Medical Physics, 2019, 46, 5294-5303.	3.0	6
31	On the capabilities of conventional xâ€ray tubes to deliver ultraâ€high (FLASH) dose rates. Medical Physics, 2019, 46, 5690-5695.	3.0	43
32	Monte Carlo calculated kilovoltage x-ray arc therapy plans for three lung cancer patients. Biomedical Physics and Engineering Express, 2019, 5, 065022.	1.2	3
33	Optimal planar X-ray imaging soft tissue segmentation using a photon counting detector. Journal of Instrumentation, 2019, 14, P01020-P01020.	1.2	2
34	Unsupervised learning methods in X-ray spectral imaging material segmentation. Journal of Instrumentation, 2019, 14, P06022-P06022.	1.2	3
35	X-Ray Fluorescence Computed Tomography Induced by Photon, Electron, and Proton Beams. IEEE Transactions on Medical Imaging, 2019, 38, 2735-2743.	8.9	3
36	[18F]-SuPAR: A Radiofluorinated Probe for Noninvasive Imaging of DNA Damage-Dependent Poly(ADP-ribose) Polymerase Activity. Bioconjugate Chemistry, 2019, 30, 1331-1342.	3.6	11

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37	A 3D printed modular phantom for quality assurance of imageâ€guided small animal irradiators: Design, imaging experiments, and Monte Carlo simulations. Medical Physics, 2019, 46, 2015-2024.	3.0	14
38	Investigation of combined kV / MV CBCT imaging with a highâ€•DQE MV detector. Medical Physics, 2019, 46, 563-575.	3.0	5
39	Technical Note: Manufacturing of a realistic mouse phantom for dosimetry of radiobiology experiments. Medical Physics, 2019, 46, 1030-1036.	3.0	10
40	Sheet beam xâ€ray fluorescence computed tomography (XFCT) imaging of gold nanoparticles. Medical Physics, 2018, 45, 2572-2582.	3.0	17
41	Optimization of a table-top x-ray fluorescence computed tomography (XFCT) system. Physics in Medicine and Biology, 2018, 63, 235013.	3.0	14
42	MicroCT imaging dose to mouse organs using a validated Monte Carlo model of the small animal radiation research platform (SARRP). Physics in Medicine and Biology, 2018, 63, 115012.	3.0	11
43	Inverse optimization of lowâ€cost kilovoltage xâ€ray arc therapy plans. Medical Physics, 2018, 45, 5161-5171.	3.0	6
44	RECORDS: improved Reporting of montE CarlO RaDiation transport Studies. International Journal of Radiation Oncology Biology Physics, 2018, 101, 792-793.	0.8	0
45	Monte Carlo optimization of a microbeam collimator design for use on the small animal radiation research platform (SARRP). Physics in Medicine and Biology, 2018, 63, 175004.	3.0	8
46	RECORDS: improved Reporting of montE CarlO RaDiation transport Studies: Report of the <scp>AAPM</scp> Research Committee Task Group 268. Medical Physics, 2018, 45, e1-e5.	3.0	178
47	Development of a high resolution voxelised head phantom for medical physics applications. Physica Medica, 2017, 33, 182-188.	0.7	22
48	Feasibility of external beam radiation therapy to deep-seated targets with kilovoltage x-rays. Medical Physics, 2017, 44, 597-607.	3.0	12
49	Brief Report: External Beam Radiation Therapy for the Treatment of Human Pluripotent Stem Cell-Derived Teratomas. Stem Cells, 2017, 35, 1994-2000.	3.2	12
50	Very highâ€energy electron (<scp>VHEE</scp>) beams in radiation therapy; Treatment plan comparison between <scp>VHEE</scp> , <scp>VMAT</scp> , and <scp>PPBS</scp>. Medical Physics, 2017, 44, 2544-2555.	3.0	54
51	Monte Carlo simulations of a kilovoltage external beam radiotherapy system on phantoms and breast patients. Medical Physics, 2017, 44, 6548-6559.	3.0	13
52	Multi-institutional MicroCT image comparison of image-guided small animal irradiators. Physics in Medicine and Biology, 2017, 62, 5760-5776.	3.0	13
53	Measured and Monte Carlo simulated electron backscatter to the monitor chamber for the Varian TrueBeam Linac. Physics in Medicine and Biology, 2016, 61, 8779-8793.	3.0	2
54	Validation of Varian TrueBeam electron phaseâ€“spaces for Monte Carlo simulation of MLCâ€shaped fields. Medical Physics, 2016, 43, 2894-2903.	3.0	11

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55	Performance of a clinical gridded electron gun in magnetic fields: Implications for MRIâ€linac therapy. Medical Physics, 2016, 43, 5903-5914.	3.0	10
56	Absolute dosimetric characterization of Gafchromic EBT3 and HDv2 films using commercial flat-bed scanners and evaluation of the scanner response function variability. Review of Scientific Instruments, 2016, 87, 073301.	1.3	34
57	Assessment of the quality of very high-energy electron radiotherapy planning. Radiotherapy and Oncology, 2016, 119, 154-158.	0.6	34
58	Aligned nanofibrillar collagen scaffolds â€“ Guiding lymphangiogenesis for treatment of acquired lymphedema. Biomaterials, 2016, 102, 259-267.	11.4	55
59	Molecular Magnetic Resonance Imaging of Tumor Response to Therapy. Scientific Reports, 2015, 5, 14759.	3.3	43
60	Protonâ€induced xâ€ray fluorescence CT imaging. Medical Physics, 2015, 42, 900-907.	3.0	16
61	Comparison of film measurements and Monte Carlo simulations of dose delivered with very highâ€energy electron beams in a polystyrene phantom. Medical Physics, 2015, 42, 1606-1613.	3.0	40
62	Treatment planning for radiotherapy with very highâ€energy electron beams and comparison of VHEE and VMAT plans. Medical Physics, 2015, 42, 2615-2625.	3.0	55
63	Experimental validation of L-shell x-ray fluorescence computed tomography imaging: phantom study. Journal of Medical Imaging, 2015, 2, 043501.	1.5	21
64	Optimized Detector Angular Configuration Increases the Sensitivity of X-ray Fluorescence Computed Tomography (XFCT). IEEE Transactions on Medical Imaging, 2015, 34, 1140-1147.	8.9	33
65	The potential of L-shell X-ray fluorescence CT (XFCT) for molecular imaging. British Journal of Radiology, 2015, 88, 20140308.	2.2	9
66	Monte Carlo modeling of ultrasound probes for image guided radiotherapy. Medical Physics, 2015, 42, 5745-5756.	3.0	16
67	MOâ€Fâ€303â€06: Evaluation of the Performance of Very Highâ€Energy Electron (VHEE) Beams in Radiotherapy: Five Clinical Cases. Medical Physics, 2015, 42, 3568-3568.	3.0	4
68	X-Ray Luminescence and X-Ray Fluorescence Computed Tomography: New Molecular Imaging Modalities. IEEE Access, 2014, 2, 1051-1061.	4.2	53
69	L-shell x-ray fluorescence computed tomography (XFCT) imaging of Cisplatin. Physics in Medicine and Biology, 2014, 59, 219-232.	3.0	29
70	Order of Magnitude Sensitivity Increase in X-ray Fluorescence Computed Tomography (XFCT) Imaging With an Optimized Spectro-Spatial Detector Configuration: Theory and Simulation. IEEE Transactions on Medical Imaging, 2014, 33, 1119-1128.	8.9	35
71	First Demonstration of Multiplexed X-Ray Fluorescence Computed Tomography (XFCT) Imaging. IEEE Transactions on Medical Imaging, 2013, 32, 262-267.	8.9	79
72	Development of XFCT imaging strategy for monitoring the spatial distribution of platinum-based chemodrugs: Instrumentation and phantom validation. Medical Physics, 2013, 40, 030701.	3.0	33

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73	Modality comparison for small animal radiotherapy: A simulation study. Medical Physics, 2013, 41, 011710.	3.0	27
74	WE-C-108-01: JUNIOR INVESTIGATOR WINNER - Towards Radiation Therapy with Very High-Energy Electron Beams. Medical Physics, 2013, 40, 474-474.	3.0	0
75	TH-A-141-05: Ultra-Sensitive X-Ray Fluorescence Computed Tomography. Medical Physics, 2013, 40, 523-523.	3.0	0
76	SU-E-J-63: Correlation Between Radiation Dose and Molecular Bioluminescence Responses of 4T1 Breast Cancer Cells for Adaptive Radiation Therapy. Medical Physics, 2013, 40, 164-164.	3.0	0
77	TH-A-141-03: High-Sensitivity L-Shell X-Ray Fluorescence CT Imaging of Cisplatin. Medical Physics, 2013, 40, 523-523.	3.0	0
78	Investigation of X-ray Fluorescence Computed Tomography (XFCT) and K-Edge Imaging. IEEE Transactions on Medical Imaging, 2012, 31, 1620-1627.	8.9	81
79	Monte Carlo model of the scanning beam digital x-ray (SBDX) source. Physics in Medicine and Biology, 2012, 57, 7381-7394.	3.0	7
80	SU-E-J-198: Bioluminescence Monitoring of Metastatic Breast Cancer: Quantitative Assessment of Radiation Treatment Effects and Tracking of Tumor Cells. Medical Physics, 2012, 39, 3698-3698.	3.0	0
81	WE-C-BRB-05: Monte Carlo Simulations and Experimental Validation of Rapid Dose Delivery with Very High-Energy Electron Beams. Medical Physics, 2012, 39, 3944-3944.	3.0	0
82	TH-A-213CD-02: BEST IN PHYSICS (IMAGING) - The Feasibility of Multiplexed Biomarker Detection Using X-Ray Stimulated Fluorescence Imaging. Medical Physics, 2012, 39, 3986-3986.	3.0	0
83	WE-C-217BCD-07: Best in Physics (Joint Eyiaging-Therapy) - Direct Imaging of the Uptake of Platinum Anticancer Agents Using X-Ray Stimulated Fluorescence: A Proof-Of-Concept Study. Medical Physics, 2012, 39, 3950-3951.	3.0	0
84	TH-A-213CD-01: Compton Scatter in X-Ray Fluorescence CT Imaging. Medical Physics, 2012, 39, 3986-3986.	3.0	0
85	The importance of tissue segmentation for dose calculations for kilovoltage radiation therapy. Medical Physics, 2011, 38, 3039-3049.	3.0	47
86	TU-E-BRB-06: Monte Carlo Simulations of a Novel Kilovoltage Radiotherapy Source. Medical Physics, 2011, 38, 3767-3768.	3.0	1
87	SU-E-T-316: Integration of Bioluminescence Imaging with Small Animal Radiotherapy for Treatment Planning and Response Assessment. Medical Physics, 2011, 38, 3560-3560.	3.0	0
88	TH-E-BRC-10: Accuracy of Monte Carlo Dose Calculations with Kilovoltage Photon Beams. Medical Physics, 2011, 38, 3871-3871.	3.0	0
89	SU-E-T-15: GEANT4 Microdosimetry for Simulation of Dose Enhancement in Vivo at Orthovoltage Energy. Medical Physics, 2011, 38, 3488-3489.	3.0	0
90	SU-E-T-315: In Silico, in Vitro, and in Vivo Quantification of Tungsten and Iodine in Dose Enhanced RT (DERT). Medical Physics, 2011, 38, 3560-3560.	3.0	0

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91	Investigation of the effects of treatment planning variables in small animal radiotherapy dose distributions. Medical Physics, 2010, 37, 590-599.	3.0	20
92	SU-GG-J-128: Comparison of Dose Distributions for Small Animal Radiotherapy Using a MicroCT Scanner and a Single-Field Irradiator. Medical Physics, 2010, 37, 3175-3175.	3.0	2
93	SUâ€GGâ€Tâ€449: Dosimetric Impact of CT Metal Artifacts on Proton Pencilâ€Beam Scanning Delivery. Medical Physics, 2010, 37, 3289-3290.	3.0	0
94	SUâ€GGâ€Jâ€131: Immobilization Bed for Multiâ€Modality Image Registration. Medical Physics, 2010, 37, 3175-3175.	3.0	1
95	Kilovoltage beam Monte Carlo dose calculations in submillimeter voxels for small animal radiotherapy. Medical Physics, 2009, 36, 4991-4999.	3.0	35
96	SU-FF-T-408: Tissue Inhomogeneities in Monte Carlo Treatment Planning for Proton Therapy. Medical Physics, 2009, 36, 2616-2616.	3.0	2
97	MO-D-303A-06: ImaSim, An Animated Tool for Teaching Imaging. Medical Physics, 2009, 36, 2696-2697.	3.0	3
98	SU-DD-A3-04: Monte Carlo Simulation of a MicroCT-Based Small Animal Radiotherapy System. Medical Physics, 2009, 36, 2425-2425.	3.0	0
99	SU-FF-I-15: An Algorithm for Metal Streaking Artifact Reduction in Cone Beam CT. Medical Physics, 2009, 36, 2437-2737.	3.0	0
100	SU-FF-J-155: The Influence of Material Assignment On Monte Carlo Dose Calculations for Kilovoltage Small Animal Radiotherapy. Medical Physics, 2009, 36, 2512-2512.	3.0	0
101	SU-FF-T-671: Investigation of Effects of Treatment Planning Variables On Small Animal Therapy Dose Distributions. Medical Physics, 2009, 36, 2679-2679.	3.0	0
102	Tissue segmentation in Monte Carlo treatment planning: A simulation study using dual-energy CT images. Radiotherapy and Oncology, 2008, 86, 93-98.	0.6	56
103	Monte Carlo dose calculations for phantoms with hip prostheses. Journal of Physics: Conference Series, 2008, 102, 012001.	0.4	3
104	Spectroscopic characterization of a novel electronic brachytherapy system. Physics in Medicine and Biology, 2008, 53, 61-75.	3.0	252
105	Dual-energy CT-based material extraction for tissue segmentation in Monte Carlo dose calculations. Physics in Medicine and Biology, 2008, 53, 2439-2456.	3.0	171
106	TH-D-332-01: The Use of Dual-Energy CT Images for Monte Carlo Treatment Planning: Material Extraction and Metal Artifact Reduction. Medical Physics, 2008, 35, 2990-2990.	3.0	0
107	Monte Carlo simulation of a computed tomography x-ray tube. Physics in Medicine and Biology, 2007, 52, 5945-5955.	3.0	52
108	Correction of CT artifacts and its influence on Monte Carlo dose calculations. Medical Physics, 2007, 34, 2119-2132.	3.0	112

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109	MO-D-330A-03: Correction of Streaking Artifacts in CT Images and Its Influence On Monte Carlo Dose Calculations. Medical Physics, 2006, 33, 2158-2159.	3.0	1