Oliver JÃ¤kel

List of Publications by Year in descending order

Source: https://exaly.com/author-pdf/5294618/publications.pdf

Version: 2024-02-01

286	9,829	31949	49868
papers	citations	53 h-index	87 g-index

292	292	292	5402
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Treatment planning for heavy-ion radiotherapy: physical beam model and dose optimization. Physics in Medicine and Biology, 2000, 45, 3299-3317.	1.6	470
2	Carbon ion radiotherapy in Japan: an assessment of 20 years of clinical experience. Lancet Oncology, The, 2015, 16, e93-e100.	5.1	423
3	Results of carbon ion radiotherapy in 152 patients. International Journal of Radiation Oncology Biology Physics, 2004, 58, 631-640.	0.4	279
4	Effectiveness of Carbon Ion Radiotherapy in the Treatment of Skull-Base Chordomas. International Journal of Radiation Oncology Biology Physics, 2007, 68, 449-457.	0.4	276
5	Monte Carlo simulations to support start-up and treatment planning of scanned proton and carbon ion therapy at a synchrotron-based facility. Physics in Medicine and Biology, 2012, 57, 3759-3784.	1.6	182
6	The heidelberg ion therapy center. Radiotherapy and Oncology, 2004, 73, S186-S190.	0.3	181
7	Development of the open-source dose calculation and optimization toolkit matRad. Medical Physics, 2017, 44, 2556-2568.	1.6	178
8	Carbon ion radiotherapy of skull base chondrosarcomas. International Journal of Radiation Oncology Biology Physics, 2007, 67, 171-177.	0.4	177
9	Dosimetry for ion beam radiotherapy. Physics in Medicine and Biology, 2010, 55, R193-R234.	1.6	163
10	Experimental verification of ion stopping power prediction from dual energy CT data in tissue surrogates. Physics in Medicine and Biology, 2014, 59, 83-96.	1.6	158
11	Radiation Therapy With Charged Particles. Seminars in Radiation Oncology, 2006, 16, 249-259.	1.0	153
12	Therapy strategies for locally advanced adenoid cystic carcinomas using modern radiation therapy techniques. Cancer, 2005, 104, 338-344.	2.0	149
13	Treatment planning for heavy ion radiotherapy: clinical implementation and application. Physics in Medicine and Biology, 2001, 46, 1101-1116.	1.6	138
14	Highly effective treatment of skull base chordoma with carbon ion irradiation using a raster scan technique in 155 patients: First longâ€term results. Cancer, 2014, 120, 3410-3417.	2.0	124
15	Analysis of uncertainties in GafchromicÂ® EBT film dosimetry of photon beams. Physics in Medicine and Biology, 2008, 53, 7013-7027.	1.6	120
16	Dose- and LET-painting with particle therapy. Acta OncolÃ³gica, 2010, 49, 1170-1176.	0.8	120
17	Particle therapy at the Heidelberg Ion Therapy Center (HIT) â€“ Integrated research-driven university-hospital-based radiation oncology service in Heidelberg, Germany. Radiotherapy and Oncology, 2010, 95, 41-44.	0.3	119
18	Technical Note: Homogeneity of GafchromicÂ®EBT2 film. Medical Physics, 2010, 37, 1753-1756.	1.6	116

#	Article	IF	Citations
19	LET-painting increases tumour control probability in hypoxic tumours. Acta OncolÃ³gica, 2014, 53, 25-32.	0.8	112
20	Radiotherapy for chordomas and low-grade chondrosarcomas of the skull base with carbon ions. International Journal of Radiation Oncology Biology Physics, 2002, 53, 36-42.	0.4	110
21	A system for three-dimensional dosimetric verification of treatment plans in intensity-modulated radiotherapy with heavy ions. Medical Physics, 1999, 26, 2125-2132.	1.6	104
22	Three-dimensional accuracy and interfractional reproducibility of patient fixation and positioning using a stereotactic head mask system. International Journal of Radiation Oncology Biology Physics, 2001, 49, 1493-1504.	0.4	103
23	Relation between carbon ion ranges and x-ray CT numbers. Medical Physics, 2001, 28, 701-703.	1.6	99
24	Heidelberg Ion Therapy Center (HIT): Initial clinical experience in the first 80 patients. Acta OncolÃ³gica, 2010, 49, 1132-1140.	0.8	93
25	Tissue decomposition from dual energy CT data for MC based dose calculation in particle therapy. Medical Physics, 2014, 41, 061714.	1.6	93
26	Carbon Ion Radiotherapy for Chordomas and Low-Grade Chondrosarcomas of the Skull Base. Strahlentherapie Und Onkologie, 2003, 179, 598-605.	1.0	91
27	Positron emission tomography for quality assurance of cancer therapy with light ion beams. Nuclear Physics A, 1999, 654, 1047c-1050c.	0.6	85
28	MR-guided proton therapy: a review and a preview. Radiation Oncology, 2020, 15, 129.	1.2	85
29	Randomized phase II study evaluating a carbon ion boost applied after combined radiochemotherapy with temozolomide versus a proton boost after radiochemotherapy with temozolomide in patients with primary glioblastoma: The CLEOPATRA Trial. BMC Cancer, 2010, 10, 478.	1.1	83
30	Dosimetric properties of GafchromicÂ® EBT films in monoenergetic medical ion beams. Physics in Medicine and Biology, 2010, 55, 3741-3751.	1.6	82
31	Combined intensityâ€modulated radiotherapy plus rasterâ€scanned carbon ion boost for advanced adenoid cystic carcinoma of the head and neck results in superior locoregional control and overall survival. Cancer, 2015, 121, 3001-3009.	2.0	81
32	The influence of metal artefacts on the range of ion beams. Physics in Medicine and Biology, 2007, 52, 635-644.	1.6	79
33	Evaluation of different fiducial markers for image-guided radiotherapy and particle therapy. Journal of Radiation Research, 2013, 54, i61-i68.	0.8	79
34	High-LET radiotherapy for adenoid cystic carcinoma of the head and neck: 15 yearsâ€™ experience with raster-scanned carbon ion therapy. Radiotherapy and Oncology, 2016, 118, 272-280.	0.3	77
35	Randomised phase I/II study to evaluate carbon ion radiotherapy versus fractionated stereotactic radiotherapy in patients with recurrent or progressive gliomas: The CINDERELLA trial. BMC Cancer, 2010, 10, 533.	1.1	75
36	Carbon ion radiation therapy for high-risk meningiomas. Radiotherapy and Oncology, 2010, 95, 54-59.	0.3	75

#	Article	IF	Citations
37	COSMIC: A Regimen of Intensity Modulated Radiation Therapy Plus Dose-Escalated, Raster-Scanned Carbon Ion Boost for Malignant Salivary Gland Tumors: Results of the Prospective Phase 2 Trial. International Journal of Radiation Oncology Biology Physics, 2015, 93, 37-46.	0.4	75
38	Overcoming hypoxia-induced tumor radioresistance in non-small cell lung cancer by targeting DNA-dependent protein kinase in combination with carbon ion irradiation. Radiation Oncology, 2017, 12, 208.	1.2	75
39	Determination of water absorbed dose in a carbon ion beam using thimble ionization chambers. Physics in Medicine and Biology, 1999, 44, 1193-1206.	1.6	72
40	Next generation multi-scale biophysical characterization of high precision cancer particle radiotherapy using clinical proton, helium-, carbon- and oxygen ion beams. Oncotarget, 2016, 7, 56676-56689.	0.8	72
41	Hypofractionated carbon ion therapy delivered with scanned ion beams for patients with hepatocellular carcinoma â€“ feasibility and clinical response. Radiation Oncology, 2013, 8, 59.	1.2	70
42	Prospective evaluation of early treatment outcome in patients with meningiomas treated with particle therapy based on target volume definition with MRI and ⁶⁸Ga-DOTATOC-PET. Acta OncolÃ³gica, 2013, 52, 514-520.	0.8	68
43	Feasibility and toxicity of combined photon and carbon ion radiotherapy for locally advanced adenoid cystic carcinomas. International Journal of Radiation Oncology Biology Physics, 2003, 56, 391-398.	0.4	65
44	Calculation of stopping power ratios for carbon ion dosimetry. Physics in Medicine and Biology, 2006, 51, 2279-2292.	1.6	65
45	Carbon ion radiotherapy performed as re-irradiation using active beam delivery in patients with tumors of the brain, skull base and sacral region. Radiotherapy and Oncology, 2011, 98, 63-67.	0.3	64
46	Upgrade and benchmarking of a 4D treatment planning system for scanned ion beam therapy. Medical Physics, 2013, 40, 051722.	1.6	58
47	Non-invasive monitoring of therapeutic carbon ion beams in a homogeneous phantom by tracking of secondary ions. Physics in Medicine and Biology, 2013, 58, 3755-3773.	1.6	57
48	Biologically optimized helium ion plans: calculation approach and itsin vitrovalidation. Physics in Medicine and Biology, 2016, 61, 4283-4299.	1.6	57
49	Non-randomized therapy trial to determine the safety and efficacy of heavy ion radiotherapy in patients with non-resectable osteosarcoma. BMC Cancer, 2010, 10, 96.	1.1	56
50	Quantitative carbon ion beam radiography and tomography with a flat-panel detector. Physics in Medicine and Biology, 2012, 57, 7957-7971.	1.6	56
51	MRI-based treatment plan simulation and adaptation for ion radiotherapy using a classification-based approach. Radiation Oncology, 2013, 8, 51.	1.2	56
52	The future of heavy ion radiotherapy. Medical Physics, 2008, 35, 5653-5663.	1.6	55
53	Proton and carbon ion radiotherapy for primary brain tumors and tumors of the skull base. Acta OncolÃ³gica, 2013, 52, 1504-1509.	0.8	55
54	MRI-based simulation of treatment plans for ion radiotherapy in the brain region. Radiotherapy and Oncology, 2013, 109, 414-418.	0.3	54

#	Article	IF	Citations
55	High control rates of protonâ€•and carbonâ€•ionâ€“beam treatment with intensityâ€•modulated active raster scanning in 101 patients with skull base chondrosarcoma at the Heidelberg Ion Beam Therapy Center. Cancer, 2018, 124, 2036-2044.	2.0	52
56	Quality assurance for a treatment planning system in scanned ion beam therapy. Medical Physics, 2000, 27, 1588-1600.	1.6	50
57	Heavy Ion Therapy: Status and Perspectives. Technology in Cancer Research and Treatment, 2003, 2, 377-387.	0.8	50
58	Ion range estimation by using dual energy computed tomography. Zeitschrift Fur Medizinische Physik, 2013, 23, 300-313.	0.6	50
59	Reirradiation Using Carbon Ions in Patients with Locally Recurrent Rectal Cancer at HIT: First Results. Annals of Surgical Oncology, 2015, 22, 2068-2074.	0.7	50
60	Carbon ion beam treatment in patients with primary and recurrent sacrococcygeal chordoma. Strahlentherapie Und Onkologie, 2015, 191, 597-603.	1.0	50
61	The application of PET to quality assurance of heavy-ion tumor therapy. Strahlentherapie Und Onkologie, 1999, 175, 33-36.	1.0	49
62	Experimental characterization of a prototype detector system for carbon ion radiography and tomography. Physics in Medicine and Biology, 2013, 58, 413-427.	1.6	49
63	Treatment of patients with atypical meningiomas Simpson grade 4 and 5 with a carbon ion boost in combination with postoperative photon radiotherapy: The MARCIE Trial. BMC Cancer, 2010, 10, 615.	1.1	48
64	Technical Note: Radiological properties of tissue surrogates used in a multimodality deformable pelvic phantom for MRâ€guided radiotherapy. Medical Physics, 2016, 43, 908-916.	1.6	48
65	A calibration procedure for beam monitors in a scanned beam of heavy charged particles. Medical Physics, 2004, 31, 1009-1013.	1.6	46
66	Temporal Lobe Reactions After Radiotherapy With Carbon Ions: Incidence and Estimation of the Relative Biological Effectiveness by the Local Effect Model. International Journal of Radiation Oncology Biology Physics, 2011, 80, 815-823.	0.4	46
67	Phase I/II trial evaluating carbon ion radiotherapy for the treatment of recurrent rectal cancer: the PANDORA-01 trial. BMC Cancer, 2012, 12, 137.	1.1	46
68	Randomized phase II trial of hypofractionated proton versus carbon ion radiation therapy in patients with sacrococcygeal chordoma-the ISAC trial protocol. Radiation Oncology, 2014, 9, 100.	1.2	45
69	Acute radiation-induced toxicity of heavy ion radiotherapy delivered with intensity modulated pencil beam scanning in patients with base of skull tumors. Radiotherapy and Oncology, 2002, 64, 189-195.	0.3	44
70	Medical physics aspects of particle therapy. Radiation Protection Dosimetry, 2009, 137, 156-166.	0.4	44
71	Treatment of pediatric patients and young adults with particle therapy at the Heidelberg Ion Therapy Center (HIT): establishment of workflow and initial clinical data. Radiation Oncology, 2012, 7, 170.	1.2	44
72	Four-Dimensional Patient Dose Reconstruction for Scanned Ion Beam Therapy of Moving Liver Tumors. International Journal of Radiation Oncology Biology Physics, 2014, 89, 175-181.	0.4	43

#	Article	IF	Citations
73	Clinical implementation and range evaluation of in vivo PET dosimetry for particle irradiation in patients with primary glioma. Radiotherapy and Oncology, 2015, 115, 179-185.	0.3	43
74	Fluorescent nuclear track detectors as a tool for ion-beam therapy research. Radiation Measurements, 2013, 56, 267-272.	0.7	42
75	A phenomenological relative biological effectiveness approach for proton therapy based on an improved description of the mixed radiation field. Physics in Medicine and Biology, 2017, 62, 1378-1395.	1.6	42
76	Evaluation of therapeutic potential of heavy ion therapy for patients with locally advanced prostate cancer. International Journal of Radiation Oncology Biology Physics, 2004, 58, 89-97.	0.4	41
77	Atrioventricular Node Ablation in Langendorff-Perfused Porcine Hearts Using Carbon Ion Particle Therapy. Circulation: Arrhythmia and Electrophysiology, 2015, 8, 429-438.	2.1	41
78	Radiation Tolerance of the Rat Spinal Cord after Single and Split Doses of Photons and Carbon Ions1. Radiation Research, 2003, 160, 536-542.	0.7	39
79	Assessment of Early Toxicity and Response in Patients Treated With Proton and Carbon Ion Therapy at the Heidelberg Ion Therapy Center Using the Raster Scanning Technique. International Journal of Radiation Oncology Biology Physics, 2011, 81, e793-e801.	0.4	39
80	Current Status and New Developments in Ion Therapy. Strahlentherapie Und Onkologie, 2007, 183, 295-300.	1.0	38
81	Generation of synthetic CT data using patient specific daily MR image data and image registration. Physics in Medicine and Biology, 2017, 62, 1358-1377.	1.6	38
82	Phase i study evaluating the treatment of patients with hepatocellular carcinoma (HCC) with carbon ion radiotherapy: The PROMETHEUS-01 trial. BMC Cancer, 2011, 11, 67.	1.1	37
83	Comparison of intensity modulated radiotherapy (IMRT) with intensity modulated particle therapy (IMPT) using fixed beams or an ion gantry for the treatment of patients with skull base meningiomas. Radiation Oncology, 2012, 7, 44.	1.2	37
84	Clinical outcome after particle therapy for meningiomas of the skull base: toxicity and local control in patients treated with active rasterscanning. Radiation Oncology, 2018, 13, 54.	1.2	37
85	On the cost-effectiveness of Carbon ion radiation therapy for skull base chordoma. Radiotherapy and Oncology, 2007, 83, 133-138.	0.3	36
86	An anthropomorphic multimodality (CT/MRI) head phantom prototype for end-to-end tests in ion radiotherapy. Zeitschrift Fur Medizinische Physik, 2015, 25, 391-399.	0.6	35
87	Evaluation of particle radiotherapy for the re-irradiation of recurrent intracranial meningioma. Radiation Oncology, 2018, 13, 86.	1.2	35
88	matRad - a multi-modality open source 3D treatment planning toolkit. IFMBE Proceedings, 2015, , 1608-1611.	0.2	33
89	Optimization of Radiation Therapy for Locally Advanced Adenoid Cystic Carcinomas with Infiltration of the Skull Base Using Photon Intensity-Modulated Radiation Therapy (IMRT) and a Carbon Ion Boost. Strahlentherapie Und Onkologie, 2003, 179, 345-351.	1.0	32
90	Influence of iodine contrast agent on the range of ion beams for radiotherapy. Medical Physics, 2004, 31, 767-773.	1.6	32

#	Article	IF	Citations
91	The impact of modeling nuclear fragmentation on delivered dose and radiobiology in ion therapy. Physics in Medicine and Biology, 2012, 57, 5169-5185.	1.6	32
92	Time-resolved optically stimulated luminescence of Al₂O₃:C for ion beam therapy dosimetry. Physics in Medicine and Biology, 2015, 60, 6613-6638.	1.6	32
93	Quality management of medical physics issues at the German heavy ion therapy project. Medical Physics, 2000, 27, 725-736.	1.6	31
94	Amorphous track models: A numerical comparison study. Radiation Measurements, 2010, 45, 1406-1409.	0.7	31
95	Residual motion mitigation in scanned carbon ion beam therapy of liver tumors using enlarged pencil beam overlap. Radiotherapy and Oncology, 2014, 113, 290-295.	0.3	31
96	Dosimetry in clinical static magnetic fields using plastic scintillation detectors. Radiation Measurements, 2013, 56, 357-360.	0.7	30
97	Effective point of measurement of cylindrical ionization chambers for heavy charged particles. Physics in Medicine and Biology, 2000, 45, 599-607.	1.6	29
98	Treatment planning for scanned ion beams. Radiotherapy and Oncology, 2004, 73, S80-S85.	0.3	29
99	The relative biological effectiveness of proton and ion beams. Zeitschrift Fur Medizinische Physik, 2008, 18, 276-285.	0.6	28
100	Subcellular Spatial Correlation of Particle Traversal and Biological Response in Clinical Ion Beams. International Journal of Radiation Oncology Biology Physics, 2013, 87, 1141-1147.	0.4	28
101	Experimental investigations on carbon ion scanning radiography using a range telescope. Physics in Medicine and Biology, 2014, 59, 3041-3057.	1.6	28
102	Antiproton radiotherapy. Radiotherapy and Oncology, 2008, 86, 14-19.	0.3	27
103	High-accuracy fluence determination in ion beams using fluorescent nuclear track detectors. Radiation Measurements, 2013, 56, 294-298.	0.7	27
104	Experimental study of the water-to-air stopping power ratio of monoenergetic carbon ion beams for particle therapy. Physics in Medicine and Biology, 2012, 57, 3629-3641.	1.6	26
105	Influence of 68Ga-DOTATOC on sparing of normal tissue for radiation therapy of skull base meningioma: differential impact of photon and proton radiotherapy. Radiation Oncology, 2018, 13, 58.	1.2	25
106	Physical advantages of particles: protons and light ions. British Journal of Radiology, 2020, 93, 20190428.	1.0	25
107	The antiproton depthâ€“dose curve in water. Physics in Medicine and Biology, 2008, 53, 793-805.	1.6	24
108	Monte Carlo simulations on the waterâ€toâ€air stopping power ratio for carbon ion dosimetry. Medical Physics, 2009, 36, 1230-1235.	1.6	24

#	Article	IF	Citations
109	Study of GafchromicÂ® EBT film response over a large dose range. Physics in Medicine and Biology, 2010, 55, N281-N290.	1.6	24
110	Analytical expressions for water-to-air stopping-power ratios relevant for accurate dosimetry in particle therapy. Physics in Medicine and Biology, 2011, 56, 2515-2533.	1.6	24
111	Dose response of alanine detectors irradiated with carbon ion beams. Medical Physics, 2011, 38, 1859-1866.	1.6	24
112	Engineering cell-fluorescent ion track hybrid detectors. Radiation Oncology, 2013, 8, 141.	1.2	24
113	An advanced image processing method to improve the spatial resolution of ion radiographies. Physics in Medicine and Biology, 2015, 60, 8525-8547.	1.6	24
114	Use of GafchromicÂ® EBT films in heavy ion therapy. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2008, 591, 171-173.	0.7	23
115	Dosimetric properties of GafchromicÂ® EBT films in medical carbon ion beams. Physics in Medicine and Biology, 2010, 55, 5557-5567.	1.6	23
116	Measurement of secondary radiation during ion beam therapy with the pixel detector Timepix. Journal of Instrumentation, 2011, 6, C11014-C11014.	0.5	23
117	Prospective feasibility analysis of aÂnovel off-line approach for MR-guided radiotherapy. Strahlentherapie Und Onkologie, 2018, 194, 425-434.	1.0	23
118	Chiral symmetry and the near threshold pion-induced 2Ï€ production on the nucleon. Nuclear Physics A, 1990, 511, 733-746.	0.6	22
119	Treatment planning for carbon ion radiotherapy in Germany: Review of clinical trials and treatment planning studies. Radiotherapy and Oncology, 2004, 73, S86-S91.	0.3	22
120	The ratio of stopping powers of water and air for dosimetry applications in tumor therapy. Nuclear Instruments & Methods in Physics Research B, 2007, 256, 561-564.	0.6	22
121	Phase I study evaluating the treatment of patients with locally advanced pancreatic cancer with carbon ion radiotherapy: the PHOENIX-01 trial. BMC Cancer, 2013, 13, 419.	1.1	22
122	Data-driven RBE parameterization for helium ion beams. Physics in Medicine and Biology, 2016, 61, 888-905.	1.6	22
123	Proof of principle of heliumâ€beam radiography using silicon pixel detectors for energy deposition measurement, identification, and tracking of single ions. Medical Physics, 2018, 45, 817-829.	1.6	22
124	Dosimetry auditing procedure with alanine dosimeters for light ion beam therapy. Radiotherapy and Oncology, 2013, 108, 99-106.	0.3	21
125	Selection of beam angles for radiotherapy of skull base tumours using charged particles. Physics in Medicine and Biology, 2000, 45, 1229-1241.	1.6	20
126	Optimization of Monte Carlo particle transport parameters and validation of a novel high throughput experimental setup to measure the biological effects of particle beams. Medical Physics, 2017, 44, 6061-6073.	1.6	20

#	Article	IF	Citations
127	Significance of intra-fractional motion for pancreatic patients treated with charged particles. Radiation Oncology, 2018, 13, 120.	1.2	20
128	Dosimetric Impact of Interfractional Variations in Prostate Cancer Radiotherapyâ€"Implications for Imaging Frequency and Treatment Adaptation. Frontiers in Oncology, 2019, 9, 940.	1.3	20
129	Imaging dose assessment for IGRT in particle beam therapy. Radiotherapy and Oncology, 2013, 109, 409-413.	0.3	19
130	Ion recombination correction factor in scanned light-ion beams for absolute dose measurement using plane-parallel ionisation chambers. Physics in Medicine and Biology, 2017, 62, 5365-5382.	1.6	19
131	Planning strategies for inter-fractional robustness in pancreatic patients treated with scanned carbon therapy. Radiation Oncology, 2017, 12, 94.	1.2	19
132	Detection and track visualization of primary and secondary radiation in hadron therapy beams with the pixel detector Timepix. , 2010, , .		18
133	Fluence-based dosimetry of proton and heavier ion beams using single track detectors. Physics in Medicine and Biology, 2016, 61, 1021-1040.	1.6	18
134	Chiral symmetry and the near-threshold pion-induced 2Ï€ production on the nucleon. Nuclear Physics A, 1992, 541, 675-686.	0.6	17
135	A method for determining the alignment accuracy of the treatment table axis at an isocentric irradiation facility. Physics in Medicine and Biology, 2001, 46, N19-N26.	1.6	17
136	Treatment planning intercomparison for spinal chordomas using intensity-modulated photon radiation therapy (IMRT) and carbon ions. Physics in Medicine and Biology, 2003, 48, 2617-2631.	1.6	17
137	The Influence of Stopping Powers upon Dosimetry for Radiation Therapy with Energetic Ions. Advances in Quantum Chemistry, 2007, , 289-306.	0.4	17
138	COTS Silicon diodes as radiation detectors in proton and heavy charged particle radiotherapy 1. Radiation and Environmental Biophysics, 2010, 49, 365-371.	0.6	17
139	Ion track reconstruction in 3D using alumina-based fluorescent nuclear track detectors. Physics in Medicine and Biology, 2013, 58, N251-N266.	1.6	17
140	Ion therapy of prostate cancer: daily rectal dose reduction by application of spacer gel. Radiation Oncology, 2015, 10, 56.	1.2	17
141	A 3D feature point tracking method for ion radiation. Physics in Medicine and Biology, 2016, 61, 4088-4104.	1.6	17
142	Direct determination of k _Q for Farmer-type ionization chambers in a clinical scanned carbon ion beam using water calorimetry. Physics in Medicine and Biology, 2017, 62, 2033-2054.	1.6	17
143	Specifying Carbon Ion Doses for Radiotherapy: The Heidelberg Approach. Journal of Radiation Research, 2007, 48, A87-A95.	0.8	16
144	Three-voltage linear method to determine ion recombination in proton and light-ion beams. Physics in Medicine and Biology, 2020, 65, 045015.	1.6	16

#	Article	IF	Citations
145	Ï€Ï€-angular correlations forÏ€â^'pâ†'Ï€+Ï€â^'nin the region of the Î" dominance. Physical Review C, 1993, 48, 981-1002.	1.1	15
146	Ranges of ions in metals for use in particle treatment planning. Physics in Medicine and Biology, 2006, 51, N173-N177.	1.6	15
147	Acute toxicity of combined photon IMRT and carbon ion boost for intermediate-risk prostate cancer â€" Acute toxicity of 12C for PC. Acta OncolÃ³gica, 2011, 50, 784-790.	0.8	15
148	Accuracy of robotic patient positioners used in ion beam therapy. Radiation Oncology, 2013, 8, 124.	1.2	15
149	Spatial correlation between traversal and cellular response in ion radiotherapy â€" Towards single track spectroscopy. Radiation Measurements, 2013, 56, 285-289.	0.7	15
150	Optimization of carbon ion and proton treatment plans using the raster-scanning technique for patients with unresectable pancreatic cancer. Radiation Oncology, 2015, 10, 237.	1.2	15
151	Investigations of a flat-panel detector for quality assurance measurements in ion beam therapy. Physics in Medicine and Biology, 2012, 57, 51-68.	1.6	14
152	Application of fluorescent nuclear track detectors for cellular dosimetry. Physics in Medicine and Biology, 2017, 62, 2719-2740.	1.6	14
153	Radiation hazard during a manned mission to Mars. Zeitschrift Fur Medizinische Physik, 2004, 14, 267-272.	0.6	13
154	Biological dose optimization using ramp-like dose gradients in ion irradiation fields. Physica Medica, 2005, 21, 107-111.	0.4	13
155	A comparison of different experimental methods for general recombination correction for liquid ionization chambers. Physics in Medicine and Biology, 2012, 57, 7161-7175.	1.6	13
156	Preclinical investigations towards the first spacer gel application in prostate cancer treatment during particle therapy at HIT. Radiation Oncology, 2013, 8, 134.	1.2	13
157	Influence of the delta ray production threshold on water-to-air stopping power ratio calculations for carbon ion beam radiotherapy. Physics in Medicine and Biology, 2013, 58, 145-158.	1.6	13
158	Analysis of inter- and intrafraction accuracy of a commercial thermoplastic mask system used for image-guided particle radiation therapy. Journal of Radiation Research, 2013, 54, i69-i76.	0.8	13
159	Temporal Lobe Reactions After Carbon Ion Radiation Therapy: Comparison of Relative Biological Effectivenessâ€"Weighted Tolerance Doses Predicted by Local Effect Models I and IV. International Journal of Radiation Oncology Biology Physics, 2014, 88, 1136-1141.	0.4	13
160	Cost-Effectiveness of Carbon Ion Radiation Therapy for Skull Base Chordoma Utilizing Long-Term (10-Year) Outcome Data. Anticancer Research, 2018, 38, 4853-4858.	0.5	13
161	Mapping the Relative Biological Effectiveness of Proton, Helium and Carbon Ions with High-Throughput Techniques. Cancers, 2020, 12, 3658.	1.7	13
162	Analysis of data on low energy Ï€N â†' Ï€Ï€N reaction I. Total cross sections. Nuclear Physics A, 1995, 592, 413-442.	0.6	12

#	Article	IF	Citations
163	Influence of setup errors on spinal cord dose and treatment plan quality for cervical spine tumours: a phantom study for photon IMRT and heavy charged particle radiotherapy. Physics in Medicine and Biology, 2003, 48, 3171-3189.	1.6	12
164	Antiproton therapy. Nuclear Instruments & Methods in Physics Research B, 2008, 266, 530-534.	0.6	12
165	Test of an amorphous silicon detector in medical proton beams. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 633, S259-S261.	0.7	12
166	Helium ion beam imaging for image guided ion radiotherapy. Radiation Oncology, 2018, 13, 109.	1.2	12
167	The history of ion beam therapy in Germany. Zeitschrift Fur Medizinische Physik, 2022, 32, 6-22.	0.6	12
168	Test of the nuclear interaction model in SHIELD-HIT and comparison to energy distributions from GEANT4. Physics in Medicine and Biology, 2009, 54, N509-N517.	1.6	11
169	A thin layer fiber-coupled luminescence dosimeter based on Al2O3:C. Radiation Measurements, 2011, 46, 1607-1609.	0.7	11
170	Registration procedure for spatial correlation of physical energy deposition of particle irradiation and cellular response utilizing cell-fluorescent ion track hybrid detectors. Physics in Medicine and Biology, 2016, 61, N441-N460.	1.6	11
171	Investigation of mixed ion fields in the forward direction for 220.5 MeV/u helium ion beams: comparison between water and PMMA targets. Physics in Medicine and Biology, 2017, 62, 8003-8024.	1.6	11
172	A Novel Method for Fragmentation Studies in Particle Therapy: Principles of Ion Identification. International Journal of Particle Therapy, 2017, 3, 439-449.	0.9	11
173	Treatment planning for light ions: How to take into account Relative Biological Effectivness (RBE). Strahlentherapie Und Onkologie, 1999, 175, 12-14.	1.0	10
174	GafchromicÂ® EBT films for ion dosimetry. Radiation Measurements, 2010, 45, 1268-1270.	0.7	10
175	The more important heavy charged particle radiotherapy of the future is more likely to be with heavy ions rather than protons. Medical Physics, 2013, 40, 090601.	1.6	10
176	STED microscopy visualizes energy deposition of single ions in a solid-state detector beyond diffraction limit. Physics in Medicine and Biology, 2017, 62, N180-N190.	1.6	10
177	Doseâ€“response curves for MRI-detected radiation-induced temporal lobe reactions in patients after proton and carbon ion therapy: Does the same RBE-weighted dose lead to the same biological effect?. Radiotherapy and Oncology, 2018, 128, 109-114.	0.3	10
178	State of the Art in Hadron Therapy. AIP Conference Proceedings, 2007, , .	0.3	9
179	Investigation of the dosimetric impact of a Ni-Ti fiducial marker in carbon ion and proton beams. Acta OncolÃ³gica, 2010, 49, 1160-1164.	0.8	9
180	Dynamic Target Definition: A novel approach for PTV definition in ion beam therapy. Radiotherapy and Oncology, 2013, 107, 227-233.	0.3	9

#	Article	IF	Citations
181	Ion range measurements using fluorescent nuclear track detectors. Radiation Measurements, 2013, 56, 342-346.	0.7	9
182	Distortion of the per-pixel signal in the Timepix detector observed in high energy carbon ion beams. Journal of Instrumentation, 2014, 9, P09006-P09006.	0.5	9
183	A method to increase the nominal range resolution of a stack of parallel-plate ionization chambers. Physics in Medicine and Biology, 2014, 59, 5501-5515.	1.6	9
184	Correlation of Particle Traversals with Clonogenic Survival Using Cell-Fluorescent Ion Track Hybrid Detector. Frontiers in Oncology, 2015, 5, 275.	1.3	9
185	Effective radiotherapeutic treatment intensification in patients with pancreatic cancer: higher doses alone, higher RBE or both?. Radiation Oncology, 2017, 12, 203.	1.2	9
186	Erste Schwerionenbestrahlung von Patienten in Europa: Medizinphysikalische Aspekte. Zeitschrift Fur Medizinische Physik, 1999, 9, 88-95.	0.6	8
187	Quality assurance at the heavy-ion therapy facility at GSI. Strahlentherapie Und Onkologie, 1999, 175, 36-38.	1.0	8
188	Response of pig lung to irradiation with accelerated 12 C-ions. Radiation and Environmental Biophysics, 1999, 38, 185-194.	0.6	8
189	Initial recombination in the track of heavy charged particles: Numerical solution for air filled ionization chambers. Acta OncolÃ³gica, 2012, 51, 368-375.	0.8	8
190	Experimental verification of ion range calculation in a treatment planning system using a flat-panel detector. Physics in Medicine and Biology, 2014, 59, 3737-3747.	1.6	8
191	Absorbed dose in ion beams: comparison of ionisation- and fluence-based measurements. Radiation Protection Dosimetry, 2014, 161, 387-392.	0.4	8
192	First experiences with the implementation of the European standard EN 62304 on medical device software for the quality assurance of a radiotherapy unit. Radiation Oncology, 2014, 9, 79.	1.2	8
193	Upgrading an Integrating Carbon-Ion Transmission Imaging System With Active Scanning Beam Delivery Toward Low Dose Ion Imaging. IEEE Transactions on Radiation and Plasma Medical Sciences, 2020, 4, 262-268.	2.7	8
194	2D range modulator for high-precision water calorimetry in scanned carbon-ion beams. Physics in Medicine and Biology, 2020, 65, 215003.	1.6	8
195	Water calorimetry-based k _Q factors for Farmer-type ionization chambers in the SOBP of a carbon-ion beam. Physics in Medicine and Biology, 2021, 66, 145012.	1.6	8
196	Assessment of secondary neutrons in particle therapy by Monte Carlo simulations. Physics in Medicine and Biology, 2022, 67, 015008.	1.6	8
197	Experience with carbon ion radiotherapy at GSI. Nuclear Instruments & Methods in Physics Research B, 2005, 241, 717-720.	0.6	7
198	Characterization of a flat-panel detector for ion beam spot measurements. Physics in Medicine and Biology, 2012, 57, 485-497.	1.6	7

#	Article	IF	Citations
199	A motorized solid-state phantom for patient-specific dose verification in ion beam radiotherapy. Physics in Medicine and Biology, 2015, 60, 7151-7163.	1.6	7
200	Visualization of air and metal inhomogeneities in phantoms irradiated by carbon ion beams using prompt secondary ions. Physica Medica, 2017, 38, 140-147.	0.4	7
201	Chiral symmetry and the near threshold pion-induced 2Ï€ production on the nucleon. Nuclear Physics A, 1993, 561, 557-581.	0.6	6
202	Extraction of total cross section data for theÏ€â^'pâ†'Ï€+Ï€â^'nreaction. Physical Review C, 1993, 47, R447-R450.	1.1	6
203	Treatment planning for the heavy-ion facility at GSI. Strahlentherapie Und Onkologie, 1999, 175, 15-17.	1.0	6
204	Methodology paper: a novel phantom setup for commissioning of scanned ion beam delivery and TPS. Radiation Oncology, 2019, 14, 77.	1.2	6
205	Investigation of single carbon ion fragmentation in water and PMMA for hadron therapy. Physics in Medicine and Biology, 2019, 64, 055018.	1.6	6
206	Analytical modeling of depth-dose degradation in heterogeneous lung tissue for intensity-modulated proton therapy planning. Physics and Imaging in Radiation Oncology, 2020, 14, 32-38.	1.2	6
207	Dosimetric Impact of Interfractional Variations for Post-prostatectomy Radiotherapy to the Prostatic Fossaâ€"Relevance for the Frequency of Position Verification Imaging and Treatment Adaptation. Frontiers in Oncology, 2019, 9, 1191.	1.3	5
208	Optimization of Carbon Ion Treatment Plans by Integrating Tissue Specific Î±/Î²-Values for Patients with Non-Resectable Pancreatic Cancer. PLoS ONE, 2016, 11, e0164473.	1.1	5
209	An abdominal phantom with anthropomorphic organ motion and multimodal imaging contrast for MR-guided radiotherapy. Physics in Medicine and Biology, 2022, 67, 045009.	1.6	5
210	High-resolution fluence verification for treatment plan specific QA in ion beam radiotherapy. Physics in Medicine and Biology, 2013, 58, 1725-1738.	1.6	4
211	Dosimetric Impact of the Positional Imaging Frequency for Hypofractionated Prostate Radiotherapy â€" A Voxel-by-Voxel Analysis. Frontiers in Oncology, 2020, 10, 564068.	1.3	4
212	Triple channel analysis of Gafchromic EBT3 irradiated with clinical carbon-ion beams. Physica Medica, 2021, 87, 123-130.	0.4	4
213	Direct determination of k _Q for Farmer-type ionization chambers in a clinical scanned carbon-ion beam using water calorimetry. Physics in Medicine and Biology, 2022, 67, 049401.	1.6	4
214	The application of amorphous track models to study cell survival in heavy ions beams. Radiation Protection Dosimetry, 2011, 143, 232-236.	0.4	3
215	Monitoring of ion beam energy by tracking of secondary ions: First measurements in a patient-like phantom. , 2012, , .		3
216	Heavy Ion Radiotherapy. , 2006, , 365-377.		3

#	Article	IF	Citations
217	What is the Clinically Relevant Relative Biologic Effectiveness? A Warning for Fractionated Treatments with High Linear Energy Transfer Radiation: In regard to DaÅŸu and Toma-DAÅŸu. (Int J Radiat) Tj ETQq1 1 0.784314 rgBT O 70, 1614.	0.4	2
218	Investigations on novel imaging techniques for ion beam therapy: Carbon ion radiography and tomography. , 2011, , .		2
219	Study of the capabilities of the Timepix detector for Ion Beam radiotherapy applications. , 2012, , .		2
220	Towards fragment distinction in therapeutic carbon ion beams: A novel experimental approach using the Timepix detector. , 2012, , .		2
221	Single track coincidence measurements of fluorescent and plastic nuclear track detectors in therapeutic carbon beams. Journal of Instrumentation, 2014, 9, P04013-P04013.	0.5	2
222	Tomographic imaging with carbon ion beams. , 2016, , .		2
223	Internal target volume margins for liver tumours treated with gated scanned carbon-ion radiotherapy. Biomedical Physics and Engineering Express, 2017, 3, 015029.	0.6	2
224	RBE-weighted doses in target volumes of chordoma and chondrosarcoma patients treated with carbon ion radiotherapy: Comparison of local effect models I and IV. Radiotherapy and Oncology, 2019, 141, 234-238.	0.3	2
225	Quality assurance method for monitoring of lateral pencil beam positions in scanned carbonâ€ion radiotherapy using tracking of secondary ions. Medical Physics, 2021, 48, 4411-4424.	1.6	2
226	Efficient uncertainty quantification for Monte Carlo dose calculations using importance (re-)weighting. Physics in Medicine and Biology, 2021, 66, .	1.6	2
227	Detecting perturbations of a radiation field inside a headâ€sized phantom exposed to therapeutic carbonâ€ion beams through chargedâ€fragment tracking. Medical Physics, 2022, 49, 1776-1792.	1.6	2
228	Experimental Comparison of Fiducial Markers Used in Proton Therapy: Study of Different Imaging Modalities and Proton Fluence Perturbations Measured With CMOS Pixel Sensors. Frontiers in Oncology, 2022, 12, 830080.	1.3	2
229	Intensity threshold variation method in the post-irradiation analysis of Fluorescent Nuclear Track Detectors for neutron dosimetry. Radiation Physics and Chemistry, 2022, 200, 110257.	1.4	2
230	Experimental heliumâ€beam radiography with a highâ€energy beam: Waterâ€equivalent thickness calibration and first imageâ€quality results. Medical Physics, 2022, 49, 5347-5362.	1.6	2
231	Comments to the Forum of M. Goitein. Zeitschrift Fur Medizinische Physik, 2004, 14, 200.	0.6	1
232	Clinical Implementation of Intensity Modulated Radiotherapy using Carbon Ions. International Journal of Radiation Oncology Biology Physics, 2008, 72, S592.	0.4	1
233	Clinical Validation of the Local Effect Model (LEM) in the Treatment Planning of Carbon Ion RT in Patients with Skull Base Tumors. International Journal of Radiation Oncology Biology Physics, 2008, 72, S229.	0.4	1
234	Liquid ionization chambers for LET determination. Radiation Measurements, 2010, 45, 1109-1111.	0.7	1

#	Article	IF	Citations
235	Two-dimensional silicon-based detectors for ion beam therapy. , 2012, , .		1
236	3D beam monitoring for ¹²C radiotherapy by tracking of secondary ions using the timepix detector. , 2012, , .		1
237	Dosimetric Characterization of Scanned Ion Beam QA and Patient Treatment Fields. International Journal of Radiation Oncology Biology Physics, 2012, 84, S833-S834.	0.4	1
238	Monte Carlo calculated CT numbers for improved heavy ion treatment planning. Nukleonika, 2014, 59, 15-23.	0.3	1
239	On the role of ion-based imaging methods in modern ion beam therapy. , 2014, , .		1
240	A novel method for assessment of nuclear interactions of therapeutic helium-ion beams using the Timepix detector. Radiotherapy and Oncology, 2016, 118, S45.	0.3	1
241	Beam characterization at NSRL for radiobiological experimentsâ€"phase 1. Journal of Instrumentation, 2020, 15, T10004-T10004.	0.5	1
242	Treatment Planning for Ion Beam Therapy. Biological and Medical Physics Series, 2012, , 503-525.	0.3	1
243	Radiation Therapy with Protons and Heavy Ions. , 2016, , 127-137.		1
244	Evaluation of Dosimetric Robustness of Carbon Ion Boost Therapy for Anal Carcinoma. International Journal of Particle Therapy, 2016, 3, 382-391.	0.9	1
245	SUâ€GGâ€Tâ€413: Comparison of Outâ€Ofâ€Field Neutron Equivalent Doses in Scanning Carbon and Proton Therapies for Cranial Fields. Medical Physics, 2010, 37, 3281-3281.	1.6	1
246	SU-GG-T-453: A Beam Angle Selection Algorithm for Particle Therapy. Medical Physics, 2010, 37, 3290-3290.	1.6	1
247	Light-Ion Radiation Therapy Planning. , 2014, , 487-504.		1
248	WEâ€EFâ€BRAâ€05: Experimental Design for Highâ€Throughput Inâ€Vitro RBE Measurements Using Protons, Helium and Carbon Ions. Medical Physics, 2015, 42, 3675-3675.	1.6	1
249	Biosensor for deconvolution of individual cell fate in response to ion beam irradiation. Cell Reports Methods, 2022, 2, 100169.	1.4	1
250	Introduction to medical physics aspects of Hadron therapy. Radiotherapy and Oncology, 2004, 73, S63.	0.3	0
251	1114. International Journal of Radiation Oncology Biology Physics, 2006, 66, S195-S196.	0.4	0
252	Simulation of Hounsfield Units for a Computed Tomography Scanner and Different Phantom Inserts. , 2007, , .		0

#	Article	IF	Citations
253	Verifying the WEPL Approximation for Several Tissue Substitutes - A Monte Carlo Study. International Journal of Radiation Oncology Biology Physics, 2008, 72, S669.	0.4	0
254	THE HEIDELBERG EXPERIENCE. Radiotherapy and Oncology, 2009, 92, S98.	0.3	0
255	Treatment Planning for Ion Beam Therapy. , 2010, , .		0
256	Radiotherapy With Protons And Ion Beams. , 2010, , .		0
257	Patient position verification in ion-beam therapy using ion-beam radiography and fiducial markers. Journal of Instrumentation, 2011, 6, C11008-C11008.	0.5	0
258	PERSPECTIVES OF THE PIXEL DETECTOR TIMEPIX FOR NEEDS OF ION BEAM THERAPY. Astroparticle, Particle, Space Physics, Radiation Interaction, Detectors and Medical Physics Applications, 2012, , 616-622.	0.1	0
259	Meeting the demands of highly precise Ion Beam Therapy - how a flat-panel detector can improve conformance tests. , 2012, , .		0
260	258 HYPOFRACTIONATED CARBON ION THERAPY DELIVERED WITH SCANNED ION BEAMS FOR PATIENTS WITH HEPATOCELLULAR CARCINOMA â€“ FEASIBILITY AND CLINICAL RESPONSE. Journal of Hepatology, 2013, 58, S110.	1.8	0
261	The Battle Between Amino Acid PET and Functional MRI: Precision of Tumor Delineation Examined by Glioma Progression Pattern After Radiation Therapy. International Journal of Radiation Oncology Biology Physics, 2014, 90, S290-S291.	0.4	0
262	Inter- and Intra-fractional Motion Robustness for Pancreatic Patients Treated With Scanned Carbon Ion Therapy. International Journal of Radiation Oncology Biology Physics, 2014, 90, S921.	0.4	0
263	SP-0219: Risk of normal tissue injury from protons and heavy ions. Radiotherapy and Oncology, 2015, 115, S110-S111.	0.3	0
264	PO-0861: Fluence verification for patient specific quality assurance in ion beam therapy. Use of an a-Si flat panel detector. Radiotherapy and Oncology, 2015, 115, S438.	0.3	0
265	EP-1373: Comparison of different detectors regarding the determination of beam width in scanned ion-beam therapy. Radiotherapy and Oncology, 2015, 115, S741.	0.3	0
266	Correlation of Particle Traversals with Clonogenic Survival Using Cell-Fluorescent Ion Track Hybrid Detector. Radiotherapy and Oncology, 2016, 118, S33-S34.	0.3	0
267	Range assignment of protons in 18-oxygenated dosimetry gel using MR-PET imaging. Physica Medica, 2016, 32, 317.	0.4	0
268	EP-1848: Dual-energy CT for range prediction in proton and ion therapy. Radiotherapy and Oncology, 2016, 119, S869-S870.	0.3	0
269	PV-0422: Direct determination of kQ in a clinical carbon ion beam using water calorimetry. Radiotherapy and Oncology, 2017, 123, S223.	0.3	0
270	EP-1464: Investigation on beam width tolerances for proton pencil beam scanning. Radiotherapy and Oncology, 2017, 123, S781-S782.	0.3	0

#	Article	IF	Citations
271	PO-0787: A compact and complete model for Bragg peak degradation in lung tissue. Radiotherapy and Oncology, 2017, 123, S417-S418.	0.3	0
272	SP-0219: EPTN WP2: dosimetry and quality assurance. Radiotherapy and Oncology, 2018, 127, S118.	0.3	0
273	PO-0824: Dose effects by interfractional variability of tumor and OAR on the example of prostate-Ca-patients. Radiotherapy and Oncology, 2018, 127, S430.	0.3	0
274	EP-1735: Pixelated semiconductor detectors for next generation imaging in ion beam radiotherapy. Radiotherapy and Oncology, 2018, 127, S928-S929.	0.3	0
275	Battle of the elements: readers' choice. Physics World, 2019, 32, 15-16.	0.0	0
276	Improved risk stratification via integration of radiomics and dosiomics features in patients with recurrent high-grade glioma undergoing carbon ion radiotherapy (CIRT).. Journal of Clinical Oncology, 2021, 39, 2043-2043.	0.8	0
277	TU-D-224A-04: How Much Better Are Carbon Beams. Medical Physics, 2006, 33, 2203-2203.	1.6	0
278	SU-GG-T-446: Minimizing Energy Changes in Particle Therapy Using Voronoi Partitions. Medical Physics, 2010, 37, 3289-3289.	1.6	0
279	MO-F-214-09: Ion Radiography: Measuring High Soft Tissue Contrast and WEPL with An Amorphous Silicon Detector. Medical Physics, 2011, 38, 3727-3727.	1.6	0
280	TU-E-BRB-10: Investigation of the Water-to-Air Stopping Power Ratio for Carbon Ion Beam Dosimetry Based on Experimental Data and FLUKA Simulation. Medical Physics, 2011, 38, 3768-3769.	1.6	0
281	Imaging and Tumor Localization for Ion Beam Therapy. Biological and Medical Physics Series, 2012, , 489-502.	0.3	0
282	SU-E-T-509: Validation of the Use of OSLD for Carbon Beam Remote Dosimetry. Medical Physics, 2014, 41, 344-344.	1.6	0
283	WE-AB-BRB-08: Progress Towards a 2D OSL Dosimetry System Using Al2O3:C Films. Medical Physics, 2015, 42, 3651-3651.	1.6	0
284	WE-H-BRA-06: Experimental Investigation of RBE for Lung Cancer Cell Lines as a Function of Dose and LET in Proton, Helium and Carbon Beams. Medical Physics, 2016, 43, 3843-3844.	1.6	0
285	Bestrahlungsverfahren. , 2018, , 525-577.		0
286	PO-1653: Dosimetric effects of interfractional variations in prostate cancer radiotherapy. Radiotherapy and Oncology, 2020, 152, S907.	0.3	0