

Christian BÄumer

List of Publications by Year in descending order

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79
papers

1,654
citations

471061

17
h-index

301761

39
g-index

80
all docs

80
docs citations

80
times ranked

1477
citing authors

#	ARTICLE	IF	CITATIONS
1	Experimental feasibility of multi-energy photon-counting K-edge imaging in pre-clinical computed tomography. <i>Physics in Medicine and Biology</i> , 2008, 53, 4031-4047.	1.6	704
2	Status of Direct Conversion Detectors for Medical Imaging With X-Rays. <i>IEEE Transactions on Nuclear Science</i> , 2009, 56, 1800-1809.	1.2	66
3	Inter-centre variability of CT-based stopping-power prediction in particle therapy: Survey-based evaluation. <i>Physics and Imaging in Radiation Oncology</i> , 2018, 6, 25-30.	1.2	53
4	Measuring the reaction with the focal-plane detection system of the BBS magnetic spectrometer at AGOR. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2002, 481, 253-261.	0.7	51
5		1.1	50
6	Evaluation of detectors for acquisition of pristine depth-dose curves in pencil beam scanning. <i>Journal of Applied Clinical Medical Physics</i> , 2015, 16, 151-163.	0.8	45
7	Gamow-Teller matrix elements from the $^{12}\text{C}(d,^2\text{He})$ and $^{24}\text{Mg}(d,^2\text{He})$ reactions at 170 MeV. <i>Physical Review C</i> , 2002, 65, .	1.1	44
8	Gamow-Teller Strengths in the $A=14$ Multiplet: A Challenge to the Shell Model. <i>Physical Review Letters</i> , 2006, 97, 062502.	2.9	40
9	Use of a novel two-dimensional ionization chamber array for pencil beam scanning proton therapy beam quality assurance. <i>Journal of Applied Clinical Medical Physics</i> , 2015, 16, 270-276.	0.8	38
10	Experimental validation of a 4D dose calculation routine for pencil beam scanning proton therapy. <i>Zeitschrift Fur Medizinische Physik</i> , 2018, 28, 121-133.	0.6	36
11	Deuteron elastic and inelastic scattering from ^{12}C , ^{24}Mg , and ^{58}Ni at 170 MeV. <i>Physical Review C</i> , 2001, 63, .	1.1	28
12	TOPAS/Geant4 configuration for ionization chamber calculations in proton beams. <i>Physics in Medicine and Biology</i> , 2018, 63, 115013.	1.6	28
13	Daily QA in proton therapy using a single commercially available detector. <i>Journal of Applied Clinical Medical Physics</i> , 2014, 15, 217-228.	0.8	27
14	Direct proton decay of the isoscalar giant dipole resonance. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2003, 576, 253-259.	1.5	26
15	Comprehensive clinical commissioning and validation of the RayStation treatment planning system for proton therapy with active scanning and passive treatment techniques. <i>Physica Medica</i> , 2017, 43, 15-24.	0.4	25
16	Collimated proton pencil-beam scanning for superficial targets: impact of the order of range shifter and aperture. <i>Physics in Medicine and Biology</i> , 2018, 63, 085020.	1.6	24
17	The $(t,^3\text{He})$ reaction at 43 MeV/nucleon on ^{48}Ca and ^{58}Ni : Results and microscopic interpretation. <i>Physical Review C</i> , 2006, 73, .	1.1	19
18	Measurement of the $^2\text{H}(d,^2\text{He})^2\text{n}$ reaction at $E_d=171\text{ÅMeV}$ and implications for the neutron-neutron scattering length. <i>Physical Review C</i> , 2005, 71, .	1.1	17

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19	Dosimetry intercomparison of four proton therapy institutions in Germany employing spot scanning. Zeitschrift Fur Medizinische Physik, 2017, 27, 80-85.	0.6	17
20	Testing quantum correlations with nuclear probes. Journal of Physics G: Nuclear and Particle Physics, 2004, 30, 481-489.	1.4	16
21	Single pencil beam benchmark of a module for Monte Carlo simulation of proton transport in the PENELOPE code. Medical Physics, 2021, 48, 456-476.	1.6	16
22	Lateral dose profile characterization in scanning particle therapy. Medical Physics, 2011, 38, 2904-2913.	1.6	15
23	Stereotactical fields applied in proton spot scanning mode with range shifter and collimating aperture. Physics in Medicine and Biology, 2019, 64, 155003.	1.6	15
24	Measurement of absolute activation cross sections from carbon and aluminum for proton therapy. Nuclear Instruments & Methods in Physics Research B, 2019, 440, 75-81.	0.6	15
25	DPM as a radiation transport engine for PRIMO. Radiation Oncology, 2018, 13, 256.	1.2	14
26	Motion effects in proton treatments of hepatocellular carcinoma—4D robustly optimised pencil beam scanning plans versus double scattering plans. Physics in Medicine and Biology, 2018, 63, 235006.	1.6	14
27	Validation of a Monte Carlo Framework for Out-of-Field Dose Calculations in Proton Therapy. Frontiers in Oncology, 0, 12, .	1.3	14
28	Spectral analysis of scattered radiation in CT. Proceedings of SPIE, 2008, , .	0.8	13
29	Enhancement of Proton Therapy Efficiency by Noble Metal Nanoparticles Is Driven by the Number and Chemical Activity of Surface Atoms. Small, 2022, 18, e2106383.	5.2	13
30	Clinical Implementation of Proton Therapy Using Pencil-Beam Scanning Delivery Combined With Static Apertures. Frontiers in Oncology, 2021, 11, 599018.	1.3	12
31	Polarized proton scattering on ^{58}Ni at small momentum transfer: A test of the microscopic optical model and effective interactions. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2005, 612, 165-172.	1.5	11
32	Testing an Energy-Dispersive Counting-Mode Detector With Hard X-Rays From a Synchrotron Source. IEEE Transactions on Nuclear Science, 2008, 55, 1785-1790.	1.2	11
33	Towards direct conversion detectors for medical imaging with X-rays. , 2008, , .		10
34	Polarization correlations of proton pairs as tests of hidden-variable theories. Physics Letters, Section A: General, Atomic and Solid State Physics, 2004, 323, 176-181.	0.9	9
35	Measurement of nuclear activation cross sections of protons on natural carbon for proton beam energies between 100 and 220 MeV. Nuclear Instruments & Methods in Physics Research B, 2019, 454, 50-55.	0.6	8
36	Proton Beam Therapy for Children With Neuroblastoma: Experiences From the Prospective KiProReg Registry. Frontiers in Oncology, 2020, 10, 617506.	1.3	8

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37	Design and Evaluation of a CMOS-Photosensor with In-Pixel Sigma-Delta Modulator for X-ray Computed Tomography. , 2006, , .		7
38	Feasibility of Proton Beam Therapy for Infants with Brain Tumours: Experiences from the Prospective KiProReg Registry Study. Clinical Oncology, 2021, 33, e295-e304.	0.6	7
39	Determination of surface dose in pencil beam scanning proton therapy. Medical Physics, 2020, 47, 2277-2288.	1.6	6
40	Impact of air gap, range shifter, and delivery technique on skin dose in proton therapy. Medical Physics, 2021, 48, 831-840.	1.6	6
41	Planning benchmark study for SBRT of liver metastases: Results of the DEGRO/DGMP working group stereotactic radiotherapy and radiosurgery. International Journal of Radiation Oncology Biology Physics, 2022, , .	0.4	6
42	Technical note: Impact of beam properties for uveal melanoma proton therapy – An in silico planning study. Medical Physics, 2022, 49, 3481-3488.	1.6	6
43	Performance of an ASD-8 based wire chamber readout system. IEEE Transactions on Nuclear Science, 2000, 47, 2741-2747.	1.2	5
44	Direct proton range verification using oxygen-18 enriched water as a contrast agent. Radiation Physics and Chemistry, 2021, 182, 109385.	1.4	5
45	Experiments and Monte Carlo simulations on multiple Coulomb scattering of protons. Medical Physics, 2021, 48, 3186-3199.	1.6	5
46	Mitigation of motion effects in pencil-beam scanning – Impact of repainting on 4D robustly optimized proton treatment plans for hepatocellular carcinoma. Zeitschrift Fur Medizinische Physik, 2022, 32, 63-73.	0.6	4
47	Technical Note: Investigating interplay effects in pencil beam scanning proton therapy with a 4D XCAT phantom within the RayStation treatment planning system. Medical Physics, 2021, 48, 1448-1455.	1.6	4
48	Towards using secondary gamma-rays from proton-induced radioactivation of titanium implants for off-line field verification. Nuclear Instruments & Methods in Physics Research B, 2021, 492, 56-63.	0.6	4
49	Delineation atlas of the Circle of Willis and the large intracranial arteries for evaluation of doses to neurovascular structures in pediatric brain tumor patients treated with radiation therapy. Acta Oncologica, 2021, 60, 1392-1398.	0.8	4
50	Evaluation of the activation of brass apertures in proton therapy using gamma-ray spectrometry and Monte Carlo simulations. Journal of Radiological Protection, 2020, 40, 848-860.	0.6	3
51	Experimental consolidation and absolute measurement of the $\sigma_{\text{nat}}^{\text{p,x}}(p,x)$ nuclear activation cross section at 100 MeV for particle therapy physics. European Physical Journal A, 2021, 57, 1.	1.0	3
52	The radiosensitizing effect of platinum nanoparticles in proton irradiations is not caused by an enhanced proton energy deposition at the macroscopic scale. Physics in Medicine and Biology, 2022, 67, 155023.	1.6	3
53	High resolution studies of low lying GT strength using the (d,2He) reaction and its impact on electron-capture rates in stellar environments. Nuclear Physics A, 2003, 719, C131-C134.	0.6	2
54	High resolution study of the Gamow – Teller strength distribution starting from the ground state of ^{14}N in the $\hat{I}^2_{\alpha^-}$ and $\hat{I}^2_{\alpha^+}$ directions. Journal of Physics G: Nuclear and Particle Physics, 2005, 31, S1931-S1934.	1.4	2

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55	4D robust optimization in pencil beam scanning proton therapy for hepatocellular carcinoma. Journal of Physics: Conference Series, 2019, 1154, 012021.	0.3	2
56	Proton Beam Range Verification with Secondary Radiation from Titanium Implants. , 2019, , .		2
57	Estimating the modulating effect of lung tissue in particle therapy using a clinical CT voxel histogram analysis. Physics in Medicine and Biology, 2021, 66, 185002.	1.6	2
58	Can a ToF-PET photon attenuation reconstruction test stopping-power estimations in proton therapy? A phantom study. Physics in Medicine and Biology, 2021, 66, 215010.	1.6	2
59	Spectral fiber dosimetry with beryllium oxide for quality assurance in hadron radiation therapy. Journal of Instrumentation, 2022, 17, P02009.	0.5	2
60	Adaptive Proton Therapy of Pediatric Head and Neck Cases Using MRI-Based Synthetic CTs: Initial Experience of the Prospective KiAPT Study. Cancers, 2022, 14, 2616.	1.7	2
61	Correction to "Status of Direct Conversion Detectors for Medical Imaging With X-Rays" [Aug 09 1800-1809]. IEEE Transactions on Nuclear Science, 2010, 57, 2995-2995.	1.2	1
62	Expected clinical benefits and challenges of particle therapy for paediatric tumours. Physica Medica, 2016, 32, 184-185.	0.4	1
63	PO-0969: Inter-center variability of CT-to-SPR conversion in particle therapy: Survey-based evaluation. Radiotherapy and Oncology, 2018, 127, S533-S534.	0.3	1
64	<i>In situ</i> spectroscopic ellipsometry as a pathway toward achieving VO ₂ stoichiometry for amorphous vanadium oxide with magnetron sputtering. AIP Advances, 2021, 11, .	0.6	1
65	PO-1786 Computed tomography of the head for therapy planning of pediatric patients – impact of scan-length. Radiotherapy and Oncology, 2021, 161, S1512.	0.3	1
66	Technical Note: Providing proton fields down to the few MeV level at clinical pencil beam scanning facilities for radiobiological experiments. Medical Physics, 2021, , .	1.6	1
67	Dosimetric feasibility of moderately hypofractionated/dose escalated radiation therapy for localised prostate cancer with intensity-modulated proton beam therapy using simultaneous integrated boost (SIB-IMPT) and impact of hydrogel prostate-rectum spacer. Radiation Oncology, 2022, 17, 64.	1.2	1
68	Design and test of an integrated Sigma-Delta analog-to-digital converter for X-ray Computed Tomography. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 576, 123-127.	0.7	0
69	EP-1404: Early results of proton beam therapy in sarcomas at the West German Proton Therapy Center Essen. Radiotherapy and Oncology, 2016, 119, S654-S655.	0.3	0
70	EP-2024: 4D evaluation of proton pencil beam scanning and double scattering for hepatocellular carcinoma. Radiotherapy and Oncology, 2018, 127, S1105-S1106.	0.3	0
71	PO-0904 Benchmarking of a module for Monte Carlo simulation of proton transport in the PENELOPE code. Radiotherapy and Oncology, 2019, 133, S479-S480.	0.3	0
72	EP-1974 Usage of computer generated 4D CTs for interplay effect studies in scanned proton therapy. Radiotherapy and Oncology, 2019, 133, S1077-S1078.	0.3	0

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73	PO-0908 Determination of surface dose in pencil beam scanning proton therapy. Radiotherapy and Oncology, 2019, 133, S483.	0.3	0
74	PO-1643 End-2-End testing of PBS proton therapy workflow with the PTW RUBY phantom. Radiotherapy and Oncology, 2021, 161, S1364.	0.3	0
75	PO-1437 Endocrine Late- Effects after Childhood and Adolescent Cancer - The Pan-European Registry HARMONIC. Radiotherapy and Oncology, 2021, 161, S1180.	0.3	0
76	PH-0379 Influence of tumor site on neurovascular structure doses in proton therapy of pediatric brain tumors. Radiotherapy and Oncology, 2021, 161, S278-S279.	0.3	0
77	THâ€Câ€BRBâ€09: Design and Initial Performance of a Large Crossâ€Section Multiâ€Element Ionization Chamber System for Water Equivalent Range Measurements of Pristine Proton Fields. Medical Physics, 2010, 37, 3454-3455.	1.6	0
78	WE-E-141-05: Ion Recombination for Ionization Chamber Dosimetry in a Pencil Beam Scanning Proton Therapy Beam. Medical Physics, 2013, 40, 492-492.	1.6	0
79	Preliminary results of the experimental cross sections of the long-lived ^{18}F emitters of interest in PET range verification in proton therapy at clinical energies. EPJ Web of Conferences, 2022, 261, 05007.	0.1	0