

Stephen J McMahon

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

77
papers

3,213
citations

29
h-index

56
g-index

84
ext. papers

3,940
ext. citations

3.5
avg, IF

5.56
L-index

#	Paper	IF	Citations
77	Development of a portable hypoxia chamber for ultra-high dose rate laser-driven proton radiobiology applications.. <i>Radiation Oncology</i> , 2022 , 17, 77	4.2	1
76	Dose estimation after a mixed field exposure: Radium-223 and intensity modulated radiotherapy.. <i>Nuclear Medicine and Biology</i> , 2021 , 106-107, 10-20	2.1	1
75	Patient-reported Health Status, Comorbidity Burden, and Prostate Cancer Treatment. <i>Urology</i> , 2021 , 149, 103-109	1.6	0
74	TOPAS a tool to evaluate the impact of cell geometry and radionuclide on alpha particle therapy. <i>Biomedical Physics and Engineering Express</i> , 2021 , 7,	1.5	1
73	Oxygen enhancement ratios of cancer cells after exposure to intensity modulated x-ray fields: DNA damage and cell survival. <i>Physics in Medicine and Biology</i> , 2021 , 66,	3.8	1
72	Impact of superparamagnetic iron oxide nanoparticles on in vitro and in vivo radiosensitisation of cancer cells. <i>Radiation Oncology</i> , 2021 , 16, 104	4.2	6
71	Theranostic AGuIX nanoparticles as radiosensitizer: A phase I, dose-escalation study in patients with multiple brain metastases (NANO-RAD trial). <i>Radiotherapy and Oncology</i> , 2021 , 160, 159-165	5.3	17
70	Proton RBE models: commonalities and differences. <i>Physics in Medicine and Biology</i> , 2021 , 66, 04NT02	3.8	3
69	Patient Reported vs Claims Based Measures of Health for Modeling Life Expectancy in Men with Prostate Cancer. <i>Journal of Urology</i> , 2021 , 205, 434-440	2.5	1
68	Cancer Cells Can Exhibit a Sparing FLASH Effect at Low Doses Under Normoxic Conditions. <i>Frontiers in Oncology</i> , 2021 , 11, 686142	5.3	6
67	A Brief Overview of the Preclinical and Clinical Radiobiology of Microbeam Radiotherapy. <i>Clinical Oncology</i> , 2021 , 33, 705-712	2.8	1
66	Characterization of a custom-made Am alpha-source for radiobiological studies. <i>Applied Radiation and Isotopes</i> , 2021 , 177, 109931	1.7	0
65	Roadmap for metal nanoparticles in radiation therapy: current status, translational challenges, and future directions. <i>Physics in Medicine and Biology</i> , 2020 , 65, 21RM02	3.8	45
64	Cellular Response to Proton Irradiation: A Simulation Study with TOPAS-nBio. <i>Radiation Research</i> , 2020 , 194, 9-21	3.1	9
63	Targeted Alpha Therapy: Current Clinical Applications. <i>Cancer Biotherapy and Radiopharmaceuticals</i> , 2020 , 35, 404-417	3.9	22
62	A Quantitative Analysis of the Role of Oxygen Tension in FLASH Radiation Therapy. <i>International Journal of Radiation Oncology Biology Physics</i> , 2020 , 107, 539-547	4	48
61	A parameter sensitivity study for simulating DNA damage after proton irradiation using TOPAS-nBio. <i>Physics in Medicine and Biology</i> , 2020 , 65, 085015	3.8	11

60	Effects of Gadolinium MRI Contrast Agents on DNA Damage and Cell Survival when Used in Combination with Radiation. <i>Radiation Research</i> , 2020 , 194, 298-309	3.1	2
59	Advances in modelling gold nanoparticle radiosensitization using new Geant4-DNA physics models. <i>Physics in Medicine and Biology</i> , 2020 , 65, 225017	3.8	6
58	Cardiac sub-volume targeting demonstrates regional radiosensitivity in the mouse heart. <i>Radiotherapy and Oncology</i> , 2020 , 152, 216-221	5.3	11
57	History and current perspectives on the biological effects of high-dose spatial fractionation and high dose-rate approaches: GRID, Microbeam & FLASH radiotherapy. <i>British Journal of Radiology</i> , 2020 , 93, 20200217	3.4	10
56	Mechanistic Modeling of Radium-223 Treatment of Bone Metastases. <i>International Journal of Radiation Oncology Biology Physics</i> , 2019 , 103, 1221-1230	4	7
55	Using the Proton Energy Spectrum and Microdosimetry to Model Proton Relative Biological Effectiveness. <i>International Journal of Radiation Oncology Biology Physics</i> , 2019 , 104, 316-324	4	15
54	Preclinical Evaluation of Dose-Volume Effects and Lung Toxicity Occurring In and Out-of-Field. <i>International Journal of Radiation Oncology Biology Physics</i> , 2019 , 103, 1231-1240	4	9
53	Mechanistic Modelling of Radiation Responses. <i>Cancers</i> , 2019 , 11,	6.6	29
52	Proton relative biological effectiveness (RBE): a multiscale problem. <i>British Journal of Radiology</i> , 2019 , 92, 20180004	3.4	7
51	Intensity Modulated Radiation Fields Induce Protective Effects and Reduce Importance of Dose-Rate Effects. <i>Scientific Reports</i> , 2019 , 9, 9483	4.9	8
50	Predicting Cancer Cell Survival Based on Measurable Cell Characteristics. <i>Radiation Research</i> , 2019 , 191, 532-544	3.1	2
49	AGuIX from bench to bedside-Transfer of an ultrasmall theranostic gadolinium-based nanoparticle to clinical medicine. <i>British Journal of Radiology</i> , 2019 , 92, 20180365	3.4	60
48	Microbeam evolution: from single cell irradiation to pre-clinical studies. <i>International Journal of Radiation Biology</i> , 2018 , 94, 708-718	2.9	15
47	Toward A variable RBE for proton beam therapy. <i>Radiotherapy and Oncology</i> , 2018 , 128, 68-75	5.3	50
46	The linear quadratic model: usage, interpretation and challenges. <i>Physics in Medicine and Biology</i> , 2018 , 64, 01TR01	3.8	92
45	LET-weighted doses effectively reduce biological variability in proton radiotherapy planning. <i>Physics in Medicine and Biology</i> , 2018 , 63, 225009	3.8	29
44	Investigation of dose-rate effects and cell-cycle distribution under protracted exposure to ionizing radiation for various dose-rates. <i>Scientific Reports</i> , 2018 , 8, 8287	4.9	25
43	An overview of current practice in external beam radiation oncology with consideration to potential benefits and challenges for nanotechnology. <i>Cancer Nanotechnology</i> , 2017 , 8, 3	7.9	7

42	Dependence of gold nanoparticle radiosensitization on cell geometry. <i>Nanoscale</i> , 2017 , 9, 5843-5853	7.7	41
41	Prostate cancer treated with brachytherapy; an exploratory study of dose-dependent biomarkers and quality of life. <i>Radiation Oncology</i> , 2017 , 12, 53	4.2	3
40	A mechanistic study of gold nanoparticle radiosensitisation using targeted microbeam irradiation. <i>Scientific Reports</i> , 2017 , 7, 44752	4.9	33
39	A novel CBCT-based method for derivation of CTV-PTV margins for prostate and pelvic lymph nodes treated with stereotactic ablative radiotherapy. <i>Radiation Oncology</i> , 2017 , 12, 124	4.2	5
38	Small field dosimetry for the small animal radiotherapy research platform (SARRP). <i>Radiation Oncology</i> , 2017 , 12, 204	4.2	20
37	A general mechanistic model enables predictions of the biological effectiveness of different qualities of radiation. <i>Scientific Reports</i> , 2017 , 7, 10790	4.9	32
36	Modelling responses to spatially fractionated radiation fields using preclinical image-guided radiotherapy. <i>British Journal of Radiology</i> , 2017 , 90, 20160485	3.4	11
35	The Impact of Hypoxia on Out-of-Field Cell Survival after Exposure to Modulated Radiation Fields. <i>Radiation Research</i> , 2017 , 188, 636-644	3.1	7
34	Dual effects of radiation bystander signaling in urothelial cancer: purinergic-activation of apoptosis attenuates survival of urothelial cancer and normal urothelial cells. <i>Oncotarget</i> , 2017 , 8, 97331-97343	3.3	4
33	Imaging and radiation effects of gold nanoparticles in tumour cells. <i>Scientific Reports</i> , 2016 , 6, 19442	4.9	98
32	Impact of fractionation on out-of-field survival and DNA damage responses following exposure to intensity modulated radiation fields. <i>Physics in Medicine and Biology</i> , 2016 , 61, 515-26	3.8	6
31	Optimising element choice for nanoparticle radiosensitisers. <i>Nanoscale</i> , 2016 , 8, 581-9	7.7	64
30	Roadmap to Clinical Use of Gold Nanoparticles for Radiation Sensitization. <i>International Journal of Radiation Oncology Biology Physics</i> , 2016 , 94, 189-205	4	132
29	Mechanistic Modelling of DNA Repair and Cellular Survival Following Radiation-Induced DNA Damage. <i>Scientific Reports</i> , 2016 , 6, 33290	4.9	50
28	Cellular signalling effects in high precision radiotherapy. <i>Physics in Medicine and Biology</i> , 2015 , 60, 4551-64	6.8	13
27	Conventional in vivo irradiation procedures are insufficient to accurately determine tumor responses to non-uniform radiation fields. <i>International Journal of Radiation Biology</i> , 2015 , 91, 257-61	2.9	5
26	Time and Cell Type Dependency of Survival Responses in Co-cultured Tumor and Fibroblast Cells after Exposure to Modulated Radiation Fields. <i>Radiation Research</i> , 2015 , 183, 656-64	3.1	7
25	Gold nanoparticle induced vasculature damage in radiotherapy: Comparing protons, megavoltage photons, and kilovoltage photons. <i>Medical Physics</i> , 2015 , 42, 5890-902	4.4	36

24	Biological modeling of gold nanoparticle enhanced radiotherapy for proton therapy. <i>Physics in Medicine and Biology</i> , 2015 , 60, 4149-68	3.8	85
23	Gold nanoparticle cellular uptake, toxicity and radiosensitisation in hypoxic conditions. <i>Radiotherapy and Oncology</i> , 2014 , 110, 342-7	5.3	60
22	Relative biological effectiveness variation along monoenergetic and modulated Bragg peaks of a 62-MeV therapeutic proton beam: a preclinical assessment. <i>International Journal of Radiation Oncology Biology Physics</i> , 2014 , 90, 27-35	4	136
21	Comparing gold nano-particle enhanced radiotherapy with protons, megavoltage photons and kilovoltage photons: a Monte Carlo simulation. <i>Physics in Medicine and Biology</i> , 2014 , 59, 7675-89	3.8	114
20	The role of mitochondrial function in gold nanoparticle mediated radiosensitisation. <i>Cancer Nanotechnology</i> , 2014 , 5, 5	7.9	67
19	Inverse planned constant dose rate volumetric modulated arc therapy (VMAT) as an efficient alternative to five-field intensity modulated radiation therapy (IMRT) for prostate. <i>Journal of Radiotherapy in Practice</i> , 2014 , 13, 68-78	0.4	6
18	Using Process Algebra to Model Radiation Induced Bystander Effects. <i>Lecture Notes in Computer Science</i> , 2014 , 196-210	0.9	1
17	Implications of intercellular signaling for radiation therapy: a theoretical dose-planning study. <i>International Journal of Radiation Oncology Biology Physics</i> , 2013 , 87, 1148-54	4	17
16	Investigating the influence of respiratory motion on the radiation induced bystander effect in modulated radiotherapy. <i>Physics in Medicine and Biology</i> , 2013 , 58, 8311-22	3.8	4
15	A kinetic-based model of radiation-induced intercellular signalling. <i>PLoS ONE</i> , 2013 , 8, e54526	3.7	46
14	Comment on implications on clinical scenario of gold nanoparticle radiosensitization in regard to photon energy, nanoparticle size, concentration and location. <i>Physics in Medicine and Biology</i> , 2012 , 57, 287-90; discussion 291-5	3.8	16
13	Physical basis and biological mechanisms of gold nanoparticle radiosensitization. <i>Nanoscale</i> , 2012 , 4, 4830-8	7.7	293
12	A computational model of cellular response to modulated radiation fields. <i>International Journal of Radiation Oncology Biology Physics</i> , 2012 , 84, 250-6	4	31
11	In-vitro investigation of out-of-field cell survival following the delivery of conformal, intensity-modulated radiation therapy (IMRT) and volumetric modulated arc therapy (VMAT) plans. <i>Physics in Medicine and Biology</i> , 2012 , 57, 6635-45	3.8	21
10	DNA damage responses following exposure to modulated radiation fields. <i>PLoS ONE</i> , 2012 , 7, e43326	3.7	38
9	Dose, dose-rate and field size effects on cell survival following exposure to non-uniform radiation fields. <i>Physics in Medicine and Biology</i> , 2012 , 57, 3197-206	3.8	35
8	Cell type-dependent uptake, localization, and cytotoxicity of 1.9 nm gold nanoparticles. <i>International Journal of Nanomedicine</i> , 2012 , 7, 2673-85	7.3	130
7	Relative biological effectiveness (RBE) and out-of-field cell survival responses to passive scattering and pencil beam scanning proton beam deliveries. <i>Physics in Medicine and Biology</i> , 2012 , 57, 6671-80	3.8	12

6	Energy Dependence of Gold Nanoparticle Radiosensitization in Plasmid DNA. <i>Journal of Physical Chemistry C</i> , 2011 , 115, 20160-20167	3.8	43
5	Nanodosimetric effects of gold nanoparticles in megavoltage radiation therapy. <i>Radiotherapy and Oncology</i> , 2011 , 100, 412-6	5.3	144
4	Cell-specific radiosensitization by gold nanoparticles at megavoltage radiation energies. <i>International Journal of Radiation Oncology Biology Physics</i> , 2011 , 79, 531-9	4	321
3	A robust curve-fitting procedure for the analysis of plasmid DNA strand break data from gel electrophoresis. <i>Radiation Research</i> , 2011 , 175, 797-805	3.1	20
2	Biological consequences of nanoscale energy deposition near irradiated heavy atom nanoparticles. <i>Scientific Reports</i> , 2011 , 1, 18	4.9	286
1	Radiotherapy in the presence of contrast agents: a general figure of merit and its application to gold nanoparticles. <i>Physics in Medicine and Biology</i> , 2008 , 53, 5635-51	3.8	159