

# Mario A Bernal

## List of Publications by Year in descending order

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55  
papers

2,559  
citations

304368

22  
h-index

189595

50  
g-index

56  
all docs

56  
docs citations

56  
times ranked

1185  
citing authors

#	ARTICLE	IF	CITATIONS
1	Comparison of GEANT4 very low energy cross section models with experimental data in water. <i>Medical Physics</i> , 2010, 37, 4692-4708.	1.6	392
2	Track structure modeling in liquid water: A review of the Geant4-DNA very low energy extension of the Geant4 Monte Carlo simulation toolkit. <i>Physica Medica</i> , 2015, 31, 861-874.	0.4	373
3	THE GEANT4-DNA PROJECT. <i>International Journal of Modeling, Simulation, and Scientific Computing</i> , 2010, 01, 157-178.	0.9	366
4	Geant4-DNA example applications for track structure simulations in liquid water: A report from the Geant4-DNA Project. <i>Medical Physics</i> , 2018, 45, e722.	1.6	265
5	Diffusion-controlled reactions modeling in Geant4-DNA. <i>Journal of Computational Physics</i> , 2014, 274, 841-882.	1.9	121
6	An investigation on the capabilities of the PENELOPE MC code in nanodosimetry. <i>Medical Physics</i> , 2009, 36, 620-625.	1.6	85
7	Geant4 Monte Carlo simulation of absorbed dose and radiolysis yields enhancement from a gold nanoparticle under MeV proton irradiation. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , 2016, 373, 126-139.	0.6	63
8	Evaluation of early radiation DNA damage in a fractal cell nucleus model using Geant4-DNA. <i>Physica Medica</i> , 2019, 62, 152-157.	0.4	54
9	Monte Carlo simulation of energy-deposit clustering for ions of the same LET in liquid water. <i>Physics in Medicine and Biology</i> , 2012, 57, 209-224.	1.6	51
10	Simulation of Auger electron emission from nanometer-size gold targets using the Geant4 Monte Carlo simulation toolkit. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , 2016, 372, 91-101.	0.6	50
11	A New Standard DNA Damage (SDD) Data Format. <i>Radiation Research</i> , 2018, 191, 76.	0.7	49
12	The invariance of the total direct DNA strand break yield. <i>Medical Physics</i> , 2011, 38, 4147-4153.	1.6	44
13	Dose point kernels in liquid water: An intra-comparison between GEANT4-DNA and a variety of Monte Carlo codes. <i>Applied Radiation and Isotopes</i> , 2014, 83, 137-141.	0.7	42
14	An atomistic geometrical model of the B-DNA configuration for DNA-radiation interaction simulations. <i>Computer Physics Communications</i> , 2013, 184, 2840-2847.	3.0	38
15	On the consistency of Monte Carlo track structure DNA damage simulations. <i>Medical Physics</i> , 2014, 41, 121708.	1.6	38
16	Simulating radial dose of ion tracks in liquid water simulated with Geant4-DNA: A comparative study. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , 2014, 333, 92-98.	0.6	38
17	Energy deposition in small-scale targets of liquid water using the very low energy electromagnetic physics processes of the Geant4 toolkit. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , 2013, 306, 158-164.	0.6	36
18	Accounting for radiation-induced indirect damage on DNA with the Geant 4-DNA code. <i>Physica Medica</i> , 2018, 51, 108-116.	0.4	33

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19	Inelastic-collision cross sections for the interactions of totally stripped H, He and C ions with liquid water. Nuclear Instruments & Methods in Physics Research B, 2007, 262, 1-6.	0.6	26
20	Comparison of Geant4-DNA simulation of S-values with other Monte Carlo codes. Nuclear Instruments & Methods in Physics Research B, 2014, 319, 87-94.	0.6	26
21	Combination of electromagnetic physics processes for microdosimetry in liquid water with the Geant4 Monte Carlo simulation toolkit. Nuclear Instruments & Methods in Physics Research B, 2012, 273, 95-97.	0.6	25
22	Assessment of Radio-Induced Damage in Endothelial Cells Irradiated with 40 kVp, 220 kVp, and 4 MV X-rays by Means of Micro and Nanodosimetric Calculations. International Journal of Molecular Sciences, 2019, 20, 6204.	1.8	23
23	A Feasibility Study of Fricke Dosimetry as an Absorbed Dose to Water Standard for <sup>192</sup> Ir HDR Sources. PLoS ONE, 2014, 9, e115155.	1.1	22
24	Modeling proton and alpha elastic scattering in liquid water in Geant4-DNA. Nuclear Instruments & Methods in Physics Research B, 2015, 343, 132-137.	0.6	22
25	Proximity effects in chromosome aberration induction by low-LET ionizing radiation. DNA Repair, 2017, 58, 38-46.	1.3	22
26	Carbon ion fragmentation effects on the nanometric level behind the Bragg peak depth. Physics in Medicine and Biology, 2014, 59, 7691-7702.	1.6	21
27	The HKS model for electron production in liquid water by light ions. Nuclear Instruments & Methods in Physics Research B, 2006, 251, 171-176.	0.6	18
28	Dosimetric evaluation of radionuclides for VCAM-1-targeted radionuclide therapy of early brain metastases. Theranostics, 2018, 8, 292-303.	4.6	17
29	Comparison of experimental proton-induced fluorescence spectra for a selection of thin high-Z samples with Geant4 Monte Carlo simulations. Nuclear Instruments & Methods in Physics Research B, 2015, 358, 210-222.	0.6	16
30	Proximity effects in chromosome aberration induction: Dependence on radiation quality, cell type and dose. DNA Repair, 2018, 64, 45-52.	1.3	16
31	The Influence of DNA Configuration on the Direct Strand Break Yield. Computational and Mathematical Methods in Medicine, 2015, 2015, 1-8.	0.7	14
32	A Geant4-DNA Evaluation of Radiation-Induced DNA Damage on a Human Fibroblast. Cancers, 2021, 13, 4940.	1.7	13
33	A comparison between Geant4 PIXE simulations and experimental data for standard reference samples. Nuclear Instruments & Methods in Physics Research B, 2013, 316, 1-5.	0.6	12
34	Calculation of lineal energies for water and DNA bases using the Rudd model cross sections integrated within the Geant4-DNA processes. Journal of Applied Physics, 2017, 122, .	1.1	12
35	Targeted alpha therapy with <sup>212</sup> Pb or <sup>225</sup> Ac: Change in RBE from daughter migration. Physica Medica, 2018, 51, 91-98.	0.4	12
36	Microdosimetric calculations for radionuclides emitting $\hat{1}^2$ and $\hat{1}\pm$ particles and Auger electrons. Applied Radiation and Isotopes, 2020, 166, 109302.	0.7	12

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37	Estimation of the RBE of mammography-quality beams using a combination of a Monte Carlo code with a B-DNA geometrical model. <i>Physics in Medicine and Biology</i> , 2011, 56, 7393-7403.	1.6	11
38	Proton transport in water and DNA components: A Geant4 Monte Carlo simulation. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , 2013, 306, 165-168.	0.6	11
39	Application of High-Z Gold Nanoparticles in Targeted Cancer Radiotherapyâ€”Pharmacokinetic Modeling, Monte Carlo Simulation and Radiobiological Effect Modeling. <i>Cancers</i> , 2021, 13, 5370.	1.7	9
40	Experimental and Monte Carlo-simulated spectra of standard mammography-quality beams. <i>British Journal of Radiology</i> , 2012, 85, 629-635.	1.0	8
41	TDDFT-Based Study on the Protonâ€™DNA Collision. <i>Journal of Physical Chemistry B</i> , 2017, 121, 7276-7283.	1.2	8
42	Computational approach to determine the relative biological effectiveness of fast neutrons using the Geant4-DNA toolkit and a DNA atomic model from the Protein Data Bank. <i>Physical Review E</i> , 2019, 99, 052404.	0.8	8
43	A simulation study of gold nanoparticles localisation effects on radiation enhancement at the mitochondrion scale. <i>Physica Medica</i> , 2019, 67, 148-154.	0.4	6
44	Evaluation of the mean energy deposit during the impact of charged particles on liquid water. <i>Physics in Medicine and Biology</i> , 2012, 57, 1745-1757.	1.6	5
45	Single electron ionization and electron capture cross sections for (C 6+ , H 2 O) interaction within the Classical Trajectory Monte Carlo (CTMC) approach. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , 2016, 366, 140-144.	0.6	5
46	Numerical insight into the Dual Radiation Action Theory. <i>Physica Medica</i> , 2017, 43, 120-126.	0.4	5
47	Determination of fast neutron RBE using a fully mechanistic computational model. <i>Applied Radiation and Isotopes</i> , 2020, 156, 108952.	0.7	4
48	Performance of a new atomistic geometrical model of the B-DNA configuration for DNA-radiation interaction simulations. <i>Journal of Physics: Conference Series</i> , 2014, 490, 012150.	0.3	3
49	Impact of photon cross section uncertainties on Monte Carlo-determined depth-dose distributions. <i>Physica Medica</i> , 2016, 32, 1065-1071.	0.4	2
50	Experimental cross sections for water ionization due to the impact of light ionsâ€™A review. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , 2022, 517, 6-15.	0.6	2
51	Multi-elemental characterization of organic liquid samples by use of a 13MeV <sup>6</sup> Li <sup>3+</sup> beam. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , 2009, 267, 3424-3430.	0.6	1
52	Single Ionization of Liquid Water by Protons, Alpha Particles, and Carbon Nuclei: Comparative Analysis of the Continuum Distorted Wave Methodologies and Empirical Models. <i>Advances in Quantum Chemistry</i> , 2013, 65, 203-229.	0.4	1
53	Quality Control of Pavements and Tarmacs Using ( <sup>137</sup> Cs) <sup>Î³</sup> Compton Scattering. , 2010, , .		0
54	SU-E-T-05: Comparing DNA Strand Break Yields for Photons under Different Irradiation Conditions with Geant4-DNA. <i>Medical Physics</i> , 2012, 39, 3703-3703.	1.6	0

#	ARTICLE	IF	CITATIONS
55	SU-E-T-306: Electronic Equilibrium in RBE of DSB Induction in Monte Carlo Simulations of Low Energy Photon and Electron Track Structures. Medical Physics, 2013, 40, 275-275.	1.6	0