

Mario A Bernal

List of Publications by Year in descending order

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Version: 2024-02-01

55
papers

2,559
citations

304743

22
h-index

189892

50
g-index

56
all docs

56
docs citations

56
times ranked

1185
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | Experimental cross sections for water ionization due to the impact of light ionsâ€”A review. Nuclear Instruments & Methods in Physics Research B, 2022, 517, 6-15. | 1.4 | 2 |
| 2 | A Geant4-DNA Evaluation of Radiation-Induced DNA Damage on a Human Fibroblast. Cancers, 2021, 13, 4940. | 3.7 | 13 |
| 3 | Application of High-Z Gold Nanoparticles in Targeted Cancer Radiotherapyâ€”Pharmacokinetic Modeling, Monte Carlo Simulation and Radiobiological Effect Modeling. Cancers, 2021, 13, 5370. | 3.7 | 9 |
| 4 | Determination of fast neutron RBE using a fully mechanistic computational model. Applied Radiation and Isotopes, 2020, 156, 108952. | 1.5 | 4 |
| 5 | Microdosimetric calculations for radionuclides emitting $\hat{1}^2$ and $\hat{1}\pm$ particles and Auger electrons. Applied Radiation and Isotopes, 2020, 166, 109302. | 1.5 | 12 |
| 6 | A simulation study of gold nanoparticles localisation effects on radiation enhancement at the mitochondrion scale. Physica Medica, 2019, 67, 148-154. | 0.7 | 6 |
| 7 | 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. Physical Review E, 2019, 99, 052404. | 2.1 | 8 |
| 8 | Evaluation of early radiation DNA damage in a fractal cell nucleus model using Geant4-DNA. Physica Medica, 2019, 62, 152-157. | 0.7 | 54 |
| 9 | 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. | 4.1 | 23 |
| 10 | Proximity effects in chromosome aberration induction: Dependence on radiation quality, cell type and dose. DNA Repair, 2018, 64, 45-52. | 2.8 | 16 |
| 11 | A New Standard DNA Damage (SDD) Data Format. Radiation Research, 2018, 191, 76. | 1.5 | 49 |
| 12 | Targeted alpha therapy with ^{212}Pb or ^{225}Ac : Change in RBE from daughter migration. Physica Medica, 2018, 51, 91-98. | 0.7 | 12 |
| 13 | Dosimetric evaluation of radionuclides for VCAM-1-targeted radionuclide therapy of early brain metastases. Theranostics, 2018, 8, 292-303. | 10.0 | 17 |
| 14 | Geant4â€”DNA example applications for track structure simulations in liquid water: A report from the Geant4â€”DNA Project. Medical Physics, 2018, 45, e722. | 3.0 | 265 |
| 15 | Accounting for radiation-induced indirect damage on DNA with the Geant 4-DNA code. Physica Medica, 2018, 51, 108-116. | 0.7 | 33 |
| 16 | Proximity effects in chromosome aberration induction by low-LET ionizing radiation. DNA Repair, 2017, 58, 38-46. | 2.8 | 22 |
| 17 | Numerical insight into the Dual Radiation Action Theory. Physica Medica, 2017, 43, 120-126. | 0.7 | 5 |
| 18 | TDDFT-Based Study on the Protonâ€”DNA Collision. Journal of Physical Chemistry B, 2017, 121, 7276-7283. | 2.6 | 8 |

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|----|---|-----|-----------|
| 19 | Calculation of lineal energies for water and DNA bases using the Rudd model cross sections integrated within the Geant4-DNA processes. <i>Journal of Applied Physics</i> , 2017, 122, . | 2.5 | 12 |
| 20 | Simulation of Auger electron emission from nanometer-size gold targets using the Geant4 Monte Carlo simulation toolkit. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2016, 372, 91-101. | 1.4 | 50 |
| 21 | Impact of photon cross section uncertainties on Monte Carlo-determined depth-dose distributions. <i>Physica Medica</i> , 2016, 32, 1065-1071. | 0.7 | 2 |
| 22 | 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 & Methods in Physics Research B</i> , 2016, 366, 140-144. | 1.4 | 5 |
| 23 | Geant4 Monte Carlo simulation of absorbed dose and radiolysis yields enhancement from a gold nanoparticle under MeV proton irradiation. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2016, 373, 126-139. | 1.4 | 63 |
| 24 | The Influence of DNA Configuration on the Direct Strand Break Yield. <i>Computational and Mathematical Methods in Medicine</i> , 2015, 2015, 1-8. | 1.3 | 14 |
| 25 | 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. | 0.7 | 373 |
| 26 | Comparison of experimental proton-induced fluorescence spectra for a selection of thin high-Z samples with Geant4 Monte Carlo simulations. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2015, 358, 210-222. | 1.4 | 16 |
| 27 | Modeling proton and alpha elastic scattering in liquid water in Geant4-DNA. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2015, 343, 132-137. | 1.4 | 22 |
| 28 | A Feasibility Study of Fricke Dosimetry as an Absorbed Dose to Water Standard for 192Ir HDR Sources. <i>PLoS ONE</i> , 2014, 9, e115155. | 2.5 | 22 |
| 29 | On the consistency of Monte Carlo track structure DNA damage simulations. <i>Medical Physics</i> , 2014, 41, 121708. | 3.0 | 38 |
| 30 | Carbon ion fragmentation effects on the nanometric level behind the Bragg peak depth. <i>Physics in Medicine and Biology</i> , 2014, 59, 7691-7702. | 3.0 | 21 |
| 31 | 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. | 1.5 | 42 |
| 32 | 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. | 0.4 | 3 |
| 33 | Comparison of Geant4-DNA simulation of S-values with other Monte Carlo codes. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2014, 319, 87-94. | 1.4 | 26 |
| 34 | Diffusion-controlled reactions modeling in Geant4-DNA. <i>Journal of Computational Physics</i> , 2014, 274, 841-882. | 3.8 | 121 |
| 35 | Simulating radial dose of ion tracks in liquid water simulated with Geant4-DNA: A comparative study. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2014, 333, 92-98. | 1.4 | 38 |
| 36 | A comparison between Geant4 PIXE simulations and experimental data for standard reference samples. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2013, 316, 1-5. | 1.4 | 12 |

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|----|--|-----|-----------|
| 37 | An atomistic geometrical model of the B-DNA configuration for DNA-radiation interaction simulations. <i>Computer Physics Communications</i> , 2013, 184, 2840-2847. | 7.5 | 38 |
| 38 | 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. | 0.8 | 1 |
| 39 | Proton transport in water and DNA components: A Geant4 Monte Carlo simulation. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2013, 306, 165-168. | 1.4 | 11 |
| 40 | Energy deposition in small-scale targets of liquid water using the very low energy electromagnetic physics processes of the Geant4 toolkit. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2013, 306, 158-164. | 1.4 | 36 |
| 41 | SU-E-T-306: Electronic Equilibrium in RBE of DSB Induction in Monte Carlo Simulations of Low Energy Photon and Electron Track Structures. <i>Medical Physics</i> , 2013, 40, 275-275. | 3.0 | 0 |
| 42 | Experimental and Monte Carlo-simulated spectra of standard mammography-quality beams. <i>British Journal of Radiology</i> , 2012, 85, 629-635. | 2.2 | 8 |
| 43 | 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. | 3.0 | 51 |
| 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. | 3.0 | 5 |
| 45 | Combination of electromagnetic physics processes for microdosimetry in liquid water with the Geant4 Monte Carlo simulation toolkit. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2012, 273, 95-97. | 1.4 | 25 |
| 46 | 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. | 3.0 | 0 |
| 47 | The invariance of the total direct DNA strand break yield. <i>Medical Physics</i> , 2011, 38, 4147-4153. | 3.0 | 44 |
| 48 | 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. | 3.0 | 11 |
| 49 | Quality Control of Pavements and Tarmacs Using (¹³⁷ Cs) [†] 3 Compton Scattering. , 2010, , . | | 0 |
| 50 | THE GEANT4-DNA PROJECT. <i>International Journal of Modeling, Simulation, and Scientific Computing</i> , 2010, 01, 157-178. | 1.4 | 366 |
| 51 | Comparison of GEANT4 very low energy cross section models with experimental data in water. <i>Medical Physics</i> , 2010, 37, 4692-4708. | 3.0 | 392 |
| 52 | Multi-elemental characterization of organic liquid samples by use of a 13MeV ⁶ Li ³⁺ beam. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2009, 267, 3424-3430. | 1.4 | 1 |
| 53 | An investigation on the capabilities of the PENELOPE MC code in nanodosimetry. <i>Medical Physics</i> , 2009, 36, 620-625. | 3.0 | 85 |
| 54 | Inelastic-collision cross sections for the interactions of totally stripped H, He and C ions with liquid water. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2007, 262, 1-6. | 1.4 | 26 |

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|----|---|-----|-----------|
| 55 | The HKS model for electron production in liquid water by light ions. Nuclear Instruments & Methods in Physics Research B, 2006, 251, 171-176. | 1.4 | 18 |