Carmen Villagrasa

List of Publications by Year
in descending order

38 papers	2,394 citations	331259 21 h-index	329751 37 g-index
39 all docs	39 docs citations	39 times ranked	1075 citing authors

#	Article	IF	Citations
1	Comparison of <scp>GEANT4</scp> very low energy cross section models with experimental data in water. Medical Physics, 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. Physica Medica, 2015, 31, 861-874.	0.4	373
3	THE GEANT4-DNA PROJECT. International Journal of Modeling, Simulation, and Scientific Computing, 2010, 01, 157-178.	0.9	366
4	Geant4â€DNA example applications for track structure simulations in liquid water: A report from the Geant4â€DNA Project. Medical Physics, 2018, 45, e722.	1.6	265
5	Simulation of early DNA damage after the irradiation of a fibroblast cell nucleus using Geant4-DNA. Scientific Reports, 2017, 7, 11923.	1.6	103
6	Modeling Radiation Chemistry in the Geant4 Toolkit. Progress in Nuclear Science and Technology, 2011, 2, 503-508.	0.3	91
7	Stopping power and ranges of electrons, protons and alpha particles in liquid water using the Geant4-DNA package. Nuclear Instruments & Methods in Physics Research B, 2011, 269, 2307-2311.	0.6	88
8	Molecular scale track structure simulations in liquid water using the Geant4-DNA Monte-Carlo processes. Applied Radiation and Isotopes, 2011, 69, 220-226.	0.7	71
9	An electron-impact cross section data set (10 eVâ€“1 keV) of DNA constituents based on consistent experimental data: A requisite for Monte Carlo simulations. Radiation Physics and Chemistry, 2017, 130, 459-479.	1.4	54
10	Evaluation of early radiation DNA damage in a fractal cell nucleus model using Geant4-DNA. Physica Medica, 2019, 62, 152-157.	0.4	54
11	A New Standard DNA Damage (SDD) Data Format. Radiation Research, 2018, 191, 76.	0.7	49
12	Influence of the DNA density on the number of clustered damages created by protons of different energies. Nuclear Instruments & Methods in Physics Research B, 2013, 298, 47-54.	0.6	43
13	Review of the Geant4-DNA Simulation Toolkit for Radiobiological Applications at the Cellular and DNA Level. Cancers, 2022, 14, 35.	1.7	43
14	Intercomparison of dose enhancement ratio and secondary electron spectra for gold nanoparticles irradiated by X-rays calculated using multiple Monte Carlo simulation codes. Physica Medica, 2020, 69, 147-163.	0.4	42
15	Physical models implemented in the GEANT4-DNA extension of the GEANT-4 toolkit for calculating initial radiation damage at the molecular level. Radiation Protection Dosimetry, 2011, 143, 214-218.	0.4	39
16	Geant4-DNA simulations using complex DNA geometries generated by the DnaFabric tool. Computer Physics Communications, 2016, 204, 159-169.	3.0	38
17	Influence of chromatin compaction on simulated early radiationâ€induced <scp>DNA</scp> damage using Geant4â€<scp>DNA</scp>. Medical Physics, 2019, 46, 1501-1511.	1.6	38
18	Independent reaction times method in Geant4â€DNA: Implementation and performance. Medical Physics, 2020, 47, 5919-5930.	1.6	27

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19	Determining dose enhancement factors of high-Z nanoparticles from simulations where lateral secondary particle disequilibrium exists. Physics in Medicine and Biology, 2019, 64, 155016.	1.6	25
20	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
21	ASSESSING THE CONTRIBUTION OF CROSS-SECTIONS TO THE UNCERTAINTY OF MONTE CARLO CALCULATIONS IN MICRO- AND NANODOSIMETRY. Radiation Protection Dosimetry, 2019, 183, 11-16.	0.4	23
22	Intercomparison of Monte Carlo calculated dose enhancement ratios for gold nanoparticles irradiated by X-rays: Assessing the uncertainty and correct methodology for extended beams. Physica Medica, 2021, 84, 241-253.	0.4	20
23	TOPAS-nBio validation for simulating water radiolysis and DNA damage under low-LET irradiation. Physics in Medicine and Biology, 2021, 66, 175026.	1.6	16
24	Influence of the geometrical detail in the description of DNA and the scoring method of ionization clustering on nanodosimetric parameters of track structure: a Monte Carlo study using Geant4-DNA. Physics in Medicine and Biology, 2015, 60, 8583-8599.	1.6	14
25	A Geant4-DNA Evaluation of Radiation-Induced DNA Damage on a Human Fibroblast. Cancers, 2021, 13, 4940.	1.7	13
26	Influence of chromatin condensation on the number of direct DSB damages induced by ions studied using a Monte Carlo code. Radiation Protection Dosimetry, 2014, 161, 469-473.	0.4	10
27	Assessment of DNA damage with an adapted independent reaction time approach implemented in Geant4â€DNA for the simulation of diffusionâ€controlled reactions between radioâ€induced reactive species and a chromatin fiber. Medical Physics, 2021, 48, 890-901.	1.6	10
28	Influence of the chromatin density on the number of direct clustered damages calculated for proton and alpha irradiations using a Monte Carlo code. Progress in Nuclear Science and Technology, 2014, 4, 449-453.	0.3	10
29	Quality assurance for the use of computational methods in dosimetry: activities of EURADOS Working Group 6 â€˜Computational Dosimetryâ€™. Journal of Radiological Protection, 2021, 41, 46-58.	0.6	8
30	SIMULATION OF EARLY RADIATION-INDUCED DNA DAMAGE ON DIFFERENT TYPES OF CELL NUCLEI. Radiation Protection Dosimetry, 2019, 183, 26-31.	0.4	7
31	Consistency checks of results from a Monte Carlo code intercomparison for emitted electron spectra and energy deposition around a single gold nanoparticle irradiated by X-rays. Radiation Measurements, 2021, 147, 106637.	0.7	7
32	Nanodosimetric Calculations of Radiation-Induced DNA Damage in a New Nucleus Geometrical Model Based on the Isochore Theory. International Journal of Molecular Sciences, 2022, 23, 3770.	1.8	7
33	RBE-LET relationship for proton and alpha irradiations studied with a nanodosimetric approach. Radiation Protection Dosimetry, 2014, 161, 449-453.	0.4	5
34	Intercomparison of micro- and nanodosimetry Monte Carlo simulations: An approach to assess the influence of different cross-sections for low-energy electrons on the dispersion of results. Radiation Measurements, 2022, 150, 106675.	0.7	5
35	Modeling early radiation DNA damage occurring during [¹⁷⁷Lu]Lu-DOTA-[Tyr³]octreotate radionuclide therapy. Journal of Nuclear Medicine, 2021, , jnumed.121.262610.	2.8	2
36	Lessons learnt from the recent EURADOS intercomparisons in computational dosimetry. Radiation Measurements, 2022, 156, 106822.	0.7	2

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37	Anthropomorphic phantom for effective dose measurements: Feasibility numerical study and presentation of the detector development. Radiation Measurements, 2008, 43, 590-593.	0.7	0
38	Effective dose measurement at workplaces within an instrumented anthropomorphic phantom. Radiation Protection Dosimetry, 2011, 144, 640-644.	0.4	0