JosÃ© M FernÃ¡ndez-Varea

List of Publications by Year
in descending order

98 papers	3,653 citations	218677 26 h-index	133252 59 g-index
99 all docs	99 docs citations	99 times ranked	2399 citing authors

#	Article	IF	Citations
1	A comprehensive Monte Carlo study of CT dose metrics proposed by the AAPM Reports 111 and 200. Medical Physics, 2022, 49, 201-218.	3.0	7
2	Experimental and theoretical <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>L</mml:mi></mml:math> -subshell ionization cross sectionsÂfor <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mrow /><mml:mn>83</mml:mn></mml:msub><mml:mi>Bi</mml:mi></mml:mrow></mml:math> by electron impact from the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>	2.5	3
3	Impact of the I-value of diamond on the energy deposition in different beam qualities. Physics in Medicine and Biology, 2021, 66, .	3.0	2
4	Impact of photoelectric cross section data on systematic uncertainties for Monte Carlo breast dosimetry in mammography. Physics in Medicine and Biology, 2021, 66, 115015.	3.0	2
5	Electronic stopping power of diamond for electrons and positrons. Physics in Medicine and Biology, 2021, 66, 165003.	3.0	3
6	Intrinsic efficiency of semiconductor spectrometers for divergent photon beams. Nuclear Instruments & Methods in Physics Research B, 2020, 477, 39-42.	1.4	1
7	Calculation of secondary electron bremsstrahlung in the binary encounter approximation using Diracâ€"Hartreeâ€"Fockâ€"Slater velocity distributions. Nuclear Instruments & Methods in Physics Research B, 2020, 478, 70-79.	1.4	0
8	On the relativistic impulse approximation for the calculation of Compton scattering cross sections and photon interaction coefficients used in kV dosimetry. Physics in Medicine and Biology, 2020, 65, 125010.	3.0	7
9	Experimental and theoretical cross sections for <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>K</mml:mi></mml:math> -shell ionization of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mrow /><mml:mn>52</mml:mn></mml:msub><mml:mi>Te</mml:mi></mml:mrow></mml:math> , <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mrow /><mml:mn>	2.5	7
10	L-shell X-ray production cross-sections for Mo by proton impact. Journal of Analytical Atomic Spectrometry, 2019, 34, 214-221.	3.0	5
11	radial: A Fortran subroutine package for the solution of the radial SchrÃ¶dinger and Dirac wave equations. Computer Physics Communications, 2019, 240, 165-177.	7.5	36
12	Atomic alignment of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mrow /><mml:mn>73</mml:mn></mml:msub><mml:mi>Ta</mml:mi></mml:mrow><mml:mo>,</mml:mo><mml:mo>Â</mml:mo><mml:mrow /><mml:mn>74</mml:mn></mml:msub><mml:mi mathvariant="normal">W</mml:mi></mml:mrow></mml:math> , and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mrow /><mml:mn>	2.5	10
13	Ionization cross sections of the Au L subshells by electron impact from the L₃threshold to 100 keV. Journal of Physics B: Atomic, Molecular and Optical Physics, 2018, 51, 025201.	1.5	7
14	Electronâ€"atom bremsstrahlung cross sections in the 20â€"100 keV energy region: absolute measurements for $6leqslant Zleqslant 79$ and comparison with theoretical databases. Journal of Physics B: Atomic, Molecular and Optical Physics, 2018, 51, 225003.	1.5	10
15	RBED cross sections for the ionization of atomic inner shells by electron-impact. Journal of Physics B: Atomic, Molecular and Optical Physics, 2018, 51, 145201.	1.5	2
16	Absorbed dose evaluation of Auger electron-emitting radionuclides: impact of input decay spectra on dose point kernels and <i>S</i>-values. Physics in Medicine and Biology, 2017, 62, 2239-2253.	3.0	24
17	Abstract ID: 165 Assessment of RBED electron-impact ionization cross sections for Monte Carlo electron transport. Physica Medica, 2017, 42, 35.	0.7	0
18	Full-energy peak efficiency of SiÂdrift and Si(Li) detectors for photons with energies above the SiÂK binding energy. X-Ray Spectrometry, 2017, 46, 34-43.	1.4	10

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19	Measurement of doubly differential electron bremsstrahlung cross sections at the end point (tip) for C, Al, Te, Ta and Au. Journal of Physics B: Atomic, Molecular and Optical Physics, 2017, 50, 155003.	1.5	2
20	Determination of LaBr 3 (Ce) internal background using a HPGe detector and Monte Carlo simulations. Applied Radiation and Isotopes, 2016, 109, 512-517.	1.5	14
21	Analytical response function for planar Ge detectors. Radiation Physics and Chemistry, 2016, 121, 23-34.	2.8	4
22	Ag K-shell ionization by electron impact: New cross-section measurements between 50 and 100keV and review of previous experimental data. Radiation Physics and Chemistry, 2016, 119, 14-23.	2.8	8
23	Preliminary measurements of the Bremsstrahlung doubly differential cross section for electrons between 20 and 100 keV in Au. Journal of Physics: Conference Series, 2015, 635, 052084.	0.4	0
24	Dynamic screening of an ion in a degenerate electron gas within the second-order Born approximation. Nuclear Instruments & Methods in Physics Research B, 2015, 354, 167-171.	1.4	8
25	Monte Carlo Evaluation of Auger Electronâ€“Emitting Theranostic Radionuclides. Journal of Nuclear Medicine, 2015, 56, 1441-1446.	5.0	61
26	PET imaging of DNA damage using 89Zr-labelled anti-Î³H2AX-TAT immunoconjugates. European Journal of Nuclear Medicine and Molecular Imaging, 2015, 42, 1707-1717.	6.4	24
27	Ionization cross sections of the L subshells of Au by 50 to 100 keV electron impact. Journal of Physics B: Atomic, Molecular and Optical Physics, 2015, 48, 175201.	1.5	17
28	A new parallel-plate graphite ionization chamber as a 60Co gamma radiation reference instrument. Radiation Physics and Chemistry, 2014, 95, 106-108.	2.8	9
29	Cross sections of K-shell ionization by electron impact, measured from threshold to 100 keV, for Au and Bi. Journal of Physics B: Atomic, Molecular and Optical Physics, 2014, 47, 155201.	1.5	13
30	Stopping cross sections of TiO2 for H and He ions. European Physical Journal D, 2014, 68, 1.	1.3	10
31	Dosimetric application of a special pencil ionization chamber in radiotherapy X-ray beams. Radiation Physics and Chemistry, 2014, 95, 98-100.	2.8	0
32	Analytical formula for the stopping power of low-energy ions in a free-electron gas. Radiation Physics and Chemistry, 2014, 96, 88-91.	2.8	14
33	Efficiency calibration of x-ray HPGe detectors for photons with energies above the Ge K binding energy. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2013, 729, 371-380.	1.6	14
34	Application of a Pencil Ionization Chamber (0.34 cm^{3} Volume) for ^{60}Co Beams: Experimental and Monte Carlo Results. IEEE Transactions on Nuclear Science, 2013, 60, 746-750.	2.0	8
35	Evaluation and Simulation of a New Ionization Chamber Design for use in Computed Tomography Beams. IEEE Transactions on Nuclear Science, 2013, 60, 768-773.	2.0	15
36	Second-order Born approximation for the scattering phase shifts: Application to the Friedel sum rule. Nuclear Instruments & Methods in Physics Research B, 2013, 311, 121-130.	1.4	3

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37	Track structure of protons and other light ions in liquid water: Applications of the LIonTrack code at the nanometer scale. Medical Physics, 2013, 40, 064101.	3.0	26
38	Limitations (and merits) of PENELOPE as a track-structure code. International Journal of Radiation Biology, 2012, 88, 66-70.	1.8	52
39	A Monte Carlo program for the analysis of low-energy electron tracks in liquid water. Physics in Medicine and Biology, 2011, 56, 1985-2003.	3.0	28
40	First Experiments with the IFUSP Microtron Injector. AIP Conference Proceedings, 2011, , .	0.4	5
41	Monte Carlo Simulation of Pileup Effects in the Electron-Positron Annihilation Peak. , 2011, , .		6
42	LÎ±,LÎ², andLÎ³x-ray production cross sections of Hf, Ta, W, Re, Os, Au, Pb, and Bi by electron impact: Comparison of distorted-wave calculations with experiment. Physical Review A, 2011, 83, .	2.5	12
43	Triple- and quadruple-escape peaks in HPGe detectors: Experimental observation and Monte Carlo simulation. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2010, 615, 285-294.	1.6	3
44	Monte Carlo simulation of correction factors for IAEA TLD holders. Physics in Medicine and Biology, 2010, 55, N161-N166.	3.0	9
45	Monte Carlo dosimetry for forthcoming clinical trials in x-ray microbeam radiation therapy. Physics in Medicine and Biology, 2010, 55, 4375-4388.	3.0	46
46	Observation of double electron-positron pair production by<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>Î³</mml:mi></mml:mrow></mml:math>rays reexamined. Physical Review C, 2009, 79, .	2.9	1
47	Overview of physical interaction models for photon and electron transport used in Monte Carlo codes. Metrologia, 2009, 46, S112-S138.	1.2	160
48	<i>LÎ±, LÎ²</i>, and<i>L</i>Î³ x-ray production cross sections for heavy elements by electron impact. Journal of Physics: Conference Series, 2009, 194, 042001.	0.4	0
49	Optimization of a tissue-equivalent CVD-diamond dosimeter for radiotherapy using the Monte Carlo code PENELOPE. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2008, 593, 578-587.	1.6	13
50	Distorted-wave ionization and x-ray production cross sections of the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>K</mml:mi></mml:math>shell of Cu and the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>L</mml:mi></mml:math>shells of Ag, In, and Sn by positron impact. Physical Review A, 2008, 77, .	2.5	9
51	A microfocus x-ray source based on a nonmetal liquid-jet anode. Applied Physics Letters, 2008, 92, 233509.	3.3	8
52	Monte Carlo simulation and analysis of proton energy-deposition patterns in the Bragg peak. Physics in Medicine and Biology, 2008, 53, 2857-2875.	3.0	6
53	Monte Carlo based water/medium stopping-power ratios for various ICRP and ICRU tissues. Physics in Medicine and Biology, 2007, 52, 6475-6483.	3.0	26
54	Calculation of the energy loss of swift H and He ions in Ag using the dielectric formalism: The role of inner-shell ionization. Nuclear Instruments & Methods in Physics Research B, 2007, 256, 172-176.	1.4	7

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55	AbsoluteK-shell ionization cross sections andLÎ±andLÎ²1x-ray production cross sections of Ga and As by1.5â€"39â^'keVelectrons. Physical Review A, 2006, 73, .	2.5	37
56	Monte Carlo simulation of bremsstrahlung emission by electrons. Radiation Physics and Chemistry, 2006, 75, 1201-1219.	2.8	58
57	Monte Carlo Simulation in Electron Probe Microanalysis. Comparison of Different Simulation Algorithms. Mikrochimica Acta, 2006, 155, 67-74.	5.0	27
58	Influence of electrodes on the photon energy deposition in CVD-diamond dosimeters studied with the Monte Carlo code PENELOPE. Physics in Medicine and Biology, 2006, 51, 3607-3623.	3.0	15
59	A relativistic optical-data model for inelastic scattering of electrons and positrons in condensed matter. Nuclear Instruments & Methods in Physics Research B, 2005, 229, 187-218.	1.4	81
60	Monte Carlo simulation of X-ray emission using the general-purpose codePENELOPE. Surface and Interface Analysis, 2005, 37, 1054-1058.	1.8	39
61	Cross sections for electron interactions in condensed matter. Surface and Interface Analysis, 2005, 37, 824-832.	1.8	25
62	333 Monte Carlo based sw,med values for different ICRU tissues. Radiotherapy and Oncology, 2005, 76, S151-S152.	0.6	0
63	472 Monte Carlo study of the fluence perturbation in CVD diamond detectors due to electric contacts. Radiotherapy and Oncology, 2005, 76, S204.	0.6	0
64	Calculated energy loss of swift He, Li, B, and N ions inSiO2,Al2O3, andZrO2. Physical Review A, 2005, 72, .	2.5	91
65	Monte Carlo Simulation of Electron Transport and X-Ray Generation. II. Radiative Processes and Examples in Electron Probe Microanalysis. Mikrochimica Acta, 2004, 145, 111-120.	5.0	2
66	Monte Carlo Simulation of Electron Transport and X-Ray Generation. I. Electron Elastic and Inelastic Scattering. Mikrochimica Acta, 2004, 145, 193-202.	5.0	4
67	Experimental benchmarks of the Monte Carlo code penelope. Nuclear Instruments & Methods in Physics Research B, 2003, 207, 107-123.	1.4	274
68	Dosimetry characterization of a 32P source wire used for intravascular brachytherapy with automated stepping. Medical Physics, 2003, 30, 959-971.	3.0	35
69	Calculations of electron fluence correction factors using the Monte Carlo code PENELOPE. Physics in Medicine and Biology, 2003, 48, 1263-1275.	3.0	18
70	Radial dose function of a 90Sr-90Y seed in water and A150: Comment on â€œCalibration and characterization of beta-particle sources for intravascular brachytherapyâ€•[Med. Phys.25, 339-346 (1998)]. Medical Physics, 2002, 29, 2737-2738.	3.0	2
71	The structure of the Bethe ridge. Relativistic Born and impulse approximations. Journal of Physics B: Atomic, Molecular and Optical Physics, 2002, 35, 33-53.	1.5	17
72	Comparison of Monte Carlo calculated electron slowing-down spectra generated by60Co Î³-rays, electrons, protons and light ions. Physics in Medicine and Biology, 2002, 47, 1303-1319.	3.0	21

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73	Characterization of a high-dose-rate90Srâ€“90Y source for intravascular brachytherapy by using the Monte Carlo code PENELOPE. Physics in Medicine and Biology, 2002, 47, 697-711.	3.0	23
74	Monte Carlo simulation of electron beams from an accelerator head using PENELOPE. Physics in Medicine and Biology, 2001, 46, 1163-1186.	3.0	189
75	Mixed simulation of the multiple elastic scattering of electrons and positrons using partial-wave differential cross-sections. Nuclear Instruments & Methods in Physics Research B, 2001, 174, 91-110.	1.4	21
76	Status of PENELOPE. , 2001, , 147-152.		0
77	Simulation of X-ray Spectra Generated by Kilovolt-Electron Bombardment. , 2001, , 105-110.		1
78	Modelling the Generalized Oscillator Strength for Low-Energy Electron or Positron Inelastic Scattering. , 2001, , 33-38.		0
79	Analog Electron Physics. Interaction Cross-Sections. , 2001, , 27-32.		0
80	Hamaker Constants of Systems Involving Water Obtained from a Dielectric Function That Fulfills the f Sum Rule. Journal of Colloid and Interface Science, 2000, 231, 394-397.	9.4	49
81	Relative Cross Sections for L- and M-Shell Ionization by Electron Impact. Mikrochimica Acta, 2000, 132, 163-171.	5.0	19
82	Practical aspects of Monte Carlo simulation of charged particle transport: Mixed algorithms and variance reduction techniques. Radiation and Environmental Biophysics, 1999, 38, 15-22.	1.4	24
83	Monte Carlo simulation of the inelastic scattering of electrons and positrons using optical-data models. Radiation Physics and Chemistry, 1998, 53, 235-245.	2.8	27
84	An algorithm for Monte Carlo simulation of coupled electron-photon transport. Nuclear Instruments & Methods in Physics Research B, 1997, 132, 377-390.	1.4	320
85	Detour factors in water and plastic phantoms and their use for range and depth scaling in electron-beam dosimetry. Physics in Medicine and Biology, 1996, 41, 1119-1139.	3.0	34
86	Radial Energy Distributions in LiF by Alpha Particle Irradiation Using Monte Carlo Simulation. Radiation Protection Dosimetry, 1996, 65, 37-40.	0.8	10
87	Monte Carlo simulation of 0.1â€“100 keV electron and positron transport in solids using optical data and partial wave methods. Nuclear Instruments & Methods in Physics Research B, 1996, 108, 35-50.	1.4	80
88	Fast sampling algorithm for the simulation of photon Compton scattering. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1996, 379, 167-175.	1.6	82
89	Accurate numerical solution of the radial SchrÃ¶dinger and Dirac wave equations. Computer Physics Communications, 1995, 90, 151-168.	7.5	207
90	PENELOPE: An algorithm for Monte Carlo simulation of the penetration and energy loss of electrons and positrons in matter. Nuclear Instruments & Methods in Physics Research B, 1995, 100, 31-46.	1.4	721

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91	Simplified Monte Carlo simulation of elastic electron scattering in limited media. Nuclear Instruments & Methods in Physics Research B, 1994, 84, 465-483.	1.4	34
92	Cross sections for elastic scattering of fast electrons and positrons by atoms. Nuclear Instruments & Methods in Physics Research B, 1993, 82, 39-45.	1.4	15
93	On the theory and simulation of multiple elastic scattering of electrons. Nuclear Instruments & Methods in Physics Research B, 1993, 73, 447-473.	1.4	111
94	Inelastic scattering of electrons in solids from a generalized oscillator strength model using optical and photoelectric data. Journal of Physics Condensed Matter, 1993, 5, 3593-3610.	1.8	91
95	A comparison of inelastic electron scattering models based on delta -function representations of the Bethe surface. Journal of Physics Condensed Matter, 1992, 4, 2879-2890.	1.8	18
96	Evaluation of beta-particle emitter spectra in liquid scintillation counting systems. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1992, 312, 136-140.	1.6	0
97	Semiempirical cross sections for the simulation of the energy loss of electrons and positrons in matter. Nuclear Instruments & Methods in Physics Research B, 1992, 63, 255-269.	1.4	44
98	A simplified method for the detailed Monte Carlo simulation of electron transport. Journal Physics D: Applied Physics, 1991, 24, 814-826.	2.8	2