Frederick Currell

List of Publications by Year
in descending order

78 papers	1,732 citations	304743 22 h-index	289244 40 g-index
83 all docs	83 docs citations	83 times ranked	1771 citing authors

#	Article	IF	Citations
1	Evaluation of cytotoxicity and radiation enhancement using 1.9 nm gold particles: potential application for cancer therapy. Nanotechnology, 2010, 21, 295101.	2.6	194
2	Cold atmospheric pressure plasma jet interactions with plasmid DNA. Applied Physics Letters, 2011, 98, .	3.3	138
3	A New Mechanism for Hydroxyl Radical Production in Irradiated Nanoparticle Solutions. Small, 2014, 10, 3338-3346.	10.0	120
4	Isotope Shift in the Dielectronic Recombination of Three-Electron<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mmultiscripts><mml:mi>Nd</mml:mi><mml:none /><mml:mrow><mml:mn>57</mml:mn><mml:mo>+</mml:mo></mml:mrow><mml:mprescripts /><mml:none /><mml:mi>A</mml:mi></mml:mmultiscripts></mml:math>. Physical Review Letters, 2008, 100, 073201.	7.8	102
5	Variation of Strand Break Yield for Plasmid DNA Irradiated with High-ZMetal Nanoparticles. Radiation Research, 2008, 170, 381-387.	1.5	81
6	Radiosensitising Nanoparticles as Novel Cancer Therapeutics â€" Pipe Dream or Realistic Prospect?. Clinical Oncology, 2013, 25, 593-603.	1.4	66
7	Breit interaction in dielectronic recombination of hydrogenlike uranium. Physical Review A, 2011, 83, .	2.5	61
8	An overview of the Tokyo electron beam ion trap. Physica Scripta, 1997, T73, 362-364.	2.5	58
9	A photoelectron study of resonance structure in the argon correlation satellites. Journal of Physics B: Atomic, Molecular and Optical Physics, 1989, 22, 3217-3226.	1.5	53
10	The measurement of the dielectronic recombination in He-like Fe ions. Journal of Physics B: Atomic, Molecular and Optical Physics, 2001, 34, 5095-5102.	1.5	52
11	Dielectronic recombination of He-like to C-like iodine ions. Physical Review A, 2007, 75, .	2.5	44
12	Magnetic dipole transitions in titaniumlike ions. Physical Review A, 2001, 63, .	2.5	40
13	Dielectronic recombination in He-like titanium ions. Journal of Physics B: Atomic, Molecular and Optical Physics, 2004, 37, 2343-2353.	1.5	37
14	Protein disulphide isomerase as a target for nanoparticle-mediated sensitisation of cancer cells to radiation. Nanotechnology, 2016, 27, 215101.	2.6	36
15	Resonant recombination at ion storage rings: a conceptual alternative for isotope shift and hyperfine studies. Hyperfine Interactions, 2010, 196, 115-127.	0.5	35
16	Target dependence of multi-electron processes in Iq+(q=10, 15)+rare gas (Ne, Ar, Kr and Xe) collisions. Journal of Physics B: Atomic, Molecular and Optical Physics, 1995, 28, 2959-2972.	1.5	28
17	Dielectronic recombination in He-like, Li-like, and Be-like highly charged ions in theKLLandKLMmanifolds. Physical Review A, 2010, 81, .	2.5	27
18	Injection of metallic elements into an electron-beam ion trap using a Knudsen cell. Review of Scientific Instruments, 2006, 77, 066110.	1.3	26

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19	Isotope shifts in dielectronic recombination: From stable to in-flight-produced nuclei. Journal of Physics: Conference Series, 2009, 194, 012023.	0.4	26
20	Search forH2â˜”resonances in the detachment ofHâ˜”by electron impact with a high-resolution cooler ring. Physical Review A, 1996, 54, 4069-4072.	2.5	25
21	Electron-impact ionization of hydrogen-like iron ions. Journal of Physics B: Atomic, Molecular and Optical Physics, 2001, 34, 4003-4013.	1.5	25
22	The present status of the Tokyo electron beam ion trap. Review of Scientific Instruments, 1998, 69, 694-696.	1.3	24
23	Probing nuclear properties by resonant atomic collisions between electrons and ions. Physica Scripta, 2013, T156, 014050.	2.5	23
24	Antiproton induced DNA damage: proton like in flight, carbon-ion like near rest. Scientific Reports, 2013, 3, 1770.	3.3	21
25	Physical Radiation Enhancement Effects Around Clinically Relevant Clusters of Nanoagents in Biological Systems. Scientific Reports, 2019, 9, 8156.	3.3	20
26	Electron-impact excitation of the doubly excited states of helium below the N=3He+threshold. Physical Review A, 1997, 55, 318-328.	2.5	19
27	Electron impact ionization of hydrogen-like molybdenum ions. Journal of Physics B: Atomic, Molecular and Optical Physics, 2002, 35, 5095-5103.	1.5	19
28	Electron spectra from singlet and triplet states of O4+(1s23l3l', 1s23l4l') produced by 60 and 120 keV O6++He, Ne, Ar collisions. Journal of Physics B: Atomic, Molecular and Optical Physics, 1995, 28, 4743-4758.	1.5	17
29	High-resolution x-ray spectromicroscopy with the Tokyo electron beam ion trap. Review of Scientific Instruments, 1999, 70, 1658-1664.	1.3	17
30	Measurements of cross sections and oscillator strengths by electron impact for the 5dand 7slevels of Xe. Physical Review A, 1996, 53, 4138-4144.	2.5	16
31	Detector systems for use with an electron beam ion trap. Physica Scripta, 1997, T73, 371-372.	2.5	16
32	Parity nonconservation in electron recombination of multiply charged ions. Physical Review A, 2005, 72, .	2.5	16
33	Imaging intracellular and systemicin vivogold nanoparticles to enhance radiotherapy. British Journal of Radiology, 2015, 88, 20150170.	2.2	16
34	Branching ratios of x-ray photons from dielectronic recombination processes in H-like titanium ions. Physical Review A, 2008, 77, .	2.5	15
35	Ejected-electron spectra from the triplet states of O4+(1s23l3l') produced by O6++O2collisions. Journal of Physics B: Atomic, Molecular and Optical Physics, 1994, 27, L785-L793.	1.5	13
36	Fragmentation and plasmid strand breaks in pure and gold-doped DNA irradiated by beams of fast hydrogen atoms. Physics in Medicine and Biology, 2009, 54, 4705-4721.	3.0	13

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37	Angular correlations in radiative cascades following resonant electron capture by highly charged ions. Physical Review A, 2011, 84, .	2.5	13
38	Decay of multiply excited Rydberg ions produced in I10+-rare-gas collisions. Journal of Physics B: Atomic, Molecular and Optical Physics, 1995, 28, L9-L13.	1.5	11
39	Thomson scattering system at the Tokyo electron beam ion trap. Review of Scientific Instruments, 2002, 73, 42-46.	1.3	11
40	The role of target polarization in electronâ€“ion recombination. Journal of Physics B: Atomic, Molecular and Optical Physics, 2004, 37, 2411-2428.	1.5	11
41	Effect of Target Polarization in Electron-Ion Recombination. Physical Review Letters, 2006, 97, 223201.	7.8	10
42	X-ray spectroscopy at the Tokyo electron beam ion trap. Physica Scripta, 1997, T73, 90-92.	2.5	8
43	Relativistic effects on resonant interactions between electrons and highly charged ions. Journal of Physics: Conference Series, 2007, 88, 012066.	0.4	8
44	Two-electron QED contributions to the ground-state binding energy in He-like<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mi mathvariant="normal">Kr</mml:mi><mml:mrow><mml:mn>34</mml:mn><mml:mo>+</mml:mo></mml:mrow></mml:msup></mml:ma Physical Review A, 2008, 77, .	2.5	8
45	Numerical simulation of the charge balance and temperature evolution in an electron beam ion trap. Physical Review Special Topics: Accelerators and Beams, 2009, 12, .	1.8	8
46	Dynamics of intracellular clusters of nanoparticles. Cancer Nanotechnology, 2022, 13, .	3.7	8
47	Electron spectroscopy of doubly excited states in He produced by slow collisions ofHe2+ions with Ba atoms. Physical Review A, 2001, 64, .	2.5	7
48	Dielectronic recombination of in-flight synthesized exotic isotopes. Journal of Physics: Conference Series, 2012, 388, 062042.	0.4	7
49	Nuclear Uptake of Gold Nanoparticles Deduced Using Dualâ€Angle Xâ€Ray Fluorescence Mapping. Particle and Particle Systems Characterization, 2019, 36, 1900140.	2.3	7
50	Injection of refractory metals into EBIT using a Knudsen cell. Journal of Physics: Conference Series, 2007, 58, 403-406.	0.4	6
51	Characterization and parametrization in terms of atomic number of x-ray emission from<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>K</mml:mi></mml:mrow></mml:math>-shell filling during ion-surface interactions. Physical Review A, 2011, 83, .	2.5	6
52	Extraction of trapped ions from the Tokyo electron beam ion trap. Physica Scripta, 1997, T73, 368-370.	2.5	5
53	Application to argon ions of a new technique to measure the two-electron contribution to the ground state energy of helium-like ions. Journal of Physics B: Atomic, Molecular and Optical Physics, 2000, 33, 727-734.	1.5	5
54	Physics B: Atomic, Molecular and Optical Physics, 1996, 29, 1995-2006.	1.5	4

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55	Projectile charge dependence of multi-electron transfer processes in highly charged ion-atom collisions. Physica Scripta, 1997, T73, 182-184.	2.5	4
56	Control system of the Tokyo electron beam ion trap. Physica Scripta, 1997, T73, 365-367.	2.5	4
57	Experimental setup and first measurement of DNA damage induced along and around an antiproton beam. European Physical Journal D, 2010, 60, 209-214.	1.3	4
58	Angular distribution of metastable fragments of produced by electron impact dissociative excitation of. Journal of Physics B: Atomic, Molecular and Optical Physics, 1997, 30, 3287-3296.	1.5	3
59	Pulsed Evaporative Cooling of Ion Cloud in an Electron Beam Ion Trap. Physica Scripta, 2001, T92, 102-104.	2.5	3
60	A New Device for the Study of Electronâ€“Ion Interactions: The Belfast EBIT. Physica Scripta, 2005, T120, 53-55.	2.5	3
61	Cold atmospheric pressure plasma jets: Interaction with plasmid DNA and tailored electron heating using dual-frequency excitation. , 2012, , .		3
62	Real-Time Electron Solvation Induced by Bursts of Laser-Accelerated Protons in Liquid Water. Physical Review Letters, 2021, 127, 186001.	7.8	3
63	The observation of post-collision interaction in states of N2O excited by electron impact. Journal of Physics B: Atomic, Molecular and Optical Physics, 1994, 27, 583-591.	1.5	2
64	Electron-Ion Interactions and Spectroscopy of Highly Charged Ions Studied Using the Tokyo EBIT. Physica Scripta, 1999, T80, 154.	2.5	2
65	Design of an electron-beam ion trap to be situated at Queenâ€™s University, Belfast. Review of Scientific Instruments, 2004, 75, 1551-1553.	1.3	2
66	Photorecombination studies of highly charged ions at the storage ring ESR: a progress report. Journal of Physics: Conference Series, 2007, 58, 81-86.	0.4	2
67	Fast Ion-Beam Inactivation of Viruses, Where Radiation Track Structure Meets RNA Structural Biology. Radiation Research, 2022, 198, .	1.5	2
68	Radiation from K-shell filling in highly charged ions: a driver for resonant combination cancer therapy?. Journal of Physics: Conference Series, 2007, 58, 439-442.	0.4	1
69	Investigation of an electron string ion source with field emission cathode. Review of Scientific Instruments, 2008, 79, 02A701.	1.3	1
70	Recent activities at the Tokyo EBIT 2006. Canadian Journal of Physics, 2008, 86, 315-319.	1.1	1
71	Activities at the Tokyo EBIT 2010. Journal of Instrumentation, 2010, 5, C08007-C08007.	1.2	1
72	New Research in Ionizing Radiation andÂNanoparticles: The ARGENT Project. , 2017, , 379-434.		1

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73	Ejected electron spectra from doubly-excited states He (2lnl') produced by He2+-Mg, Ca and Ba collisions. Physica Scripta, 1997, T73, 205-206.	2.5	1
74	Electron Impact Ionisation of Hydrogen-Like Ions. , 2003, , 333-349.		1
75	A new method for nondestructively monitoring the position of a charged particle beam in real time. Review of Scientific Instruments, 1999, 70, 2288-2292.	1.3	0
76	Breit interaction in dielectronic recombination of H-like uranium. Journal of Physics: Conference Series, 2012, 388, 062034.	0.4	0
77	Cancer research, treatment, and COVID-19. Cancer Nanotechnology, 2020, 11, 7.	3.7	0
78	Resonant recombination at ion storage rings: a conceptual alternative for isotope shift and hyperfine studies. , 2010, , 115-127.		0