LÃ©on Sanche

List of Publications by Year
in descending order

97	5,557	87888	82547
papers	citations	38 h-index	72 g-index

97	97	97	3764
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	DNA Strand Breaks Induced by 0â€“4ÂeV Electrons: The Role of Shape Resonances. Physical Review Letters, 2004, 93, 068101.	7.8	423
2	Single, Double, and Multiple Double Strand Breaks Induced in DNA by 3â˜100 eV Electrons. Journal of the American Chemical Society, 2003, 125, 4467-4477.	13.7	399
3	Biomolecular Damage Induced by Ionizing Radiation: The Direct and Indirect Effects of Low-Energy Electrons on DNA. Annual Review of Physical Chemistry, 2015, 66, 379-398.	10.8	347
4	Precursors of Solvated Electrons in Radiobiological Physics and Chemistry. Chemical Reviews, 2012, 112, 5578-5602.	47.7	309
5	Resonant dissociation of DNA bases by subionization electrons. Journal of Chemical Physics, 1998, 108, 1309-1312.	3.0	241
6	Radiosensitization of DNA by Gold Nanoparticles Irradiated with High-Energy Electrons. Radiation Research, 2008, 169, 19-27.	1.5	172
7	Chemical Basis of DNA Sugarâ˜Phosphate Cleavage by Low-Energy Electrons. Journal of the American Chemical Society, 2005, 127, 16592-16598.	13.7	166
8	Silver Nanoparticles Inhibit Replication of Respiratory Syncytial Virus. Journal of Biomedical Nanotechnology, 2008, 4, 149-158.	1.1	149
9	Parameters governing gold nanoparticle X-ray radiosensitization of DNA in solution. Colloids and Surfaces B: Biointerfaces, 2009, 72, 128-134.	5.0	127
10	DNA Damage Induced by Low-Energy Electrons: Electron Transfer and Diffraction. Physical Review Letters, 2006, 96, 208101.	7.8	115
11	Dehalogenation of 5-Halouracils after Low Energy Electron Attachment:Â A Density Functional Theory Investigation. Journal of Physical Chemistry A, 2002, 106, 11248-11253.	2.5	108
12	Glycosidic Bond Cleavage of Thymidine by Low-Energy Electrons. Journal of the American Chemical Society, 2004, 126, 1002-1003.	13.7	104
13	Roadmap for metal nanoparticles in radiation therapy: current status, translational challenges, and future directions. Physics in Medicine and Biology, 2020, 65, 21RM02.	3.0	101
14	Role of Secondary Low-Energy Electrons in the Concomitant Chemoradiation Therapy of Cancer. Physical Review Letters, 2008, 100, 198101.	7.8	99
15	Radiation Damage to DNA: The Indirect Effect of Low-Energy Electrons. Journal of Physical Chemistry Letters, 2013, 4, 820-825.	4.6	98
16	Gold Nanoparticles Enhance DNA Damage Induced by Anti-cancer Drugs and Radiation. Radiation Research, 2009, 172, 114-119.	1.5	96
17	Electron stimulated desorption of Hâ˜ from thin films of thymine and uracil. Journal of Chemical Physics, 2001, 114, 5755-5764.	3.0	89
18	Damage Induced by 1â€“30 eV Electrons on Thymine- and Bromouracil-Substituted Oligonucleotides. Radiation Research, 2000, 153, 23-28.	1.5	81

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19	Low Energy Electron Induced DNA Damage: Effects of Terminal Phosphate and Base Moieties on the Distribution of Damage. Journal of the American Chemical Society, 2008, 130, 5612-5613.	13.7	76
20	Absolute and effective cross-sections for low-energy electron-scattering processes within condensed matter. Radiation and Environmental Biophysics, 1998, 37, 243-257.	1.4	69
21	On the role of low-energy electrons in the radiosensitization of DNA by gold nanoparticles. Nanotechnology, 2011, 22, 465101.	2.6	69
22	Dissociative electron attachment to hydrated single DNA strands. Physical Review E, 2007, 75, 031915.	2.1	67
23	Phosphodiester and N-glycosidic bond cleavage in DNA induced by 4â€“15 eV electrons. Journal of Chemical Physics, 2006, 124, 064710.	3.0	65
24	Damage Induced to DNA by Low-Energy (0â^'30 eV) Electrons under Vacuum and Atmospheric Conditions. Journal of Physical Chemistry B, 2009, 113, 10008-10013.	2.6	60
25	Low-Energy Electron-Induced DNA Damage: Effect of Base Sequence in Oligonucleotide Trimers. Journal of the American Chemical Society, 2010, 132, 5422-5427.	13.7	60
26	Interaction of low energy electrons with DNA: Applications to cancer radiation therapy. Radiation Physics and Chemistry, 2016, 128, 36-43.	2.8	59
27	Degradation of functionalized alkanethiolate monolayers by 0â€“18 eV electrons. Journal of Chemical Physics, 2003, 118, 11168-11178.	3.0	58
28	Fundamental Mechanisms of DNA Radiosensitization: Damage Induced by Low-Energy Electrons in Brominated Oligonucleotide Trimers. Journal of Physical Chemistry B, 2012, 116, 9676-9682.	2.6	57
29	New Insights into the Mechanism Underlying the Synergistic Action of Ionizing Radiation With Platinum Chemotherapeutic Drugs: The Role of Low-Energy Electrons. International Journal of Radiation Oncology Biology Physics, 2013, 87, 847-853.	0.8	57
30	Comparison between X-ray Photon and Secondary Electron Damage to DNA in Vacuum. Journal of Physical Chemistry B, 2005, 109, 4796-4800.	2.6	56
31	Mechanisms for Low-Energy (0.5â^'30 eV) Electron-Induced Pyrimidine Ring Fragmentation within Thymine- and Halogen-Substituted Single Strands of DNA. Journal of Physical Chemistry B, 2000, 104, 5610-5617.	2.6	54
32	Cellular uptake and cytoplasm / DNA distribution of cisplatin and oxaliplatin and their liposomal formulation in human colorectal cancer cell HCT116. Investigational New Drugs, 2011, 29, 1321-1327.	2.6	49
33	DNA strand breaks and crosslinks induced by transient anions in the range 2-20 eV. Journal of Chemical Physics, 2014, 140, .	3.0	49
34	On the mechanism of anion desorption from DNA induced by low energy electrons. Journal of Chemical Physics, 2006, 125, 144713.	3.0	48
35	Optimization of the route of platinum drugs administration to optimize the concomitant treatment with radiotherapy for glioblastoma implanted in the Fischer rat brain. Journal of Neuro-Oncology, 2013, 115, 365-373.	2.9	45
36	Hydrogen Atom Loss in Pyrimidine DNA Bases Induced by Low-Energy Electrons:Â Energetics Predicted by Theory. Journal of Physical Chemistry B, 2004, 108, 19013-19019.	2.6	43

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37	A Single Subexcitationâ€Energy Electron Can Induce a Doubleâ€Strand Break in DNA Modified by Platinum Chemotherapeutic Drugs. ChemMedChem, 2014, 9, 1145-1149.	3.2	43
38	Glioblastoma Treatment: Bypassing the Toxicity of Platinum Compounds by Using Liposomal Formulation and Increasing Treatment Efficiency With Concomitant Radiotherapy. International Journal of Radiation Oncology Biology Physics, 2012, 84, 244-249.	0.8	39
39	Absolute cross section for low-energy-electron damage to condensed macromolecules: A case study of DNA. Physical Review E, 2012, 86, 031913.	2.1	38
40	Concomitant treatment of F98 glioma cells with new liposomal platinum compounds and ionizing radiation. Journal of Neuro-Oncology, 2010, 97, 187-193.	2.9	36
41	Convection-Enhanced Delivery in Malignant Gliomas: A Review of Toxicity and Efficacy. Journal of Oncology, 2019, 2019, 1-13.	1.3	36
42	Soft X-ray and Low Energy Electron-Induced Damage to DNA under N₂ and O₂ Atmospheres. Journal of Physical Chemistry B, 2011, 115, 4523-4531.	2.6	35
43	Liposomal formulations of carboplatin injected by convection-enhanced delivery increases the median survival time of F98 glioma bearing rats. Journal of Nanobiotechnology, 2018, 16, 77.	9.1	35
44	Low-Energy Electron-Induced Damage in a Trinucleotide Containing 5-Bromouracil. Journal of Physical Chemistry B, 2011, 115, 13668-13673.	2.6	33
45	DNA Damage Induced by Low-Energy Electrons: Conversion of Thymine to 5,6-Dihydrothymine in the Oligonucleotide Trimer TpTpT. Radiation Research, 2011, 175, 240-246.	1.5	33
46	The Relative Contributions of DNA Strand Breaks, Base Damage and Clustered Lesions to the Loss of DNA Functionality Induced by Ionizing Radiation. Radiation Research, 2014, 181, 99-110.	1.5	33
47	Clustered DNA Damage Induced by 2â€“20 eV Electrons and Transient Anions: General Mechanism and Correlation to Cell Death. Journal of Physical Chemistry Letters, 2019, 10, 2985-2990.	4.6	33
48	Cisplatin Radiosensitization of DNA Irradiated with 2â€“20 eV Electrons: Role of Transient Anions. Journal of Physical Chemistry C, 2014, 118, 15516-15524.	3.1	32
49	Low Energy Electrons in Nanoscale Radiation Physics: Relationship to Radiosensitization and Chemoradiation Therapy. Reviews in Nanoscience and Nanotechnology, 2013, 2, 1-28.	0.4	32
50	Dissociative electron attachment to abasic DNA. Physical Chemistry Chemical Physics, 2007, 9, 1730-1735.	2.8	31
51	Increased radiosensitivity of colorectal tumors with intra-tumoral injection of low dose of gold nanoparticles. International Journal of Nanomedicine, 2016, Volume 11, 5323-5333.	6.7	29
52	Effective and absolute cross sections for low-energy (1-30 eV) electron interactions with condensed biomolecules. Applied Physics Reviews, 2018, 5, 021302.	11.3	29
53	Efficacy of cisplatin and Lipoplatinâ„¢ in combined treatment with radiation of a colorectal tumor in nude mouse. Anticancer Research, 2013, 33, 3005-14.	1.1	29
54	Measurement of inelastic cross sections for low-energy electron scattering from DNA bases. International Journal of Radiation Biology, 2012, 88, 15-21.	1.8	27

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55	Role of Humidity and Oxygen Level on Damage to DNA Induced by Soft X-rays and Low-Energy Electrons. Journal of Physical Chemistry C, 2013, 117, 22445-22453.	3.1	27
56	Low-energy electron therapy. Nature Materials, 2015, 14, 861-863.	27.5	27
57	Strand Breaks Induced by Very Low Energy Electrons: Product Analysis and Mechanistic Insight into the Reaction with TpT. Journal of the American Chemical Society, 2019, 141, 10315-10323.	13.7	27
58	Low-Energy Electron Damage to Condensed-Phase DNA and Its Constituents. International Journal of Molecular Sciences, 2021, 22, 7879.	4.1	27
59	Unified Mechanism for the Generation of Isolated and Clustered DNA Damages by a Single Low Energy (5â€“10 eV) Electron. Journal of Physical Chemistry C, 2017, 121, 2466-2472.	3.1	25
60	Tuning the size of gold nanoparticles produced by multiple filamentation of femtosecond laser pulses in aqueous solutions. Physical Chemistry Chemical Physics, 2018, 20, 23403-23413.	2.8	25
61	Soft Adsorption of Densely Packed Layers of DNA-PlasmidÂ·1,3-Diaminopropane Complexes onto Highly Oriented Pyrolitic Graphite Designed To Erode in Water. Journal of Physical Chemistry C, 2011, 115, 21291-21298.	3.1	24
62	Loss of Cellular Transformation Efficiency Induced by DNA Irradiation with Low-Energy (10 eV) Electrons. Journal of Physical Chemistry B, 2014, 118, 13123-13131.	2.6	24
63	Dissociative electron attachment and charge transfer in condensed matter. Radiation Physics and Chemistry, 2003, 68, 3-13.	2.8	22
64	Enhanced DNA Damage Induced by Secondary Electron Emission from a Tantalum Surface Exposed to Soft X Rays. Radiation Research, 2006, 165, 365-371.	1.5	22
65	Low-energy-electron interactions with DNA: approaching cellular conditions with atmospheric experiments. European Physical Journal D, 2014, 68, 1.	1.3	21
66	Dense ionization and subsequent non-homogeneous radical-mediated chemistry of femtosecond laser-induced low density plasma in aqueous solutions: synthesis of colloidal gold. Physical Chemistry Chemical Physics, 2017, 19, 7897-7909.	2.8	21
67	Electron-Induced Radiolysis of Astrochemically Relevant Ammonia Ices. ACS Earth and Space Chemistry, 2019, 3, 800-810.	2.7	21
68	Synergism in concomitant chemoradiotherapy of cisplatin and oxaliplatin and their liposomal formulation in the human colorectal cancer HCT116 model. Anticancer Research, 2012, 32, 4395-404.	1.1	21
69	Dynamics of Dissociative Electronâ€“Molecule Interactions in Condensed Methanol. Journal of Physical Chemistry C, 2014, 118, 22592-22600.	3.1	20
70	Absolute cross-sections for DNA strand breaks and crosslinks induced by low energy electrons. Physical Chemistry Chemical Physics, 2016, 18, 32762-32771.	2.8	20
71	Chemoradiation Cancer Therapy: Molecular Mechanisms of Cisplatin Radiosensitization. Journal of Physical Chemistry C, 2017, 121, 17505-17513.	3.1	20
72	Clustered DNA Damages induced by 0.5 to 30 eV Electrons. International Journal of Molecular Sciences, 2019, 20, 3749.	4.1	20

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73	Damage to amino acidâ€“nucleotide pairs induced by 1 eV electrons. Physical Chemistry Chemical Physics, 2010, 12, 9367.	2.8	19
74	Side-by-Side Comparison of DNA Damage Induced by Low-Energy Electrons and High-Energy Photons with Solid TpTpT Trinucleotide. Journal of Physical Chemistry B, 2013, 117, 10122-10131.	2.6	19
75	Convection-enhancement delivery of liposomal formulation of oxaliplatin shows less toxicity than oxaliplatin yet maintains a similar median survival time in F98 glioma-bearing rat model. Investigational New Drugs, 2016, 34, 269-276.	2.6	19
76	Concomitant Chemoradiation Therapy with Gold Nanoparticles and Platinum Drugs Co-Encapsulated in Liposomes. International Journal of Molecular Sciences, 2020, 21, 4848.	4.1	19
77	Early Events in Radiobiology: Isolated and Cluster DNA Damage Induced by Initial Cations and Nonionizing Secondary Electrons. Journal of Physical Chemistry Letters, 2021, 12, 717-723.	4.6	19
78	Irradiator to study damage induced to large nonvolatile molecules by low-energy electrons. Review of Scientific Instruments, 2004, 75, 4534-4540.	1.3	18
79	Induction of strand breaks in DNA films by low energy electrons and soft X-ray under nitrous oxide atmosphere. Radiation Physics and Chemistry, 2012, 81, 33-39.	2.8	18
80	New therapeutic possibilities of combined treatment of radiotherapy with oxaliplatin and its liposomal formulation, Lipoxalâ„¢, in rectal cancer using xenograft in nude mice. Anticancer Research, 2014, 34, 5303-12.	1.1	18
81	Effect of morphology of thin DNA films on the electron stimulated desorption of anions. Journal of Chemical Physics, 2011, 134, 015102.	3.0	14
82	Radiation-Induced Formation of 2â€²,3â€²-Dideoxyribonucleosides in DNA: A Potential Signature of Low-Energy Electrons. Journal of the American Chemical Society, 2012, 134, 17366-17368.	13.7	14
83	Dissociative electron attachment to DNA-diamine thin films: Impact of the DNA close environment on the OHâ^' and Oâ^' decay channels. Journal of Chemical Physics, 2013, 139, 055101.	3.0	14
84	DNA Strand Breaks Induced by 0â€“1.5 eV UV Photoelectrons under Atmospheric Pressure. Journal of Physical Chemistry C, 2016, 120, 487-495.	3.1	12
85	High Cytotoxic Effect by Combining Copper-64 with a NOTAâ€“Terpyridine Platinum Conjugate. Journal of Medicinal Chemistry, 2021, 64, 6765-6776.	6.4	12
86	Low energy electron stimulated desorption from DNA films dosed with oxygen. Journal of Chemical Physics, 2012, 136, 235104.	3.0	10
87	Role of Transient Anions in Chemoradiation Therapy: Base Modifications, Cross-Links, and Cluster Damages Induced to Cisplatin-DNA Complexes by 1â€“20 eV Electrons. Journal of Physical Chemistry B, 2020, 124, 3315-3325.	2.6	8
88	Base Release and Modification in Solid-Phase DNA Exposed to Low-Energy Electrons. Radiation Research, 2016, 186, 520.	1.5	7
89	Design, Synthesis, and Cytotoxicity Assessment of [64Cu]Cu-NOTA-Terpyridine Platinum Conjugate: A Novel Chemoradiotherapeutic Agent with Flexible Linker. Nanomaterials, 2021, 11, 2154.	4.1	7
90	DNA Base Modifications Mediated by Femtosecond Laser-Induced Cold Low-Density Plasma in Aqueous Solutions. Journal of Physical Chemistry Letters, 2019, 10, 2753-2760.	4.6	6

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91	Low-energy electron-induced dissociation in condensed-phase L-cysteine II: a comparative study on anion desorption from chemisorbed and physisorbed films. European Physical Journal D, 2016, 70, 1.	1.3	5
92	Absolute cross sections for chemoradiation therapy: Damages to cisplatin-DNA complexes induced by 10 eV electrons. Journal of Chemical Physics, 2019, 150, 195101.	3.0	5
93	Damage Induced to DNA and Its Constituents by 0â€“3 eV UV Photoelectrons^{â€}. Photochemistry and Photobiology, 2022, 98, 546-563.	2.5	5
94	Low-Energy Electron Damage to Plasmid DNA in Thin Films: Dependence on Substrates, Surface Density, Charging, Environment, and Uniformity. Journal of Physical Chemistry B, 0, , .	2.6	3
95	Intratumoral 18F-FLT infusion in metabolic targeted radiotherapy. EJNMMI Research, 2019, 9, 33.	2.5	2
96	Formation and decay of transient anions produced by electron impact on surface molecules. AIP Conference Proceedings, 1993, , .	0.4	1
97	Radiosensitization Induced by Ultra-stable PVA-coated Gold Nanoparticles: A Study with Fricke Dosimeter, Plasmid DNA and F98 Glioma Cells. Current Nanomedicine, 2018, 8, 121-134.	0.6	1