

LÃ©on Sanche

List of Publications by Year in descending order

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97
papers

5,557
citations

87723

38
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82410

72
g-index

97
all docs

97
docs citations

97
times ranked

3764
citing authors

#	ARTICLE	IF	CITATIONS
1	DNA Strand Breaks Induced by 4 eV Electrons: The Role of Shape Resonances. <i>Physical Review Letters</i> , 2004, 93, 068101.	2.9	423
2	Single, Double, and Multiple Double Strand Breaks Induced in DNA by 100 eV Electrons. <i>Journal of the American Chemical Society</i> , 2003, 125, 4467-4477.	6.6	399
3	Biomolecular Damage Induced by Ionizing Radiation: The Direct and Indirect Effects of Low-Energy Electrons on DNA. <i>Annual Review of Physical Chemistry</i> , 2015, 66, 379-398.	4.8	347
4	Precursors of Solvated Electrons in Radiobiological Physics and Chemistry. <i>Chemical Reviews</i> , 2012, 112, 5578-5602.	23.0	309
5	Resonant dissociation of DNA bases by subionization electrons. <i>Journal of Chemical Physics</i> , 1998, 108, 1309-1312.	1.2	241
6	Radiosensitization of DNA by Gold Nanoparticles Irradiated with High-Energy Electrons. <i>Radiation Research</i> , 2008, 169, 19-27.	0.7	172
7	Chemical Basis of DNA Sugar-Phosphate Cleavage by Low-Energy Electrons. <i>Journal of the American Chemical Society</i> , 2005, 127, 16592-16598.	6.6	166
8	Silver Nanoparticles Inhibit Replication of Respiratory Syncytial Virus. <i>Journal of Biomedical Nanotechnology</i> , 2008, 4, 149-158.	0.5	149
9	Parameters governing gold nanoparticle X-ray radiosensitization of DNA in solution. <i>Colloids and Surfaces B: Biointerfaces</i> , 2009, 72, 128-134.	2.5	127
10	DNA Damage Induced by Low-Energy Electrons: Electron Transfer and Diffraction. <i>Physical Review Letters</i> , 2006, 96, 208101.	2.9	115
11	Dehalogenation of 5-Halouracils after Low Energy Electron Attachment: A Density Functional Theory Investigation. <i>Journal of Physical Chemistry A</i> , 2002, 106, 11248-11253.	1.1	108
12	Glycosidic Bond Cleavage of Thymidine by Low-Energy Electrons. <i>Journal of the American Chemical Society</i> , 2004, 126, 1002-1003.	6.6	104
13	Roadmap for metal nanoparticles in radiation therapy: current status, translational challenges, and future directions. <i>Physics in Medicine and Biology</i> , 2020, 65, 21RM02.	1.6	101
14	Role of Secondary Low-Energy Electrons in the Concomitant Chemoradiation Therapy of Cancer. <i>Physical Review Letters</i> , 2008, 100, 198101.	2.9	99
15	Radiation Damage to DNA: The Indirect Effect of Low-Energy Electrons. <i>Journal of Physical Chemistry Letters</i> , 2013, 4, 820-825.	2.1	98
16	Gold Nanoparticles Enhance DNA Damage Induced by Anti-cancer Drugs and Radiation. <i>Radiation Research</i> , 2009, 172, 114-119.	0.7	96
17	Electron stimulated desorption of H from thin films of thymine and uracil. <i>Journal of Chemical Physics</i> , 2001, 114, 5755-5764.	1.2	89
18	Damage Induced by 30 eV Electrons on Thymine- and Bromouracil-Substituted Oligonucleotides. <i>Radiation Research</i> , 2000, 153, 23-28.	0.7	81

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19	Low Energy Electron Induced DNA Damage: Effects of Terminal Phosphate and Base Moieties on the Distribution of Damage. <i>Journal of the American Chemical Society</i> , 2008, 130, 5612-5613.	6.6	76
20	Absolute and effective cross-sections for low-energy electron-scattering processes within condensed matter. <i>Radiation and Environmental Biophysics</i> , 1998, 37, 243-257.	0.6	69
21	On the role of low-energy electrons in the radiosensitization of DNA by gold nanoparticles. <i>Nanotechnology</i> , 2011, 22, 465101.	1.3	69
22	Dissociative electron attachment to hydrated single DNA strands. <i>Physical Review E</i> , 2007, 75, 031915.	0.8	67
23	Phosphodiester and N-glycosidic bond cleavage in DNA induced by 4â€“15 eV electrons. <i>Journal of Chemical Physics</i> , 2006, 124, 064710.	1.2	65
24	Damage Induced to DNA by Low-Energy (0âˆ“30 eV) Electrons under Vacuum and Atmospheric Conditions. <i>Journal of Physical Chemistry B</i> , 2009, 113, 10008-10013.	1.2	60
25	Low-Energy Electron-Induced DNA Damage: Effect of Base Sequence in Oligonucleotide Trimers. <i>Journal of the American Chemical Society</i> , 2010, 132, 5422-5427.	6.6	60
26	Interaction of low energy electrons with DNA: Applications to cancer radiation therapy. <i>Radiation Physics and Chemistry</i> , 2016, 128, 36-43.	1.4	59
27	Degradation of functionalized alkanethiolate monolayers by 0â€“18 eV electrons. <i>Journal of Chemical Physics</i> , 2003, 118, 11168-11178.	1.2	58
28	Fundamental Mechanisms of DNA Radiosensitization: Damage Induced by Low-Energy Electrons in Brominated Oligonucleotide Trimers. <i>Journal of Physical Chemistry B</i> , 2012, 116, 9676-9682.	1.2	57
29	New Insights into the Mechanism Underlying the Synergistic Action of Ionizing Radiation With Platinum Chemotherapeutic Drugs: The Role of Low-Energy Electrons. <i>International Journal of Radiation Oncology Biology Physics</i> , 2013, 87, 847-853.	0.4	57
30	Comparison between X-ray Photon and Secondary Electron Damage to DNA in Vacuum. <i>Journal of Physical Chemistry B</i> , 2005, 109, 4796-4800.	1.2	56
31	Mechanisms for Low-Energy (0.5âˆ“30 eV) Electron-Induced Pyrimidine Ring Fragmentation within Thymine- and Halogen-Substituted Single Strands of DNA. <i>Journal of Physical Chemistry B</i> , 2000, 104, 5610-5617.	1.2	54
32	Cellular uptake and cytoplasm / DNA distribution of cisplatin and oxaliplatin and their liposomal formulation in human colorectal cancer cell HCT116. <i>Investigational New Drugs</i> , 2011, 29, 1321-1327.	1.2	49
33	DNA strand breaks and crosslinks induced by transient anions in the range 2-20 eV. <i>Journal of Chemical Physics</i> , 2014, 140, .	1.2	49
34	On the mechanism of anion desorption from DNA induced by low energy electrons. <i>Journal of Chemical Physics</i> , 2006, 125, 144713.	1.2	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. <i>Journal of Neuro-Oncology</i> , 2013, 115, 365-373.	1.4	45
36	Hydrogen Atom Loss in Pyrimidine DNA Bases Induced by Low-Energy Electrons:Â Energetics Predicted by Theory. <i>Journal of Physical Chemistry B</i> , 2004, 108, 19013-19019.	1.2	43

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37	A Single Subexcitationâ€Energy Electron Can Induce a Doubleâ€Strand Break in DNA Modified by Platinum Chemotherapeutic Drugs. <i>ChemMedChem</i> , 2014, 9, 1145-1149.	1.6	43
38	Glioblastoma Treatment: Bypassing the Toxicity of Platinum Compounds by Using Liposomal Formulation and Increasing Treatment Efficiency With Concomitant Radiotherapy. <i>International Journal of Radiation Oncology Biology Physics</i> , 2012, 84, 244-249.	0.4	39
39	Absolute cross section for low-energy-electron damage to condensed macromolecules: A case study of DNA. <i>Physical Review E</i> , 2012, 86, 031913.	0.8	38
40	Concomitant treatment of F98 glioma cells with new liposomal platinum compounds and ionizing radiation. <i>Journal of Neuro-Oncology</i> , 2010, 97, 187-193.	1.4	36
41	Convection-Enhanced Delivery in Malignant Gliomas: A Review of Toxicity and Efficacy. <i>Journal of Oncology</i> , 2019, 2019, 1-13.	0.6	36
42	Soft X-ray and Low Energy Electron-Induced Damage to DNA under N_{2} and O_{2} Atmospheres. <i>Journal of Physical Chemistry B</i> , 2011, 115, 4523-4531.	1.2	35
43	Liposomal formulations of carboplatin injected by convection-enhanced delivery increases the median survival time of F98 glioma bearing rats. <i>Journal of Nanobiotechnology</i> , 2018, 16, 77.	4.2	35
44	Low-Energy Electron-Induced Damage in a Trinucleotide Containing 5-Bromouracil. <i>Journal of Physical Chemistry B</i> , 2011, 115, 13668-13673.	1.2	33
45	DNA Damage Induced by Low-Energy Electrons: Conversion of Thymine to 5,6-Dihydrothymine in the Oligonucleotide Trimer TpTpT. <i>Radiation Research</i> , 2011, 175, 240-246.	0.7	33
46	The Relative Contributions of DNA Strand Breaks, Base Damage and Clustered Lesions to the Loss of DNA Functionality Induced by Ionizing Radiation. <i>Radiation Research</i> , 2014, 181, 99-110.	0.7	33
47	Clustered DNA Damage Induced by ~ 20 eV Electrons and Transient Anions: General Mechanism and Correlation to Cell Death. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 2985-2990.	2.1	33
48	Cisplatin Radiosensitization of DNA Irradiated with ~ 20 eV Electrons: Role of Transient Anions. <i>Journal of Physical Chemistry C</i> , 2014, 118, 15516-15524.	1.5	32
49	Low Energy Electrons in Nanoscale Radiation Physics: Relationship to Radiosensitization and Chemoradiation Therapy. <i>Reviews in Nanoscience and Nanotechnology</i> , 2013, 2, 1-28.	0.4	32
50	Dissociative electron attachment to abasic DNA. <i>Physical Chemistry Chemical Physics</i> , 2007, 9, 1730-1735.	1.3	31
51	Increased radiosensitivity of colorectal tumors with intra-tumoral injection of low dose of gold nanoparticles. <i>International Journal of Nanomedicine</i> , 2016, Volume 11, 5323-5333.	3.3	29
52	Effective and absolute cross sections for low-energy (1-30 eV) electron interactions with condensed biomolecules. <i>Applied Physics Reviews</i> , 2018, 5, 021302.	5.5	29
53	Efficacy of cisplatin and Lipoplatin, ϕ in combined treatment with radiation of a colorectal tumor in nude mouse. <i>Anticancer Research</i> , 2013, 33, 3005-14.	0.5	29
54	Measurement of inelastic cross sections for low-energy electron scattering from DNA bases. <i>International Journal of Radiation Biology</i> , 2012, 88, 15-21.	1.0	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. <i>Journal of Physical Chemistry C</i> , 2013, 117, 22445-22453.	1.5	27
56	Low-energy electron therapy. <i>Nature Materials</i> , 2015, 14, 861-863.	13.3	27
57	Strand Breaks Induced by Very Low Energy Electrons: Product Analysis and Mechanistic Insight into the Reaction with TpT. <i>Journal of the American Chemical Society</i> , 2019, 141, 10315-10323.	6.6	27
58	Low-Energy Electron Damage to Condensed-Phase DNA and Its Constituents. <i>International Journal of Molecular Sciences</i> , 2021, 22, 7879.	1.8	27
59	Unified Mechanism for the Generation of Isolated and Clustered DNA Damages by a Single Low Energy (5×10 eV) Electron. <i>Journal of Physical Chemistry C</i> , 2017, 121, 2466-2472.	1.5	25
60	Tuning the size of gold nanoparticles produced by multiple filamentation of femtosecond laser pulses in aqueous solutions. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 23403-23413.	1.3	25
61	Soft Adsorption of Densely Packed Layers of DNA-Plasmid-1,3-Diaminopropane Complexes onto Highly Oriented Pyrolytic Graphite Designed To Erode in Water. <i>Journal of Physical Chemistry C</i> , 2011, 115, 21291-21298.	1.5	24
62	Loss of Cellular Transformation Efficiency Induced by DNA Irradiation with Low-Energy (10 eV) Electrons. <i>Journal of Physical Chemistry B</i> , 2014, 118, 13123-13131.	1.2	24
63	Dissociative electron attachment and charge transfer in condensed matter. <i>Radiation Physics and Chemistry</i> , 2003, 68, 3-13.	1.4	22
64	Enhanced DNA Damage Induced by Secondary Electron Emission from a Tantalum Surface Exposed to Soft X Rays. <i>Radiation Research</i> , 2006, 165, 365-371.	0.7	22
65	Low-energy-electron interactions with DNA: approaching cellular conditions with atmospheric experiments. <i>European Physical Journal D</i> , 2014, 68, 1.	0.6	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. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 7897-7909.	1.3	21
67	Electron-Induced Radiolysis of Astrochemically Relevant Ammonia Ices. <i>ACS Earth and Space Chemistry</i> , 2019, 3, 800-810.	1.2	21
68	Synergism in concomitant chemoradiotherapy of cisplatin and oxaliplatin and their liposomal formulation in the human colorectal cancer HCT116 model. <i>Anticancer Research</i> , 2012, 32, 4395-404.	0.5	21
69	Dynamics of Dissociative Electron-Molecule Interactions in Condensed Methanol. <i>Journal of Physical Chemistry C</i> , 2014, 118, 22592-22600.	1.5	20
70	Absolute cross-sections for DNA strand breaks and crosslinks induced by low energy electrons. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 32762-32771.	1.3	20
71	Chemoradiation Cancer Therapy: Molecular Mechanisms of Cisplatin Radiosensitization. <i>Journal of Physical Chemistry C</i> , 2017, 121, 17505-17513.	1.5	20
72	Clustered DNA Damages induced by 0.5 to 30 eV Electrons. <i>International Journal of Molecular Sciences</i> , 2019, 20, 3749.	1.8	20

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73	Damage to amino acidâ€“nucleotide pairs induced by 1 eV electrons. <i>Physical Chemistry Chemical Physics</i> , 2010, 12, 9367.	1.3	19
74	Side-by-Side Comparison of DNA Damage Induced by Low-Energy Electrons and High-Energy Photons with Solid TpTpT Trinucleotide. <i>Journal of Physical Chemistry B</i> , 2013, 117, 10122-10131.	1.2	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. <i>Investigational New Drugs</i> , 2016, 34, 269-276.	1.2	19
76	Concomitant Chemoradiation Therapy with Gold Nanoparticles and Platinum Drugs Co-Encapsulated in Liposomes. <i>International Journal of Molecular Sciences</i> , 2020, 21, 4848.	1.8	19
77	Early Events in Radiobiology: Isolated and Cluster DNA Damage Induced by Initial Cations and Nonionizing Secondary Electrons. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 717-723.	2.1	19
78	Irradiator to study damage induced to large nonvolatile molecules by low-energy electrons. <i>Review of Scientific Instruments</i> , 2004, 75, 4534-4540.	0.6	18
79	Induction of strand breaks in DNA films by low energy electrons and soft X-ray under nitrous oxide atmosphere. <i>Radiation Physics and Chemistry</i> , 2012, 81, 33-39.	1.4	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. <i>Anticancer Research</i> , 2014, 34, 5303-12.	0.5	18
81	Effect of morphology of thin DNA films on the electron stimulated desorption of anions. <i>Journal of Chemical Physics</i> , 2011, 134, 015102.	1.2	14
82	Radiation-Induced Formation of 2â€“2,3â€“2-Dideoxyribonucleosides in DNA: A Potential Signature of Low-Energy Electrons. <i>Journal of the American Chemical Society</i> , 2012, 134, 17366-17368.	6.6	14
83	Dissociative electron attachment to DNA-diamine thin films: Impact of the DNA close environment on the OHâˆ“ and Oâˆ“ decay channels. <i>Journal of Chemical Physics</i> , 2013, 139, 055101.	1.2	14
84	DNA Strand Breaks Induced by Oâˆ“1.5 eV UV Photoelectrons under Atmospheric Pressure. <i>Journal of Physical Chemistry C</i> , 2016, 120, 487-495.	1.5	12
85	High Cytotoxic Effect by Combining Copper-64 with a NOTAâ€“Terpyridine Platinum Conjugate. <i>Journal of Medicinal Chemistry</i> , 2021, 64, 6765-6776.	2.9	12
86	Low energy electron stimulated desorption from DNA films dosed with oxygen. <i>Journal of Chemical Physics</i> , 2012, 136, 235104.	1.2	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. <i>Journal of Physical Chemistry B</i> , 2020, 124, 3315-3325.	1.2	8
88	Base Release and Modification in Solid-Phase DNA Exposed to Low-Energy Electrons. <i>Radiation Research</i> , 2016, 186, 520.	0.7	7
89	Design, Synthesis, and Cytotoxicity Assessment of [64Cu]Cu-NOTA-Terpyridine Platinum Conjugate: A Novel Chemoradiotherapeutic Agent with Flexible Linker. <i>Nanomaterials</i> , 2021, 11, 2154.	1.9	7
90	DNA Base Modifications Mediated by Femtosecond Laser-Induced Cold Low-Density Plasma in Aqueous Solutions. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 2753-2760.	2.1	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. <i>European Physical Journal D</i> , 2016, 70, 1.	0.6	5
92	Absolute cross sections for chemoradiation therapy: Damages to cisplatin-DNA complexes induced by 10 eV electrons. <i>Journal of Chemical Physics</i> , 2019, 150, 195101.	1.2	5
93	Damage Induced to DNA and Its Constituents by 0â€“3 eV UV Photoelectrons^{â€“}. <i>Photochemistry and Photobiology</i> , 2022, 98, 546-563.	1.3	5
94	Low-Energy Electron Damage to Plasmid DNA in Thin Films: Dependence on Substrates, Surface Density, Charging, Environment, and Uniformity. <i>Journal of Physical Chemistry B</i> , 0, , .	1.2	3
95	Intratumoral 18F-FLT infusion in metabolic targeted radiotherapy. <i>EJNMMI Research</i> , 2019, 9, 33.	1.1	2
96	Formation and decay of transient anions produced by electron impact on surface molecules. <i>AIP Conference Proceedings</i> , 1993, , .	0.3	1
97	Radiosensitization Induced by Ultra-stable PVA-coated Gold Nanoparticles: A Study with Fricke Dosimeter, Plasmid DNA and F98 Glioma Cells. <i>Current Nanomedicine</i> , 2018, 8, 121-134.	0.2	1