Carlos E Crespo-HernÃ¡ndez

List of Publications by Year
in descending order

105 papers	6,754 citations	76196 40 h-index	60497 81 g-index
119 all docs	119 docs citations	119 times ranked	3775 citing authors

#	Article	IF	Citations
1	Intramolecular Charge Transfer in the Azathioprine Prodrug Quenches Intersystem Crossing to the Reactive Triplet State in 6â€Mercaptopurine^{â€}. Photochemistry and Photobiology, 2022, 98, 617-632.	1.3	3
2	Photostability of 2,6-diaminopurine and its 2â€²-deoxyriboside investigated by femtosecond transient absorption spectroscopy. Physical Chemistry Chemical Physics, 2022, 24, 4204-4211.	1.3	4
3	On the Photostability of Cyanuric Acid and Its Candidature as a Prebiotic Nucleobase. Molecules, 2022, 27, 1184.	1.7	1
4	Increased Photostability of the Integral mRNA Vaccine Component N₁â€Methylpseudouridine Compared to Uridine. Chemistry - A European Journal, 2022, 28, .	1.7	4
5	Excited state dynamics of 2â€²-deoxyisoguanosine and isoguanosine in aqueous solution. Physical Chemistry Chemical Physics, 2022, 24, 6769-6781.	1.3	2
6	Disclosing the Role of C4-Oxo Substitution in the Photochemistry of DNA and RNA Pyrimidine Monomers: Formation of Photoproducts from the Vibrationally Excited Ground State. Journal of Physical Chemistry Letters, 2022, 13, 2000-2006.	2.1	2
7	2-Oxopurine Riboside: A Dual Fluorescent Analog and Photosensitizer for RNA/DNA Research. Journal of Physical Chemistry B, 2022, 126, 4483-4490.	1.2	3
8	Excited state dynamics of 7-deazaguanosine and guanosine 5â€²-monophosphate. Journal of Chemical Physics, 2021, 154, 075103.	1.2	9
9	Electronic Relaxation Pathways in Heavy-Atom-Free Photosensitizers Absorbing Near-Infrared Radiation and Exhibiting High Yields of Singlet Oxygen Generation. Journal of the American Chemical Society, 2021, 143, 2676-2681.	6.6	38
10	The kinetic landscape of an RNA-binding protein in cells. Nature, 2021, 591, 152-156.	13.7	50
11	Femtosecond intersystem crossing to the reactive triplet state of the 2,6-dithiopurine skin cancer photosensitizer. Physical Chemistry Chemical Physics, 2021, 23, 25048-25055.	1.3	3
12	Thionated organic compounds as emerging heavy-atom-free photodynamic therapy agents. Chemical Science, 2020, 11, 11113-11123.	3.7	49
13	Detection of the thietane precursor in the UVA formation of the DNA 6-4 photoadduct. Nature Communications, 2020, 11, 3599.	5.8	17
14	On the Origin of the Photostability of DNA and RNA Monomers: Excited State Relaxation Mechanism of the Pyrimidine Chromophore. Journal of Physical Chemistry Letters, 2020, 11, 5156-5161.	2.1	10
15	Excited State Lifetimes of Sulfur-Substituted DNA and RNA Monomers Probed Using the Femtosecond Fluorescence Up-Conversion Technique. Molecules, 2020, 25, 584.	1.7	8
16	Photochemical and Photodynamical Properties of Sulfurâ€Substituted Nucleic Acid Bases,. Photochemistry and Photobiology, 2019, 95, 33-58.	1.3	89
17	Photo-protection/photo-damage in natural systems: general discussion. Faraday Discussions, 2019, 216, 538-563.	1.6	4
18	Photovoltaics and bio-inspired light harvesting: general discussion. Faraday Discussions, 2019, 216, 269-300.	1.6	0

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19	Tracking the origin of photostability in purine nucleobases: the photophysics of 2-oxopurine. Physical Chemistry Chemical Physics, 2019, 21, 13467-13473.	1.3	9
20	Excited-State Dynamics in the RNA Nucleotide Uridine 5â€²-Monophosphate Investigated Using Femtosecond Broadband Transient Absorption Spectroscopy. Journal of Physical Chemistry Letters, 2019, 10, 2156-2161.	2.1	34
21	Light induced damage and repair in nucleic acids and proteins: general discussion. Faraday Discussions, 2018, 207, 389-408.	1.6	0
22	Photodynamics in Metal-Chelating Tetraphenylazadipyrromethene Complexes: Implications for Their Potential Use as Photovoltaic Materials. Journal of Physical Chemistry C, 2018, 122, 13579-13589.	1.5	3
23	Photocrosslinking between nucleic acids and proteins: general discussion. Faraday Discussions, 2018, 207, 283-306.	1.6	5
24	Light induced charge and energy transport in nucleic acids and proteins: general discussion. Faraday Discussions, 2018, 207, 153-180.	1.6	1
25	Dithionated Nucleobases as Effective Photodynamic Agents against Human Epidermoid Carcinoma Cells. ChemMedChem, 2018, 13, 1044-1050.	1.6	27
26	Photochemical relaxation pathways of S⁶-methylthioinosine and O⁶-methylguanosine in solution. Faraday Discussions, 2018, 207, 351-374.	1.6	9
27	Heavy-Atom-Substituted Nucleobases in Photodynamic Applications: Substitution of Sulfur with Selenium in 6-Thioguanine Induces a Remarkable Increase in the Rate of Triplet Decay in 6-Selenoguanine. Journal of the American Chemical Society, 2018, 140, 11214-11218.	6.6	48
28	Electronic relaxation pathways of the biologically relevant pterin chromophore. Physical Chemistry Chemical Physics, 2017, 19, 12720-12729.	1.3	11
29	Photochemical Reactivity of dTPT3: A Crucial Nucleobase Derivative in the Development of Semisynthetic Organisms. Journal of Physical Chemistry Letters, 2017, 8, 2387-2392.	2.1	12
30	Solvatochromic Effects on the Absorption Spectrum of 2-Thiocytosine. Journal of Physical Chemistry B, 2017, 121, 5187-5196.	1.2	31
31	Decoding the Molecular Basis for the Population Mechanism of the Triplet Phototoxic Precursors in UVA Lightâ€Activated Pyrimidine Anticancer Drugs. Chemistry - A European Journal, 2017, 23, 2619-2627.	1.7	49
32	HnRNP A1 Alters the Structure of a Conserved Enterovirus IRES Domain to Stimulate Viral Translation. Journal of Molecular Biology, 2017, 429, 2841-2858.	2.0	56
33	2-Thiouracil intersystem crossing photodynamics studied by wavelength-dependent photoelectron and transient absorption spectroscopies. Physical Chemistry Chemical Physics, 2017, 19, 19756-19766.	1.3	58
34	Photochemical Relaxation Pathways in Dinitropyrene Isomer Pollutants. Journal of Physical Chemistry A, 2017, 121, 8197-8206.	1.1	11
35	Excited-State Dynamics in O⁶-Methylguanosine: Impact of O⁶-Methylation on the Relaxation Mechanism of Guanine Monomers. Journal of Physical Chemistry Letters, 2017, 8, 4380-4385.	2.1	11
36	Ultrafast Excited-State Dynamics in Cyclometalated Ir(III) Complexes Coordinated with Perylenebisimide and Its Ï€-Radical Anion Ligands. Journal of Physical Chemistry C, 2017, 121, 21184-21198.	1.5	11

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37	Excited-State Dynamics of the Thiopurine Prodrug 6-Thioguanine: Can N9-Glycosylation Affect Its Phototoxic Activity?. Molecules, 2017, 22, 379.	1.7	43
38	Photorelaxation and Photorepair Processes in Nucleic and Amino Acid Derivatives. Molecules, 2017, 22, 2203.	1.7	3
39	Correction: Photochemical etiology of promising ancestors of the RNA nucleobases. Physical Chemistry Chemical Physics, 2016, 18, 22731-22731.	1.3	2
40	The Triplet State of 6â€thioâ€2â€²â€deoxyguanosine: Intrinsic Properties and Reactivity Toward Molecular Oxygen. Photochemistry and Photobiology, 2016, 92, 286-292.	1.3	35
41	Internal conversion and intersystem crossing pathways in UV excited, isolated uracils and their implications in prebiotic chemistry. Physical Chemistry Chemical Physics, 2016, 18, 20168-20176.	1.3	65
42	Unintended Consequences of Expanding the Genetic Alphabet. Journal of the American Chemical Society, 2016, 138, 11457-11460.	6.6	36
43	The Photochemical Branching Ratio in 1,6-Dinitropyrene Depends on the Excitation Energy. Journal of Physical Chemistry Letters, 2016, 7, 5086-5092.	2.1	18
44	Can a Sixâ€Letter Alphabet Increase the Likelihood of Photochemical Assault to the Genetic Code?. Chemistry - A European Journal, 2016, 22, 16648-16656.	1.7	17
45	The origin of efficient triplet state population in sulfur-substituted nucleobases. Nature Communications, 2016, 7, 13077.	5.8	149
46	Photochemical etiology of promising ancestors of the RNA nucleobases. Physical Chemistry Chemical Physics, 2016, 18, 20097-20103.	1.3	19
47	Increase in the photoreactivity of uracil derivatives by doubling thionation. Physical Chemistry Chemical Physics, 2015, 17, 27851-27861.	1.3	96
48	Electronic and Structural Elements That Regulate the Excited-State Dynamics in Purine Nucleobase Derivatives. Journal of the American Chemical Society, 2015, 137, 4368-4381.	6.6	72
49	Direct Observation of Triplet-State Population Dynamics in the RNA Uracil Derivative 1-Cyclohexyluracil. Journal of Physical Chemistry Letters, 2015, 6, 4404-4409.	2.1	30
50	Photochemistry of Nucleic Acid Bases and Their Thio- and Aza-Analogues in Solution. Topics in Current Chemistry, 2014, 355, 245-327.	4.0	82
51	2,4-Dithiothymine as a Potent UVA Chemotherapeutic Agent. Journal of the American Chemical Society, 2014, 136, 17930-17933.	6.6	126
52	Communication: The dark singlet state as a doorway state in the ultrafast and efficient intersystem crossing dynamics in 2-thiothymine and 2-thiouracil. Journal of Chemical Physics, 2014, 140, 071101.	1.2	86
53	Excited-State Dynamics in Nitro-Naphthalene Derivatives: Intersystem Crossing to the Triplet Manifold in Hundreds of Femtoseconds. Journal of Physical Chemistry A, 2013, 117, 6580-6588.	1.1	68
54	Electronic spectra and excited-state dynamics of 4-fluoro-N,N-dimethylaniline. Chemical Physics Letters, 2013, 586, 70-75.	1.2	11

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55	Role of intersystem crossing in the fluorescence quenching of 2-aminopurine 2â€™-deoxyriboside in solution. Photochemical and Photobiological Sciences, 2013, 12, 1341-1350.	1.6	48
56	Conformational Control in the Population of the Triplet State and Photoreactivity of Nitronaphthalene Derivatives. Journal of Physical Chemistry A, 2013, 117, 14100-14108.	1.1	41
57	On the Primary Reaction Pathways in the Photochemistry of Nitro-Polycyclic Aromatic Hydrocarbons. Modern Chemistry & Applications, 2013, 01, .	0.2	14
58	Subpicosecond Intersystem Crossing in Mono- and Di(organophosphine)gold(I) Naphthalene Derivatives in Solution. Journal of the American Chemical Society, 2012, 134, 14808-14817.	6.6	58
59	<i>In silico</i> structureâ€“function analysis of <i>E. cloacae</i> nitroreductase. Proteins: Structure, Function and Bioinformatics, 2012, 80, 2728-2741.	1.5	15
60	Synthesis, Optical Characterization, and Electrochemical Properties of Isomeric Tetraphenylbenzodifurans Containing Electron Acceptor Groups. Journal of Physical Chemistry A, 2011, 115, 4157-4168.	1.1	17
61	Excited-State Dynamics in 6-Thioguanosine from the Femtosecond to Microsecond Time Scale. Journal of Physical Chemistry B, 2011, 115, 3263-3270.	1.2	97
62	Quenching Enhancement of the Singlet Excited State of Pheophorbideâ€a by DNA in the Presence of the Quinone Carboquone. Photochemistry and Photobiology, 2011, 87, 275-283.	1.3	4
63	Photophysical and photochemical properties of the pharmaceutical compound salbutamol in aqueous solutions. Chemosphere, 2011, 83, 1513-1523.	4.2	25
64	Room-Temperature Phosphorescence of the DNA Monomer Analogue 4-Thiothymidine in Aqueous Solutions after UVA Excitation. Journal of Physical Chemistry Letters, 2010, 1, 2239-2243.	2.1	81
65	Excited-State Dynamics of (Organophosphine)gold(I) Pyrenyl Isomers. Journal of Physical Chemistry Letters, 2010, 1, 1205-1211.	2.1	31
66	Ultrafast spin crossover in 4-thiothymidine in an ionic liquid. Chemical Communications, 2010, 46, 5963.	2.2	56
67	On the origin of ultrafast nonradiative transitions in nitro-polycyclic aromatic hydrocarbons: Excited-state dynamics in 1-nitronaphthalene. Journal of Chemical Physics, 2009, 131, 224518.	1.2	110
68	The Excitedâ€State Lifetimes in a Gâ‹…C DNA Duplex are Nearly Independent of Helix Conformation and Baseâ€Pairing Motif. ChemPhysChem, 2009, 10, 1421-1425.	1.0	24
69	Deuterium Isotope Effect on Excited-State Dynamics in an Alternating GC Oligonucleotide. Journal of the American Chemical Society, 2009, 131, 17557-17559.	6.6	48
70	DNA Excited-State Dynamics: From Single Bases to the Double Helix. Annual Review of Physical Chemistry, 2009, 60, 217-239.	4.8	737
71	Structureâ€“Activity Relationships in Nitro-Aromatic Compounds. , 2009, , 217-240.		2
72	Predicting Thymine Dimerization Yields from Molecular Dynamics Simulations. Biophysical Journal, 2008, 94, 3590-3600.	0.2	90

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73	Environmental Photochemistry of Nitro-PAHs: Direct Observation of Ultrafast Intersystem Crossing in 1-Nitropyrene. Journal of Physical Chemistry A, 2008, 112, 6313-6319.	1.1	89
74	Ionization Energy Thresholds of Microhydrated Adenine and Its Tautomers. Journal of Physical Chemistry A, 2008, 112, 12702-12706.	1.1	20
75	Theoretical Elucidation of Conflicting Experimental Data on Vertical Ionization Potentials of Microhydrated Thymine. Journal of Physical Chemistry A, 2008, 112, 4405-4409.	1.1	16
76	Ground-State Recovery Following UV Excitation is Much Slower in GÂ·Câˆ'DNA Duplexes and Hairpins Than in Mononucleotides. Journal of the American Chemical Society, 2008, 130, 10844-10845.	6.6	53
77	UV excitation of single DNA and RNA strands produces high yields of exciplex states between two stacked bases. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 10285-10290.	3.3	172
78	Internal conversion to the electronic ground state occurs via two distinct pathways for pyrimidine bases in aqueous solution. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 435-440.	3.3	283
79	Thymine Dimerization in DNA Is an Ultrafast Photoreaction. Science, 2007, 315, 625-629.	6.0	496
80	Determination of Redox Potentials for the Watsonâˆ'Crick Base Pairs, DNA Nucleosides, and Relevant Nucleoside Analogues. Journal of Physical Chemistry B, 2007, 111, 5386-5395.	1.2	140
81	Vertical Singlet Excitations on Adenine Dimer: A Time Dependent Density Functional Study. AIP Conference Proceedings, 2007, , .	0.3	0
82	Excited State Dynamics in Single and Double-Stranded DNA Constructs: Ultrafast Formation of the Major Radiation Product in DNAâ€. , 2007, , .		0
83	Influence of Microhydration on the Ionization Energy Thresholds of Thymine:Â Comparisons of Theoretical Calculations with Experimental Values. Journal of Physical Chemistry A, 2006, 110, 7485-7490.	1.1	32
84	Solvent-Dependent Photophysics of 1-Cyclohexyluracil:Â Ultrafast Branching in the Initial Bright State Leads Nonradiatively to the Electronic Ground State and a Long-Lived1nÏ€* State. Journal of Physical Chemistry B, 2006, 110, 18641-18650.	1.2	112
85	Role of Sequence and Conformation on the Photochemistry and the Photophysics of Aâˆ'T DNA Dimers:Â An Experimental and Computational Approach. Journal of Physical Chemistry B, 2006, 110, 15589-15596.	1.2	11
86	Complexity of excited-state dynamics in DNA (Reply). Nature, 2006, 441, E8-E8.	13.7	56
87	Base stacking controls excited-state dynamics in AÂ·T DNA. Nature, 2005, 436, 1141-1144.	13.7	424
88	The Influence of Microhydration on the Ionization Energy Thresholds of Uracil and Thymine. Journal of Physical Chemistry A, 2005, 109, 9279-9283.	1.1	34
89	Ultrafast Excited-State Dynamics in Nucleic Acids. Chemical Reviews, 2004, 104, 1977-2020.	23.0	1,157
90	Formamidopyrimidines as major products in the low- and high-intensity UV irradiation of guanine derivatives. Journal of Photochemistry and Photobiology B: Biology, 2004, 73, 167-175.	1.7	14

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91	Ultrafast Excited-State Dynamics in Nucleic Acids. ChemInform, 2004, 35, no.	0.1	0
92	Stricklerâ€"Berg analysis of excited singlet state dynamics in DNA and RNA nucleosides. Faraday Discussions, 2004, 127, 137-147.	1.6	87
93	Influence of Secondary Structure on Electronic Energy Relaxation in Adenine Homopolymers. Journal of Physical Chemistry B, 2004, 108, 11182-11188.	1.2	110
94	Ab Initio Ionization Energy Thresholds of DNA and RNA Bases in Gas Phase and in Aqueous Solution. Journal of Physical Chemistry A, 2004, 108, 6373-6377.	1.1	119
95	Magnetic field-enhanced photoionization of 6-methylpurine. Chemical Physics Letters, 2003, 382, 661-664.	1.2	0
96	Near Threshold Photo-Oxidation of Dinucleotides Containing Purines upon 266 nm Nanosecond Laser Excitation. The Role of Base Stacking, Conformation, and Sequenceâ€. Journal of Physical Chemistry B, 2003, 107, 1062-1070.	1.2	21
97	The 254 nm low intensity and 266 nm laser photochemistry of adenosine.. Journal of Photochemistry and Photobiology A: Chemistry, 2002, 152, 123-133.	2.0	12
98	Photoionization of DNA and RNA Bases, Nucleosides and Nucleotides Through a Combination of One- and Two-photon Pathways upon 266 nm Nanosecond Laser ExcitationÂ¶. Photochemistry and Photobiology, 2002, 76, 259-267.	1.3	3
99	Photoionization of DNA and RNA Bases, Nucleosides and Nucleotides Through a Combination of One- and Two-photon Pathways upon 266 nm Nanosecond Laser ExcitationÂ¶. Photochemistry and Photobiology, 2002, 76, 259.	1.3	23
100	Mechanism of formation of the MV+ radical during the UV excitation of methylviologen. Journal of Photochemistry and Photobiology A: Chemistry, 2001, 142, 19-24.	2.0	12
101	Part II. Mechanism of Formation of Guanine as one of the Major Products in the 254 nm Photolysis of Guanine Derivatives: Concentration and pH Effects. Photochemistry and Photobiology, 2000, 71, 544.	1.3	12
102	Photochemistry of Pyrene on Unactivated and Activated Silica Surfaces. Environmental Science & Technology, 2000, 34, 415-421.	4.6	82
103	Part I. Photochemical and Photophysical Studies of Guanine Derivatives: Intermediates Contributing to its Photodestruction Mechanism in Aqueous Solution and the Participation of the Electron Adduct. Photochemistry and Photobiology, 2000, 71, 534-543.	1.3	3
104	Part II. Mechanism of Formation of Guanine as one of the Major Products in the 254 nm Photolysis of Guanine Derivatives: Concentration and pH Effects. Photochemistry and Photobiology, 2000, 71, 544-550.	1.3	2
105	Part I. Photochemical and Photophysical Studies of Guanine Derivatives: Intermediates Contributing to its Photodestruction Mechanism in Aqueous Solution and the Participation of the Electron Adduct. Photochemistry and Photobiology, 2000, 71, 534.	1.3	18