

Carlos E Crespo-Hernandez

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96
papers

5,655
citations

34
h-index

75
g-index

119
ext. papers

6,252
ext. citations

7.8
avg, IF

5.89
L-index

#	Paper	IF	Citations
96	Ultrafast excited-state dynamics in nucleic acids. <i>Chemical Reviews</i> , 2004 , 104, 1977-2019	68.1	1041
95	DNA excited-state dynamics: from single bases to the double helix. <i>Annual Review of Physical Chemistry</i> , 2009 , 60, 217-39	15.7	654
94	Thymine dimerization in DNA is an ultrafast photoreaction. <i>Science</i> , 2007 , 315, 625-9	33.3	425
93	Base stacking controls excited-state dynamics in A.T DNA. <i>Nature</i> , 2005 , 436, 1141-4	50.4	391
92	Internal conversion to the electronic ground state occurs via two distinct pathways for pyrimidine bases in aqueous solution. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007 , 104, 435-40	11.5	254
91	UV excitation of single DNA and RNA strands produces high yields of exciplex states between two stacked bases. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008 , 105, 10285-90	11.5	159
90	Determination of redox potentials for the Watson-Crick base pairs, DNA nucleosides, and relevant nucleoside analogues. <i>Journal of Physical Chemistry B</i> , 2007 , 111, 5386-95	3.4	116
89	The origin of efficient triplet state population in sulfur-substituted nucleobases. <i>Nature Communications</i> , 2016 , 7, 13077	17.4	110
88	Ab Initio Ionization Energy Thresholds of DNA and RNA Bases in Gas Phase and in Aqueous Solution. <i>Journal of Physical Chemistry A</i> , 2004 , 108, 6373-6377	2.8	110
87	Solvent-dependent photophysics of 1-cyclohexyluracil: ultrafast branching in the initial bright state leads nonradiatively to the electronic ground state and a long-lived $1\pi\pi^*$ state. <i>Journal of Physical Chemistry B</i> , 2006 , 110, 18641-50	3.4	105
86	2,4-Dithiothymine as a potent UVA chemotherapeutic agent. <i>Journal of the American Chemical Society</i> , 2014 , 136, 17930-3	16.4	100
85	Influence of Secondary Structure on Electronic Energy Relaxation in Adenine Homopolymers. <i>Journal of Physical Chemistry B</i> , 2004 , 108, 11182-11188	3.4	96
84	On the origin of ultrafast nonradiative transitions in nitro-polycyclic aromatic hydrocarbons: Excited-state dynamics in 1-nitronaphthalene. <i>Journal of Chemical Physics</i> , 2009 , 131, 224518	3.9	90
83	Excited-state dynamics in 6-thioguanosine from the femtosecond to microsecond time scale. <i>Journal of Physical Chemistry B</i> , 2011 , 115, 3263-70	3.4	84
82	Increase in the photoreactivity of uracil derivatives by doubling thionation. <i>Physical Chemistry Chemical Physics</i> , 2015 , 17, 27851-61	3.6	83
81	Environmental photochemistry of nitro-PAHs: direct observation of ultrafast intersystem crossing in 1-nitropyrene. <i>Journal of Physical Chemistry A</i> , 2008 , 112, 6313-9	2.8	78
80	Communication: the dark singlet state as a doorway state in the ultrafast and efficient intersystem crossing dynamics in 2-thiothymine and 2-thiouracil. <i>Journal of Chemical Physics</i> , 2014 , 140, 071101	3.9	76

79	Predicting thymine dimerization yields from molecular dynamics simulations. <i>Biophysical Journal</i> , 2008 , 94, 3590-600	2.9	76
78	Photochemistry of Pyrene on Unactivated and Activated Silica Surfaces. <i>Environmental Science & Technology</i> , 2000 , 34, 415-421	10.3	76
77	Strickler-Berg analysis of excited singlet state dynamics in DNA and RNA nucleosides. <i>Faraday Discussions</i> , 2004 , 127, 137-47	3.6	75
76	Room-Temperature Phosphorescence of the DNA Monomer Analogue 4-Thiothymidine in Aqueous Solutions after UVA Excitation. <i>Journal of Physical Chemistry Letters</i> , 2010 , 1, 2239-2243	6.4	71
75	Photochemistry of nucleic acid bases and their thio- and aza-analogues in solution. <i>Topics in Current Chemistry</i> , 2015 , 355, 245-327		62
74	Electronic and structural elements that regulate the excited-state dynamics in purine nucleobase derivatives. <i>Journal of the American Chemical Society</i> , 2015 , 137, 4368-81	16.4	58
73	Excited-state dynamics in nitro-naphthalene derivatives: intersystem crossing to the triplet manifold in hundreds of femtoseconds. <i>Journal of Physical Chemistry A</i> , 2013 , 117, 6580-8	2.8	54
72	Photochemical and Photodynamical Properties of Sulfur-Substituted Nucleic Acid Bases. <i>Photochemistry and Photobiology</i> , 2019 , 95, 33-58	3.6	53
71	Complexity of excited-state dynamics in DNA (Reply). <i>Nature</i> , 2006 , 441, E8-E8	50.4	53
70	Ultrafast spin crossover in 4-thiothymidine in an ionic liquid. <i>Chemical Communications</i> , 2010 , 46, 5963-5	5.8	52
69	Subpicosecond intersystem crossing in mono- and di(organophosphine)gold(I) naphthalene derivatives in solution. <i>Journal of the American Chemical Society</i> , 2012 , 134, 14808-17	16.4	51
68	Ground-state recovery following UV excitation is much slower in G x C-DNA duplexes and hairpins than in mononucleotides. <i>Journal of the American Chemical Society</i> , 2008 , 130, 10844-5	16.4	51
67	Internal conversion and intersystem crossing pathways in UV excited, isolated uracils and their implications in prebiotic chemistry. <i>Physical Chemistry Chemical Physics</i> , 2016 , 18, 20168-76	3.6	50
66	Deuterium isotope effect on excited-state dynamics in an alternating GC oligonucleotide. <i>Journal of the American Chemical Society</i> , 2009 , 131, 17557-9	16.4	44
65	2-Thiouracil intersystem crossing photodynamics studied by wavelength-dependent photoelectron and transient absorption spectroscopies. <i>Physical Chemistry Chemical Physics</i> , 2017 , 19, 19756-19766	3.6	43
64	HnRNP A1 Alters the Structure of a Conserved Enterovirus IRES Domain to Stimulate Viral Translation. <i>Journal of Molecular Biology</i> , 2017 , 429, 2841-2858	6.5	39
63	Decoding the Molecular Basis for the Population Mechanism of the Triplet Phototoxic Precursors in UVA Light-Activated Pyrimidine Anticancer Drugs. <i>Chemistry - A European Journal</i> , 2017 , 23, 2619-2627	4.8	37
62	The influence of microhydration on the ionization energy thresholds of uracil and thymine. <i>Journal of Physical Chemistry A</i> , 2005 , 109, 9279-83	2.8	33

61	Role of intersystem crossing in the fluorescence quenching of 2-aminopurine 2Sdeoxyriboside in solution. <i>Photochemical and Photobiological Sciences</i> , 2013 , 12, 1341-50	4.2	30
60	Excited-State Dynamics of the Thiopurine Prodrug 6-Thioguanine: Can N9-Glycosylation Affect Its Phototoxic Activity?. <i>Molecules</i> , 2017 , 22,	4.8	30
59	Conformational control in the population of the triplet state and photoreactivity of nitronaphthalene derivatives. <i>Journal of Physical Chemistry A</i> , 2013 , 117, 14100-8	2.8	30
58	Excited-State Dynamics of (Organophosphine)gold(I) Pyrenyl Isomers. <i>Journal of Physical Chemistry Letters</i> , 2010 , 1, 1205-1211	6.4	30
57	The Triplet State of 6-thio-2Sdeoxyguanosine: Intrinsic Properties and Reactivity Toward Molecular Oxygen. <i>Photochemistry and Photobiology</i> , 2016 , 92, 286-292	3.6	30
56	Influence of microhydration on the ionization energy thresholds of thymine: comparisons of theoretical calculations with experimental values. <i>Journal of Physical Chemistry A</i> , 2006 , 110, 7485-90	2.8	29
55	Unintended Consequences of Expanding the Genetic Alphabet. <i>Journal of the American Chemical Society</i> , 2016 , 138, 11457-60	16.4	26
54	Direct Observation of Triplet-State Population Dynamics in the RNA Uracil Derivative 1-Cyclohexyluracil. <i>Journal of Physical Chemistry Letters</i> , 2015 , 6, 4404-9	6.4	25
53	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. <i>Journal of the American Chemical Society</i> , 2018 , 140, 11214-11218	16.4	23
52	The excited-state lifetimes in a G x C DNA duplex are nearly independent of helix conformation and base-pairing motif. <i>ChemPhysChem</i> , 2009 , 10, 1421-5	3.2	21
51	Dithionated Nucleobases as Effective Photodynamic Agents against Human Epidermoid Carcinoma Cells. <i>ChemMedChem</i> , 2018 , 13, 1044-1050	3.7	20
50	Ionization energy thresholds of microhydrated adenine and its tautomers. <i>Journal of Physical Chemistry A</i> , 2008 , 112, 12702-6	2.8	20
49	Photoionization of DNA and RNA bases, nucleosides and nucleotides through a combination of one- and two-photon pathways upon 266 nm nanosecond laser excitation. <i>Photochemistry and Photobiology</i> , 2002 , 76, 259-67	3.6	20
48	Solvatochromic Effects on the Absorption Spectrum of 2-Thiocytosine. <i>Journal of Physical Chemistry B</i> , 2017 , 121, 5187-5196	3.4	19
47	Photophysical and photochemical properties of the pharmaceutical compound salbutamol in aqueous solutions. <i>Chemosphere</i> , 2011 , 83, 1513-23	8.4	19
46	Near Threshold Photo-Oxidation of Dinucleotides Containing Purines upon 266 nm Nanosecond Laser Excitation. The Role of Base Stacking, Conformation, and Sequence. <i>Journal of Physical Chemistry B</i> , 2003 , 107, 1062-1070	3.4	19
45	Thionated organic compounds as emerging heavy-atom-free photodynamic therapy agents. <i>Chemical Science</i> , 2020 , 11, 11113-11123	9.4	19
44	Excited-State Dynamics in the RNA Nucleotide Uridine 5SMonophosphate Investigated Using Femtosecond Broadband Transient Absorption Spectroscopy. <i>Journal of Physical Chemistry Letters</i> , 2019 , 10, 2156-2161	6.4	17

43	Synthesis, optical characterization, and electrochemical properties of isomeric tetraphenylbenzodifurans containing electron acceptor groups. <i>Journal of Physical Chemistry A</i> , 2011 , 115, 4157-68	2.8	16
42	Photochemical and photophysical studies of guanine derivatives: intermediates contributing to its photodestruction mechanism in aqueous solution and the participation of the electron adduct. <i>Photochemistry and Photobiology</i> , 2000 , 71, 534-43	3.6	16
41	Electronic Relaxation Pathways in Heavy-Atom-Free Photosensitizers Absorbing Near-Infrared Radiation and Exhibiting High Yields of Singlet Oxygen Generation. <i>Journal of the American Chemical Society</i> , 2021 , 143, 2676-2681	16.4	15
40	The kinetic landscape of an RNA-binding protein in cells. <i>Nature</i> , 2021 , 591, 152-156	50.4	15
39	The Photochemical Branching Ratio in 1,6-Dinitropyrene Depends on the Excitation Energy. <i>Journal of Physical Chemistry Letters</i> , 2016 , 7, 5086-5092	6.4	14
38	Photochemical etiology of promising ancestors of the RNA nucleobases. <i>Physical Chemistry Chemical Physics</i> , 2016 , 18, 20097-103	3.6	14
37	Theoretical elucidation of conflicting experimental data on vertical ionization potentials of microhydrated thymine. <i>Journal of Physical Chemistry A</i> , 2008 , 112, 4405-9	2.8	14
36	Can a Six-Letter Alphabet Increase the Likelihood of Photochemical Assault to the Genetic Code?. <i>Chemistry - A European Journal</i> , 2016 , 22, 16648-16656	4.8	12
35	On the Primary Reaction Pathways in the Photochemistry of Nitro-Polycyclic Aromatic Hydrocarbons. <i>Modern Chemistry & Applications</i> , 2013 , 01,		12
34	Mechanism of formation of the MV ⁺ radical during the UV excitation of methylviologen. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 2001 , 142, 19-24	4.7	12
33	Mechanism of formation of guanine as one of the major products in the 254 nm photolysis of guanine derivatives: concentration and pH effects. <i>Photochemistry and Photobiology</i> , 2000 , 71, 544-50	3.6	11
32	Ultrafast Excited-State Dynamics in Cyclometalated Ir(III) Complexes Coordinated with Perylenebisimide and Its Radical Anion Ligands. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 21184-21198 ^{3.8}		10
31	In silico structure-function analysis of E. cloacae nitroreductase. <i>Proteins: Structure, Function and Bioinformatics</i> , 2012 , 80, 2728-41	4.2	10
30	Formamidopyrimidines as major products in the low- and high-intensity UV irradiation of guanine derivatives. <i>Journal of Photochemistry and Photobiology B: Biology</i> , 2004 , 73, 167-75	6.7	10
29	Electronic spectra and excited-state dynamics of 4-fluoro-N,N-dimethylaniline. <i>Chemical Physics Letters</i> , 2013 , 586, 70-75	2.5	9
28	The 254 nm low intensity and 266 nm laser photochemistry of adenosine.: Effect of pH and concentration on the reactive precursors of the principal products, adenine and FAPyAde. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 2002 , 152, 123-133	4.7	9
27	Electronic relaxation pathways of the biologically relevant pterin chromophore. <i>Physical Chemistry Chemical Physics</i> , 2017 , 19, 12720-12729	3.6	7
26	Photochemical Relaxation Pathways in Dinitropyrene Isomer Pollutants. <i>Journal of Physical Chemistry A</i> , 2017 , 121, 8197-8206	2.8	7

25	Role of sequence and conformation on the photochemistry and the photophysics of A-T DNA dimers: an experimental and computational approach. <i>Journal of Physical Chemistry B</i> , 2006 , 110, 15589-96	3.4	7
24	Detection of the thietane precursor in the UVA formation of the DNA 6-4 photoadduct. <i>Nature Communications</i> , 2020 , 11, 3599	17.4	7
23	Photochemical Reactivity of dTPT3: A Crucial Nucleobase Derivative in the Development of Semisynthetic Organisms. <i>Journal of Physical Chemistry Letters</i> , 2017 , 8, 2387-2392	6.4	6
22	Photocrosslinking between nucleic acids and proteins: general discussion. <i>Faraday Discussions</i> , 2018 , 207, 283-306	3.6	5
21	Excited-State Dynamics in O-Methylguanosine: Impact of O-Methylation on the Relaxation Mechanism of Guanine Monomers. <i>Journal of Physical Chemistry Letters</i> , 2017 , 8, 4380-4385	6.4	5
20	Photochemical relaxation pathways of S-methylthioinosine and O-methylguanosine in solution. <i>Faraday Discussions</i> , 2018 , 207, 351-374	3.6	5
19	Tracking the origin of photostability in purine nucleobases: the photophysics of 2-oxopurine. <i>Physical Chemistry Chemical Physics</i> , 2019 , 21, 13467-13473	3.6	4
18	On the Origin of the Photostability of DNA and RNA Monomers: Excited State Relaxation Mechanism of the Pyrimidine Chromophore. <i>Journal of Physical Chemistry Letters</i> , 2020 , 11, 5156-5161	6.4	4
17	Excited State Lifetimes of Sulfur-Substituted DNA and RNA Monomers Probed Using the Femtosecond Fluorescence Up-Conversion Technique. <i>Molecules</i> , 2020 , 25,	4.8	4
16	Photo-protection/photo-damage in natural systems: general discussion. <i>Faraday Discussions</i> , 2019 , 216, 538-563	3.6	4
15	Quenching enhancement of the singlet excited state of pheophorbide-a by DNA in the presence of the quinone carboquone. <i>Photochemistry and Photobiology</i> , 2011 , 87, 275-83	3.6	4
14	Photodynamics in Metal-Chelating Tetraphenylazadipyrrromethene Complexes: Implications for Their Potential Use as Photovoltaic Materials. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 13579-13589	3.8	3
13	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. <i>Photochemistry and Photobiology</i> , 2007 , 71, 534-543	3.6	1
12	Structure-Activity Relationships in Nitro-Aromatic Compounds 2009 , 217-240		1
11	Intramolecular Charge Transfer in the Azathioprine Prodrug Quenches Intersystem Crossing to the Reactive Triplet State in 6-Mercaptopurine. <i>Photochemistry and Photobiology</i> , 2021 ,	3.6	1
10	Light induced charge and energy transport in nucleic acids and proteins: general discussion. <i>Faraday Discussions</i> , 2018 , 207, 153-180	3.6	0
9	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. <i>Photochemistry and Photobiology</i> , 2007 , 71, 544-550	3.6	0
8	Photoionization of DNA and RNA Bases, Nucleosides and Nucleotides Through a Combination of One- and Two-photon Pathways upon 266 nm Nanosecond Laser Excitation. <i>Photochemistry and Photobiology</i> , 2007 , 76, 259-267	3.6	0

- 7 Femtosecond intersystem crossing to the reactive triplet state of the 2,6-dithiopurine skin cancer photosensitizer. *Physical Chemistry Chemical Physics*, **2021**, 23, 25048-25055 3.6 0
- 6 Correction: Photochemical etiology of promising ancestors of the RNA nucleobases. *Physical Chemistry Chemical Physics*, **2016**, 18, 22731 3.6 0
- 5 Excited state dynamics of 7-deazaguanosine and guanosine 5Smonophosphate. *Journal of Chemical Physics*, **2021**, 154, 075103 3.9 0
- 4 Light induced damage and repair in nucleic acids and proteins: general discussion. *Faraday Discussions*, **2018**, 207, 389-408 3.6
- 3 Photovoltaics and bio-inspired light harvesting: general discussion. *Faraday Discussions*, **2019**, 216, 269-300 3.0
- 2 Magnetic field-enhanced photoinization of 6-methylpurine. *Chemical Physics Letters*, **2003**, 382, 661-664 2.5
- 1 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**, 2000-2006 6.4