Amitava Adhikary

List of Publications by Year
in descending order

58 papers	1,818 citations	236925 25 h-index	276875 41 g-index
61 all docs	61 docs citations	61 times ranked	1158 citing authors

#	Article	IF	Citations
1	The Guanine Cation Radical:Â Investigation of Deprotonation States by ESR and DFT. Journal of Physical Chemistry B, 2006, 110, 24171-24180.	2.6	133
2	Hydroxyl radical is a significant player in oxidative DNA damage<i>in vivo</i>. Chemical Society Reviews, 2021, 50, 8355-8360.	38.1	114
3	Direct Observation of the Hole Protonation State and Hole Localization Site in DNA-Oligomers. Journal of the American Chemical Society, 2009, 131, 8614-8619.	13.7	104
4	Formation of 8-oxo-7,8-dihydroguanine-radicals in Â-irradiated DNA by multiple one-electron oxidations. Nucleic Acids Research, 2004, 32, 6565-6574.	14.5	95
5	Effect of Base Stacking on the Acidâˆ’Base Properties of the Adenine Cation Radical [Aâ€¢+] in Solution: ESR and DFT Studies. Journal of the American Chemical Society, 2008, 130, 10282-10292.	13.7	74
6	Reactivity of prehydrated electrons toward nucleobases and nucleotides in aqueous solution. Science Advances, 2017, 3, e1701669.	10.3	67
7	UVA-visible photo-excitation of guanine radical cations produces sugar radicals in DNA and model structures. Nucleic Acids Research, 2005, 33, 5553-5564.	14.5	66
8	Photo-induced Hole Transfer from Base to Sugar in DNA: Relationship to Primary Radiation Damage. Radiation Research, 2006, 165, 479-484.	1.5	55
9	C5'- and C3'-sugar radicals produced via photo-excitation of one-electron oxidized adenine in 2'-deoxyadenosine and its derivatives. Nucleic Acids Research, 2006, 34, 1501-1511.	14.5	55
10	Observation of dissociative quasi-free electron attachment to nucleoside via excited anion radical in solution. Nature Communications, 2019, 10, 102.	12.8	55
11	Prototropic equilibria in DNA containing one-electron oxidized GC: intra-duplex vs. duplex to solvent deprotonation. Physical Chemistry Chemical Physics, 2010, 12, 5353.	2.8	54
12	Reaction of Electrons with DNA: Radiation Damage to Radiosensitization. International Journal of Molecular Sciences, 2019, 20, 3998.	4.1	54
13	Ensemble and single-molecule fluorescence spectroscopic study of the binding modes of the bis-benzimidazole derivative Hoechst 33258 with DNA. Nucleic Acids Research, 2003, 31, 2178-2186.	14.5	51
14	Gamma and ion-beam irradiation of DNA: Free radical mechanisms, electron effects, and radiation chemical track structure. Radiation Physics and Chemistry, 2016, 128, 60-74.	2.8	47
15	Do Solvated Electrons (e_{aq}^{â€“}) Reduce DNA Bases? A Gaussian 4 and Density Functional Theory-Molecular Dynamics Study. Journal of Physical Chemistry B, 2016, 120, 2115-2123.	2.6	43
16	Hydroxyl Ion Addition to One-Electron Oxidized Thymine: Unimolecular Interconversion of C5 to C6 OH-Adducts. Journal of the American Chemical Society, 2013, 135, 3121-3135.	13.7	42
17	Sugar Radicals Formed by Photoexcitation of Guanine Cation Radical in Oligonucleotides. Journal of Physical Chemistry B, 2007, 111, 7415-7421.	2.6	41
18	Photoexcitation of Adenine Cation Radical [Aâ€¢+] in the near UVâˆ’vis Region Produces Sugar Radicals in Adenosine and in Its Nucleotides. Journal of Physical Chemistry B, 2008, 112, 15844-15855.	2.6	36

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19	Highly Oxidizing Excited States of One-Electron-Oxidized Guanine in DNA: Wavelength and pH Dependence. Journal of the American Chemical Society, 2011, 133, 4527-4537.	13.7	36
20	UV-Induced Adenine Radicals Induced in DNA A-Tracts: Spectral and Dynamical Characterization. Journal of Physical Chemistry Letters, 2016, 7, 3949-3953.	4.6	35
21	The Role of Charge and Spin Migration in DNA Radiation Damage. Nanoscience and Technology, 2007, , 139-175.	1.5	34
22	Formation of Sugar Radicals in RNA Model Systems and Oligomers via Excitation of Guanine Cation Radical. Journal of Physical Chemistry B, 2008, 112, 2168-2178.	2.6	33
23	5-Thiocyanato-2â€²-deoxyuridine as a possible radiosensitizer: electron-induced formation of uracil-C5-thiyl radical and its dimerization. Physical Chemistry Chemical Physics, 2015, 17, 16907-16916.	2.8	29
24	A combinatorial approach of a polypharmacological adjuvant 2-deoxy-D-glucose with low dose radiation therapy to quell the cytokine storm in COVID-19 management. International Journal of Radiation Biology, 2020, 96, 1323-1328.	1.8	29
25	Formation of Sâ€"Cl Phosphorothioate Adduct Radicals in dsDNA S-Oligomers: Hole Transfer to Guanine vs Disulfide Anion Radical Formation. Journal of the American Chemical Society, 2013, 135, 12827-12838.	13.7	27
26	Modulating the Catalytic Activity of Cerium Oxide Nanoparticles with the Anion of the Precursor Salt. Journal of Physical Chemistry C, 2017, 121, 20039-20050.	3.1	26
27	Ultrafast Electron Attachment and Hole Transfer Following Ionizing Radiation of Aqueous Uridine Monophosphate. Journal of Physical Chemistry Letters, 2018, 9, 5105-5109.	4.6	26
28	Ultrafast Processes Occurring in Radiolysis of Highly Concentrated Solutions of Nucleosides/Tides. International Journal of Molecular Sciences, 2019, 20, 4963.	4.1	26
29	Electron Spin Resonance of Radicals in Irradiated DNA. , 2014, , 299-352.		25
30	Direct Formation of the C5â€²-Radical in the Sugarâ€"Phosphate Backbone of DNA by High-Energy Radiation. Journal of Physical Chemistry B, 2012, 116, 5900-5906.	2.6	24
31	Mechanisms of Radiation-Induced DNA Damage: Direct Effects. , 2010, , 509-542.		24
32	Ï€-Radical to Ïƒ-Radical Tautomerization in One-Electron-Oxidized 1-Methylcytosine and Its Analogs. Journal of Physical Chemistry B, 2015, 119, 11496-11505.	2.6	20
33	Direct observation of the oxidation of DNA bases by phosphate radicals formed under radiation: a model of the backbone-to-base hole transfer. Physical Chemistry Chemical Physics, 2018, 20, 14927-14937.	2.8	20
34	Formation of Aminyl Radicals on Electron Attachment to AZT: Abstraction from the Sugar Phosphate Backbone versus One-Electron Oxidation of Guanine. Journal of Physical Chemistry B, 2010, 114, 9289-9299.	2.6	19
35	On the Protonation Equilibrium for the Benzimidazole Derivative Hoechst 33258: An Electronic Molecular Orbital Study. Journal of Biomolecular Structure and Dynamics, 2002, 20, 301-310.	3.5	16
36	An ESR and DFT study of hydration of the 2â€²-deoxyuridine-5-yl radical: a possible hydroxyl radical intermediate. Chemical Communications, 2014, 50, 14605-14608.	4.1	15

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37	One-Electron Oxidation of Gemcitabine and Analogs: Mechanism of Formation of C3â€² and C2â€² Sugar Radicals. Journal of the American Chemical Society, 2014, 136, 15646-15653.	13.7	15
38	One-electron oxidation of ds(5â€²-GGG-3â€²) and ds(5â€²-G(8OG)G-3â€²) and the nature of hole distribution: a density functional theory (DFT) study. Physical Chemistry Chemical Physics, 2020, 22, 5078-5089.	2.8	15
39	Photooxidation of Nucleic Acids on Metal Oxides: Physicochemical and Astrobiological Perspectives. Journal of Physical Chemistry C, 2011, 115, 3393-3403.	3.1	14
40	Comment on â€œProton Transfer of Guanine Radical Cations Studied by Time-Resolved Resonance Raman Spectroscopy Combined with Pulse Radiolysisâ€. Journal of Physical Chemistry B, 2016, 120, 2984-2986.	2.6	14
41	Electron-Mediated Aminyl and Iminyl Radicals from C5 Azido-Modified Pyrimidine Nucleosides Augment Radiation Damage to Cancer Cells. Organic Letters, 2018, 20, 7400-7404.	4.6	14
42	Kr-86 Ion-Beam Irradiation of Hydrated DNA: Free Radical and Unaltered Base Yields. Radiation Research, 2012, 178, 524.	1.5	13
43	Prehydrated One-Electron Attachment to Azido-Modified Pentofuranoses: Aminyl Radical Formation, Rapid H-Atom Transfer, and Subsequent Ring Opening. Journal of Physical Chemistry B, 2017, 121, 4968-4980.	2.6	11
44	Presolvated Electron Reactions with Methyl Acetoacetate: Electron Localization, Proton-Deuteron Exchange, and H-Atom Abstraction. Molecules, 2014, 19, 13486-13497.	3.8	10
45	Reactions of 5-methylcytosine cation radicals in DNA and model systems: Thermal deprotonation from the 5-methyl group vs. excited state deprotonation from sugar. International Journal of Radiation Biology, 2014, 90, 433-445.	1.8	10
46	Comment on â€œTheoretical Study of Polaron Formation in Poly(G)â€“Poly(C) Cationsâ€. Journal of Physical Chemistry B, 2011, 115, 8947-8948.	2.6	8
47	Independent Photochemical Generation and Reactivity of Nitrogen-Centered Purine Nucleoside Radicals from Hydrazines. Organic Letters, 2017, 19, 6444-6447.	4.6	7
48	Quasi-Free Electron-Mediated Radiation Sensitization by C5-Halopyrimidines. Journal of Physical Chemistry A, 2021, 125, 7967-7975.	2.5	7
49	Evidence for strain control of magnetic anisotropy in epitaxial nickel ferrite thin films grown on strontium titanate substrates. Materials Research Bulletin, 2021, 138, 111214.	5.2	6
50	Ne-22 Ion-Beam Radiation Damage to DNA: From Initial Free Radical Formation to Resulting DNA-Base Damage. ACS Omega, 2021, 6, 16600-16611.	3.5	5
51	Site of Azido Substitution in the Sugar Moiety of Azidopyrimidine Nucleosides Influences the Reactivity of Aminyl Radicals Formed by Dissociative Electron Attachment. Journal of Physical Chemistry B, 2020, 124, 11357-11370.	2.6	4
52	One Way Traffic: Baseâ€toâ€Backbone Hole Transfer in Nucleoside Phosphorodithioate. Chemistry - A European Journal, 2020, 26, 9495-9505.	3.3	4
53	Radical Formation and Chemical Track Structure in Ion-Beam Irradiated DNA. , 2009, , .		3
54	Professor Clemens von Sonntag (1936 â€“ 2013). International Journal of Radiation Biology, 2013, 89, 590-592.	1.8	2

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55	Probing the Mechanism for 2,4â€²-Dihydroxyacetophenone Dioxygenase Using Biomimetic Iron Complexes. Inorganic Chemistry, 2021, 60, 7168-7179.	4.0	2
56	Modulation of the Directionality of Hole Transfer between the Base and the Sugar-Phosphate Backbone in DNA with the Number of Sulfur Atoms in the Phosphate Group. Journal of Physical Chemistry B, 2022, 126, 430-442.	2.6	2
57	Introduction to Clemens von Sonntag Memorial Issue. International Journal of Radiation Biology, 2014, 90, 415-415.	1.8	0
58	One Way Traffic: Baseâ€toâ€Backbone Hole Transfer in Nucleoside Phosphorodithioate. Chemistry - A European Journal, 2020, 26, 9407-9407.	3.3	0