Aaron M Fleming

List of Publications by Year
in descending order

95 papers	4,043 citations	117625 34 h-index	133252 59 g-index
99 all docs	99 docs citations	99 times ranked	3290 citing authors

#	Article	IF	Citations
1	Riboflavin Stabilizes Abasic, Oxidized G-Quadruplex Structures. Biochemistry, 2022, 61, 265-275.	2.5	3
2	Collateral Damage Occurs When Using Photosensitizer Probes to Detect or Modulate Nucleic Acid Modifications. Angewandte Chemie - International Edition, 2022, 61, e202110649.	13.8	6
3	Collateral Damage Occurs When Using Photosensitizer Probes to Detect or Modulate Nucleic Acid Modifications. Angewandte Chemie, 2022, 134, .	2.0	0
4	Identification of the Major Product of Guanine Oxidation in DNA by Ozone. Chemical Research in Toxicology, 2022, 35, 1809-1813.	3.3	5
5	Hysteresis in polyâ€2â€²â€deoxycytidine iâ€motif folding is impacted by the method of analysis as well as loop and stem lengths. Biopolymers, 2021, 112, e23389.	2.4	4
6	Deciphering nucleic acid knots. Nature Chemistry, 2021, 13, 618-619.	13.6	0
7	Oxidative stress-mediated epigenetic regulation by G-quadruplexes. NAR Cancer, 2021, 3, zcab038.	3.1	31
8	Nanopore Dwell Time Analysis Permits Sequencing and Conformational Assignment of Pseudouridine in SARS-CoV-2. ACS Central Science, 2021, 7, 1707-1717.	11.3	46
9	Binding of AP Endonuclease-1 to G-Quadruplex DNA Depends on the N-Terminal Domain, Mg²⁺, and Ionic Strength. ACS Bio & Med Chem Au, 2021, 1, 44-56.	3.7	17
10	Chemistry of ROS-Mediated Oxidation to the Guanine Base in DNA and its Biological Consequences. International Journal of Radiation Biology, 2021, , 1-24.	1.8	8
11	Interplay of Guanine Oxidation and G-Quadruplex Folding in Gene Promoters. Journal of the American Chemical Society, 2020, 142, 1115-1136.	13.7	99
12	On the irrelevancy of hydroxyl radical to DNA damage from oxidative stress and implications for epigenetics. Chemical Society Reviews, 2020, 49, 6524-6528.	38.1	68
13	Iron Fenton oxidation of 2â€²-deoxyguanosine in physiological bicarbonate buffer yields products consistent with the reactive oxygen species carbonate radical anion not the hydroxyl radical. Chemical Communications, 2020, 56, 9779-9782.	4.1	25
14	Potential G-Quadruplex Forming Sequences and <i>N</i>⁶-Methyladenosine Colocalize at Human Pre-mRNA Intron Splice Sites. ACS Chemical Biology, 2020, 15, 1292-1300.	3.4	18
15	Cruciform DNA Sequences in Gene Promoters Can Impact Transcription upon Oxidative Modification of 2â€²-Deoxyguanosine. Biochemistry, 2020, 59, 2616-2626.	2.5	9
16	RNA polymerase II stalls on oxidative DNA damage via a torsion-latch mechanism involving lone pairâ€"Ï€ and CHâ€"Ï€ interactions. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 9338-9348.	7.1	26
17	Structural Elucidation of Bisulfite Adducts to Pseudouridine That Result in Deletion Signatures during Reverse Transcription of RNA. Journal of the American Chemical Society, 2019, 141, 16450-16460.	13.7	23
18	Human <i>NEIL3</i> Gene Expression Regulated by Epigenetic-Like Oxidative DNA Modification. Journal of the American Chemical Society, 2019, 141, 11036-11049.	13.7	49

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19	Synthesis of Site-Specific Crown Ether Adducts to DNA Abasic Sites: 8-Oxo-7,8-Dihydro-2â€²-Deoxyguanosine and 2â€²-Deoxycytidine. Methods in Molecular Biology, 2019, 1973, 15-25.	0.9	1
20	Location dependence of the transcriptional response of a potential G-quadruplex in gene promoters under oxidative stress. Nucleic Acids Research, 2019, 47, 5049-5060.	14.5	44
21	Transcriptome-wide profiling of multiple RNA modifications simultaneously at single-base resolution. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 6784-6789.	7.1	162
22	Colocalization of m⁶A and G-Quadruplex-Forming Sequences in Viral RNA (HIV, Zika,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 ACS Central Science, 2019, 5, 218-228.	11.3	39
23	Oxidative Modification of Guanine in a Potential Z-DNA-Forming Sequence of a Gene Promoter Impacts Gene Expression. Chemical Research in Toxicology, 2019, 32, 899-909.	3.3	15
24	Impact of DNA Oxidation on Toxicology: From Quantification to Genomics. Chemical Research in Toxicology, 2019, 32, 345-347.	3.3	6
25	Oxidative Modification of the Potential G-Quadruplex Sequence in the <i>PCNA</i> Gene Promoter Can Turn on Transcription. Chemical Research in Toxicology, 2019, 32, 437-446.	3.3	45
26	Effect of Oxidative Damage on Charge and Spin Transport in DNA. Journal of the American Chemical Society, 2019, 141, 123-126.	13.7	32
27	Nanopore Analysis of the 5-Guanidinohydantoin to Iminoallantoin Isomerization in Duplex DNA. Journal of Organic Chemistry, 2018, 83, 3973-3978.	3.2	5
28	Human DNA Repair Genes Possess Potential G-Quadruplex Sequences in Their Promoters and 5â€²-Untranslated Regions. Biochemistry, 2018, 57, 991-1002.	2.5	55
29	The Fifth Domain in the G-Quadruplex-Forming Sequence of the Human <i>NEIL3</i> Promoter Locks DNA Folding in Response to Oxidative Damage. Biochemistry, 2018, 57, 2958-2970.	2.5	20
30	Unusual Isothermal Hysteresis in DNA i-Motif pHÂTransitions: A Study of the RAD17 Promoter Sequence. Biophysical Journal, 2018, 114, 1804-1815.	0.5	23
31	Single-Molecule Titration in a Protein Nanoreactor Reveals the Protonation/Deprotonation Mechanism of a C:C Mismatch in DNA. Journal of the American Chemical Society, 2018, 140, 5153-5160.	13.7	24
32	Characterization of G-Quadruplexes in <i>Chlamydomonas reinhardtii</i> and the Effects of Polyamine and Magnesium Cations on Structure and Stability. Biochemistry, 2018, 57, 6551-6561.	2.5	5
33	Î³-Hemolysin Nanopore Is Sensitive to Guanine-to-Inosine Substitutions in Double-Stranded DNA at the Single-Molecule Level. Journal of the American Chemical Society, 2018, 140, 14224-14234.	13.7	26
34	Case studies on potential G-quadruplex-forming sequences from the bacterial orders Deinococcales and Thermales derived from a survey of published genomes. Scientific Reports, 2018, 8, 15679.	3.3	38
35	Rapid Screen of Potential i-Motif Forming Sequences in DNA Repair Gene Promoters. ACS Omega, 2018, 3, 9630-9635.	3.5	24
36	The <i>RAD17</i> Promoter Sequence Contains a Potential Tail-Dependent G-Quadruplex That Downregulates Gene Expression upon Oxidative Modification. ACS Chemical Biology, 2018, 13, 2577-2584.	3.4	30

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37	Unraveling the 4n âˆ’ 1 rule for DNA i-motif stability: base pairs vs. loop lengths. Organic and Biomolecular Chemistry, 2018, 16, 4537-4546.	2.8	29
38	Oxidative DNA damage is epigenetic by regulating gene transcription via base excision repair. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 2604-2609.	7.1	269
39	Sequencing the Mouse Genome for the Oxidatively Modified Base 8-Oxo-7,8-dihydroguanine by OG-Seq. Journal of the American Chemical Society, 2017, 139, 2569-2572.	13.7	120
40	Dynamics of a DNA Mismatch Site Held in Confinement Discriminate Epigenetic Modifications of Cytosine. Journal of the American Chemical Society, 2017, 139, 2750-2756.	13.7	34
41	Interrogation of Base Pairing of the Spiroiminodihydantoin Diastereomers Using the Î±-Hemolysin Latch. Biochemistry, 2017, 56, 1596-1603.	2.5	8
42	8-Oxo-7,8-dihydroguanine, friend and foe: Epigenetic-like regulator versus initiator of mutagenesis. DNA Repair, 2017, 56, 75-83.	2.8	110
43	4<i>n</i>â€“1 Is a â€œSweet Spotâ€•in DNA i-Motif Folding of 2â€²-Deoxycytidine Homopolymers. Journal of the American Chemical Society, 2017, 139, 4682-4689.	13.7	100
44	Formation and processing of DNA damage substrates for the hNEIL enzymes. Free Radical Biology and Medicine, 2017, 107, 35-52.	2.9	97
45	8-Oxo-7,8-dihydroguanine in the Context of a Gene Promoter G-Quadruplex Is an Onâ€“Off Switch for Transcription. ACS Chemical Biology, 2017, 12, 2417-2426.	3.4	82
46	Reverse Transcription Past Products of Guanine Oxidation in RNA Leads to Insertion of A and C opposite 8-Oxo-7,8-dihydroguanine and A and G opposite 5-Guanidinohydantoin and Spiroiminodihydantoin Diastereomers. Biochemistry, 2017, 56, 5053-5064.	2.5	21
47	8-Oxo-7,8-dihydro-2â€²-deoxyguanosine and abasic site tandem lesions are oxidation prone yielding hydantoin products that strongly destabilize duplex DNA. Organic and Biomolecular Chemistry, 2017, 15, 8341-8353.	2.8	18
48	Sequencing DNA for the Oxidatively Modified Base 8-Oxo-7,8-Dihydroguanine. Methods in Enzymology, 2017, 591, 187-210.	1.0	7
49	Energetics of base flipping at a DNA mismatch site confined at the latch constriction of Î±-hemolysin. Faraday Discussions, 2016, 193, 471-485.	3.2	8
50	Kinetics of T3-DNA Ligase-Catalyzed Phosphodiester Bond Formation Measured Using the Î±-Hemolysin Nanopore. ACS Nano, 2016, 10, 11127-11135.	14.6	20
51	Zika Virus Genomic RNA Possesses Conserved G-Quadruplexes Characteristic of the Flaviviridae Family. ACS Infectious Diseases, 2016, 2, 674-681.	3.8	117
52	UV-Induced Proton-Coupled Electron Transfer in Cyclic DNA Miniduplexes. Journal of the American Chemical Society, 2016, 138, 7395-7401.	13.7	28
53	Unzipping of A-Form DNA-RNA, A-Form DNA-PNA, and B-Form DNA-DNA in the Î±-Hemolysin Nanopore. Biophysical Journal, 2016, 110, 306-314.	0.5	26
54	pH-Dependent Equilibrium between 5-Guanidinohydantoin and Iminoallantoin Affects Nucleotide Insertion Opposite the DNA Lesion. Journal of Organic Chemistry, 2016, 81, 351-359.	3.2	27

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55	Sequencing of DNA Lesions Facilitated by Site-Specific Excision via Base Excision Repair DNA Glycosylases Yielding Ligatable Gaps. Journal of the American Chemical Society, 2016, 138, 491-494.	13.7	32
56	Human Telomere G-Quadruplexes with Five Repeats Accommodate 8-Oxo-7,8-dihydroguanine by Looping out the DNA Damage. ACS Chemical Biology, 2016, 11, 500-507.	3.4	32
57	Base Flipping within the Î±-Hemolysin Latch Allows Single-Molecule Identification of Mismatches in DNA. Journal of the American Chemical Society, 2016, 138, 594-603.	13.7	42
58	Î±-Hemolysin nanopore studies reveal strong interactions between biogenic polyamines and DNA hairpins. Mikrochimica Acta, 2016, 183, 973-979.	5.0	4
59	Computational studies of electronic circular dichroism spectra predict absolute configuration assignments for the guanine oxidation product 5-carboxamido-5-formamido-2-iminohydantoin. Tetrahedron Letters, 2015, 56, 3191-3196.	1.4	12
60	The NEIL glycosylases remove oxidized guanine lesions from telomeric and promoter quadruplex DNA structures. Nucleic Acids Research, 2015, 43, 4039-4054.	14.5	129
61	Identification of DNA lesions using a third base pair for amplification and nanopore sequencing. Nature Communications, 2015, 6, 8807.	12.8	71
62	Spirodi(iminohydantoin) Products from Oxidation of 2â€²-Deoxyguanosine in the Presence of NH₄Cl in Nucleoside and Oligodeoxynucleotide Contexts. Journal of Organic Chemistry, 2015, 80, 711-721.	3.2	16
63	A Role for the Fifth G-Track in G-Quadruplex Forming Oncogene Promoter Sequences during Oxidative Stress: Do These â€œSpare Tiresâ€•Have an Evolved Function?. ACS Central Science, 2015, 1, 226-233.	11.3	125
64	Unfolding Kinetics of the Human Telomere i-Motif Under a 10 pN Force Imposed by the Î±-Hemolysin Nanopore Identify Transient Folded-State Lifetimes at Physiological pH. Journal of the American Chemical Society, 2015, 137, 9053-9060.	13.7	32
65	5-Carboxamido-5-formamido-2-iminohydantoin, in Addition to 8-oxo-7,8-Dihydroguanine, Is the Major Product of the Iron-Fenton or X-ray Radiation-Induced Oxidation of Guanine under Aerobic Reducing Conditions in Nucleoside and DNA Contexts. Journal of Organic Chemistry, 2015, 80, 6996-7007.	3.2	47
66	Rates of Chemical Cleavage of DNA and RNA Oligomers Containing Guanine Oxidation Products. Chemical Research in Toxicology, 2015, 28, 1292-1300.	3.3	35
67	Nanopore Detection of 8-Oxoguanine in the Human Telomere Repeat Sequence. ACS Nano, 2015, 9, 4296-4307.	14.6	71
68	Guanine Oxidation Product 5-Carboxamido-5-formamido-2-iminohydantoin Induces Mutations When Bypassed by DNA Polymerases and Is a Substrate for Base Excision Repair. Chemical Research in Toxicology, 2015, 28, 1861-1871.	3.3	15
69	Differentiation of G:C <i>vs</i> A:T and G:C <i>vs</i> G:mC Base Pairs in the Latch Zone of Î±-Hemolysin. ACS Nano, 2015, 9, 11325-11332.	14.6	18
70	Singleâ€•molecule detection of a guanine(C8)â€thymine(N3) crossâ€link using ion channel recording. Journal of Physical Organic Chemistry, 2014, 27, 247-251.	1.9	5
71	Effect of an Electrolyte Cation on Detecting DNA Damage with the Latch Constriction of Î±-Hemolysin. Journal of Physical Chemistry Letters, 2014, 5, 3781-3786.	4.6	19
72	Internal vs Fishhook Hairpin DNA: Unzipping Locations and Mechanisms in the Î±-Hemolysin Nanopore. Journal of Physical Chemistry B, 2014, 118, 12873-12882.	2.6	29

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73	Temperature and Electrolyte Optimization of the Î±-Hemolysin Latch Sensing Zone for Detection of Base Modification in Double-Stranded DNA. Biophysical Journal, 2014, 107, 924-931.	0.5	22
74	Single-molecule investigation of G-quadruplex folds of the human telomere sequence in a protein nanocavity. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 14325-14331.	7.1	62
75	Crystal Structure of DNA Polymerase Î² with DNA Containing the Base Lesion Spiroiminodihydantoin in a Templating Position. Biochemistry, 2014, 53, 2075-2077.	2.5	18
76	G-Quadruplex Folds of the Human Telomere Sequence Alter the Site Reactivity and Reaction Pathway of Guanine Oxidation Compared to Duplex DNA. Chemical Research in Toxicology, 2013, 26, 593-607.	3.3	133
77	Repair of Hydantoin Lesions and Their Amine Adducts in DNA by Base and Nucleotide Excision Repair. Journal of the American Chemical Society, 2013, 135, 13851-13861.	13.7	53
78	Endonuclease and exonuclease activities on oligodeoxynucleotides containing spiroiminodihydantoin depend on the sequence context and the lesion stereochemistry. New Journal of Chemistry, 2013, 37, 3440.	2.8	13
79	Structural Destabilization of DNA Duplexes Containing Single-Base Lesions Investigated by Nanopore Measurements. Biochemistry, 2013, 52, 7870-7877.	2.5	28
80	Base-Excision Repair Activity of Uracil-DNA Glycosylase Monitored Using the Latch Zone of Î±-Hemolysin. Journal of the American Chemical Society, 2013, 135, 19347-19353.	13.7	56
81	Reconciliation of Chemical, Enzymatic, Spectroscopic and Computational Data To Assign the Absolute Configuration of the DNA Base Lesion Spiroiminodihydantoin. Journal of the American Chemical Society, 2013, 135, 18191-18204.	13.7	64
82	Human NEIL3 is mainly a monofunctional DNA glycosylase removing spiroimindiohydantoin and guanidinohydantoin. DNA Repair, 2013, 12, 1159-1164.	2.8	80
83	Interactions of the Human Telomere Sequence with the Nanocavity of the Î±-Hemolysin Ion Channel Reveal Structure-Dependent Electrical Signatures for Hybrid Folds. Journal of the American Chemical Society, 2013, 135, 8562-8570.	13.7	49
84	Electrical Current Signatures of DNA Base Modifications in Single Molecules Immobilized in the Î±â€Hemolysin Ion Channel. Israel Journal of Chemistry, 2013, 53, 417-430.	2.3	13
85	Neil3 and NEIL1 DNA Glycosylases Remove Oxidative Damages from Quadruplex DNA and Exhibit Preferences for Lesions in the Telomeric Sequence Context. Journal of Biological Chemistry, 2013, 288, 27263-27272.	3.4	103
86	Crown etherâ€"electrolyte interactions permit nanopore detection of individual DNA abasic sites in single molecules. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 11504-11509.	7.1	93
87	Unzipping Kinetics of Duplex DNA Containing Oxidized Lesions in an Î±-Hemolysin Nanopore. Journal of the American Chemical Society, 2012, 134, 11006-11011.	13.7	74
88	Structural Context Effects in the Oxidation of 8-Oxo-7,8-dihydro-2â€²-deoxyguanosine to Hydantoin Products: Electrostatics, Base Stacking, and Base Pairing. Journal of the American Chemical Society, 2012, 134, 15091-15102.	13.7	70
89	Sequence-Specific Single-Molecule Analysis of 8-Oxo-7,8-dihydroguanine Lesions in DNA Based on Unzipping Kinetics of Complementary Probes in Ion Channel Recordings. Journal of the American Chemical Society, 2011, 133, 14778-14784.	13.7	37
90	Copper/H₂O₂-Mediated Oxidation of 2â€²-Deoxyguanosine in the Presence of 2-Naphthol Leads to the Formation of Two Distinct Isomeric Adducts. Journal of Organic Chemistry, 2011, 76, 7953-7963.	3.2	8

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91	Characterization of 2â€²-deoxyguanosine oxidation products observed in the Fenton-like system Cu(ii)/H2O2/reductant in nucleoside and oligodeoxynucleotide contexts. Organic and Biomolecular Chemistry, 2011, 9, 3338.	2.8	74
92	Endonuclease VIII-like 3 (Neil3) DNA glycosylase promotes neurogenesis induced by hypoxia-ischemia. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 18802-18807.	7.1	83
93	Electronic Structure of DNA - Unique Properties of 8-Oxoguanosine. Journal of the American Chemical Society, 2009, 131, 89-95.	13.7	24
94	Fluorophoreâ€mediated photooxidation of the guanine heterocycle. Journal of Physical Organic Chemistry, 0, , .	1.9	0
95	Response to â€œHydroxyl radical is predominantly involved in oxidatively generated base damage to cellular DNA exposed to ionizing radiationâ€•by Cadet etÂal.. International Journal of Radiation Biology, 0, , 1-1.	1.8	0