Mark D Szczelkun

List of Publications by Year
in descending order

63 papers	2,235 citations	236925 25 h-index	243625 44 g-index
69 all docs	69 docs citations	69 times ranked	1820 citing authors

#	Article	IF	Citations
1	Bacteriostatic antibiotics promote CRISPR-Cas adaptive immunity by enabling increased spacer acquisition. Cell Host and Microbe, 2022, 30, 31-40.e5.	11.0	30
2	CRISPRâ€“Cas12a-mediated DNA clamping triggers target-strand cleavage. Nature Chemical Biology, 2022, 18, 1014-1022.	8.0	15
3	ENDO-Pore: high-throughput linked-end mapping of single DNA cleavage events using nanopore sequencing. Nucleic Acids Research, 2021, 49, e118-e118.	14.5	1
4	Evolutionary Ecology and Interplay of Prokaryotic Innate and Adaptive Immune Systems. Current Biology, 2020, 30, R1189-R1202.	3.9	48
5	Mitochondrial import, health and mtDNA copy number variability using type II and type V CRISPR effectors. Journal of Cell Science, 2020, 133, .	2.0	16
6	5â€² modifications to CRISPRâ€“Cas9 gRNA can change the dynamics and size of R-loops and inhibit DNA cleavage. Nucleic Acids Research, 2020, 48, 6811-6823.	14.5	25
7	The Effect of DNA Topology on Observed Rates of R-Loop Formation and DNA Strand Cleavage by CRISPR Cas12a. Genes, 2019, 10, 169.	2.4	29
8	Hexameric assembly of the AAA+ protein McrB is necessary for GTPase activity. Nucleic Acids Research, 2019, 47, 868-882.	14.5	11
9	The H-subunit of the restriction endonuclease CglI contains a prototype DEAD-Z1 helicase-like motor. Nucleic Acids Research, 2018, 46, 2560-2572.	14.5	1
10	CglI cleaves DNA using a mechanism distinct from other ATP-dependent restriction endonucleases. Nucleic Acids Research, 2017, 45, 8435-8447.	14.5	2
11	Length heterogeneity at conserved sequence block 2 in human mitochondrial DNA acts as a rheostat for RNA polymerase POLRMT activity. Nucleic Acids Research, 2016, 44, 7817-7829.	14.5	29
12	Structural insights into DNA sequence recognition by Type ISP restriction-modification enzymes. Nucleic Acids Research, 2016, 44, 4396-4408.	14.5	14
13	Re-evaluating the kinetics of ATP hydrolysis during initiation of DNA sliding by Type III restriction enzymes. Nucleic Acids Research, 2015, 43, 10870-10881.	14.5	10
14	Mapping DNA cleavage by the Type ISP restriction-modification enzymes following long-range communication between DNA sites in different orientations. Nucleic Acids Research, 2015, 43, gkv1129.	14.5	5
15	Translocation-coupled DNA cleavage by the Type ISP restriction-modification enzymes. Nature Chemical Biology, 2015, 11, 870-877.	8.0	26
16	Type III restriction endonucleases are heterotrimeric: comprising one helicaseâ€“nuclease subunit and a dimeric methyltransferase that binds only one specific DNA. Nucleic Acids Research, 2014, 42, 5139-5150.	14.5	29
17	DNA cleavage by CglI and NgoAVII requires interaction between N- and R-proteins and extensive nucleotide hydrolysis. Nucleic Acids Research, 2014, 42, 13887-13896.	14.5	10
18	ClpXP protease targets long-lived DNA translocation states of a helicase-like motor to cause restriction alleviation. Nucleic Acids Research, 2014, 42, 12082-12091.	14.5	5

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19	Direct observation of R-loop formation by single RNA-guided Cas9 and Cascade effector complexes. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 9798-9803.	7.1	397
20	Roles for Helicases as ATP-Dependent Molecular Switches. Advances in Experimental Medicine and Biology, 2013, 767, 225-244.	1.6	8
21	The Type ISP Restriction-Modification enzymes LlaBIII and LlaGI use a translocation-collision mechanism to cleave non-specific DNA distant from their recognition sites. Nucleic Acids Research, 2013, 41, 1071-1080.	14.5	15
22	DNA cleavage by Type ISP Restrictionâ€"Modification enzymes is initially targeted to the 3â€²-5â€² strand. Nucleic Acids Research, 2013, 41, 1081-1090.	14.5	7
23	Switching roles for a helicase. Cell Cycle, 2013, 12, 3125-3126.	2.6	4
24	The Helicase-Like Domains of Type III Restriction Enzymes Trigger Long-Range Diffusion Along DNA. Science, 2013, 340, 353-356.	12.6	75
25	Dissociation from DNA of Type III Restrictionâ€"Modification enzymes during helicase-dependent motion and following endonuclease activity. Nucleic Acids Research, 2012, 40, 6752-6764.	14.5	4
26	How to Build a DNA Unwinding Machine. Structure, 2012, 20, 1127-1128.	3.3	3
27	Recycling of protein subunits during DNA translocation and cleavage by Type I restriction-modification enzymes. Nucleic Acids Research, 2011, 39, 7656-7666.	14.5	11
28	DNA cleavage site selection by Type III restriction enzymes provides evidence for head-on protein collisions following 1D bidirectional motion. Nucleic Acids Research, 2011, 39, 8042-8051.	14.5	9
29	Translocation, switching and gating: potential roles for ATP in long-range communication on DNA by TypeÂIII restriction endonucleases. Biochemical Society Transactions, 2011, 39, 589-594.	3.4	14
30	Maintaining a sense of direction during long-range communication on DNA. Biochemical Society Transactions, 2010, 38, 404-409.	3.4	24
31	Sequence-specific assembly of FtsK hexamers establishes directional translocation on DNA. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 20263-20268.	7.1	46
32	Type III restriction enzymes cleave DNA by long-range interaction between sites in both head-to-head and tail-to-tail inverted repeat. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 9123-9128.	7.1	41
33	An Mrr-family nuclease motif in the single polypeptide restrictionâ€"modification enzyme LlaGI. Nucleic Acids Research, 2009, 37, 7231-7238.	14.5	11
34	DNA cleavage and methylation specificity of the single polypeptide restrictionâ€"modification enzyme LlaGI. Nucleic Acids Research, 2009, 37, 7206-7218.	14.5	25
35	The single polypeptide restrictionâ€"modification enzyme LlaGI is a self-contained molecular motor that translocates DNA loops. Nucleic Acids Research, 2009, 37, 7219-7230.	14.5	17
36	Type III restriction enzymes communicate in 1D without looping between their target sites. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 1748-1753.	7.1	61

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37	S-Adenosyl homocysteine and DNA ends stimulate promiscuous nuclease activities in the Type III restriction endonuclease EcoPI. Nucleic Acids Research, 2009, 37, 3934-3945.	14.5	10
38	Motor step size and ATP coupling efficiency of the dsDNA translocase EcoR124I. EMBO Journal, 2008, 27, 1388-1398.	7.8	62
39	The Interrelationship of Helicase and Nuclease Domains during DNA Translocation by the Molecular Motor EcoR124I. Journal of Molecular Biology, 2008, 384, 1273-1286.	4.2	17
40	A RecB-family nuclease motif in the Type I restriction endonuclease EcoR124I. Nucleic Acids Research, 2008, 36, 3939-3949.	14.5	22
41	Controlling the motor activity of a transcription-repair coupling factor: autoinhibition and the role of RNA polymerase. Nucleic Acids Research, 2007, 35, 1802-1811.	14.5	58
42	A chlorite mineral surface actively drives the deposition of DNA molecules in stretched conformations. Nanotechnology, 2006, 17, 3897-3902.	2.6	25
43	When a helicase is not a helicase: dsDNA tracking by the motor protein EcoR124I. EMBO Journal, 2006, 25, 2230-2239.	7.8	57
44	Direct and random routing of a molecular motor protein at a DNA junction. Nucleic Acids Research, 2006, 34, 4387-4394.	14.5	10
45	Dynamics of initiation, termination and reinitiation of DNA translocation by the motor proteinEcoR124I. EMBO Journal, 2005, 24, 4188-4197.	7.8	33
46	Characterization of the Type III restriction endonuclease PstII from Providencia stuartii. Nucleic Acids Research, 2005, 33, 4775-4787.	14.5	27
47	Subunit assembly modulates the activities of the Type III restriction-modification enzyme PstII in vitro. Nucleic Acids Research, 2005, 33, 4788-4796.	14.5	11
48	Continuous Assays for DNA Translocation Using Fluorescent Triplex Dissociation: Application to Type I Restriction Endonucleases. Journal of Molecular Biology, 2005, 348, 895-915.	4.2	54
49	DNA communications by Type III restriction endonucleases--confirmation of 1D translocation over 3D looping. Nucleic Acids Research, 2004, 32, 4166-4174.	14.5	28
50	Enzyme-Mediated DNA Looping. Annual Review of Biophysics and Biomolecular Structure, 2004, 33, 1-24.	18.3	102
51	S-Adenosyl Methionine Prevents Promiscuous DNA Cleavage by the EcoP1I type III Restriction Enzyme. Journal of Molecular Biology, 2003, 333, 321-335.	4.2	34
52	Evidence for DNA Translocation by the ISWI Chromatin-Remodeling Enzyme. Molecular and Cellular Biology, 2003, 23, 1935-1945.	2.3	131
53	Kinetic Models of Translocation, Head-On Collision, and DNA Cleavage by Type I Restriction Endonucleasesâ€. Biochemistry, 2002, 41, 2067-2074.	2.5	29
54	Comparison Between Shear Force and Tapping Mode AFM - High Resolution Imaging of DNA. Single Molecules, 2002, 3, 105-110.	0.9	30

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55	How to get from A to B: strategies for analysing protein motion on DNA. European Biophysics Journal, 2002, 31, 257-267.	2.2	70
56	Subunit assembly and mode of DNA cleavage of the type III restriction endonucleases EcoP1I and EcoP15I11Edited by J. Karn. Journal of Molecular Biology, 2001, 306, 417-431.	4.2	83
57	Analysis of DNA looping interactions by type II restriction enzymes that require two copies of their recognition sites 1 1Edited by J. Karn. Journal of Molecular Biology, 2001, 311, 515-527.	4.2	36
58	How to proteins move along DNA? Lessons from type-I and type-III restriction endonucleases. Essays in Biochemistry, 2000, 35, 131-143.	4.7	14
59	DNA excision by the SfiI restriction endonuclease. Journal of Molecular Biology, 1998, 281, 419-432.	4.2	58
60	Random walk models for DNA synapsis by resolvase. Journal of Molecular Biology, 1997, 270, 413-425.	4.2	25
61	Selection of non-specific DNA cleavage sites by the type IC restriction endonuclease EcoR124I. Journal of Molecular Biology, 1997, 271, 112-123.	4.2	43
62	A general assay for restriction endonucleases and other DNA-modifying enzymes with plasmid substrates. Molecular Biotechnology, 1995, 4, 259-268.	2.4	26
63	Sequence-Specific Binding of DNA by the EcoRV Restriction and Modification Enzymes with Nucleic Acid and Cofactor Analogs. Biochemistry, 1995, 34, 10724-10733.	2.5	58