Maria Spies

List of Publications by Year
in descending order

67 papers	2,850 citations	186265 28 h-index	197818 49 g-index
85 all docs	85 docs citations	85 times ranked	2616 citing authors

#	Article	IF	Citations
1	RecBCD enzyme is a bipolar DNA helicase. Nature, 2003, 423, 893-897.	27.8	196
2	A Molecular Throttle. Cell, 2003, 114, 647-654.	28.9	176
3	Mismatch Repair during Homologous and Homeologous Recombination. Cold Spring Harbor Perspectives in Biology, 2015, 7, a022657.	5.5	146
4	Human Rad52 binds and wraps single-stranded DNA and mediates annealing via two hRad52â€“ssDNA complexes. Nucleic Acids Research, 2010, 38, 2917-2930.	14.5	121
5	RecBCD Enzyme Switches Lead Motor Subunits in Response to ï‡ Recognition. Cell, 2007, 131, 694-705.	28.9	120
6	Small-Molecule Inhibitors Targeting DNA Repair and DNA Repair Deficiency in Research and Cancer Therapy. Cell Chemical Biology, 2017, 24, 1101-1119.	5.2	111
7	A structural and dynamic model for the assembly of Replication Protein A on single-stranded DNA. Nature Communications, 2018, 9, 5447.	12.8	110
8	The RecA Binding Locus of RecBCD Is a General Domain for Recruitment of DNA Strand Exchange Proteins. Molecular Cell, 2006, 21, 573-580.	9.7	99
9	Dynamics and selective remodeling of the DNA-binding domains of RPA. Nature Structural and Molecular Biology, 2019, 26, 129-136.	8.2	94
10	The Iron-containing Domain Is Essential in Rad3 Helicases for Coupling of ATP Hydrolysis to DNA Translocation and for Targeting the Helicase to the Single-stranded DNA-Double-stranded DNA Junction. Journal of Biological Chemistry, 2008, 283, 1732-1743.	3.4	88
11	Dynamic binding of replication protein a is required for DNA repair. Nucleic Acids Research, 2016, 44, 5758-5772.	14.5	82
12	Human Rad52-mediated homology search and annealing occurs by continuous interactions between overlapping nucleoprotein complexes. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 20274-20279.	7.1	80
13	G-quadruplex recognition and remodeling by the FANCJ helicase. Nucleic Acids Research, 2016, 44, 8742-8753.	14.5	80
14	Single-Molecule Analysis Reveals Differential Effect of ssDNA-Binding Proteins on DNA Translocation by XPD Helicase. Molecular Cell, 2009, 35, 694-703.	9.7	73
15	Sequence-dependent base pair stepping dynamics in XPD helicase unwinding. ELife, 2013, 2, e00334.	6.0	72
16	Dynamic elements of replication protein A at the crossroads of DNA replication, recombination, and repair. Critical Reviews in Biochemistry and Molecular Biology, 2020, 55, 482-507.	5.2	70
17	Survival of the Replication Checkpoint Deficient Cells Requires MUS81-RAD52 Function. PLoS Genetics, 2013, 9, e1003910.	3.5	68
18	Small-molecule inhibitors identify the RAD52-ssDNA interaction as critical for recovery from replication stress and for survival of BRCA2 deficient cells. ELife, 2016, 5, .	6.0	64

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19	Rad52 prevents excessive replication fork reversal and protects from nascent strand degradation. Nature Communications, 2019, 10, 1412.	12.8	60
20	Regulation of translocation polarity by helicase domain 1 in SF2B helicases. EMBO Journal, 2012, 31, 503-514.	7.8	58
21	Tyrosine phosphorylation enhances RAD52-mediated annealing by modulating its DNA binding. EMBO Journal, 2011, 30, 3368-3382.	7.8	56
22	PCNA tool belts and polymerase bridges form during translesion synthesis. Nucleic Acids Research, 2016, 44, 8250-8260.	14.5	49
23	Tyrosine phosphorylation stimulates activity of human RAD51 recombinase through altered nucleoprotein filament dynamics. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E6045-E6054.	7.1	47
24	The Proliferating Cell Nuclear Antigen (PCNA)-interacting Protein (PIP) Motif of DNA Polymerase Î· Mediates Its Interaction with the C-terminal Domain of Rev1. Journal of Biological Chemistry, 2016, 291, 8735-8744.	3.4	44
25	Translocation by the RecB Motor Is an Absolute Requirement for Ï‡-Recognition and RecA Protein Loading by RecBCD Enzyme. Journal of Biological Chemistry, 2005, 280, 37078-37087.	3.4	40
26	Homologous Recombination by the RecBCD and RecF Pathways. , 0, , 389-403.		40
27	Contributions of the RAD51 N-terminal domain to BRCA2-RAD51 interaction. Nucleic Acids Research, 2013, 41, 9020-9032.	14.5	37
28	Mismatch repair protein hMSH2â€“hMSH6 recognizes mismatches and forms sliding clamps within a D-loop recombination intermediate. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E316-25.	7.1	37
29	Direct Correlation of DNA Binding and Single Protein Domain Motion via Dual Illumination Fluorescence Microscopy. Nano Letters, 2014, 14, 5920-5931.	9.1	37
30	Ferroplasma acidarmanus RPA2 Facilitates Efficient Unwinding of Forked DNA Substrates by Monomers of FacXPD Helicase. Journal of Molecular Biology, 2008, 383, 982-998.	4.2	32
31	Structure and Mechanisms of SF2 DNA Helicases. Advances in Experimental Medicine and Biology, 2013, 767, 47-73.	1.6	31
32	Making choices: DNA replication fork recovery mechanisms. Seminars in Cell and Developmental Biology, 2021, 113, 27-37.	5.0	30
33	Gain-of-function mutations in RPA1 cause a syndrome with short telomeres and somatic genetic rescue. Blood, 2022, 139, 1039-1051.	1.4	29
34	Single-molecule sorting reveals how ubiquitylation affects substrate recognition and activities of FBH1 helicase. Nucleic Acids Research, 2013, 41, 3576-3587.	14.5	28
35	Single-molecule study of the CUG repeatâ€“MBNL1 interaction and its inhibition by small molecules. Nucleic Acids Research, 2013, 41, 6687-6697.	14.5	27
36	Two steps forward, one step back: Determining XPD helicase mechanism by single-molecule fluorescence and high-resolution optical tweezers. DNA Repair, 2014, 20, 58-70.	2.8	25

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37	DSS1 interacts with and stimulates RAD52 to promote the repair of DSBs. Nucleic Acids Research, 2020, 48, 694-708.	14.5	24
38	Physiological and Pathological Roles of RAD52 at DNA Replication Forks. Cancers, 2020, 12, 402.	3.7	20
39	FRET-Based Assays to Monitor DNA Binding and Annealing by Rad52 Recombination Mediator Protein. Methods in Molecular Biology, 2011, 745, 463-483.	0.9	20
40	Engineering of Functional Replication Protein A Homologs Based on Insights into the Evolution of Oligonucleotide/ Oligosaccharide-Binding Folds. Journal of Bacteriology, 2008, 190, 5766-5780.	2.2	19
41	Single-molecule sorting of DNA helicases. Methods, 2016, 108, 14-23.	3.8	19
42	The Tiam1 guanine nucleotide exchange factor is auto-inhibited by its pleckstrin homology coiled-coil extension domain. Journal of Biological Chemistry, 2017, 292, 17777-17793.	3.4	19
43	Overview: What Are Helicases?. Advances in Experimental Medicine and Biology, 2013, 767, 1-16.	1.6	18
44	There and back again: new single-molecule insights in the motion of DNA repair proteins. Current Opinion in Structural Biology, 2013, 23, 154-160.	5.7	17
45	Ensemble and single-molecule fluorescence-based assays to monitor DNA binding, translocation, and unwinding by ironâ€“sulfur cluster containing helicases. Methods, 2010, 51, 313-321.	3.8	16
46	Quantifying the Assembly of Multicomponent Molecular Machines by Single-Molecule Total Internal Reflection Fluorescence Microscopy. Methods in Enzymology, 2016, 581, 105-145.	1.0	16
47	Observation and Analysis of RAD51 Nucleation Dynamics at Single-Monomer Resolution. Methods in Enzymology, 2018, 600, 201-232.	1.0	15
48	RPA complexes inCaenorhabditis elegansmeiosis; unique roles in replication, meiotic recombination and apoptosis. Nucleic Acids Research, 2021, 49, 2005-2026.	14.5	14
49	Helicase SPRNTing through the nanopore. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 11809-11811.	7.1	12
50	Inching over hurdles: How DNA helicases move on crowded lattices. Cell Cycle, 2010, 9, 1742-1749.	2.6	11
51	Expression, Purification, and Biochemical Evaluation of Human RAD51 Protein. Methods in Enzymology, 2018, 600, 157-178.	1.0	9
52	KERA: analysis tool for multi-process, multi-state single-molecule data. Nucleic Acids Research, 2021, 49, e53-e53.	14.5	9
53	Switch-like control of helicase processivity by single-stranded DNA binding protein. ELife, 2021, 10, .	6.0	7
54	Construction of a Three-Color Prism-Based TIRF Microscope to Study the Interactions and Dynamics of Macromolecules. Biology, 2021, 10, 571.	2.8	6

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55	Proteinâ€“nucleic acids interactions: new ways of connecting structure, dynamics and function. Biophysical Reviews, 2017, 9, 289-291.	3.2	5
56	DNA Repair: Trust but Verify. Current Biology, 2013, 23, R115-R117.	3.9	2
57	A time for promiscuity in a eukaryotic recombinase. Journal of Biological Chemistry, 2017, 292, 11136-11137.	3.4	2
58	<scp>RAD</scp> 51 discrimination between singleâ€•and doubleâ€strand <scp>DNA</scp> : a matter of flexibility and enthalpy. EMBO Journal, 2020, 39, e104547.	7.8	2
59	Fulfilling the dream of a perfect genome editing tool. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 10029-10030.	7.1	1
60	Preface. Methods in Enzymology, 2017, 582, xv-xvi.	1.0	1
61	Single-Molecule Analysis of Conformational Transitions in XPD Helicase. Biophysical Journal, 2013, 104, 61a.	0.5	0
62	Insights into the Autoinhibition Mechanism of the Tiam1 Guanine Nucleotide Exchange Factor. Biophysical Journal, 2016, 110, 206a.	0.5	0
63	Preface. Methods in Enzymology, 2016, 581, xvii-xviii.	1.0	0
64	Single-Molecule Sorting of Human DNA Repair Enzymes. Biophysical Journal, 2017, 112, 5a-6a.	0.5	0
65	Preface. Methods in Enzymology, 2018, 601, xv-xvi.	1.0	0
66	Getting swept off your toe(hold)s: Single-molecule DNA fission analysis offers glimpse into kinetics of branch migration. Biophysical Journal, 2021, 120, 2367-2369.	0.5	0
67	RAD52 Prevents Excessive Replication Fork Reversal and Protects from Nascent Strand Degradation. SSRN Electronic Journal, 0, , .	0.4	0