Eric C Greene

List of Publications by Year
in descending order

118 papers	8,209 citations	66234 42 h-index	56606 83 g-index
121 all docs	121 docs citations	121 times ranked	7637 citing authors

#	Article	IF	Citations
1	Rad54 and Rdh54 prevent Srs2-mediated disruption of Rad51 presynaptic filaments. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	11
2	Structureâ€“activity relationships at a nucleobase-stacking tryptophan required for chemomechanical coupling in the DNA resecting motor-nuclease AdnAB. Nucleic Acids Research, 2022, 50, 952-961.	6.5	2
3	Bloom helicase mediates formation of large singleâ€“stranded DNA loops during DNA end processing. Nature Communications, 2022, 13, 2248.	5.8	11
4	Single-molecule visualization of human RECQ5 interactions with single-stranded DNA recombination intermediates. Nucleic Acids Research, 2021, 49, 285-305.	6.5	15
5	Single-Stranded DNA Curtains for Single-Molecule Visualization of Rad51-ssDNA Filament Dynamics. Methods in Molecular Biology, 2021, 2281, 193-207.	0.4	4
6	Clutch mechanism of chemomechanical coupling in a DNA resecting motor nuclease. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, e2023955118.	3.3	6
7	RADX controls RAD51 filament dynamics to regulate replication fork stability. Molecular Cell, 2021, 81, 1074-1083.e5.	4.5	26
8	The Rad51 paralog complex Rad55-Rad57 acts as a molecular chaperone during homologous recombination. Molecular Cell, 2021, 81, 1043-1057.e8.	4.5	45
9	DNA Repair Pathway Choices in CRISPR-Cas9-Mediated Genome Editing. Trends in Genetics, 2021, 37, 639-656.	2.9	126
10	Srs2 and Pif1 as Model Systems for Understanding Sf1a and Sf1b Helicase Structure and Function. Genes, 2021, 12, 1319.	1.0	5
11	The Role of the Rad55â€“Rad57 Complex in DNA Repair. Genes, 2021, 12, 1390.	1.0	6
12	Editorial overview: Recombination â€" the ends justify the means. Current Opinion in Genetics and Development, 2021, 71, iii-vii.	1.5	0
13	Mechanistic Insights From Single-Molecule Studies of Repair of Double Strand Breaks. Frontiers in Cell and Developmental Biology, 2021, 9, 745311.	1.8	7
14	Computed structures of core eukaryotic protein complexes. Science, 2021, 374, eabm4805.	6.0	316
15	Single-molecule studies of yeast Rad51 paralogs. Methods in Enzymology, 2021, 661, 343-362.	0.4	0
16	Rad54 Drives ATP Hydrolysis-Dependent DNA Sequence Alignment during Homologous Recombination. Cell, 2020, 181, 1380-1394.e18.	13.5	77
17	DNA Curtains Shed Light on Complex Molecular Systems During Homologous Recombination. Journal of Visualized Experiments, 2020, , .	0.2	6
18	Human Condensin I and II Drive Extensive ATP-Dependent Compaction of Nucleosome-Bound DNA. Molecular Cell, 2020, 79, 99-114.e9.	4.5	129

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19	Rad54 and Rdh54 occupy spatially and functionally distinct sites within the Rad51â€ѕs <scp>DNA</scp> presynaptic complex. EMBO Journal, 2020, 39, e105705.	3.5	17
20	Demystifying the D-loop during DNA recombination. Nature, 2020, 586, 677-678.	13.7	4
21	Defining the influence of Rad51 and Dmc1 lineage-specific amino acids on genetic recombination. Genes and Development, 2019, 33, 1191-1207.	2.7	38
22	Rad52 Restrains Resection at DNA Double-Strand Break Ends in Yeast. Molecular Cell, 2019, 76, 699-711.e6.	4.5	37
23	Single-molecule visualization of human BLM helicase as it acts upon double- and single-stranded DNA substrates. Nucleic Acids Research, 2019, 47, 11225-11237.	6.5	32
24	Regulatory control of Sgs1 and Dna2 during eukaryotic DNA end resection. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 6091-6100.	3.3	35
25	The RecQ helicase Sgs1 drives ATP-dependent disruption of Rad51 filaments. Nucleic Acids Research, 2019, 47, 4694-4706.	6.5	26
26	Helicase Mechanisms During Homologous Recombination in <i>Saccharomyces cerevisiae</i>. Annual Review of Biophysics, 2019, 48, 255-273.	4.5	21
27	Structures and single-molecule analysis of bacterial motor nuclease AdnAB illuminate the mechanism of DNA double-strand break resection. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 24507-24516.	3.3	16
28	Dynamic interactions of the homologous pairing 2 (Hop2)â€“meiotic nuclear divisions 1 (Mnd1) protein complex with meiotic presynaptic filaments in budding yeast. Journal of Biological Chemistry, 2019, 294, 490-501.	1.6	19
29	Regulation of Hed1 and Rad54 binding during maturation of the meiosisâ€ѕpecific presynaptic complex. EMBO Journal, 2018, 37, .	3.5	33
30	Spontaneous self-segregation of Rad51 and Dmc1 DNA recombinases within mixed recombinase filaments. Journal of Biological Chemistry, 2018, 293, 4191-4200.	1.6	24
31	A change of view: homologous recombination at single-molecule resolution. Nature Reviews Genetics, 2018, 19, 191-207.	7.7	53
32	The biochemistry of early meiotic recombination intermediates. Cell Cycle, 2018, 17, 2520-2530.	1.3	24
33	Meiosis-specific recombinase Dmc1 is a potent inhibitor of the Srs2 antirecombinase. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E10041-E10048.	3.3	29
34	New roles for RAD52 in DNA repair. Cell Research, 2018, 28, 1127-1128.	5.7	7
35	Biochemical attributes of mitotic and meiotic presynaptic complexes. DNA Repair, 2018, 71, 148-157.	1.3	18
36	Single-Stranded DNA Curtains for Studying the Srs2 Helicase Using Total Internal Reflection Fluorescence Microscopy. Methods in Enzymology, 2018, 600, 407-437.	0.4	29

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37	Sequence imperfections and base triplet recognition by the Rad51/RecA family of recombinases. Journal of Biological Chemistry, 2017, 292, 11125-11135.	1.6	26
38	Human RAD52 interactions with replication protein A and the RAD51 presynaptic complex. Journal of Biological Chemistry, 2017, 292, 11702-11713.	1.6	47
39	Replication Protein A Blocks the Way. Biochemistry, 2017, 56, 1809-1810.	1.2	0
40	Telomere Recognition and Assembly Mechanism of Mammalian Shelterin. Cell Reports, 2017, 18, 41-53.	2.9	61
41	BRCA1â€"BARD1 promotes RAD51-mediated homologous DNA pairing. Nature, 2017, 550, 360-365.	13.7	262
42	Yeast Srs2 Helicase Promotes Redistribution of Single-Stranded DNA-Bound RPA and Rad52 in Homologous Recombination Regulation. Cell Reports, 2017, 21, 570-577.	2.9	36
43	Single-Stranded DNA Curtains for Studying Homologous Recombination. Methods in Enzymology, 2017, 582, 193-219.	0.4	31
44	The condensin complex is a mechanochemical motor that translocates along DNA. Science, 2017, 358, 672-676.	6.0	266
45	Sequential eviction of crowded nucleoprotein complexes by the exonuclease RecBCD molecular motor. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E6322-E6331.	3.3	21
46	Dissociation of Rad51 Presynaptic Complexes and Heteroduplex DNA Joints by Tandem Assemblies of Srs2. Cell Reports, 2017, 21, 3166-3177.	2.9	43
47	Monitoring Replication Protein A (RPA) dynamics in homologous recombination through site-specific incorporation of non-canonical amino acids. Nucleic Acids Research, 2017, 45, 9413-9426.	6.5	43
48	Protein dynamics of human RPA and RAD51 on ssDNA during assembly and disassembly of the RAD51 filament. Nucleic Acids Research, 2017, 45, 749-761.	6.5	120
49	Generalized nucleation and looping model for epigenetic memory of histone modifications. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E4180-9.	3.3	60
50	Visualizing recombination intermediates with single-stranded DNA curtains. Methods, 2016, 105, 62-74.	1.9	27
51	DNA Sequence Alignment during Homologous Recombination. Journal of Biological Chemistry, 2016, 291, 11572-11580.	1.6	65
52	ATP hydrolysis Promotes Duplex DNA Release by the RecA Presynaptic Complex. Journal of Biological Chemistry, 2016, 291, 22218-22230.	1.6	28
53	A Polar and Nucleotide-Dependent Mechanism of Action for RAD51 Paralogs in RAD51 Filament Remodeling. Molecular Cell, 2016, 64, 926-939.	4.5	43
54	Single-Molecule Imaging Reveals a Collapsed Conformational State for DNA-Bound Cohesin. Cell Reports, 2016, 15, 988-998.	2.9	220

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55	On the influence of protein-DNA register during homologous recombination. Cell Cycle, 2016, 15, 172-175.	1.3	2
56	DNA Sequence Alignment by Microhomology Sampling during Homologous Recombination. Cell, 2015, 160, 856-869.	13.5	182
57	The Dynamics of Eukaryotic Replication Initiation: Origin Specificity, Licensing, and Firing at the Single-Molecule Level. Molecular Cell, 2015, 58, 483-494.	4.5	80
58	A Molecular Take on Aesopâ€™s The Oak and the Reeds. Cell, 2015, 160, 1039-1040.	13.5	1
59	Surveillance and Processing of Foreign DNA by the Escherichia coli CRISPR-Cas System. Cell, 2015, 163, 854-865.	13.5	177
60	Base triplet stepping by the Rad51/RecA family of recombinases. Science, 2015, 349, 977-981.	6.0	145
61	Visualizing protein movement on DNA at the single-molecule level using DNA curtains. DNA Repair, 2014, 20, 94-109.	1.3	28
62	Single-Molecule Imaging of FtsK Translocation Reveals Mechanistic Features of Protein-Protein Collisions on DNA. Molecular Cell, 2014, 54, 832-843.	4.5	58
63	RPA antagonizes microhomology-mediated repair of DNA double-strand breaks. Nature Structural and Molecular Biology, 2014, 21, 405-412.	3.6	162
64	DNA interrogation by the CRISPR RNA-guided endonuclease Cas9. Nature, 2014, 507, 62-67.	13.7	1,573
65	DNA Dynamics and Single-Molecule Biology. Chemical Reviews, 2014, 114, 3072-3086.	23.0	37
66	Protein dynamics during presynaptic-complex assembly on individual single-stranded DNA molecules. Nature Structural and Molecular Biology, 2014, 21, 893-900.	3.6	81
67	DNA curtains. Methods in Cell Biology, 2014, 123, 217-234.	0.5	55
68	Concentration-Dependent Exchange of Replication Protein A on Single-Stranded DNA Revealed by Single-Molecule Imaging. PLoS ONE, 2014, 9, e87922.	1.1	176
69	The promoter-search mechanism of Escherichia coli RNA polymerase is dominated by three-dimensional diffusion. Nature Structural and Molecular Biology, 2013, 20, 174-181.	3.6	110
70	Single-Stranded DNA Curtains for Real-Time Single-Molecule Visualization of Proteinâˆ'Nucleic Acid Interactions. Biophysical Journal, 2013, 104, 178a.	0.2	0
71	Single-Molecule DNA Curtains Reveals the Details of KOPS Targeting, Translocation, and Collision with Protein Roadblocks of DNA Translocase FtsK. Biophysical Journal, 2013, 104, 173a.	0.2	1
72	E. Coli RNA Polymerase Searches for Promoters through 3D Diffusion. Biophysical Journal, 2013, 104, 541a.	0.2	0

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73	Molecular Traffic Jams on DNA. Annual Review of Biophysics, 2013, 42, 241-263.	4.5	34
74	How do proteins locate specific targets in DNA?. Chemical Physics Letters, 2013, 570, 1-11.	1.2	44
75	Target search dynamics during post-replicative mismatch repair. Cell Cycle, 2013, 12, 537-538.	1.3	2
76	Tension modulates actin filament polymerization mediated by formin and profilin. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 9752-9757.	3.3	115
77	Single-molecule imaging of DNA curtains reveals mechanisms of KOPS sequence targeting by the DNA translocase FtsK. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 6531-6536.	3.3	56
78	Single-molecule imaging reveals target-search mechanisms during DNA mismatch repair. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, E3074-83.	3.3	156
79	The Unstructured Linker Arms of Mlh1â€"Pms1 Are Important for Interactions with DNA during Mismatch Repair. Journal of Molecular Biology, 2012, 422, 192-203.	2.0	30
80	Measuring intermolecular rupture forces with a combined TIRF-optical trap microscope and DNA curtains. Biochemical and Biophysical Research Communications, 2012, 426, 565-570.	1.0	11
81	Single-Molecule Imaging Reveals Mechanisms of Roadblock Clearance by DNA Motor Enzymes. Biophysical Journal, 2012, 102, 610a-611a.	0.2	0
82	Single-Stranded DNA Curtains for Real-Time Single-Molecule Visualization of Proteinâ€"Nucleic Acid Interactions. Analytical Chemistry, 2012, 84, 7607-7612.	3.2	70
83	Sliding to the rescue of damaged DNA. ELife, 2012, 1, e00347.	2.8	2
84	Single-Molecule Studies of Transcription: From One RNA Polymerase at a Time to the Gene Expression Profile of a Cell. Journal of Molecular Biology, 2011, 412, 814-831.	2.0	23
85	Analyses of the yeast Rad51 recombinase A265V mutant reveal different in vivo roles of Swi2-like factors. Nucleic Acids Research, 2011, 39, 6511-6522.	6.5	16
86	Supported Lipid Bilayers and DNA Curtains for High-Throughput Single-Molecule Studies. Methods in Molecular Biology, 2011, 745, 447-461.	0.4	30
87	Assembly of Recombinant Nucleosomes on Nanofabricated DNA Curtains for Single-Molecule Imaging. Methods in Molecular Biology, 2011, 778, 243-258.	0.4	16
88	Visualizing one-dimensional diffusion of eukaryotic DNA repair factors along a chromatin lattice. Nature Structural and Molecular Biology, 2010, 17, 932-938.	3.6	175
89	Single-molecule imaging reveals mechanisms of protein disruption by a DNA translocase. Nature, 2010, 468, 983-987.	13.7	153
90	Molecular Traffic Jams on DNA Highways: Single Molecule Observation of Collisions Between RecBCD Helicase and DNA Binding Proteins. Biophysical Journal, 2010, 98, 61a-62a.	0.2	1

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91	Visual Biochemistry: High Throughput Single Molecule Imaging of Protein DNA Interactions. Biophysical Journal, 2010, 98, 185a-186a.	0.2	0
92	Nanofabricated Racks of Aligned and Anchored DNA Substrates for Single-Molecule Imaging. Langmuir, 2010, 26, 1372-1379.	1.6	62
93	DNA Curtains for High-Throughput Single-Molecule Optical Imaging. Methods in Enzymology, 2010, 472, 293-315.	0.4	116
94	Structural transitions within human Rad51 nucleoprotein filaments. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 12688-12693.	3.3	43
95	Functional significance of the Rad51-Srs2 complex in Rad51 presynaptic filament disruption. Nucleic Acids Research, 2009, 37, 6754-6764.	6.5	60
96	Functional interactions of meiotic recombination factors Rdh54 and Dmc1. DNA Repair, 2009, 8, 279-284.	1.3	29
97	Single-molecule imaging of DNA curtains reveals intrinsic energy landscapes for nucleosome deposition. Nature Structural and Molecular Biology, 2009, 16, 1056-1062.	3.6	80
98	Visualizing the Disassembly of S. cerevisiae Rad51 Nucleoprotein Filaments. Journal of Molecular Biology, 2009, 388, 703-720.	2.0	24
99	XPD Helicase Speeds through a Molecular Traffic Jam. Molecular Cell, 2009, 35, 549-550.	4.5	2
100	Visualizing one-dimensional diffusion of proteins along DNA. Nature Structural and Molecular Biology, 2008, 15, 768-774.	3.6	247
101	The importance of surfaces in single-molecule bioscience. Molecular BioSystems, 2008, 4, 394.	2.9	43
102	Single molecule studies of homologous recombination. Molecular BioSystems, 2008, 4, 1094.	2.9	17
103	Parallel Arrays of Geometric Nanowells for Assembling Curtains of DNA with Controlled Lateral Dispersion. Langmuir, 2008, 24, 11293-11299.	1.6	44
104	DNA Curtains and Nanoscale Curtain Rods: High-Throughput Tools for Single Molecule Imaging. Langmuir, 2008, 24, 10524-10531.	1.6	95
105	ATP-dependent Chromatin Remodeling by the Saccharomyces cerevisiae Homologous Recombination Factor Rdh54. Journal of Biological Chemistry, 2008, 283, 10445-10452.	1.6	36
106	A DNA-translocating Snf2 Molecular Motor: Saccharomyces cerevisiae Rdh54 Displays Processive Translocation and Extrudes DNA Loops. Journal of Molecular Biology, 2007, 369, 940-953.	2.0	77
107	Dynamic Basis for One-Dimensional DNA Scanning by the Mismatch Repair Complex Msh2-Msh6. Molecular Cell, 2007, 28, 359-370.	4.5	215
108	Organized Arrays of Individual DNA Molecules Tethered to Supported Lipid Bilayers. Langmuir, 2006, 22, 292-299.	1.6	131

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109	Visualizing the Assembly of Human Rad51 Filaments on Double-stranded DNA. Journal of Molecular Biology, 2006, 363, 713-728.	2.0	55
110	Visualizing the Behavior of Human Rad51 at the Single-Molecule Level. Cell Cycle, 2006, 5, 1033-1038.	1.3	7
111	Long-distance lateral diffusion of human Rad51 on double-stranded DNA. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 1221-1226.	3.3	156
112	Visualizing DNA repair proteins in action. FASEB Journal, 2006, 20, .	0.2	0
113	Visualizing the Assembly and Disassembly Mechanisms of the MuB Transposition Targeting Complex. Journal of Biological Chemistry, 2004, 279, 16736-16743.	1.6	28
114	Direct Observation of Single MuB Polymers. Molecular Cell, 2002, 9, 1079-1089.	4.5	47
115	Target Immunity during Mu DNA Transposition. Molecular Cell, 2002, 10, 1367-1378.	4.5	39
116	Dynamics of a protein polymer: the assembly and disassembly pathways of the MuB transposition target complex. EMBO Journal, 2002, 21, 1477-1486.	3.5	26
117	Flexible Positioning of the Telomerase-Associated Nuclease Leads to Preferential Elimination of Nontelomeric DNA. Molecular and Cellular Biology, 1998, 18, 1544-1552.	1.1	21
118	Developmentally regulated initiation of DNA synthesis by telomerase: evidence for factor-assistedde novotelomere formation. EMBO Journal, 1997, 16, 2507-2518.	3.5	44