

Ilya J Finkelstein

List of Publications by Year in descending order

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Version: 2024-02-01

64
papers

4,528
citations

159585

30
h-index

133252

59
g-index

96
all docs

96
docs citations

96
times ranked

7392
citing authors

#	ARTICLE	IF	CITATIONS
1	Structure-based design of prefusion-stabilized SARS-CoV-2 spikes. <i>Science</i> , 2020, 369, 1501-1505.	12.6	977
2	Human cohesin compacts DNA by loop extrusion. <i>Science</i> , 2019, 366, 1345-1349.	12.6	513
3	Kinetic Basis for DNA Target Specificity of CRISPR-Cas12a. <i>Molecular Cell</i> , 2018, 71, 816-824.e3.	9.7	225
4	Prevalent, protective, and convergent IgG recognition of SARS-CoV-2 non-RBD spike epitopes. <i>Science</i> , 2021, 372, 1108-1112.	12.6	210
5	Single-Molecule Imaging Reveals How Mre11-Rad50-Nbs1 Initiates DNA Break Repair. <i>Molecular Cell</i> , 2017, 67, 891-898.e4.	9.7	156
6	Single-molecule imaging reveals mechanisms of protein disruption by a DNA translocase. <i>Nature</i> , 2010, 468, 983-987.	27.8	153
7	Poly(ADP-ribose) polymerase-1 antagonizes DNA resection at double-strand breaks. <i>Nature Communications</i> , 2019, 10, 2954.	12.8	122
8	Molecular Architecture of Early Dissemination and Massive Second Wave of the SARS-CoV-2 Virus in a Major Metropolitan Area. <i>MBio</i> , 2020, 11, .	4.1	99
9	Massively Parallel Biophysical Analysis of CRISPR-Cas Complexes on Next Generation Sequencing Chips. <i>Cell</i> , 2017, 170, 35-47.e13.	28.9	96
10	DNA-dependent protein kinase promotes DNA end processing by MRN and CtIP. <i>Science Advances</i> , 2020, 6, eaay0922.	10.3	92
11	Nucleosome Acidic Patch Promotes RNF168- and RING1B/BMI1-Dependent H2AX and H2A Ubiquitination and DNA Damage Signaling. <i>PLoS Genetics</i> , 2014, 10, e1004178.	3.5	83
12	Single-molecule imaging reveals the mechanism of Exo1 regulation by single-stranded DNA binding proteins. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, E1170-9.	7.1	81
13	Massively parallel kinetic profiling of natural and engineered CRISPR nucleases. <i>Nature Biotechnology</i> , 2021, 39, 84-93.	17.5	80
14	HEDGES error-correcting code for DNA storage corrects indels and allows sequence constraints. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 18489-18496.	7.1	75
15	Assembly and Translocation of a CRISPR-Cas Primed Acquisition Complex. <i>Cell</i> , 2018, 175, 934-946.e15.	28.9	74
16	RPA Phosphorylation Inhibits DNA Resection. <i>Molecular Cell</i> , 2019, 75, 145-153.e5.	9.7	73
17	Single-Stranded DNA Curtains for Real-Time Single-Molecule Visualization of Protein-Nucleic Acid Interactions. <i>Analytical Chemistry</i> , 2012, 84, 7607-7612.	6.5	70
18	Retrons and their applications in genome engineering. <i>Nucleic Acids Research</i> , 2019, 47, 11007-11019.	14.5	60

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19	High-Throughput Universal DNA Curtain Arrays for Single-Molecule Fluorescence Imaging. <i>Langmuir</i> , 2015, 31, 10310-10317.	3.5	59
20	Single-Molecule Imaging of FtsK Translocation Reveals Mechanistic Features of Protein-Protein Collisions on DNA. <i>Molecular Cell</i> , 2014, 54, 832-843.	9.7	58
21	Single-molecule imaging of DNA curtains reveals mechanisms of KOPS sequence targeting by the DNA translocase FtsK. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 6531-6536.	7.1	56
22	Conserved Sequence Preferences Contribute to Substrate Recognition by the Proteasome. <i>Journal of Biological Chemistry</i> , 2016, 291, 14526-14539.	3.4	56
23	Functional metagenomics-guided discovery of potent Cas9 inhibitors in the human microbiome. <i>ELife</i> , 2019, 8, .	6.0	56
24	Indel-correcting DNA barcodes for high-throughput sequencing. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E6217-E6226.	7.1	54
25	Systematic Discovery of Endogenous Human Ribonucleoprotein Complexes. <i>Cell Reports</i> , 2019, 29, 1351-1368.e5.	6.4	53
26	3D-Printed Microfluidic Microdissector for High-Throughput Studies of Cellular Aging. <i>Analytical Chemistry</i> , 2014, 86, 7406-7412.	6.5	50
27	Dynamic DNA binding licenses a repair factor to bypass roadblocks in search of DNA lesions. <i>Nature Communications</i> , 2016, 7, 10607.	12.8	44
28	Sequence Analysis of 20,453 Severe Acute Respiratory Syndrome Coronavirus 2 Genomes from the Houston Metropolitan Area Identifies the Emergence and Widespread Distribution of Multiple Isolates of All Major Variants of Concern. <i>American Journal of Pathology</i> , 2021, 191, 983-992.	3.8	42
29	Metagenomic discovery of CRISPR-associated transposons. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	38
30	Compartmentalization of telomeres through DNA-scaffolded phase separation. <i>Developmental Cell</i> , 2022, 57, 277-290.e9.	7.0	38
31	Molecular Traffic Jams on DNA. <i>Annual Review of Biophysics</i> , 2013, 42, 241-263.	10.0	34
32	Epigenetic cell fate in <i>Candida albicans</i> is controlled by transcription factor condensates acting at super-enhancer-like elements. <i>Nature Microbiology</i> , 2020, 5, 1374-1389.	13.3	34
33	Rapid characterization of spike variants via mammalian cell surface display. <i>Molecular Cell</i> , 2021, 81, 5099-5111.e8.	9.7	32
34	Expression and characterization of SARS-CoV-2 spike proteins. <i>Nature Protocols</i> , 2021, 16, 5339-5356.	12.0	31
35	Inhibition of CRISPR-Cas12a DNA targeting by nucleosomes and chromatin. <i>Science Advances</i> , 2021, 7, .	10.3	30
36	Supported Lipid Bilayers and DNA Curtains for High-Throughput Single-Molecule Studies. <i>Methods in Molecular Biology</i> , 2011, 745, 447-461.	0.9	30

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37	An aging-independent replicative lifespan in a symmetrically dividing eukaryote. <i>ELife</i> , 2017, 6, .	6.0	30
38	Noncoding RNA-nucleated heterochromatin spreading is intrinsically labile and requires accessory elements for epigenetic stability. <i>ELife</i> , 2018, 7, .	6.0	30
39	Next-Generation DNA Curtains for Single-Molecule Studies of Homologous Recombination. <i>Methods in Enzymology</i> , 2017, 592, 259-281.	1.0	26
40	Phage Mu Gam protein promotes NHEJ in concert with <i>Escherichia coli</i> ligase. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E11614-E11622.	7.1	26
41	Trajectory of Growth of Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) Variants in Houston, Texas, January through May 2021, Based on 12,476 Genome Sequences. <i>American Journal of Pathology</i> , 2021, 191, 1754-1773.	3.8	26
42	How Glutamate Promotes Liquid-liquid Phase Separation and DNA Binding Cooperativity of <i>E. coli</i> SSB Protein. <i>Journal of Molecular Biology</i> , 2022, 434, 167562.	4.2	25
43	Intrinsically disordered regions regulate both catalytic and non-catalytic activities of the MutL mismatch repair complex. <i>Nucleic Acids Research</i> , 2019, 47, 1823-1835.	14.5	24
44	RADX condenses single-stranded DNA to antagonize RAD51 loading. <i>Nucleic Acids Research</i> , 2020, 48, 7834-7843.	14.5	20
45	Efficient modification of DNA substrates for single-molecule studies. <i>Scientific Reports</i> , 2017, 7, 2071.	3.3	19
46	CRISPR-Guided Programmable Self-Assembly of Artificial Virus-Like Nucleocapsids. <i>Nano Letters</i> , 2021, 21, 2752-2757.	9.1	18
47	Single molecule studies of homologous recombination. <i>Molecular BioSystems</i> , 2008, 4, 1094.	2.9	17
48	Polymerase theta-helicase promotes end joining by stripping single-stranded DNA-binding proteins and bridging DNA ends. <i>Nucleic Acids Research</i> , 2022, 50, 3911-3921.	14.5	17
49	Rapid Prototyping of Multichannel Microfluidic Devices for Single-Molecule DNA Curtain Imaging. <i>Analytical Chemistry</i> , 2014, 86, 4157-4163.	6.5	16
50	Assessing Protein Dynamics on Low-Complexity Single-Stranded DNA Curtains. <i>Langmuir</i> , 2018, 34, 14882-14890.	3.5	16
51	High-throughput single-molecule studies of protein-DNA interactions. <i>FEBS Letters</i> , 2014, 588, 3539-3546.	2.8	15
52	A kinetic model predicts SpCas9 activity, improves off-target classification, and reveals the physical basis of targeting fidelity. <i>Nature Communications</i> , 2022, 13, 1367.	12.8	15
53	Distinct roles of XPF-ERCC1 and Rad1-Rad10-Saw1 in replication-coupled and uncoupled inter-strand crosslink repair. <i>Nature Communications</i> , 2018, 9, 2025.	12.8	13
54	Coordination of Rad1-Rad10 interactions with Msh2-Msh3, Saw1 and RPA is essential for functional 3' non-homologous tail removal. <i>Nucleic Acids Research</i> , 2018, 46, 5075-5096.	14.5	10

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55	Sortase-mediated fluorescent labeling of CRISPR complexes. <i>Methods in Enzymology</i> , 2019, 616, 43-59.	1.0	10
56	Eukaryotic resectosomes: A single-molecule perspective. <i>Progress in Biophysics and Molecular Biology</i> , 2017, 127, 119-129.	2.9	9
57	Purification and Biophysical Characterization of the Mre11-Rad50-Nbs1 Complex. <i>Methods in Molecular Biology</i> , 2019, 2004, 269-287.	0.9	6
58	Assembling the Human Resectosome on DNA Curtains. <i>Methods in Molecular Biology</i> , 2019, 1999, 225-244.	0.9	5
59	Disintegration promotes protospacer integration by the Cas1-Cas2 complex. <i>ELife</i> , 2021, 10, .	6.0	5
60	Characterization of the T4 gp32-ssDNA complex by native, cross-linking, and ultraviolet photodissociation mass spectrometry. <i>Chemical Science</i> , 2021, 12, 13764-13776.	7.4	3
61	A Microfluidic Device for Massively Parallel, Whole-lifespan Imaging of Single Fission Yeast Cells. <i>Bio-protocol</i> , 2018, 8, .	0.4	3
62	XPD Helicase Speeds through a Molecular Traffic Jam. <i>Molecular Cell</i> , 2009, 35, 549-550.	9.7	2
63	High-throughput activator sequence selection for silver nanocluster beacons. , 2019, , .		2
64	Opfi: A Python package for identifying gene clusters in large genomics and metagenomics data sets. <i>Journal of Open Source Software</i> , 2021, 6, 3678.	4.6	2