Martin Jinek

List of Publications by Year
in descending order

82 papers	26,619 citations	57631 44 h-index	79541 73 g-index
106 all docs	106 docs citations	106 times ranked	26259 citing authors

#	Article	IF	Citations
1	Multi-microsecond molecular dynamics unveils the mechanism of DNA traversal within CRISPR-Cas12a. Biophysical Journal, 2022, 121, 322a.	0.2	0
2	Critical Role of Conserved Histidine Residues in Genome Editing and Recombination. Biophysical Journal, 2021, 120, 137a-138a.	0.2	0
3	Cooperative Dynamics of REC-Nuc Lobes Prime Cas12a for DNA Processing. Biophysical Journal, 2021, 120, 16a-17a.	0.2	0
4	In vivo adenine base editing of PCSK9 in macaques reduces LDL cholesterol levels. Nature Biotechnology, 2021, 39, 949-957.	9.4	196
5	The oxidoreductase PYROXD1 uses NAD(P)+ as an antioxidant to sustain tRNA ligase activity in pre-tRNA splicing and unfolded protein response. Molecular Cell, 2021, 81, 2520-2532.e16.	4.5	21
6	Hakai is required for stabilization of core components of the m6A mRNA methylation machinery. Nature Communications, 2021, 12, 3778.	5.8	77
7	Conformational control of Cas9 by CRISPR hybrid RNA-DNA guides mitigates off-target activity in TÂcells. Molecular Cell, 2021, 81, 3637-3649.e5.	4.5	27
8	Multiplexed Single-Molecule Experiments Reveal Nucleosome Invasion Dynamics of the Cas9 Genome Editor. Journal of the American Chemical Society, 2021, 143, 16313-16319.	6.6	6
9	Target site selection and remodelling by type V CRISPR-transposon systems. Nature, 2021, 599, 497-502.	13.7	42
10	Molecular architecture of the human tRNA ligase complex. ELife, 2021, 10, .	2.8	22
11	CRISPR-Directed Therapeutic Correction at the NCF1 Locus Is Challenged by Frequent Incidence of Chromosomal Deletions. Molecular Therapy - Methods and Clinical Development, 2020, 17, 936-943.	1.8	8
12	Catalytic Mechanism of Non-Target DNA Cleavage in CRISPR-Cas9 Revealed by <i>Ab Initio</i> Molecular Dynamics. ACS Catalysis, 2020, 10, 13596-13605.	5.5	63
13	ANGEL2 is a member of the CCR4 family of deadenylases with 2â€²,3â€²-cyclic phosphatase activity. Science, 2020, 369, 524-530.	6.0	23
14	Molecular Dynamics Reveals a DNA-Induced Dynamic Switch Triggering Activation of CRISPR-Cas12a. Journal of Chemical Information and Modeling, 2020, 60, 6427-6437.	2.5	43
15	Activation and self-inactivation mechanisms of the cyclic oligoadenylate-dependent CRISPR ribonuclease Csm6. Nature Communications, 2020, 11, 1596.	5.8	67
16	Two-Metal Ion Mechanism of DNA Cleavage in CRISPR-Cas9. Biophysical Journal, 2020, 118, 64a.	0.2	2
17	The CRISPR-RNA World: An Interview with Martin JÃnek. CRISPR Journal, 2020, 3, 68-72.	1.4	2
18	Editorial overview: Proteinâ€“nucleic acid interactions â€“ cryo-EM, what else?. Current Opinion in Structural Biology, 2019, 59, vi-viii.	2.6	0

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19	Mechanistic Insights into the cis- and trans-Acting DNase Activities of Cas12a. Molecular Cell, 2019, 73, 589-600.e4.	4.5	298
20	Introducing gene deletions by mouse zygote electroporation of Cas12a/Cpf1. Transgenic Research, 2019, 28, 525-535.	1.3	20
21	Mechanistic insights into mRNA 3â€²-end processing. Current Opinion in Structural Biology, 2019, 59, 143-150.	2.6	83
22	Structural basis for acceptor RNA substrate selectivity of the 3â€² terminal uridylyl transferase Tailor. Nucleic Acids Research, 2019, 47, 1030-1042.	6.5	13
23	DNA-guided DNA cleavage at moderate temperatures by Clostridium butyricum Argonaute. Nucleic Acids Research, 2019, 47, 5809-5821.	6.5	115
24	Deciphering Off-Target Effects in CRISPR-Cas9 through Accelerated Molecular Dynamics. ACS Central Science, 2019, 5, 651-662.	5.3	99
25	Molecular mechanism of the RNA helicase DHX37 and its activation by UTP14A in ribosome biogenesis. Rna, 2019, 25, 685-701.	1.6	33
26	In vitro Generation of CRISPR-Cas9 Complexes with Covalently Bound Repair Templates for Genome Editing in Mammalian Cells. Bio-protocol, 2019, 9, .	0.2	13
27	Uncut but Primed for Change. CRISPR Journal, 2019, 2, 352-354.	1.4	0
28	Preparation and electroporation of Cas12a/Cpf1-guide RNA complexes for introducing large gene deletions in mouse embryonic stem cells. Methods in Enzymology, 2019, 616, 241-263.	0.4	16
29	Molecular architecture of <scp>LSM</scp> 14 interactions involved in the assembly of <scp>mRNA</scp> silencing complexes. EMBO Journal, 2018, 37, .	3.5	51
30	Structural basis of AAUAAA polyadenylation signal recognition by the human CPSF complex. Nature Structural and Molecular Biology, 2018, 25, 135-138.	3.6	96
31	Bacteriophage DNA glucosylation impairs target DNA binding by type I and II but not by type V CRISPRâ€“Cas effector complexes. Nucleic Acids Research, 2018, 46, 873-885.	6.5	57
32	Cover Image, Volume 9, Issue 5. Wiley Interdisciplinary Reviews RNA, 2018, 9, e1505.	3.2	0
33	Human MARF1 is an endoribonuclease that interacts with the DCP1:2 decapping complex and degrades target mRNAs. Nucleic Acids Research, 2018, 46, 12008-12021.	6.5	22
34	Key role of the REC lobe during CRISPRâ€“Cas9 activation by â€˜sensingâ€™, â€˜regulatingâ€™, and â€˜lockingâ€™ the catalytic HNH domain. Quarterly Reviews of Biophysics, 2018, 51, .	2.4	79
35	A PAM-Induced Signalling Activates the Communication between HNH and RUVC in CRISPR-Cas9. Biophysical Journal, 2018, 114, 250a.	0.2	0
36	Cas9 versus Cas12a/Cpf1: Structureâ€“function comparisons and implications for genome editing. Wiley Interdisciplinary Reviews RNA, 2018, 9, e1481.	3.2	164

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37	Covalent linkage of the DNA repair template to the CRISPR-Cas9 nuclease enhances homology-directed repair. ELife, 2018, 7, .	2.8	127
38	Heterologous Expression and Purification of the CRISPR-Cas12a/Cpf1 Protein. Bio-protocol, 2018, 8, e2842.	0.2	21
39	Structural Basis for Guide RNA Processing and Seed-Dependent DNA Targeting by CRISPR-Cas12a. Molecular Cell, 2017, 66, 221-233.e4.	4.5	408
40	CRISPR-Cas9: Computational Insights Toward Improved Genome Editing. Biophysical Journal, 2017, 112, 72a.	0.2	0
41	Specialized Weaponry: How a Type III-A CRISPR-Cas System Excels at Combating Phages. Cell Host and Microbe, 2017, 22, 258-259.	5.1	5
42	Type III CRISPRâ€“Cas systems produce cyclic oligoadenylate second messengers. Nature, 2017, 548, 543-548.	13.7	377
43	Protospacer Adjacent Motif-Induced Allostery Activates CRISPR-Cas9. Journal of the American Chemical Society, 2017, 139, 16028-16031.	6.6	104
44	Molecular architectures and mechanisms of Class 2 CRISPR-associated nucleases. Current Opinion in Structural Biology, 2017, 47, 157-166.	2.6	65
45	CRISPR-Cas9 conformational activation as elucidated from enhanced molecular simulations. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 7260-7265.	3.3	133
46	Structural insights into the assembly and polyA signal recognition mechanism of the human CPSF complex. ELife, 2017, 6, .	2.8	71
47	CrispRVariants charts the mutation spectrum of genome engineering experiments. Nature Biotechnology, 2016, 34, 701-702.	9.4	149
48	Maximizing mutagenesis with solubilized CRISPR-Cas9 ribonucleoprotein complexes.. Development (Cambridge), 2016, 143, 2025-37.	1.2	244
49	Striking Plasticity of CRISPR-Cas9 and Key Role of Non-target DNA, as Revealed by Molecular Simulations. ACS Central Science, 2016, 2, 756-763.	5.3	103
50	Molecular basis for cytoplasmic <scp>RNA</scp> surveillance by uridylationâ€triggered decay in <i>Drosophila</i>. EMBO Journal, 2016, 35, 2417-2434.	3.5	50
51	Data-collection strategy for challenging native SAD phasing. Acta Crystallographica Section D: Structural Biology, 2016, 72, 421-429.	1.1	42
52	Structural basis for the endoribonuclease activity of the type III-A CRISPR-associated protein Csm6. Rna, 2016, 22, 318-329.	1.6	128
53	Structural Plasticity of PAM Recognition by Engineered Variants of the RNA-Guided Endonuclease Cas9. Molecular Cell, 2016, 61, 895-902.	4.5	161
54	Structural insights into the molecular mechanism of the m6A writer complex. ELife, 2016, 5, .	2.8	386

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55	Crystal structure of the C-terminal 2â€²,5â€²-phosphodiesterase domain of group a rotavirus protein VP3. Proteins: Structure, Function and Bioinformatics, 2015, 83, 997-1002.	1.5	14
56	An internal promoter underlies the difference in disease severity between N- and C-terminal truncation mutations of Titin in zebrafish. ELife, 2015, 4, e09406.	2.8	83
57	In Vitro Reconstitution and Crystallization of Cas9 Endonuclease Bound to a Guide RNA and a DNA Target. Methods in Enzymology, 2015, 558, 515-537.	0.4	23
58	A prudent path forward for genomic engineering and germline gene modification. Science, 2015, 348, 36-38.	6.0	541
59	Evolution of CRISPR RNA recognition and processing by Cas6 endonucleases. Nucleic Acids Research, 2014, 42, 1341-1353.	6.5	68
60	In Vitro Enzymology of Cas9. Methods in Enzymology, 2014, 546, 1-20.	0.4	97
61	Structures of Cas9 Endonucleases Reveal RNA-Mediated Conformational Activation. Science, 2014, 343, 1247997.	6.0	938
62	DNA interrogation by the CRISPR RNA-guided endonuclease Cas9. Nature, 2014, 507, 62-67.	13.7	1,573
63	Structural basis of PAM-dependent target DNA recognition by the Cas9 endonuclease. Nature, 2014, 513, 569-573.	13.7	1,075
64	RNA-programmed genome editing in human cells. ELife, 2013, 2, e00471.	2.8	1,830
65	Structural mimicry in transcription regulation of human RNA polymerase II by the DNA helicase RECQL5. Nature Structural and Molecular Biology, 2013, 20, 892-899.	3.6	27
66	A Programmable Dual-RNAâ€"Guided DNA Endonuclease in Adaptive Bacterial Immunity. Science, 2012, 337, 816-821.	6.0	12,811
67	Coupled 5â€² Nucleotide Recognition and Processivity in Xrn1-Mediated mRNA Decay. Molecular Cell, 2011, 41, 600-608.	4.5	155
68	An RNA-induced conformational change required for CRISPR RNA cleavage by the endoribonuclease Cse3. Nature Structural and Molecular Biology, 2011, 18, 680-687.	3.6	166
69	Structural insights into the human GW182-PABC interaction in microRNA-mediated deadenylation. Nature Structural and Molecular Biology, 2010, 17, 238-240.	3.6	92
70	Structural and Biochemical Studies of a Fluoroacetyl-CoA-Specific Thioesterase Reveal a Molecular Basis for Fluorine Selectivity. Biochemistry, 2010, 49, 9269-9279.	1.2	31
71	Use of RNA Tertiary Interaction Modules for the Crystallisation of the Spliceosomal snRNP Core Domain. Journal of Molecular Biology, 2010, 402, 154-164.	2.0	11
72	Sequence- and Structure-Specific RNA Processing by a CRISPR Endonuclease. Science, 2010, 329, 1355-1358.	6.0	599

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73	Structural Basis for DNase Activity of a Conserved Protein Implicated in CRISPR-Mediated Genome Defense. Structure, 2009, 17, 904-912.	1.6	228
74	A three-dimensional view of the molecular machinery of RNA interference. Nature, 2009, 457, 405-412.	13.7	651
75	Structures of the tRNA export factor in the nuclear and cytosolic states. Nature, 2009, 461, 60-65.	13.7	108
76	Mammalian miRNA RISC Recruits CAF1 and PABP to Affect PABP-Dependent Deadenylation. Molecular Cell, 2009, 35, 868-880.	4.5	331
77	The C-terminal region of Ge-1 presents conserved structural features required for P-body localization. Rna, 2008, 14, 1991-1998.	1.6	30
78	Structural Biology of Nucleocytoplasmic Transport. Annual Review of Biochemistry, 2007, 76, 647-671.	5.0	458
79	Eukaryotic expression, purification, crystallization and preliminary X-ray analysis of murine Manic Fringe. Acta Crystallographica Section F: Structural Biology Communications, 2006, 62, 774-777.	0.7	0
80	Structural insights into the Notch-modifying glycosyltransferase Fringe. Nature Structural and Molecular Biology, 2006, 13, 945-946.	3.6	35
81	The superhelical TPR-repeat domain of O-linked GlcNAc transferase exhibits structural similarities to importin Î±. Nature Structural and Molecular Biology, 2004, 11, 1001-1007.	3.6	263
82	The Oxidoreductase PYROXD1 Utilizes NAD(P)+ As an Antioxidant to Sustain tRNA Ligase Activity in Pre-tRNA Splicing and Unfolded Protein Response. SSRN Electronic Journal, 0, , .	0.4	1