Stan J J Brouns

List of Publications by Year
in descending order

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95	16,580	53794 45	45317 90
papers	citations	h-index	g-index

112	112	112	11643
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Small CRISPR RNAs Guide Antiviral Defense in Prokaryotes. Science, 2008, 321, 960-964.	12.6	2,138
2	An updated evolutionary classification of CRISPRâ€“Cas systems. Nature Reviews Microbiology, 2015, 13, 722-736.	28.6	2,081
3	Evolution and classification of the CRISPRâ€“Cas systems. Nature Reviews Microbiology, 2011, 9, 467-477.	28.6	2,078
4	Evolutionary classification of CRISPRâ€“Cas systems: a burst of class 2 and derived variants. Nature Reviews Microbiology, 2020, 18, 67-83.	28.6	1,427
5	Interference by clustered regularly interspaced short palindromic repeat (CRISPR) RNA is governed by a seed sequence. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 10098-10103.	7.1	665
6	Structural basis for CRISPR RNA-guided DNA recognition by Cascade. Nature Structural and Molecular Biology, 2011, 18, 529-536.	8.2	498
7	CRISPR Immunity Relies on the Consecutive Binding and Degradation of Negatively Supercoiled Invader DNA by Cascade and Cas3. Molecular Cell, 2012, 46, 595-605.	9.7	475
8	CRISPR-based adaptive and heritable immunity in prokaryotes. Trends in Biochemical Sciences, 2009, 34, 401-407.	7.5	453
9	DNA-guided DNA interference by a prokaryotic Argonaute. Nature, 2014, 507, 258-261.	27.8	373
10	Structures of the RNA-guided surveillance complex from a bacterial immune system. Nature, 2011, 477, 486-489.	27.8	355
11	CRISPR Interference Directs Strand Specific Spacer Acquisition. PLoS ONE, 2012, 7, e35888.	2.5	335
12	CRISPR-Cas: Adapting to change. Science, 2017, 356, .	12.6	323
13	Targeting mechanisms of tailed bacteriophages. Nature Reviews Microbiology, 2018, 16, 760-773.	28.6	310
14	Molecular and Evolutionary Determinants of Bacteriophage Host Range. Trends in Microbiology, 2019, 27, 51-63.	7.7	277
15	CRISPRTarget. RNA Biology, 2013, 10, 817-827.	3.1	272
16	The CRISPRs, They Are A-Changin': How Prokaryotes Generate Adaptive Immunity. Annual Review of Genetics, 2012, 46, 311-339.	7.6	260
17	Improving the Performance of a Quadrupole Time-of-Flight Instrument for Macromolecular Mass Spectrometry. Analytical Chemistry, 2006, 78, 7473-7483.	6.5	240
18	Degenerate target sites mediate rapid primed CRISPR adaptation. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E1629-38.	7.1	239

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19	Crystal structure of the CRISPR RNAâ€“guided surveillance complex from <i>Escherichia coli</i>. Science, 2014, 345, 1473-1479.	12.6	226
20	Hâ€NSâ€mediated repression of CRISPRâ€based immunity in <i>Escherichia coli</i> K12 can be relieved by the transcription activator LeuO. Molecular Microbiology, 2010, 77, 1380-1393.	2.5	220
21	Type I-E CRISPR-Cas Systems Discriminate Target from Non-Target DNA through Base Pairing-Independent PAM Recognition. PLoS Genetics, 2013, 9, e1003742.	3.5	187
22	Global phylogeography and ancient evolution of the widespread human gut virus crAssphage. Nature Microbiology, 2019, 4, 1727-1736.	13.3	184
23	Comparative Genomic and Functional Analysis of 100 Lactobacillus rhamnosus Strains and Their Comparison with Strain GG. PLoS Genetics, 2013, 9, e1003683.	3.5	180
24	Clustered regularly interspaced short palindromic repeats (CRISPRs): the hallmark of an ingenious antiviral defense mechanism in prokaryotes. Biological Chemistry, 2011, 392, 277-89.	2.5	145
25	Interference-driven spacer acquisition is dominant over naive and primed adaptation in a native CRISPRâ€“Cas system. Nature Communications, 2016, 7, 12853.	12.8	125
26	Cas3-Derived Target DNA Degradation Fragments Fuel Primed CRISPR Adaptation. Molecular Cell, 2016, 63, 852-864.	9.7	111
27	Identification of the Missing Links in Prokaryotic Pentose Oxidation Pathways. Journal of Biological Chemistry, 2006, 281, 27378-27388.	3.4	102
28	Cas4 Facilitates PAM-Compatible Spacer Selection during CRISPR Adaptation. Cell Reports, 2018, 22, 3377-3384.	6.4	102
29	Two Distinct DNA Binding Modes Guide Dual Roles of a CRISPR-Cas Protein Complex. Molecular Cell, 2015, 58, 60-70.	9.7	100
30	CRISPR interference and priming varies with individual spacer sequences. Nucleic Acids Research, 2015, 43, 10831-10847.	14.5	95
31	Mechanisms and clinical importance of bacteriophage resistance. FEMS Microbiology Reviews, 2022, 46, .	8.6	92
32	Harnessing type I CRISPRâ€“Cas systems for genome engineering in human cells. Nature Biotechnology, 2019, 37, 1471-1477.	17.5	91
33	Short prokaryotic Argonaute systems trigger cell death upon detection of invading DNA. Cell, 2022, 185, 1471-1486.e19.	28.9	85
34	Transcriptome Analysis of Infection of the Archaeon <i>Sulfolobus solfataricus</i> with <i>Sulfolobus</i> Turreted Icosahedral Virus. Journal of Virology, 2008, 82, 4874-4883.	3.4	84
35	Engineering a Selectable Marker for Hyperthermophiles. Journal of Biological Chemistry, 2005, 280, 11422-11431.	3.4	78
36	RNA in Defense: CRISPRs Protect Prokaryotes against Mobile Genetic Elements. Cold Spring Harbor Perspectives in Biology, 2012, 4, a003657-a003657.	5.5	76

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37	The gRAMP CRISPR-Cas effector is an RNA endonuclease complexed with a caspase-like peptidase. Science, 2021, 373, 1349-1353.	12.6	76
38	Native Tandem and Ion Mobility Mass Spectrometry Highlight Structural and Modular Similarities in Clustered-Regularly-Interspaced Shot-Palindromic-Repeats (CRISPR)-associated Protein Complexes From Escherichia coli and Pseudomonas aeruginosa. Molecular and Cellular Proteomics, 2012, 11, 1430-1441.	3.8	74
39	Planting the seed: target recognition of short guide RNAs. Trends in Microbiology, 2014, 22, 74-83.	7.7	70
40	Visualisation of dCas9 target search in vivo using an open-microscopy framework. Nature Communications, 2019, 10, 3552.	12.8	70
41	Differential Translation Tunes Uneven Production of Operon-Encoded Proteins. Cell Reports, 2013, 4, 938-944.	6.4	64
42	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.	14.5	57
43	SCOPE enables type III CRISPR-Cas diagnostics using flexible targeting and stringent CARF ribonuclease activation. Nature Communications, 2021, 12, 5033.	12.8	57
44	Repetitive DNA Reeling by the Cascade-Cas3 Complex in Nucleotide Unwinding Steps. Molecular Cell, 2018, 70, 385-394.e3.	9.7	54
45	Reconstruction of central carbon metabolism inSulfolobus solfataricus using a two-dimensional gel electrophoresis map, stable isotope labelling and DNA microarray analysis. Proteomics, 2006, 6, 1518-1529.	2.2	52
46	Identification of a Novel Î±-Galactosidase from the Hyperthermophilic Archaeon Sulfolobus solfataricus. Journal of Bacteriology, 2006, 188, 2392-2399.	2.2	51
47	Selective loading and processing of prespacers for precise CRISPR adaptation. Nature, 2020, 579, 141-145.	27.8	46
48	Direct Visualization of Native CRISPR Target Search in Live Bacteria Reveals Cascade DNA Surveillance Mechanism. Molecular Cell, 2020, 77, 39-50.e10.	9.7	43
49	DNA family shuffling of hyperthermostable Î²-glycosidases. Biochemical Journal, 2002, 368, 461-470.	3.7	38
50	Laboratory evolution of Pyrococcus furiosus alcohol dehydrogenase to improve the production of (2S,5S)-hexanediol at moderate temperatures. Extremophiles, 2008, 12, 587-594.	2.3	37
51	Cascade-mediated binding and bending of negatively supercoiled DNA. RNA Biology, 2012, 9, 1134-1138.	3.1	37
52	Prophages are associated with extensive CRISPRâ€“Cas auto-immunity. Nucleic Acids Research, 2020, 48, 12074-12084.	14.5	35
53	Structural Insight into Substrate Binding and Catalysis of a Novel 2-Keto-3-deoxy-d-arabinonate Dehydratase Illustrates Common Mechanistic Features of the FAH Superfamily. Journal of Molecular Biology, 2008, 379, 357-371.	4.2	34
54	Cas4â€“Cas1 fusions drive efficient PAM selection and control CRISPR adaptation. Nucleic Acids Research, 2019, 47, 5223-5230.	14.5	34

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55	CRISPR-Cas systems preferentially target the leading regions of MOB_Fconjugative plasmids. RNA Biology, 2013, 10, 749-761.	3.1	32
56	Evidence Supporting a cis-enediol-based Mechanism for Pyrococcus furiosus Phosphoglucose Isomerase. Journal of Molecular Biology, 2006, 358, 1353-1366.	4.2	29
57	Mechanism for Cas4-assisted directional spacer acquisition in CRISPRâ€“Cas. Nature, 2021, 598, 515-520.	27.8	29
58	Cloning and Expression of Islandisin, a New Thermostable Subtilisin from Fervidobacterium islandicum , in Escherichia coli. Applied and Environmental Microbiology, 2005, 71, 3951-3958.	3.1	28
59	Systematic analysis of Type Iâ€E <i>Escherichia coli</i> CRISPRâ€Cas PAM sequences ability to promote interference and primed adaptation. Molecular Microbiology, 2019, 111, 1558-1570.	2.5	27
60	The rise and fall of CRISPRs â€“ dynamics of spacer acquisition and loss. Molecular Microbiology, 2012, 85, 1021-1025.	2.5	26
61	PAM-repeat associations and spacer selection preferences in single and co-occurring CRISPR-Cas systems. Genome Biology, 2021, 22, 281.	8.8	26
62	Adsorption Sequencing as a Rapid Method to Link Environmental Bacteriophages to Hosts. IScience, 2020, 23, 101439.	4.1	23
63	RNAi: Prokaryotes Get in on the Act. Cell, 2009, 139, 863-865.	28.9	22
64	Role of multiprotein bridging factor 1 in archaea: bridging the domains?. Biochemical Society Transactions, 2009, 37, 52-57.	3.4	21
65	Creation of Conductive Graphene Materials by Bacterial Reduction Using <i>Shewanella Oneidensis</i>. ChemistryOpen, 2019, 8, 888-895.	1.9	20
66	Evolution of BACON Domain Tandem Repeats in crAssphage and Novel Gut Bacteriophage Lineages. Viruses, 2019, 11, 1085.	3.3	20
67	An educational guide for nanopore sequencing in the classroom. PLoS Computational Biology, 2020, 16, e1007314.	3.2	20
68	Structure of the ribosome associating GTPase HflX. Proteins: Structure, Function and Bioinformatics, 2010, 78, 705-713.	2.6	19
69	Extracting Transition Rates in Particle Tracking Using Analytical Diffusion Distribution Analysis. Biophysical Journal, 2020, 119, 1970-1983.	0.5	19
70	Crystal Structure and Biochemical Properties of the d-Arabinose Dehydrogenase from Sulfolobus solfataricus. Journal of Molecular Biology, 2007, 371, 1249-1260.	4.2	16
71	Assembling the archaeal ribosome: roles for translation-factor-related GTPases. Biochemical Society Transactions, 2011, 39, 45-50.	3.4	16
72	Archaeal MBF1 binds to 30S and 70S ribosomes via its helixâ€“turnâ€“helix domain. Biochemical Journal, 2014, 462, 373-384.	3.7	16

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73	Conserved motifs in the CRISPR leader sequence control spacer acquisition levels in Type I-D CRISPR-Cas systems. FEMS Microbiology Letters, 2019, 366, .	1.8	16
74	Using CAPTURE to detect spacer acquisition in native CRISPR arrays. Nature Protocols, 2019, 14, 976-990.	12.0	14
75	Iron can be microbially extracted from Lunar and Martian regolith simulants and 3D printed into tough structural materials. PLoS ONE, 2021, 16, e0249962.	2.5	12
76	Role of nucleotide identity in effective CRISPR target escape mutations. Nucleic Acids Research, 2018, 46, 10395-10404.	14.5	10
77	Structural basis for broad anti-phage immunity by DISARM. Nature Communications, 2022, 13, .	12.8	10
78	Cas4â€"Cas1 Is a Protospacer Adjacent Motifâ€"Processing Factor Mediating Half-Site Spacer Integration During CRISPR Adaptation. CRISPR Journal, 2021, 4, 536-548.	2.9	9
79	A Swiss Army Knife of Immunity. Science, 2012, 337, 808-809.	12.6	8
80	Distribution and Mechanism of the Type I CRISPR-Cas Systems. , 2013, , 145-169.		7
81	Distribution and Mechanism of the Type I CRISPR-Cas Systems. , 2013, , 145-169.		5
82	Addiction systems antagonize bacterial adaptive immunity. FEMS Microbiology Letters, 2019, 366, .	1.8	5
83	Fidelity in Archaeal Information Processing. Archaea, 2010, 2010, 1-15.	2.3	4
84	Electrophoretic Mobility Shift Assay of DNA and CRISPR-Cas Ribonucleoprotein Complexes. Methods in Molecular Biology, 2015, 1311, 171-184.	0.9	4
85	Purification, crystallization and preliminary crystallographic analysis of a GTP-binding protein from the hyperthermophilic archaeonSulfolobus solfataricus. Acta Crystallographica Section F: Structural Biology Communications, 2007, 63, 239-241.	0.7	3
86	CRISPR sabotage. Genome Biology, 2015, 16, 248.	8.8	3
87	Development of Styrene Maleic Acid Lipid Particles as a Tool for Studies of Phage-Host Interactions. Journal of Virology, 2020, 94, .	3.4	3
88	Single cell variability of CRISPRâ€Cas interference and adaptation. Molecular Systems Biology, 2022, 18, e10680.	7.2	3
89	A capture approach for supercoiled plasmid DNA using a triplex-forming oligonucleotide. Nucleic Acids Research, 2013, 41, e111-e111.	14.5	1
90	Complete Genome Sequence of the <i>Escherichia coli</i> Phage Ayreon. Genome Announcements, 2018, 6, .	0.8	1

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91	Complete Genome Sequences of Two T4-Like Escherichia coli Bacteriophages. Genome Announcements, 2018, 6, .	0.8	1
92	Adaptation by Type V-A and V-B CRISPR-Cas Systems Demonstrates Conserved Protospacer Selection Mechanisms Between Diverse CRISPR-Cas Types. CRISPR Journal, 0, , .	2.9	1
93	9 Functional Genomics of the Thermo-Acidophilic Archaeon Sulfolobus solfataricus. Methods in Microbiology, 2006, 35, 201-231.	0.8	0
94	CRISPR-Cas Systems Reduced to a Minimum. Molecular Cell, 2019, 73, 641-642.	9.7	0
95	RNA | Small RNAs in Bacteria. , 2021, , 580-586.		0