Mark Isalan

List of Publications by Year
in descending order

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Version: 2024-02-01

76 papers	3,143 citations	159585 30 h-index	168389 53 g-index
83 all docs	83 docs citations	83 times ranked	3274 citing authors

#	Article	IF	Citations
1	Evolvability and hierarchy in rewired bacterial gene networks. Nature, 2008, 452, 840-845.	27.8	285
2	A rapid, generally applicable method to engineer zinc fingers illustrated by targeting the HIV-1 promoter. Nature Biotechnology, 2001, 19, 656-660.	17.5	187
3	Synthetic zinc finger repressors reduce mutant huntingtin expression in the brain of R6/2 mice. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, E3136-45.	7.1	155
4	Synergy between adjacent zinc fingers in sequence-specific DNA recognition. Proceedings of the National Academy of Sciences of the United States of America, 1997, 94, 5617-5621.	7.1	152
5	Zinc-finger protein-targeted gene regulation: Genomewide single-gene specificity. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 11997-12002.	7.1	142
6	Comprehensive DNA Recognition through Concerted Interactions from Adjacent Zinc Fingers. Biochemistry, 1998, 37, 12026-12033.	2.5	133
7	A unified design space of synthetic stripe-forming networks. Nature Communications, 2014, 5, 4905.	12.8	128
8	Repression of the HIV-1 5' LTR promoter and inhibition of HIV-1 replication by using engineered zinc-finger transcription factors. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 1615-1620.	7.1	125
9	Engineering Gene Networks to Emulate Drosophila Embryonic Pattern Formation. PLoS Biology, 2005, 3, e64.	5.6	111
10	Histone Acetyltransferase Activity of p300 Is Required for Transcriptional Repression by the Promyelocytic Leukemia Zinc Finger Protein. Molecular and Cellular Biology, 2005, 25, 5552-5566.	2.3	99
11	Combining a Toggle Switch and a Repressilator within the AC-DC Circuit Generates Distinct Dynamical Behaviors. Cell Systems, 2018, 6, 521-530.e3.	6.2	96
12	Advances in zinc finger engineering. Current Opinion in Structural Biology, 2000, 10, 411-416.	5.7	94
13	Gene Therapy Advances: A Meta-Analysis of AAV Usage in Clinical Settings. Frontiers in Medicine, 2021, 8, 809118.	2.6	91
14	Inhibition of herpes simplex virus 1 gene expression by designer zinc-finger transcription factors. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 1621-1626.	7.1	76
15	Selection of Zinc Fingers that Bind Single-Stranded Telomeric DNA in the G-Quadruplex Conformationâ€. Biochemistry, 2001, 40, 830-836.	2.5	63
16	A Comprehensive Network Atlas Reveals That Turing Patterns Are Common but Not Robust. Cell Systems, 2019, 9, 243-257.e4.	6.2	61
17	Zinc-finger nucleases: how to play two good hands. Nature Methods, 2012, 9, 32-34.	19.0	56
18	A split intein T7 RNA polymerase for transcriptional AND-logic. Nucleic Acids Research, 2014, 42, 12322-12328.	14.5	50

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19	Î²-Catenin Fluctuates in Mouse ESCs and Is Essential for Nanog-Mediated Reprogramming of Somatic Cells to Pluripotency. Cell Reports, 2014, 8, 1686-1696.	6.4	50
20	Computer design of obligate heterodimer meganucleases allows efficient cutting of custom DNA sequences. Nucleic Acids Research, 2008, 36, 2163-2173.	14.5	49
21	Cooperativity To Increase Turing Pattern Space for Synthetic Biology. ACS Synthetic Biology, 2015, 4, 177-186.	3.8	48
22	Engineering orthogonal dual transcription factors for multi-input synthetic promoters. Nature Communications, 2016, 7, 13858.	12.8	47
23	Deimmunization for gene therapy: host matching of synthetic zinc finger constructs enables long-term mutant Huntingtin repression in mice. Molecular Neurodegeneration, 2016, 11, 64.	10.8	46
24	Inhibition of Human Telomerase Activity by an Engineered Zinc Finger Protein that Binds G-Quadruplexesâ€. Biochemistry, 2004, 43, 13452-13458.	2.5	43
25	An impaired metabolism of nucleotides underpins a novel mechanism of cardiac remodeling leading to Huntington's disease related cardiomyopathy. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2016, 1862, 2147-2157.	3.8	42
26	Neuro-Cardio Mechanisms in Huntingtonâ€™s Disease and Other Neurodegenerative Disorders. Frontiers in Physiology, 2018, 9, 559.	2.8	40
27	Engineering prokaryotic gene circuits. FEMS Microbiology Reviews, 2009, 33, 27-37.	8.6	37
28	Localized transfection on arrays of magnetic beads coated with PCR products. Nature Methods, 2005, 2, 113-118.	19.0	36
29	p53 Gene Repair with Zinc Finger Nucleases Optimised by Yeast 1-Hybrid and Validated by Solexa Sequencing. PLoS ONE, 2011, 6, e20913.	2.5	34
30	Synthetic circuits reveal how mechanisms of gene regulatory networks constrain evolution. Molecular Systems Biology, 2018, 14, e8102.	7.2	34
31	Rapid, high-throughput engineering of sequence-specific zinc finger DNA-binding proteins. Methods in Enzymology, 2001, 340, 593-609.	1.0	32
32	Building synthetic gene circuits from combinatorial libraries: screening and selection strategies. Molecular BioSystems, 2013, 9, 1559.	2.9	32
33	Genetically Encoded Senderâ€“Receiver System in 3D Mammalian Cell Culture. ACS Synthetic Biology, 2014, 3, 264-272.	3.8	30
34	Senderâ€“receiver systems and applying information theory for quantitative synthetic biology. Current Opinion in Biotechnology, 2015, 31, 101-107.	6.6	26
35	A three-step framework for programming pattern formation. Current Opinion in Chemical Biology, 2017, 40, 1-7.	6.1	24
36	Synthetic biology and therapeutic strategies for the degenerating brain. BioEssays, 2014, 36, 979-990.	2.5	23

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37	Gene networks and liar paradoxes. BioEssays, 2009, 31, 1110-1115.	2.5	22
38	A shared mechanism of muscle wasting in cancer and Huntington's disease. Clinical and Translational Medicine, 2015, 4, 34.	4.0	22
39	Transcriptional Signature of an Altered Purine Metabolism in the Skeletal Muscle of a Huntington's Disease Mouse Model. Frontiers in Physiology, 2017, 8, 127.	2.8	22
40	The propagation of perturbations in rewired bacterial gene networks. Nature Communications, 2015, 6, 10105.	12.8	19
41	Early transcriptional alteration of histone deacetylases in a murine model of doxorubicin-induced cardiomyopathy. PLoS ONE, 2017, 12, e0180571.	2.5	18
42	Engineering of biomolecules by bacteriophage directed evolution. Current Opinion in Biotechnology, 2018, 51, 32-38.	6.6	17
43	Construction of semi-randomized gene libraries with weighted oligonucleotide synthesis and PCR. Nature Protocols, 2006, 1, 468-475.	12.0	16
44	Intracellular directed evolution of proteins from combinatorial libraries based on conditional phage replication. Nature Protocols, 2017, 12, 1830-1843.	12.0	16
45	A Biobrick Library for Cloning Custom Eukaryotic Plasmids. PLoS ONE, 2011, 6, e23685.	2.5	15
46	Engineered zinc finger proteins that respond to DNA modification by Hae III and Hha I methyltransferase enzymes 1 1Edited by T. Richmond. Journal of Molecular Biology, 2000, 295, 471-477.	4.2	14
47	Drug-Inducible Control of Lethality Genes: A Low Background Destabilizing Domain Architecture Applied to the Gal4-UAS System in Drosophila. ACS Synthetic Biology, 2018, 7, 1496-1506.	3.8	14
48	The Application of CRISPR/Cas Systems for Antiviral Therapy. Frontiers in Genome Editing, 2021, 3, 745559.	5.2	14
49	Changes in cardiac nucleotide metabolism in Huntington's disease. Nucleosides, Nucleotides and Nucleic Acids, 2016, 35, 707-712.	1.1	13
50	Accelerated evolution of a minimal 63â€“amino acid dual transcription factor. Science Advances, 2020, 6, eaba2728.	10.3	13
51	Prevalence of Non-psychiatric Comorbidities in Pre-symptomatic and Symptomatic Huntington's Disease Gene Carriers in Poland. Frontiers in Medicine, 2020, 7, 79.	2.6	12
52	Localized transfection with magnetic beads coated with PCR products and other nucleic acids. Nature Protocols, 2006, 1, 526-531.	12.0	10
53	Avoiding transcription factor competition at promoter level increases the chances of obtaining oscillation. BMC Systems Biology, 2010, 4, 66.	3.0	10
54	The PLOS ONE Synthetic Biology Collection: Six Years and Counting. PLoS ONE, 2012, 7, e43231.	2.5	10

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55	A genetic toolkit and gene switches to limit Mycoplasma growth for biosafety applications. Nature Communications, 2022, 13, 1910.	12.8	10
56	This title is false. Nature, 2009, 458, 969-969.	27.8	8
57	Identifying ultrasensitive HGF dose-response functions in a 3D mammalian system for synthetic morphogenesis. Scientific Reports, 2016, 6, 39178.	3.3	7
58	Structural Abnormalities of the Optic Nerve and Retina in Huntingtonâ€™s Disease Pre-Clinical and Clinical Settings. International Journal of Molecular Sciences, 2022, 23, 5450.	4.1	6
59	A cell in a computer. Nature, 2012, 488, 40-41.	27.8	5
60	Cross-Sectional Transcriptional Analysis of the Aging Murine Heart. Frontiers in Molecular Biosciences, 2020, 7, 565530.	3.5	5
61	Kinetin stimulates differentiation of C2C12 myoblasts. PLoS ONE, 2021, 16, e0258419.	2.5	5
62	Emergent expression of fitness-conferring genes by phenotypic selection. , 0, , .		5
63	Transfecting RNA quadruplexes results in few transcriptome perturbations. RNA Biology, 2013, 10, 205-210.	3.1	4
64	From noise to synthetic nucleoli: can synthetic biology achieve new insights?. Integrative Biology (United Kingdom), 2016, 8, 383-393.	1.3	4
65	Synthetic spatial patterning in bacteria: advances based on novel diffusible signals. Microbial Biotechnology, 2022, 15, 1685-1694.	4.2	4
66	Commentary: Synthetic Addiction Extends the Productive Life Time of Engineered Escherichia coli Populations. Frontiers in Bioengineering and Biotechnology, 2018, 6, 77.	4.1	3
67	Polyglutamine diseases: looking beyond the neurodegenerative universe. Neural Regeneration Research, 2021, 16, 1186.	3.0	3
68	Dynamical model fitting to a synthetic positive feedback circuit in E. coli. Engineering Biology, 2020, 4, 25-31.	1.8	2
69	Identification of the Transcriptional Biomarkers Panel Linked to Pathological Remodelling of the Eye Tissues in Various HD Mouse Models. Cells, 2022, 11, 1675.	4.1	2
70	Trp-ing upon new repressors. Nature Chemical Biology, 2018, 14, 328-329.	8.0	1
71	Functional Insulator Scanning of CpG Islands to Identify Regulatory Regions of Promoters Using CRISPR. Methods in Molecular Biology, 2018, 1766, 285-301.	0.9	1
72	DNA Recognition/Processing | Zinc Fingers: Structure and Design. , 2021, , 506-516.		1

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73	Reducing metabolic burden in the PACEmid evolver system by remastering highâ€copy phagemid vectors. Engineering Biology, 0, , .	1.8	1
74	A35â€…An altered metabolism of nucleotides leads to huntingtonâ€™s disease related cardiomyopathy. , 2018, , .		0
75	F07â€…A frequency of concomitant disorders in presymptomatic huntingtonâ€™s disease patients. , 2018, , .		0
76	Zinc Fingers. , 2004, , 435-439.		0