Christopher A Voigt

List of Publications by Citations

120 papers	12,749 citations	52 h-index	112 g-index
245 ext. papers	15,636 ext. citations	11.7 avg, IF	7 L-index

#	Paper	IF	Citations
120	Automated design of synthetic ribosome binding sites to control protein expression. *Nature Biotechnology*, **2009**, 27, 946-50	44.5	1245
119	Spatiotemporal control of cell signalling using a light-switchable protein interaction. *Nature*, **2009**, 461, 997-1001	50.4	743
118	Robust multicellular computing using genetically encoded NOR gates and chemical ‘wires’. *Nature*, **2011**, 469, 212-5	50.4	606
117	Genetic circuit design automation. *Science*, **2016**, 352, aac7341	33.3	575
116	Principles of genetic circuit design. *Nature Methods*, **2014**, 11, 508-20	21.6	551
115	Genetic programs constructed from layered logic gates in single cells. *Nature*, **2012**, 491, 249-53	50.4	479
114	Synthetic biology: engineering Escherichia coli to see light. *Nature*, **2005**, 438, 441-2	50.4	467
113	Environmentally controlled invasion of cancer cells by engineered bacteria. *Journal of Molecular Biology*, **2006**, 355, 619-27	6.5	450
112	A synthetic genetic edge detection program. *Cell*, **2009**, 137, 1272-81	56.2	372
111	Synthetic biology to access and expand nature’s chemical diversity. *Nature Reviews Microbiology*, **2016**, 14, 135-49	22.2	314
110	Symbiotic Nitrogen Fixation and the Challenges to Its Extension to Nonlegumes. *Applied and Environmental Microbiology*, **2016**, 82, 3698-3710	4.8	307
109	Synthesis of three advanced biofuels from ionic liquid-pretreated switchgrass using engineered Escherichia coli. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 19949-54	11.5	304
108	Characterization of 582 natural and synthetic terminators and quantification of their design constraints. *Nature Methods*, **2013**, 10, 659-64	21.6	288
107	Refactoring the nitrogen fixation gene cluster from Klebsiella oxytoca. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 7085-90	11.5	285
106	Environmental signal integration by a modular AND gate. *Molecular Systems Biology*, **2007**, 3, 133	12.2	273
105	Ribozyme-based insulator parts buffer synthetic circuits from genetic context. *Nature Biotechnology*, **2012**, 30, 1137-42	44.5	254
104	Genomic mining of prokaryotic repressors for orthogonal logic gates. *Nature Chemical Biology*, **2014**, 10, 99-105	11.7	249

103	Functional optimization of gene clusters by combinatorial design and assembly. *Nature Biotechnology*, **2014**, 32, 1241-9	44.5	249
102	Genetic parts to program bacteria. *Current Opinion in Biotechnology*, **2006**, 17, 548-57	11.4	193
101	Programming a Human Commensal Bacterium, , to Sense and Respond to Stimuli in the Murine Gut Microbiota. *Cell Systems*, **2015**, 1, 62-71	10.6	192
100	Multichromatic control of gene expression in Escherichia coli. *Journal of Molecular Biology*, **2011**, 405, 315-24	6.5	182
99	Synthesis of methyl halides from biomass using engineered microbes. *Journal of the American Chemical Society*, **2009**, 131, 6508-15	16.4	180
98	Multi-input CRISPR/Cas genetic circuits that interface host regulatory networks. *Molecular Systems Biology*, **2014**, 10, 763	12.2	166
97	Escherichia coli "Marionette" strains with 12 highly optimized small-molecule sensors. *Nature Chemical Biology*, **2019**, 15, 196-204	11.7	163
96	Realizing the potential of synthetic biology. *Nature Reviews Molecular Cell Biology*, **2014**, 15, 289-94	48.7	151
95	Permanent genetic memory with >1-byte capacity. *Nature Methods*, **2014**, 11, 1261-6	21.6	139
94	Modular control of multiple pathways using engineered orthogonal T7 polymerases. *Nucleic Acids Research*, **2012**, 40, 8773-81	20.1	134
93	Discovery of Reactive Microbiota-Derived Metabolites that Inhibit Host Proteases. *Cell*, **2017**, 168, 517-526.e18	36.2	130
92	Design of orthogonal genetic switches based on a crosstalk map of σs, anti-σs, and promoters. *Molecular Systems Biology*, **2013**, 9, 702	12.2	126
91	A "resource allocator" for transcription based on a highly fragmented T7 RNA polymerase. *Molecular Systems Biology*, **2014**, 10, 742	12.2	121
90	Advances in genetic circuit design: novel biochemistries, deep part mining, and precision gene expression. *Current Opinion in Chemical Biology*, **2013**, 17, 878-92	9.7	103
89	Engineering RGB color vision into Escherichia coli. *Nature Chemical Biology*, **2017**, 13, 706-708	11.7	101
88	Engineered promoters enable constant gene expression at any copy number in bacteria. *Nature Biotechnology*, **2018**, 36, 352-358	44.5	101
87	Engineering the Salmonella type III secretion system to export spider silk monomers. *Molecular Systems Biology*, **2009**, 5, 309	12.2	101
86	A Pressure Test to Make 10 Molecules in 90 Days: External Evaluation of Methods to Engineer Biology. *Journal of the American Chemical Society*, **2018**, 140, 4302-4316	16.4	87

85	Targeted DNA degradation using a CRISPR device stably carried in the host genome. *Nature Communications*, **2015**, 6, 6989	17.4	83
84	Engineered integrative and conjugative elements for efficient and inducible DNA transfer to undomesticated bacteria. *Nature Microbiology*, **2018**, 3, 1043-1053	26.6	75
83	Use of plant colonizing bacteria as chassis for transfer of N$_2$fixation to cereals. *Current Opinion in Biotechnology*, **2015**, 32, 216-222	11.4	75
82	Genetic circuit performance under conditions relevant for industrial bioreactors. *ACS Synthetic Biology*, **2012**, 1, 555-64	5.7	75
81	Kinetic buffering of cross talk between bacterial two-component sensors. *Journal of Molecular Biology*, **2009**, 390, 380-93	6.5	71
80	Antisense transcription as a tool to tune gene expression. *Molecular Systems Biology*, **2016**, 12, 854	12.2	70
79	Dynamic control of endogenous metabolism with combinatorial logic circuits. *Molecular Systems Biology*, **2018**, 14, e8605	12.2	70
78	Control of nitrogen fixation in bacteria that associate with cereals. *Nature Microbiology*, **2020**, 5, 314-330	26.6	67
77	Programming cells: towards an automated 'Genetic Compiler'. *Current Opinion in Biotechnology*, **2010**, 21, 572-81	11.4	65
76	Engineered dCas9 with reduced toxicity in bacteria: implications for genetic circuit design. *Nucleic Acids Research*, **2018**, 46, 11115-11125	20.1	65
75	Resilient living materials built by printing bacterial spores. *Nature Chemical Biology*, **2020**, 16, 126-133	11.7	60
74	Genetic encoding of DNA nanostructures and their self-assembly in living bacteria. *Nature Communications*, **2016**, 7, 11179	17.4	59
73	The Bacillus subtilis sin operon: an evolvable network motif. *Genetics*, **2005**, 169, 1187-202	4	57
72	Systematic transfer of prokaryotic sensors and circuits to mammalian cells. *ACS Synthetic Biology*, **2014**, 3, 880-91	5.7	54
71	Genetic circuit characterization and debugging using RNA-seq. *Molecular Systems Biology*, **2017**, 13, 952	12.2	53
70	Cellular checkpoint control using programmable sequential logic. *Science*, **2018**, 361,	33.3	53
69	Construction of a genetic multiplexer to toggle between chemosensory pathways in Escherichia coli. *Journal of Molecular Biology*, **2011**, 406, 215-27	6.5	52
68	Prokaryotic gene clusters: a rich toolbox for synthetic biology. *Biotechnology Journal*, **2010**, 5, 1277-96	5.6	51

67	Retrosynthetic design of metabolic pathways to chemicals not found in nature. *Current Opinion in Systems Biology*, **2019**, 14, 82-107	3.2	50
66	Formation of Nitrogenase NifDK Tetramers in the Mitochondria of Saccharomyces cerevisiae. *ACS Synthetic Biology*, **2017**, 6, 1043-1055	5.7	49
65	Post-translational control of genetic circuits using Potyvirus proteases. *Nucleic Acids Research*, **2016**, 44, 6493-502	20.1	45
64	Light-Controlled, High-Resolution Patterning of Living Engineered Bacteria Onto Textiles, Ceramics, and Plastic. *Advanced Functional Materials*, **2019**, 29, 1901788	15.6	44
63	Algorithmic co-optimization of genetic constructs and growth conditions: application to 6-ACA, a potential nylon-6 precursor. *Nucleic Acids Research*, **2015**, 43, 10560-70	20.1	44
62	Induction and relaxation dynamics of the regulatory network controlling the type III secretion system encoded within Salmonella pathogenicity island 1. *Journal of Molecular Biology*, **2008**, 377, 47-61	6.5	43
61	Engineering bacterial signals and sensors. *Contributions To Microbiology*, **2009**, 16, 194-225		40
60	Balancing gene expression without library construction via a reusable sRNA pool. *Nucleic Acids Research*, **2017**, 45, 8116-8127	20.1	39
59	Synthetic biology 2020-2030: six commercially-available products that are changing our world. *Nature Communications*, **2020**, 11, 6379	17.4	38
58	Genetic circuit design automation for yeast. *Nature Microbiology*, **2020**, 5, 1349-1360	26.6	38
57	Bacterial terpene biosynthesis: challenges and opportunities for pathway engineering. *Beilstein Journal of Organic Chemistry*, **2019**, 15, 2889-2906	2.5	38
56	DNAplotlib: Programmable Visualization of Genetic Designs and Associated Data. *ACS Synthetic Biology*, **2017**, 6, 1115-1119	5.7	37
55	Control of type III protein secretion using a minimal genetic system. *Nature Communications*, **2017**, 8, 14737	17.4	35
54	Characterization of combinatorial patterns generated by multiple two-component sensors in E. coli that respond to many stimuli. *Biotechnology and Bioengineering*, **2011**, 108, 666-75	4.9	35
53	Iterative algorithm-guided design of massive strain libraries, applied to itaconic acid production in yeast. *Metabolic Engineering*, **2018**, 48, 33-43	9.7	34
52	DNA Assembly in 3D Printed Fluidics. *PLoS ONE*, **2015**, 10, e0143636	3.7	34
51	Memory and Combinatorial Logic Based on DNA Inversions: Dynamics and Evolutionary Stability. *ACS Synthetic Biology*, **2015**, 4, 1361-72	5.7	32
50	Deep learning to predict the lab-of-origin of engineered DNA. *Nature Communications*, **2018**, 9, 3135	17.4	30

49	Programming Escherichia coli to function as a digital display. *Molecular Systems Biology*, **2020**, 16, e9401	12.2	30
48	Engineering orthogonal signalling pathways reveals the sparse occupancy of sequence space. *Nature*, **2019**, 574, 702-706	50.4	29
47	Genetic circuit design automation for the gut resident species Bacteroides thetaiotaomicron. *Nature Biotechnology*, **2020**, 38, 962-969	44.5	28
46	Double Dutch: A Tool for Designing Combinatorial Libraries of Biological Systems. *ACS Synthetic Biology*, **2016**, 5, 507-17	5.7	27
45	Genetic sensor for strong methylating compounds. *ACS Synthetic Biology*, **2013**, 2, 614-24	5.7	26
44	Registry in a tube: multiplexed pools of retrievable parts for genetic design space exploration. *Nucleic Acids Research*, **2017**, 45, 1553-1565	20.1	24
43	Hybrid Living Materials: Digital Design and Fabrication of 3D Multimaterial Structures with Programmable Biohybrid Surfaces. *Advanced Functional Materials*, **2020**, 30, 1907401	15.6	23
42	Communicating Structure and Function in Synthetic Biology Diagrams. *ACS Synthetic Biology*, **2019**, 8, 1818-1825	5.7	20
41	Single-cell measurement of plasmid copy number and promoter activity. *Nature Communications*, **2021**, 12, 1475	17.4	18
40	Precision design of stable genetic circuits carried in highly-insulated E.coli genomic landing pads. *Molecular Systems Biology*, **2020**, 16, e9584	12.2	17
39	A Framework for Genetic Logic Synthesis. *Proceedings of the IEEE*, **2015**, 103, 2196-2207	14.3	16
38	Quantification of the physiochemical constraints on the export of spider silk proteins by Salmonella type III secretion. *Microbial Cell Factories*, **2010**, 9, 78	6.4	16
37	Biosynthesis of the nitrogenase active-site cofactor precursor NifB-co in. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 25078-25086	11.5	16
36	An absorbance method for analysis of enzymatic degradation kinetics of poly(ethylene terephthalate) films. *Scientific Reports*, **2021**, 11, 928	4.9	16
35	Genetic circuit characterization by inferring RNA polymerase movement and ribosome usage. *Nature Communications*, **2020**, 11, 5001	17.4	15
34	Silica Nanostructures Produced Using Diatom Peptides with Designed Post-Translational Modifications. *Advanced Functional Materials*, **2020**, 30, 2000849	15.6	14
33	Genetic Design via Combinatorial Constraint Specification. *ACS Synthetic Biology*, **2017**, 6, 2130-2135	5.7	12
32	Genetic Tuning of Iron Oxide Nanoparticle Size, Shape, and Surface Properties in Magnetospirillum magneticum. *Advanced Functional Materials*, **2021**, 31, 2004813	15.6	12

31	Synthetic Biology Open Language Visual (SBOL Visual) Version 2.0. *Journal of Integrative Bioinformatics*, **2018**, 15,	3.8	10
30	Genetic Circuit Dynamics: Hazard and Glitch Analysis. *ACS Synthetic Biology*, **2020**, 9, 2324-2338	5.7	10
29	Organism Engineering for the Bioproduction of the Triaminotrinitrobenzene (TATB) Precursor Phloroglucinol (PG). *ACS Synthetic Biology*, **2019**, 8, 2746-2755	5.7	10
28	Distributed Implementation of Boolean Functions by Transcriptional Synthetic Circuits. *ACS Synthetic Biology*, **2020**, 9, 2172-2187	5.7	8
27	Nanoliter scale electrochemistry of natural and engineered electroactive bacteria. *Bioelectrochemistry*, **2021**, 137, 107644	5.6	8
26	Engineering living and regenerative fungal-bacterial biocomposite structures. *Nature Materials*, **2021**,	27	7
25	Marionette:E. colicontaining 12 highly-optimized small molecule sensors		7
24	Engineering a DNAzyme-Based Operon System for the Production of DNA Nanoscaffolds in Living Bacteria. *ACS Synthetic Biology*, **2020**, 9, 236-240	5.7	6
23	Synthetic Biology Open Language Visual (SBOL Visual) Version 2.1. *Journal of Integrative Bioinformatics*, **2019**, 16,	3.8	6
22	Genetic Encoding of Targeted Magnetic Resonance Imaging Contrast Agents for Tumor Imaging. *ACS Synthetic Biology*, **2020**, 9, 392-401	5.7	6
21	Activation of Protein Expression in Electroactive Biofilms. *ACS Synthetic Biology*, **2020**, 9, 1958-1967	5.7	6
20	Gut-inhabiting Clostridia build human GPCR ligands by conjugating neurotransmitters with diet- and human-derived fatty acids. *Nature Microbiology*, **2021**, 6, 792-805	26.6	4
19	Competitive dCas9 binding as a mechanism for transcriptional control. *Molecular Systems Biology*, **2021**, 17, e10512	12.2	2
18	Selection for constrained peptides that bind to a single target protein. *Nature Communications*, **2021**, 12, 6343	17.4	2
17	Genetically modifying skin microbe to produce violacein and augmenting microbiome did not defend Panamanian golden frogs from disease. *ISME Communications*, **2021**, 1,		2
16	Coculture of primary human colon monolayer with human gut bacteria. *Nature Protocols*, **2021**, 16, 3874-3890	13.8	2
15	Rapid and simultaneous screening of pathway designs and chassis organisms, applied to engineered living materials. *Metabolic Engineering*, **2021**, 66, 308-318	9.7	2
14	Genetic circuit design automation with Cello 2.0.. *Nature Protocols*, **2022**,	18.8	2

13	Engineered plant control of associative nitrogen fixation.. *Proceedings of the National Academy of Sciences of the United States of America*, **2022**, 119, e2117465119	11.5	2
12	Resilient Living Materials Built By Printing Bacterial Spores		1
11	Distributed implementation of Boolean functions by transcriptional synthetic circuits		1
10	A synthetic distributed genetic multi-bit counter.. *IScience*, **2021**, 24, 103526	6.1	0
9	Genetic Control of Aerogel and Nanofoam Properties, Applied to Ni-MnOx Cathode Design. *Advanced Functional Materials*, **2021**, 31, 2010867	15.6	0
8	Four-Step Pathway from Phenylpyruvate to Benzylamine, an Intermediate to the High-Energy Propellant CL-20. *ACS Synthetic Biology*, **2021**, 10, 2187-2196	5.7	0
7	Characterizing chemical signaling between engineered "microbial sentinels" in porous microplates.. *Molecular Systems Biology*, **2022**, 18, e10785	12.2	0
6	Confronting Racism in Chemistry Journals. *ACS Applied Nano Materials*, **2020**, 3, 6131-6133	5.6	
5	Confronting Racism in Chemistry Journals. *ACS Applied Polymer Materials*, **2020**, 2, 2496-2498	4.3	
4	Confronting Racism in Chemistry Journals. *Organometallics*, **2020**, 39, 2331-2333	3.8	
3	Update to Our Reader, Reviewer, and Author Communities April 2020. *Energy & Fuels*, **2020**, 34, 5107-5108	4.1	
2	Update to Our Reader, Reviewer, and Author Communities April 2020. *Organometallics*, **2020**, 39, 1665-1666	3.8	
1	Confronting Racism in Chemistry Journals. *Journal of Chemical Health and Safety*, **2020**, 27, 198-200	1.7	