

# Christina D Smolke

## List of Publications by Year in descending order

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Version: 2024-02-01

86  
papers

8,482  
citations

61984

43  
h-index

56724

83  
g-index

99  
all docs

99  
docs citations

99  
times ranked

6640  
citing authors

#	ARTICLE	IF	CITATIONS
1	Engineering synthetic RNA devices for cell control. <i>Nature Reviews Genetics</i> , 2022, 23, 215-228.	16.3	43
2	Polymerase-guided base editing enables in vivo mutagenesis and rapid protein engineering. <i>Nature Communications</i> , 2021, 12, 1579.	12.8	43
3	A multiplexed, automated evolution pipeline enables scalable discovery and characterization of biosensors. <i>Nature Communications</i> , 2021, 12, 1437.	12.8	30
4	A computational workflow for the expansion of heterologous biosynthetic pathways to natural product derivatives. <i>Nature Communications</i> , 2021, 12, 1760.	12.8	40
5	A convolutional neural network for the prediction and forward design of ribozyme-based gene-control elements. <i>ELife</i> , 2021, 10, .	6.0	7
6	Engineering cellular metabolite transport for biosynthesis of computationally predicted tropane alkaloid derivatives in yeast. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	32
7	A novel bivalent chromatin associates with rapid induction of camalexin biosynthesis genes in response to a pathogen signal in <i>Arabidopsis</i> . <i>ELife</i> , 2021, 10, .	6.0	20
8	Complete biosynthesis of the bisbenzylisoquinoline alkaloids guattegaumerine and berbaminine in yeast. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	20
9	Discovery of a previously unknown biosynthetic capacity of naringenin chalcone synthase by heterologous expression of a tomato gene cluster in yeast. <i>Science Advances</i> , 2020, 6, .	10.3	13
10	Biosynthesis of medicinal tropane alkaloids in yeast. <i>Nature</i> , 2020, 585, 614-619.	27.8	227
11	Structure-Guided Engineering of a Scoulerine 9-O-Methyltransferase Enables the Biosynthesis of Tetrahydropalmatrubine and Tetrahydropalmatine in Yeast. <i>ACS Catalysis</i> , 2020, 10, 4497-4509.	11.2	15
12	Model-driven generation of artificial yeast promoters. <i>Nature Communications</i> , 2020, 11, 2113.	12.8	87
13	Engineering a microbial biosynthesis platform for de novo production of tropane alkaloids. <i>Nature Communications</i> , 2019, 10, 3634.	12.8	69
14	Massively parallel RNA device engineering in mammalian cells with RNA-Seq. <i>Nature Communications</i> , 2019, 10, 4327.	12.8	36
15	Programmable mutually exclusive alternative splicing for generating RNA and protein diversity. <i>Nature Communications</i> , 2019, 10, 2673.	12.8	17
16	Synthetic biology strategies for microbial biosynthesis of plant natural products. <i>Nature Communications</i> , 2019, 10, 2142.	12.8	254
17	Production of the cyanogenic glycoside dhurrin in yeast. <i>Metabolic Engineering Communications</i> , 2019, 9, e00092.	3.6	16
18	RNA Switches for Synthetic Biology. <i>Cold Spring Harbor Perspectives in Biology</i> , 2019, 11, a032532.	5.5	33

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19	Anti-CRISPR-mediated control of gene editing and synthetic circuits in eukaryotic cells. <i>Nature Communications</i> , 2019, 10, 194.	12.8	118
20	Biosynthesis of Complex Plant-Derived Natural Products. <i>FASEB Journal</i> , 2019, 33, 95.4.	0.5	0
21	Regulation of T cell proliferation with drug-responsive microRNA switches. <i>Nucleic Acids Research</i> , 2018, 46, 1541-1552.	14.5	31
22	Complete biosynthesis of noscapine and halogenated alkaloids in yeast. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E3922-E3931.	7.1	195
23	Strategies for microbial synthesis of high-value phytochemicals. <i>Nature Chemistry</i> , 2018, 10, 395-404.	13.6	95
24	Synthetic biology strategies toward heterologous phytochemical production. <i>Natural Product Reports</i> , 2018, 35, 902-920.	10.3	45
25	Mammalian synthetic biology for studying the cell. <i>Journal of Cell Biology</i> , 2017, 216, 73-82.	5.2	38
26	Biomedical applications of RNA-based devices. <i>Current Opinion in Biomedical Engineering</i> , 2017, 4, 106-115.	3.4	19
27	Design and Construction of Generalizable RNA-Protein Hybrid Controllers by Level-Matched Genetic Signal Amplification. <i>Cell Systems</i> , 2016, 3, 549-562.e7.	6.2	20
28	Opportunities in the design and application of RNA for gene expression control. <i>Nucleic Acids Research</i> , 2016, 44, 2987-2999.	14.5	70
29	Engineering a microbial platform for de novo biosynthesis of diverse methylxanthines. <i>Metabolic Engineering</i> , 2016, 38, 191-203.	7.0	32
30	Engineering biosynthesis of the anticancer alkaloid noscapine in yeast. <i>Nature Communications</i> , 2016, 7, 12137.	12.8	121
31	Control of alphavirus-based gene expression using engineered riboswitches. <i>Virology</i> , 2015, 483, 302-311.	2.4	41
32	Engineering dynamic cell cycle control with synthetic small molecule-responsive RNA devices. <i>Journal of Biological Engineering</i> , 2015, 9, 21.	4.7	22
33	De novo production of the key branch point benzylisoquinoline alkaloid reticuline in yeast. <i>Metabolic Engineering</i> , 2015, 31, 74-83.	7.0	102
34	Engineering strategies for the fermentative production of plant alkaloids in yeast. <i>Metabolic Engineering</i> , 2015, 30, 96-104.	7.0	86
35	Synthetic feedback control using an RNAi-based gene-regulatory device. <i>Journal of Biological Engineering</i> , 2015, 9, 5.	4.7	42
36	Optimization of yeast-based production of medicinal protoberberine alkaloids. <i>Microbial Cell Factories</i> , 2015, 14, 144.	4.0	51

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37	High-throughput cellular RNA device engineering. <i>Nature Methods</i> , 2015, 12, 989-994.	19.0	100
38	Complete biosynthesis of opioids in yeast. <i>Science</i> , 2015, 349, 1095-1100.	12.6	809
39	<i>In Vitro</i> Screening and <i>In Silico</i> Modeling of RNA-Based Gene Expression Control. <i>ACS Chemical Biology</i> , 2015, 10, 2463-2467.	3.4	14
40	Protein-responsive ribozyme switches in eukaryotic cells. <i>Nucleic Acids Research</i> , 2014, 42, 12306-12321.	14.5	42
41	Facile Characterization of Aptamer Kinetic and Equilibrium Binding Properties Using Surface Plasmon Resonance. <i>Methods in Enzymology</i> , 2014, 549, 451-466.	1.0	26
42	Realizing the potential of synthetic biology. <i>Nature Reviews Molecular Cell Biology</i> , 2014, 15, 289-294.	37.0	196
43	A quantitative framework for the forward design of synthetic miRNA circuits. <i>Nature Methods</i> , 2014, 11, 1147-1153.	19.0	39
44	A system for multilocus chromosomal integration and transformation-free selection marker rescue. <i>FEMS Yeast Research</i> , 2014, 14, 1171-1185.	2.3	18
45	Kinetic and Equilibrium Binding Characterization of Aptamers to Small Molecules using a Label-Free, Sensitive, and Scalable Platform. <i>Analytical Chemistry</i> , 2014, 86, 3273-3278.	6.5	103
46	A microbial biomanufacturing platform for natural and semisynthetic opioids. <i>Nature Chemical Biology</i> , 2014, 10, 837-844.	8.0	231
47	Synthetic RNA Switches for Yeast Metabolic Engineering: Screening Recombinant Enzyme Libraries. <i>Methods in Molecular Biology</i> , 2014, 1152, 125-136.	0.9	5
48	Construction of Ligand-Responsive MicroRNAs that Operate Through Inhibition of Drosha Processing. <i>Methods in Molecular Biology</i> , 2014, 1111, 259-267.	0.9	6
49	A yeast-based rapid prototype platform for gene control elements in mammalian cells. <i>Biotechnology and Bioengineering</i> , 2013, 110, 1201-1210.	3.3	22
50	Synthetic Biology: Advancing the Design of Diverse Genetic Systems. <i>Annual Review of Chemical and Biomolecular Engineering</i> , 2013, 4, 69-102.	6.8	120
51	Molecular tools for chemical biotechnology. <i>Current Opinion in Biotechnology</i> , 2013, 24, 1000-1009.	6.6	11
52	Dynamically Reshaping Signaling Networks to Program Cell Fate via Genetic Controllers. <i>Science</i> , 2013, 341, 1235-1239.	12.6	63
53	A versatile cis-blocking and trans-activation strategy for ribozyme characterization. <i>Nucleic Acids Research</i> , 2013, 41, e41-e41.	14.5	9
54	A high-throughput, quantitative cell-based screen for efficient tailoring of RNA device activity. <i>Nucleic Acids Research</i> , 2012, 40, e154-e154.	14.5	60

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55	Identification and treatment of heme depletion attributed to overexpression of a lineage of evolved P450 monooxygenases. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 19504-19509.	7.1	72
56	Synthetic biology: advancing biological frontiers by building synthetic systems. <i>Genome Biology</i> , 2012, 13, 240.	9.6	65
57	High-throughput enzyme evolution in <i>Saccharomyces cerevisiae</i> using a synthetic RNA switch. <i>Metabolic Engineering</i> , 2012, 14, 306-316.	7.0	141
58	Synthetic RNA switches as a tool for temporal and spatial control over gene expression. <i>Current Opinion in Biotechnology</i> , 2012, 23, 679-688.	6.6	107
59	Advancing secondary metabolite biosynthesis in yeast with synthetic biology tools. <i>FEMS Yeast Research</i> , 2012, 12, 144-170.	2.3	195
60	Applications of genetically-encoded biosensors for the construction and control of biosynthetic pathways. <i>Metabolic Engineering</i> , 2012, 14, 212-222.	7.0	129
61	Synthetic biology: Emerging methodologies to catalyze the metabolic engineering design cycle. <i>Metabolic Engineering</i> , 2012, 14, 187-188.	7.0	4
62	A synthetic library of RNA control modules for predictable tuning of gene expression in yeast. <i>Molecular Systems Biology</i> , 2011, 7, 471.	7.2	72
63	Bringing It Together with RNA. <i>Science</i> , 2011, 333, 412-413.	12.6	4
64	Engineering Biological Systems with Synthetic RNA Molecules. <i>Molecular Cell</i> , 2011, 43, 915-926.	9.7	177
65	Informing Biological Design by Integration of Systems and Synthetic Biology. <i>Cell</i> , 2011, 144, 855-859.	28.9	82
66	From DNA to Targeted Therapeutics: Bringing Synthetic Biology to the Clinic. <i>Science Translational Medicine</i> , 2011, 3, 106ps42.	12.4	32
67	Engineering ligand-responsive RNA controllers in yeast through the assembly of RNase III tuning modules. <i>Nucleic Acids Research</i> , 2011, 39, 5299-5311.	14.5	38
68	Synthetic RNA modules for fine-tuning gene expression levels in yeast by modulating RNase III activity. <i>Nucleic Acids Research</i> , 2011, 39, 8651-8664.	14.5	28
69	Design of small molecule-responsive microRNAs based on structural requirements for Drosha processing. <i>Nucleic Acids Research</i> , 2011, 39, 2981-2994.	14.5	130
70	Reprogramming Cellular Behavior with RNA Controllers Responsive to Endogenous Proteins. <i>Science</i> , 2010, 330, 1251-1255.	12.6	293
71	Genetic control of mammalian T-cell proliferation with synthetic RNA regulatory systems. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 8531-8536.	7.1	238
72	Functional selection and systematic analysis of intronic splicing elements identify active sequence motifs and associated splicing factors. <i>Nucleic Acids Research</i> , 2010, 38, 5152-5165.	14.5	25

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73	It's the DNA That Counts. <i>Science</i> , 2009, 324, 1156-1157.	12.6	6
74	Design Principles for Riboswitch Function. <i>PLoS Computational Biology</i> , 2009, 5, e1000363.	3.2	115
75	Building outside of the box: iGEM and the BioBricks Foundation. <i>Nature Biotechnology</i> , 2009, 27, 1099-1102.	17.5	155
76	Frameworks for Programming Biological Function through RNA Parts and Devices. <i>Chemistry and Biology</i> , 2009, 16, 298-310.	6.0	108
77	Production of benzylisoquinoline alkaloids in <i>Saccharomyces cerevisiae</i> . <i>Nature Chemical Biology</i> , 2008, 4, 564-573.	8.0	297
78	Higher-Order Cellular Information Processing with Synthetic RNA Devices. <i>Science</i> , 2008, 322, 456-460.	12.6	495
79	Model-guided design of ligand-regulated RNAi for programmable control of gene expression. <i>Molecular Systems Biology</i> , 2008, 4, 224.	7.2	104
80	Foundational advances in RNA engineering applied to control biosynthesis. <i>FASEB Journal</i> , 2008, 22, 529.2.	0.5	0
81	A modular and extensible RNA-based gene-regulatory platform for engineering cellular function. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 14283-14288.	7.1	358
82	Combinatorial engineering of intergenic regions in operons tunes expression of multiple genes. <i>Nature Biotechnology</i> , 2006, 24, 1027-1032.	17.5	492
83	The Regulatory Roles of the Galactose Permease and Kinase in the Induction Response of the GAL Network in <i>Saccharomyces cerevisiae</i> . <i>Journal of Biological Chemistry</i> , 2006, 281, 13485-13492.	3.4	54
84	Codeine-binding RNA aptamers and rapid determination of their binding constants using a direct coupling surface plasmon resonance assay. <i>Nucleic Acids Research</i> , 2006, 34, 5670-5682.	14.5	95
85	ENGINEERING NUCLEIC ACID-BASED MOLECULAR SENSORS FOR PROBING AND PROGRAMMING CELLULAR SYSTEMS. , 2006, , .		0
86	Programmable ligand-controlled riboregulators of eukaryotic gene expression. <i>Nature Biotechnology</i> , 2005, 23, 337-343.	17.5	363