Julius B Lucks

List of Publications by Year
in descending order

61 papers	4,396 citations	117453 34 h-index	133063 59 g-index
88 all docs	88 docs citations	88 times ranked	3019 citing authors

#	Article	IF	Citations
1	Multiplexed RNA structure characterization with selective 2â€²-hydroxyl acylation analyzed by primer extension sequencing (SHAPE-Seq). Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 11063-11068.	3.3	346
2	Versatile RNA-sensing transcriptional regulators for engineering genetic networks. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 8617-8622.	3.3	277
3	Cell-free biosensors for rapid detection of water contaminants. Nature Biotechnology, 2020, 38, 1451-1459.	9.4	221
4	Creating small transcription activating RNAs. Nature Chemical Biology, 2015, 11, 214-220.	3.9	220
5	Cotranscriptional folding of a riboswitch at nucleotide resolution. Nature Structural and Molecular Biology, 2016, 23, 1124-1131.	3.6	163
6	Rationally designed families of orthogonal RNA regulators of translation. Nature Chemical Biology, 2012, 8, 447-454.	3.9	157
7	Rapidly Characterizing the Fast Dynamics of RNA Genetic Circuitry with Cell-Free Transcriptionâ€"Translation (TX-TL) Systems. ACS Synthetic Biology, 2015, 4, 503-515.	1.9	154
8	A renaissance in RNA synthetic biology: new mechanisms, applications and tools for the future. Current Opinion in Chemical Biology, 2015, 28, 47-56.	2.8	140
9	High-throughput determination of RNA structures. Nature Reviews Genetics, 2018, 19, 615-634.	7.7	140
10	SHAPE-Seq 2.0: systematic optimization and extension of high-throughput chemical probing of RNA secondary structure with next generation sequencing. Nucleic Acids Research, 2014, 42, e165-e165.	6.5	119
11	Point-of-Use Detection of Environmental Fluoride <i>via</i> a Cell-Free Riboswitch-Based Biosensor. ACS Synthetic Biology, 2020, 9, 10-18.	1.9	116
12	Computational design of small transcription activating RNAs for versatile and dynamic gene regulation. Nature Communications, 2017, 8, 1051.	5.8	113
13	Characterizing and prototyping genetic networks with cell-free transcriptionâ€"translation reactions. Methods, 2015, 86, 60-72.	1.9	112
14	Modeling and automation of sequencing-based characterization of RNA structure. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 11069-11074.	3.3	109
15	Toward scalable parts families for predictable design of biological circuits. Current Opinion in Microbiology, 2008, 11, 567-573.	2.3	106
16	Deconstructing Cell-Free Extract Preparation for <i>in Vitro</i> Activation of Transcriptional Genetic Circuitry. ACS Synthetic Biology, 2019, 8, 403-414.	1.9	102
17	An RNA Mapping DataBase for curating RNA structure mapping experiments. Bioinformatics, 2012, 28, 3006-3008.	1.8	93
18	De novo-designed translation-repressing riboregulators for multi-input cellular logic. Nature Chemical Biology, 2019, 15, 1173-1182.	3.9	90

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19	Engineering naturally occurring trans -acting non-coding RNAs to sense molecular signals. Nucleic Acids Research, 2012, 40, 5775-5786.	6.5	87
20	A modular strategy for engineering orthogonal chimeric RNA transcription regulators. Nucleic Acids Research, 2013, 41, 7577-7588.	6.5	81
21	The centrality of RNA for engineering gene expression. Biotechnology Journal, 2013, 8, 1379-1395.	1.8	76
22	Simultaneous characterization of cellular RNA structure and function with in-cell SHAPE-Seq. Nucleic Acids Research, 2016, 44, e12-e12.	6.5	76
23	Design and Optimization of a Cell-Free Atrazine Biosensor. ACS Synthetic Biology, 2020, 9, 671-677.	1.9	75
24	Characterizing RNA structures in vitro and in vivo with selective 2â€²-hydroxyl acylation analyzed by primer extension sequencing (SHAPE-Seq). Methods, 2016, 103, 34-48.	1.9	70
25	An adaptor from translational to transcriptional control enables predictable assembly of complex regulation. Nature Methods, 2012, 9, 1088-1094.	9.0	67
26	Computationally reconstructing cotranscriptional RNA folding from experimental data reveals rearrangement of non-native folding intermediates. Molecular Cell, 2021, 81, 870-883.e10.	4.5	60
27	Programming cell-free biosensors with DNA strand displacement circuits. Nature Chemical Biology, 2022, 18, 385-393.	3.9	59
28	RNA systems biology: uniting functional discoveries and structural tools to understand global roles of RNAs. Current Opinion in Biotechnology, 2016, 39, 182-191.	3.3	54
29	A primer on emerging field-deployable synthetic biology tools for global water quality monitoring. Npj Clean Water, 2020, 3, .	3.1	53
30	Design of a Transcriptional Biosensor for the Portable, On-Demand Detection of Cyanuric Acid. ACS Synthetic Biology, 2020, 9, 84-94.	1.9	51
31	Computational design of three-dimensional RNA structure and function. Nature Nanotechnology, 2019, 14, 866-873.	15.6	49
32	A ligand-gated strand displacement mechanism for ZTP riboswitch transcription control. Nature Chemical Biology, 2019, 15, 1067-1076.	3.9	47
33	Generating Effective Models and Parameters for RNA Genetic Circuits. ACS Synthetic Biology, 2015, 4, 914-926.	1.9	45
34	PLANT-Dx: A Molecular Diagnostic for Point-of-Use Detection of Plant Pathogens. ACS Synthetic Biology, 2019, 8, 902-905.	1.9	45
35	Achieving large dynamic range control of gene expression with a compact RNA transcriptionâ€"translation regulator. Nucleic Acids Research, 2017, 45, 5614-5624.	6.5	43
36	Mathematical Modeling of RNA-Based Architectures for Closed Loop Control of Gene Expression. ACS Synthetic Biology, 2018, 7, 1219-1228.	1.9	42

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37	Distinct timescales of RNA regulators enable the construction of a genetic pulse generator. Biotechnology and Bioengineering, 2019, 116, 1139-1151.	1.7	40
38	Distributed biotinâ€"streptavidin transcription roadblocks for mapping cotranscriptional RNA folding. Nucleic Acids Research, 2017, 45, e109-e109.	6.5	38
39	Improving fold activation of small transcription activating RNAs (STARs) with rational RNA engineering strategies. Biotechnology and Bioengineering, 2016, 113, 216-225.	1.7	36
40	RNA structure characterization from chemical mapping experiments. , 2011, , .		34
41	Using in-cell SHAPE-Seq and simulations to probe structureâ€"function design principles of RNA transcriptional regulators. Rna, 2016, 22, 920-933.	1.6	34
42	Engineering a Functional Small RNA Negative Autoregulation Network with Model-Guided Design. ACS Synthetic Biology, 2018, 7, 1507-1518.	1.9	32
43	A flow cytometric approach to engineering Escherichia coli for improved eukaryotic protein glycosylation. Metabolic Engineering, 2018, 47, 488-495.	3.6	30
44	How does RNA fold dynamically?. Journal of Molecular Biology, 2022, 434, 167665.	2.0	23
45	Probing of RNA structures in a positive sense RNA virus reveals selection pressures for structural elements. Nucleic Acids Research, 2018, 46, 2573-2584.	6.5	21
46	Organism Engineering for the Bioproduction of the Triaminotrinitrobenzene (TATB) Precursor Phloroglucinol (PG). ACS Synthetic Biology, 2019, 8, 2746-2755.	1.9	19
47	Dynamic Control of Gene Expression with Riboregulated Switchable Feedback Promoters. ACS Synthetic Biology, 2021, 10, 1199-1213.	1.9	19
48	Characterizing the Structureâ€"Function Relationship of a Naturally Occurring RNA Thermometer. Biochemistry, 2017, 56, 6629-6638.	1.2	18
49	Cotranscriptional RNA strand exchange underlies the gene regulation mechanism in a purine-sensing transcriptional riboswitch. Nucleic Acids Research, 2022, 50, 12001-12018.	6.5	18
50	Mapping RNA Structure In Vitro with SHAPE Chemistry and Next-Generation Sequencing (SHAPE-Seq). Methods in Molecular Biology, 2016, 1490, 135-162.	0.4	17
51	Chemical roadblocking of DNA transcription for nascent RNA display. Journal of Biological Chemistry, 2020, 295, 6401-6412.	1.6	16
52	Engineered Protein Machines: Emergent Tools for Synthetic Biology. Cell Chemical Biology, 2016, 23, 45-56.	2.5	15
53	SnapShot: RNA Structure Probing Technologies. Cell, 2018, 175, 600-600.e1.	13.5	12
54	Engineering a Synthetic Dopamine-Responsive Riboswitch for <i>In Vitro</i> Biosensing. ACS Synthetic Biology, 2022, 11, 2275-2283.	1.9	9

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55	RNA Engineering for Public Health: Innovations in RNA-Based Diagnostics and Therapeutics. Annual Review of Chemical and Biomolecular Engineering, 2021, 12, 263-286.	3.3	8
56	Elements of RNA Design. Biochemistry, 2019, 58, 1457-1459.	1.2	6
57	DUETT quantitatively identifies known and novel events in nascent RNA structural dynamics from chemical probing data. Bioinformatics, 2019, 35, 5103-5112.	1.8	4
58	RNA Sequence and Structure Determinants of Pol III Transcriptional Termination in Human Cells. Journal of Molecular Biology, 2021, 433, 166978.	2.0	4
59	Tracking RNA structures as RNAs transit through the cell. Nature Structural and Molecular Biology, 2019, 26, 256-257.	3.6	3
60	ROSALIND: Rapid Detection of Chemical Contaminants with Factor-Based. Methods in Molecular Biology, 2022, 2433, 325-342.	0.4	3
61	Turning It Up to 11: Modular Proteins Amplify RNA Sensors for Sophisticated Circuitry. Cell Systems, 2016, 3, 509-511.	2.9	0