Tae Seok Moon

List of Publications by Year
in descending order

55 papers	4,152 citations	186265 28 h-index	149698 56 g-index
56 all docs	56 docs citations	56 times ranked	4504 citing authors

#	Article	IF	Citations
1	Synthetic protein scaffolds provide modular control over metabolic flux. Nature Biotechnology, 2009, 27, 753-759.	17.5	1,071
2	Genetic programs constructed from layered logic gates in single cells. Nature, 2012, 491, 249-253.	27.8	660
3	Use of modular, synthetic scaffolds for improved production of glucaric acid in engineered E. coli. Metabolic Engineering, 2010, 12, 298-305.	7.0	258
4	Synthetic biology of cyanobacteria: unique challenges and opportunities. Frontiers in Microbiology, 2013, 4, 246.	3.5	243
5	Production of Glucaric Acid from a Synthetic Pathway in Recombinant <i>Escherichia coli</i>. Applied and Environmental Microbiology, 2009, 75, 589-595.	3.1	212
6	Comparative transcriptomics elucidates adaptive phenol tolerance and utilization in lipid-accumulating<i>Rhodococcus opacus</i>PD630. Nucleic Acids Research, 2016, 44, 2240-2254.	14.5	105
7	Programmable control of bacterial gene expression with the combined CRISPR and antisense RNA system. Nucleic Acids Research, 2016, 44, 2462-2473.	14.5	101
8	Diurnal Regulation of Cellular Processes in the Cyanobacterium <i>Synechocystis</i> sp. Strain PCC 6803: Insights from Transcriptomic, Fluxomic, and Physiological Analyses. MBio, 2016, 7, .	4.1	84
9	Cyanobacterial carbon metabolism: Fluxome plasticity and oxygen dependence. Biotechnology and Bioengineering, 2017, 114, 1593-1602.	3.3	83
10	Genetically stable CRISPR-based kill switches for engineered microbes. Nature Communications, 2022, 13, 672.	12.8	70
11	Molecular Toolkit for Gene Expression Control and Genome Modification in <i>Rhodococcus opacus</i> PD630. ACS Synthetic Biology, 2018, 7, 727-738.	3.8	69
12	Decoupling Resource-Coupled Gene Expression in Living Cells. ACS Synthetic Biology, 2017, 6, 1596-1604.	3.8	68
13	Construction of a Genetic Multiplexer to Toggle between Chemosensory Pathways in Escherichia coli. Journal of Molecular Biology, 2011, 406, 215-227.	4.2	59
14	Rapid metabolic analysis of <i>Rhodococcus opacus</i> PD630 via parallel ¹³Câ€metabolite fingerprinting. Biotechnology and Bioengineering, 2016, 113, 91-100.	3.3	51
15	Development of Design Rules for Reliable Antisense RNA Behavior in <i>E. coli</i>. ACS Synthetic Biology, 2016, 5, 1441-1454.	3.8	51
16	Multi-omic elucidation of aromatic catabolism in adaptively evolved Rhodococcus opacus. Metabolic Engineering, 2018, 49, 69-83.	7.0	50
17	Cloning and Characterization of Uronate Dehydrogenases from Two Pseudomonads and<i>Agrobacterium tumefaciens</i>Strain C58. Journal of Bacteriology, 2009, 191, 1565-1573.	2.2	48
18	Engineering Enzyme Specificity Using Computational Design of a Defined-Sequence Library. Chemistry and Biology, 2010, 17, 1306-1315.	6.0	48

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19	Oxygenâ€responsive genetic circuits constructed in <i>Synechocystis</i> sp. PCC 6803. Biotechnology and Bioengineering, 2016, 113, 433-442.	3.3	47
20	Microbial Production of Isoprenoids Enabled by Synthetic Biology. Frontiers in Microbiology, 2013, 4, 75.	3.5	46
21	De novodesign of heat-repressible RNA thermosensors inE. coli. Nucleic Acids Research, 2015, 43, 6166-6179.	14.5	45
22	Design rules of synthetic non-coding RNAs in bacteria. Methods, 2018, 143, 58-69.	3.8	41
23	Physical, chemical, and metabolic state sensors expand the synthetic biology toolbox for <i>Synechocystis</i> sp. PCC 6803. Biotechnology and Bioengineering, 2017, 114, 1561-1569.	3.3	37
24	A concerted systems biology analysis of phenol metabolism in Rhodococcus opacus PD630. Metabolic Engineering, 2019, 55, 120-130.	7.0	37
25	Robust, tunable genetic memory from protein sequestration combined with positive feedback. Nucleic Acids Research, 2015, 43, 9086-9094.	14.5	36
26	Development of Chemical and Metabolite Sensors for <i>Rhodococcus opacus</i> PD630. ACS Synthetic Biology, 2017, 6, 1973-1978.	3.8	36
27	Development of Rhodococcus opacus as a chassis for lignin valorization and bioproduction of high-value compounds. Biotechnology for Biofuels, 2019, 12, 192.	6.2	35
28	Biosensing in Smart Engineered Probiotics. Biotechnology Journal, 2020, 15, e1900319.	3.5	33
29	Multilevel Regulation of Bacterial Gene Expression with the Combined STAR and Antisense RNA System. ACS Synthetic Biology, 2018, 7, 853-865.	3.8	30
30	Bioconversion of renewable feedstocks by Rhodococcus opacus. Current Opinion in Biotechnology, 2020, 64, 10-16.	6.6	29
31	Programmable genetic circuits for pathway engineering. Current Opinion in Biotechnology, 2015, 36, 115-121.	6.6	28
32	Tuning Primary Metabolism for Heterologous Pathway Productivity. ACS Synthetic Biology, 2013, 2, 126-135.	3.8	27
33	Selection of stable reference genes for RT-qPCR in Rhodococcus opacus PD630. Scientific Reports, 2018, 8, 6019.	3.3	23
34	Lipid metabolism of phenol-tolerant Rhodococcus opacus strains for lignin bioconversion. Biotechnology for Biofuels, 2018, 11, 339.	6.2	23
35	Enabling complex genetic circuits to respond to extrinsic environmental signals. Biotechnology and Bioengineering, 2017, 114, 1626-1631.	3.3	21
36	Engineering microbial diagnostics and therapeutics with smart control. Current Opinion in Biotechnology, 2020, 66, 11-17.	6.6	21

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37	Tailoring microbes to upgrade lignin. Current Opinion in Chemical Biology, 2020, 59, 23-29.	6.1	20
38	Duplex Structure of Double-Stranded RNA Provides Stability against Hydrolysis Relative to Single-Stranded RNA. Environmental Science & Technology, 2021, 55, 8045-8053.	10.0	20
39	Engineering ligand-specific biosensors for aromatic amino acids and neurochemicals. Cell Systems, 2022, 13, 204-214.e4.	6.2	20
40	Construction of Genetic Logic Gates Based on the T7 RNA Polymerase Expression System in <i>Rhodococcus opacus</i> PD630. ACS Synthetic Biology, 2019, 8, 1921-1930.	3.8	19
41	Morphologyâ€“rheology relationship in hyaluronate/poly(vinyl alcohol)/borax polymer blends. Polymer, 2005, 46, 7156-7163.	3.8	18
42	Analysis of RNA Interference (RNAi) Biopesticides: Double-Stranded RNA (dsRNA) Extraction from Agricultural Soils and Quantification by RT-qPCR. Environmental Science & Technology, 2020, 54, 4893-4902.	10.0	17
43	Enzymatic assay of d-glucuronate using uronate dehydrogenase. Analytical Biochemistry, 2009, 392, 183-185.	2.4	14
44	Modulating Responses of Toehold Switches by an Inhibitory Hairpin. ACS Synthetic Biology, 2019, 8, 601-605.	3.8	13
45	An Improved CRISPR Interference Tool to Engineer <i>Rhodococcus opacus</i>. ACS Synthetic Biology, 2021, 10, 786-798.	3.8	13
46	From promise to practice. EMBO Reports, 2013, 14, 1034-1038.	4.5	11
47	Synthetic Gene Regulation in Cyanobacteria. Advances in Experimental Medicine and Biology, 2018, 1080, 317-355.	1.6	11
48	â€˜Hybridâ€™ processing strategies for expanding and improving the synthesis of renewable bioproducts. Current Opinion in Biotechnology, 2014, 30, 17-23.	6.6	9
49	Establishing a Multivariate Model for Predictable Antisense RNA-Mediated Repression. ACS Synthetic Biology, 2019, 8, 45-56.	3.8	9
50	Sensitivity analysis of a proposed model mechanism for newly created glucoseâ€6â€oxidases. AIChE Journal, 2012, 58, 2303-2308.	3.6	7
51	Dynamics of sequestration-based gene regulatory cascades. Nucleic Acids Research, 2017, 45, 7515-7526.	14.5	7
52	Making Security Viral: Shifting Engineering Biology Culture and Publishing. ACS Synthetic Biology, 2022, 11, 522-527.	3.8	6
53	Structural Determination of a New Peptidolipid Family from <i>Rhodococcus opacus</i> and the Pathogen <i>Rhodococcus equi</i> by Multiple Stage Mass Spectrometry. Journal of the American Society for Mass Spectrometry, 2020, 31, 611-623.	2.8	3
54	Making space for young speakers. Nature Chemical Biology, 2022, 18, 353-353.	8.0	2

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55	Model-Based Design of Synthetic Antisense RNA for Predictable Gene Repression. Methods in Molecular Biology, 2022, , 111-124.	0.9	1