Hyun Uk Kim

List of Publications by Year
in descending order

79 papers	9,744 citations	76294 40 h-index	71651 76 g-index
84 all docs	84 docs citations	84 times ranked	11255 citing authors

#	Article	IF	Citations
1	Efficient Production of Naringin Acetate with Different Acyl Donors via Enzymatic Transesterification by Lipases. International Journal of Environmental Research and Public Health, 2022, 19, 2972.	1.2	6
2	Systems metabolic engineering of <i>Streptomyces venezuelae</i> for the enhanced production of pikromycin. Biotechnology and Bioengineering, 2022, 119, 2250-2260.	1.7	4
3	Machine learning-guided evaluation of extraction and simulation methods for cancer patient-specific metabolic models. Computational and Structural Biotechnology Journal, 2022, 20, 3041-3052.	1.9	8
4	Comparative genomic analysis of Streptomyces rapamycinicus NRRL 5491 and its mutant overproducing rapamycin. Scientific Reports, 2022, 12, .	1.6	2
5	A deep learning approach to evaluate the feasibility of enzymatic reactions generated by retrobiosynthesis. Biotechnology Journal, 2021, 16, e2000605.	1.8	16
6	Microbial production of multiple short-chain primary amines via retrobiosynthesis. Nature Communications, 2021, 12, 173.	5.8	17
7	High-Level Production of the Natural Blue Pigment Indigoidine from Metabolically Engineered <i>Corynebacterium glutamicum</i> for Sustainable Fabric Dyes. ACS Sustainable Chemistry and Engineering, 2021, 9, 6613-6622.	3.2	29
8	Systems and synthetic biology to elucidate secondary metabolite biosynthetic gene clusters encoded in<i>Streptomyces</i>genomes. Natural Product Reports, 2021, 38, 1330-1361.	5.2	35
9	Predicting biochemical and physiological effects of natural products from molecular structures using machine learning. Natural Product Reports, 2021, 38, 1954-1966.	5.2	20
10	Development of computational models using omics data for the identification of effective cancer metabolic biomarkers. Molecular Omics, 2021, 17, 881-893.	1.4	4
11	Omics and Computational Modeling Approaches for the Effective Treatment of Drug-Resistant Cancer Cells. Frontiers in Genetics, 2021, 12, 742902.	1.1	13
12	Predicting Dynamic Clinical Outcomes of the Chemotherapy for Canine Lymphoma Patients Using a Machine Learning Model. Veterinary Sciences, 2021, 8, 301.	0.6	4
13	Machine learning applications in systems metabolic engineering. Current Opinion in Biotechnology, 2020, 64, 1-9.	3.3	131
14	Current status of pan-genome analysis for pathogenic bacteria. Current Opinion in Biotechnology, 2020, 63, 54-62.	3.3	54
15	Systematic and Comparative Evaluation of Software Programs for Templateâ€Based Modeling of Protein Structures. Biotechnology Journal, 2020, 15, e1900343.	1.8	5
16	Setup of a scientific computing environment for computational biology: Simulation of a genome-scale metabolic model of Escherichia coli as an example. Journal of Microbiology, 2020, 58, 227-234.	1.3	5
17	MEMOTE for standardized genome-scale metabolic model testing. Nature Biotechnology, 2020, 38, 272-276.	9.4	314
18	Modeling regulatory networks using machine learning for systems metabolic engineering. Current Opinion in Biotechnology, 2020, 65, 163-170.	3.3	18

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19	Engineering Heterologous Hosts for the Enhanced Production of Non-ribosomal Peptides. Biotechnology and Bioprocess Engineering, 2020, 25, 795-809.	1.4	5
20	Metabolic engineering of Corynebacterium glutamicum for the production of glutaric acid, a C5 dicarboxylic acid platform chemical. Metabolic Engineering, 2019, 51, 99-109.	3.6	50
21	Genomeâ€Scale Metabolic Reconstruction of Actinomycetes for Antibiotics Production. Biotechnology Journal, 2019, 14, e1800377.	1.8	22
22	Genomic and metabolic analysis of <i>Komagataeibacter xylinus</i> DSM 2325 producing bacterial cellulose nanofiber. Biotechnology and Bioengineering, 2019, 116, 3372-3381.	1.7	46
23	A safe and sustainable bacterial cellulose nanofiber separator for lithium rechargeable batteries. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 19288-19293.	3.3	57
24	Deep learning enables high-quality and high-throughput prediction of enzyme commission numbers. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 13996-14001.	3.3	151
25	Current status and applications of genome-scale metabolic models. Genome Biology, 2019, 20, 121.	3.8	463
26	Metabolic Engineering Strategies for the Enhanced Microalgal Production of Longâ€Chain Polyunsaturated Fatty Acids (LCâ€PUFAs). Biotechnology Journal, 2019, 14, e1900043.	1.8	10
27	Enhanced production of polyâ€'3â€'hydroxybutyrate (PHB) by expression of response regulator DR1558 in recombinant Escherichia coli. International Journal of Biological Macromolecules, 2019, 131, 29-35.	3.6	26
28	Designing Novel Functional Peptides by Manipulating a Temperature in the Softmax Function Coupled with Variational Autoencoder. , 2019, , .		2
29	A comprehensive metabolic map for production of bio-based chemicals. Nature Catalysis, 2019, 2, 18-33.	16.1	394
30	Recent development of antiSMASH and other computational approaches to mine secondary metabolite biosynthetic gene clusters. Briefings in Bioinformatics, 2019, 20, 1103-1113.	3.2	118
31	Deep learning improves prediction of drugâ€"drug and drugâ€"food interactions. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E4304-E4311.	3.3	325
32	Toward Systems Metabolic Engineering of Streptomycetes for Secondary Metabolites Production. Biotechnology Journal, 2018, 13, 1700465.	1.8	32
33	Metabolic engineering of <i>Escherichia coli</i> for the enhanced production of <scp>l</scp>â€tyrosine. Biotechnology and Bioengineering, 2018, 115, 2554-2564.	1.7	59
34	Current state and applications of microbial genome-scale metabolic models. Current Opinion in Systems Biology, 2017, 2, 10-18.	1.3	87
35	antiSMASH 4.0â€"improvements in chemistry prediction and gene cluster boundary identification. Nucleic Acids Research, 2017, 45, W36-W41.	6.5	1,196
36	Systems approach to characterize the metabolism of liver cancer stem cells expressing CD133. Scientific Reports, 2017, 7, 45557.	1.6	31

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37	Metabolic engineering of <i>Mannheimia succiniciproducens</i> for succinic acid production based on elementary mode analysis with clustering. Biotechnology Journal, 2017, 12, 1600701.	1.8	16
38	Framework and resource for more than 11,000 gene-transcript-protein-reaction associations in human metabolism. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E9740-E9749.	3.3	29
39	Systems metabolic engineering as an enabling technology in accomplishing sustainable development goals. Microbial Biotechnology, 2017, 10, 1254-1258.	2.0	23
40	Bacterial cellulose as an example product for sustainable production and consumption. Microbial Biotechnology, 2017, 10, 1181-1185.	2.0	55
41	Recent development of computational resources for new antibiotics discovery. Current Opinion in Microbiology, 2017, 39, 113-120.	2.3	34
42	Metabolic engineering with systems biology tools to optimize production of prokaryotic secondary metabolites. Natural Product Reports, 2016, 33, 933-941.	5.2	52
43	Systematic engineering of TCA cycle for optimal production of a four-carbon platform chemical 4-hydroxybutyric acid in Escherichia coli. Metabolic Engineering, 2016, 38, 264-273.	3.6	25
44	The secondary metabolite bioinformatics portal: Computational tools to facilitate synthetic biology of secondary metabolite production. Synthetic and Systems Biotechnology, 2016, 1, 69-79.	1.8	153
45	Design of homo-organic acid producing strains using multi-objective optimization. Metabolic Engineering, 2015, 28, 63-73.	3.6	25
46	A systems approach to traditional oriental medicine. Nature Biotechnology, 2015, 33, 264-268.	9.4	90
47	antiSMASH 3.0â€”a comprehensive resource for the genome mining of biosynthetic gene clusters. Nucleic Acids Research, 2015, 43, W237-W243.	6.5	1,764
48	Reconstruction of genome-scale human metabolic models using omics data. Integrative Biology (United Kingdom), 2015, 7, 859-868.	0.6	51
49	Systems strategies for developing industrial microbial strains. Nature Biotechnology, 2015, 33, 1061-1072.	9.4	433
50	Minimum Information about a Biosynthetic Gene cluster. Nature Chemical Biology, 2015, 11, 625-631.	3.9	715
51	Human genes with a greater number of transcript variants tend to show biological features of housekeeping and essential genes. Molecular BioSystems, 2015, 11, 2798-2807.	2.9	11
52	Metabolic engineering of antibiotic factories: new tools for antibiotic production in actinomycetes. Trends in Biotechnology, 2015, 33, 15-26.	4.9	159
53	Effects of introducing heterologous pathways on microbial metabolism with respect to metabolic optimality. Biotechnology and Bioprocess Engineering, 2014, 19, 660-667.	1.4	4
54	Systems biology and biotechnology of Streptomyces species for the production of secondary metabolites. Biotechnology Advances, 2014, 32, 255-268.	6.0	199

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55	Metabolic engineering of Corynebacterium glutamicum for L-arginine production. Nature Communications, 2014, 5, 4618.	5.8	209
56	Production of 4-hydroxybutyric acid by metabolically engineered Mannheimia succiniciproducens and its conversion to Î³-butyrolactone by acid treatment. Metabolic Engineering, 2013, 20, 73-83.	3.6	23
57	Production of bulk chemicals via novel metabolic pathways in microorganisms. Biotechnology Advances, 2013, 31, 925-935.	6.0	62
58	Fluxâ€coupled genes and their use in metabolic flux analysis. Biotechnology Journal, 2013, 8, 1035-1042.	1.8	14
59	Applications of genome-scale metabolic network models in the biopharmaceutical industry. Pharmaceutical Bioprocessing, 2013, 1, 337-339.	0.8	2
60	Flux variability scanning based on enforced objective flux for identifying gene amplification targets. BMC Systems Biology, 2012, 6, 106.	3.0	62
61	Genome-Scale Network Modeling. , 2012, , 1-23.		2
62	Metabolic network modeling and simulation for drug targeting and discovery. Biotechnology Journal, 2012, 7, 330-342.	1.8	49
63	Integrative genomeâ€scale metabolic analysis of <i>Vibrio vulnificus</i> for drug targeting and discovery. Molecular Systems Biology, 2011, 7, 460.	3.2	157
64	Microbial production of building block chemicals and polymers. Current Opinion in Biotechnology, 2011, 22, 758-767.	3.3	199
65	Framework for network modularization and Bayesian network analysis to investigate the perturbed metabolic network. BMC Systems Biology, 2011, 5, S14.	3.0	14
66	Metabolite-centric approaches for the discovery of antibacterials using genome-scale metabolic networks. Metabolic Engineering, 2010, 12, 105-111.	3.6	62
67	Data integration and analysis of biological networks. Current Opinion in Biotechnology, 2010, 21, 78-84.	3.3	44
68	Genome-scale metabolic network analysis and drug targeting of multi-drug resistant pathogen Acinetobacter baumannii AYE. Molecular BioSystems, 2010, 6, 339-348.	2.9	93
69	Metabolic engineering of microorganisms: general strategies and drug production. Drug Discovery Today, 2009, 14, 78-88.	3.2	121
70	In silico analysis of the effects of H2 and CO2 on the metabolism of a capnophilic bacterium Mannheimia succiniciproducens. Journal of Biotechnology, 2009, 144, 184-189.	1.9	11
71	Systems Biology, Genome-Scale Models, and Metabolic Engineering. , 2009, , .		1
72	Metabolic flux analysis and metabolic engineering of microorganisms. Molecular BioSystems, 2008, 4, 113-120.	2.9	141

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73	Strategies for systemsâ€level metabolic engineering. Biotechnology Journal, 2008, 3, 612-623.	1.8	59
74	Application of systems biology for bioprocess development. Trends in Biotechnology, 2008, 26, 404-412.	4.9	169
75	Systems metabolic engineering of <i>Escherichia coli</i> for <scp>L</scp> â€threonine production. Molecular Systems Biology, 2007, 3, 149.	3.2	391
76	Genome-scale analysis of Mannheimia succiniciproducens metabolism. Biotechnology and Bioengineering, 2007, 97, 657-671.	1.7	92
77	Systems biology as a foundation for genome-scale synthetic biology. Current Opinion in Biotechnology, 2006, 17, 488-492.	3.3	109
78	Korean Systems Biology and Biotechnology Research. Asia Pacific Biotech News, 2006, 10, 967-977.	0.5	0
79	Construction and Applications of Genome-Scalein silico Metabolic Models for Strain Improvement. , 0, , 355-385.		0