Jongmin Kim

List of Publications by Year
in descending order

58 papers	2,867 citations	331538 21 h-index	254106 43 g-index
74 all docs	74 docs citations	74 times ranked	2603 citing authors

#	Article	IF	Citations
1	Complex cellular logic computation using ribocomputing devices. Nature, 2017, 548, 117-121.	13.7	321
2	Construction of an in vitro bistable circuit from synthetic transcriptional switches. Molecular Systems Biology, 2006, 2, 68.	3.2	287
3	Synthetic <i>in vitro</i> transcriptional oscillators. Molecular Systems Biology, 2011, 7, 465.	3.2	271
4	Timing molecular motion and production with a synthetic transcriptional clock. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, E784-93.	3.3	208
5	Diversity in the dynamical behaviour of a compartmentalized programmable biochemical oscillator. Nature Chemistry, 2014, 6, 295-302.	6.6	201
6	Autonomous dynamic control of DNA nanostructure self-assembly. Nature Chemistry, 2019, 11, 510-520.	6.6	178
7	Gene Circuit Performance Characterization and Resource Usage in a Cell-Free â€œBreadboardâ€• ACS Synthetic Biology, 2014, 3, 416-425.	1.9	174
8	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
9	Expression of nicotinamide N-methyltransferase in hepatocellular carcinoma is associated with poor prognosis. Journal of Experimental and Clinical Cancer Research, 2009, 28, 20.	3.5	92
10	Computational Design of Nucleic Acid Feedback Control Circuits. ACS Synthetic Biology, 2014, 3, 600-616.	1.9	92
11	De novo-designed translation-repressing riboregulators for multi-input cellular logic. Nature Chemical Biology, 2019, 15, 1173-1182.	3.9	90
12	Synthetic circuit for exact adaptation and fold-change detection. Nucleic Acids Research, 2014, 42, 6078-6089.	6.5	80
13	Overexpression of High-Mobility Group Box 2 Is Associated with Tumor Aggressiveness and Prognosis of Hepatocellular Carcinoma. Clinical Cancer Research, 2010, 16, 5511-5521.	3.2	63
14	Expression of cystathionine Î²-synthase is downregulated in hepatocellular carcinoma and associated with poor prognosis. Oncology Reports, 2009, 21, 1449-54.	1.2	62
15	The expression of phospho-AKT1 and phospho-MTOR is associated with a favorable prognosis independent of PTEN expression in intrahepatic cholangiocarcinomas. Modern Pathology, 2012, 25, 131-139.	2.9	53
16	Ensemble Bayesian Analysis of Bistability in a Synthetic Transcriptional Switch. ACS Synthetic Biology, 2012, 1, 299-316.	1.9	53
17	Epithelialâ€“mesenchymal transition gene signature to predict clinical outcome of hepatocellular carcinoma. Cancer Science, 2010, 101, 1521-1528.	1.7	45
18	PID and State Feedback Controllers Using DNA Strand Displacement Reactions. , 2019, 3, 805-810.		41

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19	Molecular Titration Promotes Oscillations and Bistability in Minimal Network Models with Monomeric Regulators. ACS Synthetic Biology, 2016, 5, 321-333.	1.9	40
20	Programmable CRISPR-Cas Repression, Activation, and Computation with Sequence-Independent Targets and Triggers. ACS Synthetic Biology, 2019, 8, 1583-1589.	1.9	36
21	Ribocomputing: Cellular Logic Computation Using RNA Devices. Biochemistry, 2018, 57, 883-885.	1.2	29
22	RNA nanotechnology in synthetic biology. Current Opinion in Biotechnology, 2020, 63, 135-141.	3.3	28
23	Cell-Free Synthetic Biology Platform for Engineering Synthetic Biological Circuits and Systems. Methods and Protocols, 2019, 2, 39.	0.9	23
24	An in silico modeling toolbox for rapid prototyping of circuits in a biomolecular “breadboard” system. , 2013, , .		20
25	Cell-Free Characterization of Coherent Feed-Forward Loop-Based Synthetic Genetic Circuits. ACS Synthetic Biology, 2021, 10, 1406-1416.	1.9	15
26	Quantifying crosstalk in biochemical systems. , 2012, , .		12
27	Designing robustness to temperature in a feedforward loop circuit. , 2014, , .		11
28	Resource competition as a source of non-minimum phase behavior in transcription-translation systems. , 2013, , .		9
29	Modeling the effects of compositional context on promoter activity in an E. coli extract based transcription-translation system. , 2014, , .		9
30	On the stability of nucleic acid feedback control systems. Automatica, 2020, 119, 109103.	3.0	9
31	Sequestration and delays enable the synthesis of a molecular derivative operator. , 2020, , .		9
32	Global network identification from reconstructed dynamical structure subnetworks: Applications to biochemical reaction networks. , 2015, , .		8
33	Building a Synthetic Transcriptional Oscillator. Methods in Molecular Biology, 2016, 1342, 185-199.	0.4	8
34	DNA Input Classification by a Riboregulator-Based Cell-Free Perceptron. ACS Synthetic Biology, 2022, 11, 1510-1520.	1.9	8
35	Robustness analysis of a nucleic acid controller for a dynamic biomolecular process using the structured singular value. Journal of Process Control, 2019, 78, 34-44.	1.7	7
36	Signal amplification and optimization of riboswitch-based hybrid inputs by modular and titratable toehold switches. Journal of Biological Engineering, 2021, 15, 11.	2.0	7

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37	Design and Evaluation of Synthetic RNA-Based Incoherent Feed-Forward Loop Circuits. Biomolecules, 2021, 11, 1182.	1.8	7
38	Data-driven network models for genetic circuits from time-series data with incomplete measurements. Journal of the Royal Society Interface, 2021, 18, 20210413.	1.5	7
39	A coarse-grained model captures the temporal evolution of DNA nanotube length distributions. Natural Computing, 2018, 17, 183-199.	1.8	6
40	Multilevel Gene Regulation Using Switchable Transcription Terminator and Toehold Switch in Escherichia coli. Applied Sciences (Switzerland), 2021, 11, 4532.	1.3	6
41	Analysis and design of a synthetic transcriptional network for exact adaptation. , 2011, , .		5
42	Overexpression of Renal Tumor Antigen Is Associated with Tumor Invasion and Poor Prognosis of Hepatocellular Carcinoma. Annals of Surgical Oncology, 2012, 19, 404-411.	0.7	5
43	Biomolecular implementation of nonlinear system theoretic operators. , 2016, , .		5
44	Synthetic logic circuits using RNA aptamer against T7 RNA polymerase. Biotechnology Journal, 2022, 17, e2000449.	1.8	5
45	Load Capacity Improvements in Nucleic Acid Based Systems Using Partially Open Feedback Control. ACS Synthetic Biology, 2014, 3, 617-626.	1.9	4
46	Proportionalâ€"Integral Degradation Control Allows Accurate Tracking of Biomolecular Concentrations With Fewer Chemical Reactions. IEEE Life Sciences Letters, 2016, 2, 55-58.	1.2	4
47	A Coarse-Grained Model of DNA Nanotube Population Growth. Lecture Notes in Computer Science, 2016, , 135-147.	1.0	4
48	Detection of pks Island mRNAs Using Toehold Sensors in Escherichia coli. Life, 2021, 11, 1280.	1.1	3
49	Cellular Computational Logic Using Toehold Switches. International Journal of Molecular Sciences, 2022, 23, 4265.	1.8	3
50	Model-Based Investigation of the Relationship between Regulation Level and Pulse Property of I1-FFL Gene Circuits. ACS Synthetic Biology, 2022, 11, 2417-2428.	1.9	3
51	Synthetic Networks. , 0, , 251-271.		1
52	Analysis-based parameter estimation of an in vitro transcription-translation system. , 2015, , .		1
53	Ribocomputing devices for sophisticated in vivo logic computation. , 2016, , .		1
54	Uncertainty Modelling and Stability Robustness Analysis of Nucleic Acid-Based Feedback Control Systems. , 2018, , .		1

#	Article	IF	Citations
55	Robust tunable in vitro transcriptional oscillator networks. , 2012, , .		0
56	Load Capacity Improvements in Nucleic Acid Based Systems Using Discrete-Time Feedback Control. , 2018, , .		0
57	Synthetic Biochemical Devices for Programmable Dynamic Behavior. , 2014, , 273-295.		0
58	Minimally Complex Nucleic Acid Feedback Control Systems for First Experimental Implementations. IFAC-PapersOnLine, 2020, 53, 16745-16752.	0.5	0