

Mary J Dunlop

List of Publications by Year in descending order

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Version: 2024-02-01

45
papers

2,437
citations

304368

22
h-index

264894

42
g-index

59
all docs

59
docs citations

59
times ranked

2842
citing authors

#	ARTICLE	IF	CITATIONS
1	Engineering microbial biofuel tolerance and export using efflux pumps. <i>Molecular Systems Biology</i> , 2011, 7, 487.	3.2	440
2	Engineering microbes for tolerance to next-generation biofuels. <i>Biotechnology for Biofuels</i> , 2011, 4, 32.	6.2	246
3	Regulatory activity revealed by dynamic correlations in gene expression noise. <i>Nature Genetics</i> , 2008, 40, 1493-1498.	9.4	210
4	Heterogeneity in efflux pump expression predisposes antibiotic-resistant cells to mutation. <i>Science</i> , 2018, 362, 686-690.	6.0	178
5	DeLTA: Automated cell segmentation, tracking, and lineage reconstruction using deep learning. <i>PLoS Computational Biology</i> , 2020, 16, e1007673.	1.5	137
6	A model for improving microbial biofuel production using a synthetic feedback loop. <i>Systems and Synthetic Biology</i> , 2010, 4, 95-104.	1.0	127
7	Stochastic expression of a multiple antibiotic resistance activator confers transient resistance in single cells. <i>Scientific Reports</i> , 2016, 6, 19538.	1.6	85
8	Multiple Functions of a Feed-Forward-Loop Gene Circuit. <i>Journal of Molecular Biology</i> , 2005, 349, 501-514.	2.0	75
9	A synthetic three-color scaffold for monitoring genetic regulation and noise. <i>Journal of Biological Engineering</i> , 2010, 4, 10.	2.0	67
10	Trade-Offs in Improving Biofuel Tolerance Using Combinations of Efflux Pumps. <i>ACS Synthetic Biology</i> , 2015, 4, 1056-1063.	1.9	61
11	Microsecond fingerprint stimulated Raman spectroscopic imaging by ultrafast tuning and spatial-spectral learning. <i>Nature Communications</i> , 2021, 12, 3052.	5.8	58
12	Bacterial persistence induced by salicylate via reactive oxygen species. <i>Scientific Reports</i> , 2017, 7, 43839.	1.6	51
13	Design and Selection of a Synthetic Feedback Loop for Optimizing Biofuel Tolerance. <i>ACS Synthetic Biology</i> , 2018, 7, 16-23.	1.9	47
14	Synthetic Feedback Loop Model for Increasing Microbial Biofuel Production Using a Biosensor. <i>Frontiers in Microbiology</i> , 2012, 3, 360.	1.5	43
15	DeLTA 2.0: A deep learning pipeline for quantifying single-cell spatial and temporal dynamics. <i>PLoS Computational Biology</i> , 2022, 18, e1009797.	1.5	43
16	Mathematical Modeling of RNA-Based Architectures for Closed Loop Control of Gene Expression. <i>ACS Synthetic Biology</i> , 2018, 7, 1219-1228.	1.9	42
17	Light-Inducible Recombinases for Bacterial Optogenetics. <i>ACS Synthetic Biology</i> , 2020, 9, 227-235.	1.9	42
18	Tunable Stochastic Pulsing in the Escherichia coli Multiple Antibiotic Resistance Network from Interlinked Positive and Negative Feedback Loops. <i>PLoS Computational Biology</i> , 2013, 9, e1003229.	1.5	41

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19	Distinct timescales of RNA regulators enable the construction of a genetic pulse generator. <i>Biotechnology and Bioengineering</i> , 2019, 116, 1139-1151.	1.7	40
20	Core Competencies for Undergraduates in Bioengineering and Biomedical Engineering: Findings, Consequences, and Recommendations. <i>Annals of Biomedical Engineering</i> , 2020, 48, 905-912.	1.3	37
21	Dynamic gene expression and growth underlie cell-to-cell heterogeneity in <i>Escherichia coli</i> stress response. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, e2115032119.	3.3	33
22	Development of a Native <i>Escherichia coli</i> Induction System for Ionic Liquid Tolerance. <i>PLoS ONE</i> , 2014, 9, e101115.	1.1	31
23	Cell-machine interfaces for characterizing gene regulatory network dynamics. <i>Current Opinion in Systems Biology</i> , 2019, 14, 1-8.	1.3	31
24	Programmable gene regulation for metabolic engineering using decoy transcription factor binding sites. <i>Nucleic Acids Research</i> , 2021, 49, 1163-1172.	6.5	29
25	Stress Introduction Rate Alters the Benefit of AcrAB-TolC Efflux Pumps. <i>Journal of Bacteriology</i> , 2018, 200, .	1.0	27
26	Controlling and exploiting cell-to-cell variation in metabolic engineering. <i>Current Opinion in Biotechnology</i> , 2019, 57, 10-16.	3.3	27
27	Engineering improved bio-jet fuel tolerance in <i>Escherichia coli</i> using a transgenic library from the hydrocarbon-degrader <i>Marinobacter aquaeolei</i> . <i>Biotechnology for Biofuels</i> , 2015, 8, 165.	6.2	22
28	Functional roles of microbial cell-to-cell heterogeneity and emerging technologies for analysis and control. <i>Current Opinion in Microbiology</i> , 2020, 57, 87-94.	2.3	19
29	Antibiotic export by efflux pumps affects growth of neighboring bacteria. <i>Scientific Reports</i> , 2018, 8, 15120.	1.6	18
30	Customized Regulation of Diverse Stress Response Genes by the Multiple Antibiotic Resistance Activator MarA. <i>PLoS Computational Biology</i> , 2017, 13, e1005310.	1.5	17
31	Noise and Low-Level Dynamics Can Coordinate Multicomponent Bet Hedging Mechanisms. <i>Biophysical Journal</i> , 2015, 108, 184-193.	0.2	15
32	Forecasting cell fate during antibiotic exposure using stochastic gene expression. <i>Communications Biology</i> , 2019, 2, 259.	2.0	15
33	Mapping the Role of AcrAB-TolC Efflux Pumps in the Evolution of Antibiotic Resistance Reveals Near-MIC Treatments Facilitate Resistance Acquisition. <i>MSphere</i> , 2020, 5, .	1.3	14
34	Expression of Heterologous Sigma Factor Expands the Searchable Space for Biofuel Tolerance Mechanisms. <i>ACS Synthetic Biology</i> , 2017, 6, 1343-1350.	1.9	10
35	Active degradation of MarA controls coordination of its downstream targets. <i>PLoS Computational Biology</i> , 2018, 14, e1006634.	1.5	10
36	Salicylate Increases Fitness Cost Associated with MarA-Mediated Antibiotic Resistance. <i>Biophysical Journal</i> , 2019, 117, 563-571.	0.2	10

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37	Phenotypic Diversity Using Bimodal and Unimodal Expression of Stress Response Proteins. Biophysical Journal, 2016, 110, 2278-2287.	0.2	6
38	Making Waves with Synthetic Oscillators. Cell Systems, 2018, 6, 406-407.	2.9	6
39	Transcriptional Tuning of Mevalonate Pathway Enzymes to Identify the Impact on Limonene Production in <i>Escherichia coli</i> . ACS Omega, 2022, 7, 18331-18338.	1.6	6
40	Anticipating antibiotic resistance. Science, 2022, 375, 818-819.	6.0	3
41	Quantitative Single-Cell Gene Expression Measurements in Bacteria Using Time-Lapse Microscopy. Microscopy and Microanalysis, 2014, 20, 1174-1175.	0.2	2
42	Performing selections under dynamic conditions for synthetic biology applications. Integrative Biology (United Kingdom), 2016, 8, 556-563.	0.6	1
43	DeLTA: Automated cell segmentation, tracking, and lineage reconstruction using deep learning. , 2020, 16, e1007673.		0
44	DeLTA: Automated cell segmentation, tracking, and lineage reconstruction using deep learning. , 2020, 16, e1007673.		0
45	DeLTA: Automated cell segmentation, tracking, and lineage reconstruction using deep learning. , 2020, 16, e1007673.		0