

Johann M Rohwer

List of Publications by Year in descending order

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81
papers

2,846
citations

201674

27
h-index

182427

51
g-index

84
all docs

84
docs citations

84
times ranked

3789
citing authors

#	ARTICLE	IF	CITATIONS
1	Ribosome and transcript copy numbers, polysome occupancy and enzyme dynamics in <i>Arabidopsis</i> . <i>Molecular Systems Biology</i> , 2009, 5, 314.	7.2	276
2	<sc>SBML</sc> Level 3: an extensible format for the exchange and reuse of biological models. <i>Molecular Systems Biology</i> , 2020, 16, e9110.	7.2	178
3	Deoxyxylulose 5-Phosphate Synthase Controls Flux through the Methylerythritol 4-Phosphate Pathway in <i>Arabidopsis</i> . <i>Plant Physiology</i> , 2014, 165, 1488-1504.	4.8	154
4	Modelling cellular systems with PySCeS. <i>Bioinformatics</i> , 2005, 21, 560-561.	4.1	152
5	Analysis of sucrose accumulation in the sugar cane culm on the basis of in vitro kinetic data. <i>Biochemical Journal</i> , 2001, 358, 437-445.	3.7	132
6	Network Analysis of Enzyme Activities and Metabolite Levels and Their Relationship to Biomass in a Large Panel of <i>Arabidopsis</i> Accessions. <i>Plant Cell</i> , 2010, 22, 2872-2893.	6.6	131
7	Understanding Glucose Transport by the Bacterial Phosphoenolpyruvate:Glucose Phosphotransferase System on the Basis of Kinetic Measurements in Vitro. <i>Journal of Biological Chemistry</i> , 2000, 275, 34909-34921.	3.4	115
8	Metabolic Control Analysis of Glycerol Synthesis in <i>Saccharomyces cerevisiae</i> . <i>Applied and Environmental Microbiology</i> , 2002, 68, 4448-4456.	3.1	107
9	Kinetic model of sucrose accumulation in maturing sugarcane culm tissue. <i>Phytochemistry</i> , 2007, 68, 2375-2392.	2.9	103
10	Implications of macromolecular crowding for signal transduction and metabolite channeling. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1998, 95, 10547-10552.	7.1	102
11	Analysis of sucrose accumulation in the sugar cane culm on the basis of in vitro kinetic data. <i>Biochemical Journal</i> , 2001, 358, 437.	3.7	89
12	Kinetic modelling of plant metabolic pathways. <i>Journal of Experimental Botany</i> , 2012, 63, 2275-2292.	4.8	87
13	Taking enzyme kinetics out of control; putting control into regulation. <i>FEBS Journal</i> , 1993, 212, 833-837.	0.2	80
14	Standards for Reporting Enzyme Data: The STREND Consortium: What it aims to do and why it should be helpful. <i>Perspectives in Science</i> , 2014, 1, 131-137.	0.6	65
15	How to Recognize Monofunctional Units in a Metabolic System. <i>Journal of Theoretical Biology</i> , 1996, 179, 213-228.	1.7	58
16	Potency of progestogens used in hormonal therapy: Toward understanding differential actions. <i>Journal of Steroid Biochemistry and Molecular Biology</i> , 2014, 142, 39-47.	2.5	54
17	Impact of Glucocorticoid Receptor Density on Ligand-Independent Dimerization, Cooperative Ligand-Binding and Basal Priming of Transactivation: A Cell Culture Model. <i>PLoS ONE</i> , 2013, 8, e64831.	2.5	43
18	Investigation of the methylerythritol 4-phosphate pathway for microbial terpenoid production through metabolic control analysis. <i>Microbial Cell Factories</i> , 2019, 18, 192.	4.0	42

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19	The logic of kinetic regulation in the thioredoxin system. <i>BMC Systems Biology</i> , 2011, 5, 15.	3.0	39
20	From Top-Down to Bottom-Up: Computational Modeling Approaches for Cellular Redox Networks. <i>Antioxidants and Redox Signaling</i> , 2013, 18, 2075-2086.	5.4	39
21	Regulation of glycogen synthase from mammalian skeletal muscle – a unifying view of allosteric and covalent regulation. <i>FEBS Journal</i> , 2013, 280, 2-27.	4.7	39
22	STRENDA DB: enabling the validation and sharing of enzyme kinetics data. <i>FEBS Journal</i> , 2018, 285, 2193-2204.	4.7	38
23	Approximations and their consequences for dynamic modelling of signal transduction pathways. <i>Mathematical Biosciences</i> , 2007, 207, 40-57.	1.9	35
24	Composite control of cell function: metabolic pathways behaving as single control units. <i>FEBS Letters</i> , 1995, 368, 1-4.	2.8	33
25	Protein-level expression and localization of sucrose synthase in the sugarcane culm. <i>Physiologia Plantarum</i> , 2004, 121, 187-195.	5.2	33
26	Control of specific growth rate in <i>Saccharomyces cerevisiae</i> . <i>Microbiology (United Kingdom)</i> , 2009, 155, 1699-1707.	1.8	32
27	From steady-state to synchronized yeast glycolytic oscillations I: model construction. <i>FEBS Journal</i> , 2012, 279, 2810-2822.	4.7	30
28	Quantitative measures for redox signaling. <i>Free Radical Biology and Medicine</i> , 2016, 96, 290-303.	2.9	28
29	Partial purification and characterisation of sucrose synthase in sugarcane. <i>Journal of Plant Physiology</i> , 2005, 162, 11-20.	3.5	27
30	Kinetic and Thermodynamic Aspects of Enzyme Control and Regulation. <i>Journal of Physical Chemistry B</i> , 2010, 114, 16280-16289.	2.6	27
31	Effect of Drought on the Methylerythritol 4-Phosphate (MEP) Pathway in the Isoprene Emitting Conifer <i>Picea glauca</i> . <i>Frontiers in Plant Science</i> , 2020, 11, 546295.	3.6	27
32	Enzymes or redox couples? The kinetics of thioredoxin and glutaredoxin reactions in a systems biology context. <i>Biochemical Journal</i> , 2009, 417, 269-277.	3.7	25
33	The glutaredoxin mono- and di-thiol mechanisms for deglutathionylation are functionally equivalent: implications for redox systems biology. <i>Bioscience Reports</i> , 2015, 35, .	2.4	24
34	Evaluation of a simplified generic bi-substrate rate equation for computational systems biology. <i>IET Systems Biology</i> , 2006, 153, 338.	2.0	23
35	A kinetic study of sugarcane sucrose synthase. <i>FEBS Journal</i> , 2004, 271, 3971-3977.	0.2	22
36	Identifying and characterising regulatory metabolites with generalised supply-demand analysis. <i>Journal of Theoretical Biology</i> , 2008, 252, 546-554.	1.7	22

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37	A large-scale protein-function database. <i>Nature Chemical Biology</i> , 2010, 6, 785-785.	8.0	22
38	Supply-Demand Analysis. <i>Methods in Enzymology</i> , 2011, 500, 533-554.	1.0	21
39	Determining Enzyme Kinetics for Systems Biology with Nuclear Magnetic Resonance Spectroscopy. <i>Metabolites</i> , 2012, 2, 818-843.	2.9	20
40	PySCeSToolbox: a collection of metabolic pathway analysis tools. <i>Bioinformatics</i> , 2018, 34, 124-125.	4.1	20
41	An empirical analysis of enzyme function reporting for experimental reproducibility: Missing/incomplete information in published papers. <i>Biophysical Chemistry</i> , 2018, 242, 22-27.	2.8	19
42	Changes in the Cellular Energy State Affect the Activity of the Bacterial Phosphotransferase System. <i>FEBS Journal</i> , 1996, 235, 225-230.	0.2	18
43	Modelling cellular processes with Python and Scipy. <i>Molecular Biology Reports</i> , 2002, 29, 249-254.	2.3	18
44	Limits to inducer exclusion: inhibition of the bacterial phosphotransferase system by glycerol kinase. <i>Molecular Microbiology</i> , 1998, 29, 641-652.	2.5	15
45	Subtleties in control by metabolic channelling and enzyme organization. <i>Molecular and Cellular Biochemistry</i> , 1998, 184, 311-320.	3.1	14
46	Technical note On modifying the Arrhenius equation to compensate for temperature changes for reactions within biological systems. <i>Water S A</i> , 2012, 38, .	0.4	13
47	Energy, control and DNA structure in the living cell. <i>Biophysical Chemistry</i> , 1995, 55, 153-165.	2.8	12
48	BioSimulators: a central registry of simulation engines and services for recommending specific tools. <i>Nucleic Acids Research</i> , 2022, 50, W108-W114.	14.5	11
49	Summation theorems for flux and concentration control coefficients of dynamic systems. <i>IET Systems Biology</i> , 2006, 153, 314.	2.0	10
50	Tracing regulatory routes in metabolism using generalised supply-demand analysis. <i>BMC Systems Biology</i> , 2015, 9, 89.	3.0	10
51	A generic rate equation for catalysed, template-directed polymerisation. <i>FEBS Letters</i> , 2013, 587, 2868-2875.	2.8	9
52	Experimental supply-demand analysis of anaerobic yeast energy metabolism. <i>Molecular Biology Reports</i> , 2002, 29, 203-209.	2.3	8
53	Identifying the conditions necessary for the thioredoxin ultrasensitive response. <i>Perspectives in Science</i> , 2016, 9, 53-59.	0.6	8
54	The thioredoxin redox potential and redox charge are surrogate measures for flux in the thioredoxin system. <i>Archives of Biochemistry and Biophysics</i> , 2020, 680, 108231.	3.0	7

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55	Workflow for Data Analysis in Experimental and Computational Systems Biology: Using Python as a "Glue". <i>Processes</i> , 2019, 7, 460.	2.8	6
56	An Annual and Seasonal Characterisation of Winery Effluent in South Africa. <i>South African Journal of Enology and Viticulture</i> , 2016, 32, .	0.4	6
57	HIERARCHIES IN CONTROL. <i>Journal of Biological Systems</i> , 1995, 03, 139-144.	1.4	5
58	Experimental evidence for allosteric modifier saturation as predicted by the bi-substrate Hill equation. <i>IET Systems Biology</i> , 2006, 153, 342.	2.0	5
59	Coupling kinetic models and advection-diffusion equations. 1. Framework development and application to sucrose translocation and metabolism in sugarcane. <i>In Silico Plants</i> , 2021, 3, .	1.9	5
60	How to distinguish between the vacuum cleaner and flippase mechanisms of the ImrA multi-drug transporter in <i>Lactococcus lactis</i> . <i>Molecular Biology Reports</i> , 2002, 29, 107-112.	2.3	4
61	Conditions for effective allosteric feedforward and feedback in metabolic pathways. <i>IET Systems Biology</i> , 2006, 153, 327.	2.0	4
62	Reuteran and levan as carbohydrate sinks in transgenic sugarcane. <i>Planta</i> , 2012, 236, 1803-1815.	3.2	4
63	Functional Characterisation of Three Glycine N-Acyltransferase Variants and the Effect on Glycine Conjugation to Benzoyl-CoA. <i>International Journal of Molecular Sciences</i> , 2021, 22, 3129.	4.1	4
64	Manganese privation induced transcriptional upregulation of the class IIa bacteriocin plantaricin 423 in <i>Lactobacillus plantarum</i> 423. <i>Applied and Environmental Microbiology</i> , 2021, 87, e0097621.	3.1	4
65	Subtleties in control by metabolic channelling and enzyme organization. , 1998, , 311-320.		4
66	ThermoKinetic modelling. Membrane potential as a dependent variable in ion transport processes. <i>Molecular Biology Reports</i> , 2002, 29, 217-225.	2.3	3
67	ECA: control in ecosystems. <i>Molecular Biology Reports</i> , 2002, 29, 113-117.	2.3	3
68	Comparing the regulatory behaviour of two cooperative, reversible enzyme mechanisms. <i>IET Systems Biology</i> , 2006, 153, 335.	2.0	3
69	Incorporating covalent and allosteric effects into rate equations: the case of muscle glycogen synthase. <i>Biochemical Journal</i> , 2014, 462, 525-537.	3.7	3
70	Direct Transfer of Control and Multidrug Resistance. , 1996, , 283-292.		3
71	Applications of Kinetic Modeling to Plant Metabolism. <i>Methods in Molecular Biology</i> , 2014, 1083, 275-286.	0.9	3
72	Is there an optimal ribosome concentration for maximal protein production?. <i>IET Systems Biology</i> , 2006, 153, 398.	2.0	2

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73	Delving deeper: Relating the behaviour of a metabolic system to the properties of its components using symbolic metabolic control analysis. PLoS ONE, 2018, 13, e0207983.	2.5	2
74	Coupling kinetic models and advectionâ€“diffusion equations. 2. Sensitivity analysis of an advectionâ€“diffusionâ€“reaction model. In Silico Plants, 2021, 3, .	1.9	2
75	An Integrated Approach to the Analysis of the Control and Regulation of Cellular Systems. , 2000, , 73-79.		2
76	Editorial: 12th BTK Meeting: â€“Systems Biology: redefining BioThermoKineticsâ€™. IET Systems Biology, 2006, 153, 312.	2.0	1
77	Software tools that facilitate kinetic modelling with large data sets: an example using growth modelling in sugarcane. IET Systems Biology, 2006, 153, 385.	2.0	1
78	Regulatory design and function in metabolism. Biochemical Society Transactions, 2002, 30, A5-A5.	3.4	0
79	Detailed Kinetic Models Using Metabolomics Data Sets. , 2005, , 215-242.		0
80	Putting the Cart before the Horse: Designing a Metabolic System in order to Understand it. , 2000, , 299-308.		0
81	Moiety Conservation and Flux Enhancement. , 2000, , 27-32.		0