Jan-Hendrik S Hofmeyr

List of Publications by Year
in descending order

76 papers	2,575 citations	236925 25 h-index	197818 49 g-index
80 all docs	80 docs citations	80 times ranked	4838 citing authors

#	Article	IF	Citations
1	The complexity of failure: Implications of complexity theory for safety investigations. Safety Science, 2011, 49, 939-945.	4.9	251
2	Defining and measuring autophagosome fluxâ€"concept and reality. Autophagy, 2014, 10, 2087-2096.	9.1	225
3	Regulating the cellular economy of supply and demand. FEBS Letters, 2000, 476, 47-51.	2.8	184
4	Metabolic control analysis of moietyâ€conserved cycles. FEBS Journal, 1986, 155, 631-640.	0.2	152
5	Modelling cellular systems with PySCeS. Bioinformatics, 2005, 21, 560-561.	4.1	152
6	Quantitative assessment of regulation in metabolic systems. FEBS Journal, 1991, 200, 223-236.	0.2	126
7	Kinetic model of sucrose accumulation in maturing sugarcane culm tissue. Phytochemistry, 2007, 68, 2375-2392.	2.9	103
8	The xylose reductase/xylitol dehydrogenase/xylulokinase ratio affects product formation in recombinant xylose-utilising Saccharomyces cerevisiae. Enzyme and Microbial Technology, 2001, 29, 288-297.	3.2	82
9	Taking enzyme kinetics out of control; putting control into regulation. FEBS Journal, 1993, 212, 833-837.	0.2	80
10	Strategies for Manipulating Metabolic Fluxes in Biotechnology. Bioorganic Chemistry, 1995, 23, 439-449.	4.1	74
11	Measuring autophagosome flux. Autophagy, 2018, 14, 1-12.	9.1	66
12	Standards for Reporting Enzyme Data: The STRENDA Consortium: What it aims to do and why it should be helpful. Perspectives in Science, 2014, 1, 131-137.	0.6	65
13	The reversible Hill equation: how to incorporate cooperative enzymes into metabolic models. Bioinformatics, 1997, 13, 377-385.	4.1	62
14	Building the Cellular Puzzle. Journal of Theoretical Biology, 2001, 208, 261-285.	1.7	60
15	Complexity, Modeling, and Natural Resource Management. Ecology and Society, 2013, 18, .	2.3	60
16	Metabolic regulation: A control analytic perspective. Journal of Bioenergetics and Biomembranes, 1995, 27, 479-490.	2.3	58
17	Co-response Analysis: A New Experimental Strategy for Metabolic Control Analysis. Journal of Theoretical Biology, 1996, 182, 371-380.	1.7	51
18	An abstract cell model that describes the self-organization of cell function in living systems. Journal of Theoretical Biology, 2007, 246, 461-476.	1.7	39

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19	The logic of kinetic regulation in the thioredoxin system. BMC Systems Biology, 2011, 5, 15.	3.0	39
20	From Top-Down to Bottom-Up: Computational Modeling Approaches for Cellular Redoxin Networks. Antioxidants and Redox Signaling, 2013, 18, 2075-2086.	5.4	39
21	Regulation of glycogen synthase from mammalian skeletal muscle â€" a unifying view of allosteric and covalent regulation. FEBS Journal, 2013, 280, 2-27.	4.7	39
22	Getting to the inside of cells using metabolic control analysis. Biophysical Chemistry, 1994, 50, 273-283.	2.8	35
23	Control-pattern analysis of metabolic pathways. Flux and concentration control in linear pathways. FEBS Journal, 1989, 186, 343-354.	0.2	32
24	The Role of Stoichiometric Analysis in Studies of Metabolism: An Example. Journal of Theoretical Biology, 2002, 216, 179-191.	1.7	31
25	Kinetic and Thermodynamic Aspects of Enzyme Control and Regulation. Journal of Physical Chemistry B, 2010, 114, 16280-16289.	2.6	27
26	The biochemical factory that autonomously fabricates itself: A systems biological view of the living cell. , 2007, , 217-242.		26
27	Enzymes or redox couples? The kinetics of thioredoxin and glutaredoxin reactions in a systems biology context. Biochemical Journal, 2009, 417, 269-277.	3.7	25
28	Inhibition of Cytochrome P-45011Î²by Some Naturally Occurring Acetophenones and Plant Extracts from the ShrubSalsola tuberculatiformis. Planta Medica, 1993, 59, 139-143.	1.3	23
29	Causation, constructors and codes. BioSystems, 2018, 164, 121-127.	2.0	23
30	MetaModel: a program for modelling and control analysis of metabolic pathways on the IBM PC and compatibles. Bioinformatics, 1991, 7, 89-93.	4.1	22
31	The importance of uniformity in reporting protein-function data. Trends in Biochemical Sciences, 2005, 30, 11-12.	7.5	22
32	Identifying and characterising regulatory metabolites with generalised supplyâ€"demand analysis. Journal of Theoretical Biology, 2008, 252, 546-554.	1.7	22
33	A large-scale protein-function database. Nature Chemical Biology, 2010, 6, 785-785.	8.0	22
34	Supplyâ€"Demand Analysis. Methods in Enzymology, 2011, 500, 533-554.	1.0	21
35	Is the â€œHistone Codeâ€•an Organic Code?. Biosemiotics, 2014, 7, 203-222.	1.4	21
36	PySCeSToolbox: a collection of metabolic pathway analysis tools. Bioinformatics, 2018, 34, 124-125.	4.1	20

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37	The harmony of the cell: the regulatory design of cellular processes. Essays in Biochemistry, 2008, 45, 57-66.	4.7	19
38	Modelling cellular processes with Python and Scipy. Molecular Biology Reports, 2002, 29, 249-254.	2.3	18
39	On the relevance of precision autophagy flux control<i>in vivo</i>â€“ Points of departure for clinical translation. Autophagy, 2020, 16, 750-762.	9.1	18
40	Enzymes in context: Kinetic characterization of enzymes for systems biology. Biochemist, 2005, 27, 11-14.	0.5	15
41	The Precision Control of Autophagic Flux and Vesicle Dynamicsâ€"A Micropattern Approach. Cells, 2018, 7, 94.	4.1	13
42	Control analysis of trophic chains. Ecological Modelling, 2003, 168, 153-171.	2.5	11
43	What is systems biology? From genes to function and back. Topics in Current Genetics, 2005, , 119-141.	0.7	10
44	Tracing regulatory routes in metabolism using generalised supply-demand analysis. BMC Systems Biology, 2015, 9, 89.	3.0	10
45	A generic rate equation for catalysed, templateâ€directed polymerisation. FEBS Letters, 2013, 587, 2868-2875.	2.8	9
46	Experimental supply-demand analysis of anaerobic yeast energy metabolism. Molecular Biology Reports, 2002, 29, 203-209.	2.3	8
47	The first Special Issue on code biology â€“ A bird's-eye view. BioSystems, 2018, 164, 11-15.	2.0	7
48	Kinetic modelling of compartmentalised reaction networks. BioSystems, 2020, 197, 104203.	2.0	6
49	A biochemically-realisable relational model of the self-manufacturing cell. BioSystems, 2021, 207, 104463.	2.0	6
50	Coupling kinetic models and advectionâ€“diffusion equations. 1. Framework development and application to sucrose translocation and metabolism in sugarcane. In Silico Plants, 2021, 3, .	1.9	5
51	How to distinguish between the vacuum cleaner and flippase mechanisms of the lmrA multi-drug transporter in Lactococcus lactis. Molecular Biology Reports, 2002, 29, 107-112.	2.3	4
52	Conditions for effective allosteric feedforward and feedback in metabolic pathways. IET Systems Biology, 2006, 153, 327.	2.0	4
53	Stoicheiometric analysis in studies of metabolism. Biochemical Society Transactions, 2002, 30, 43-46.	3.4	3
54	ECA: control in ecosystems. Molecular Biology Reports, 2002, 29, 113-117.	2.3	3

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55	Attractive Models: How to Make the Silicon Cell Relevant and Dynamic. Comparative and Functional Genomics, 2003, 4, 155-158.	2.0	3
56	Incorporating covalent and allosteric effects into rate equations: the case of muscle glycogen synthase. Biochemical Journal, 2014, 462, 525-537.	3.7	3
57	Metabolite channelling and metabolic regulation. Journal of Theoretical Biology, 1991, 152, 101.	1.7	2
58	Is there an optimal ribosome concentration for maximal protein production?. IET Systems Biology, 2006, 153, 398.	2.0	2
59	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
60	Coupling kinetic models and advectionâ€“diffusion equations. 2. Sensitivity analysis of an advectionâ€“diffusionâ€“reaction model. In Silico Plants, 2021, 3, .	1.9	2
61	Basic Biological Anticipation. , 2019, , 219-233.		2
62	An Integrated Approach to the Analysis of the Control and Regulation of Cellular Systems. , 2000, , 73-79.		2
63	A Control Analysis of Metabolic Regulation. , 1993, , 193-198.		1
64	Editorial: 12th BTK Meeting: â€˜Systems Biology: redefining BioThermoKineticsâ€™. IET Systems Biology, 2006, 153, 312.	2.0	1
65	Ein Beitrag zu einer Theorie lebender Zellen (A Contribution towards a Theory of Living Cells). Automatisierungstechnik, 2008, 56, 225-232.	0.8	1
66	Autophagic Flux, Fusion Dynamics, and Cell Death. , 2014, , 39-56.		1
67	A Resistive Biosensor for the Detection of LC3 Protein in Autophagy. IEEE Sensors Journal, 2020, 20, 5119-5129.	4.7	1
68	Control-Pattern Analysis of Metabolic Systems. , 1990, , 239-248.		1
69	The regulatory design of an allosteric feedback loop: the effect of saturation by pathway substrate. Biochemical Society Transactions, 2001, 30, 19.	3.4	1
70	Mathematics and biology. South African Journal of Science, 2017, 113, 3.	0.7	0
71	Methods for Measuring Autophagosome Fluxâ€"Impact and Relevance. , 2017, , 91-104.		0
72	The Second Special Issue on Code Biology â€" An overview. BioSystems, 2020, 187, 104050.	2.0	0

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73	Measuring. Neuromethods, 2022, , 67-78.	0.3	0
74	Putting the Cart before the Horse: Designing a Metabolic System in order to Understand it. , 2000, , 299-308.		0
75	Moiety Conservation and Flux Enhancement. , 2000, , 27-32.		0
76	Mathematical description of regulation in metabolic systems: The regulatory potential. , 1996, , 3305-3310.		0