David A Fell

List of Publications by Year
in descending order

138 papers	9,326 citations	66343 42 h-index	40979 93 g-index
143 all docs	143 docs citations	143 times ranked	6665 citing authors

#	Article	IF	Citations
1	Overexpression of phospholipid: diacylglycerol acyltransferase in <i>Brassica napus</i> results in changes in lipid metabolism and oil accumulation. Biochemical Journal, 2022, 479, 805-823.	3.7	9
2	A genome-scale metabolic model of Cupriavidus necator H16 integrated with TraDIS and transcriptomic data reveals metabolic insights for biotechnological applications. PLoS Computational Biology, 2022, 18, e1010106.	3.2	10
3	Boosting Biomass Quantity and Quality by Improved Mixotrophic Culture of the Diatom Phaeodactylum tricornutum. Frontiers in Plant Science, 2021, 12, 642199.	3.6	12
4	Increase in lysophosphatidate acyltransferase activity in oilseed rape (<i>Brassica napus</i>) increases seed triacylglycerol content despite its low intrinsic flux control coefficient. New Phytologist, 2019, 224, 700-711.	7.3	17
5	Genomeâ€scale model of <i>C. autoethanogenum</i> reveals optimal bioprocess conditions for highâ€value chemical production from carbon monoxide. Engineering Biology, 2019, 3, 32-40.	1.8	19
6	Model-assisted metabolic engineering of Escherichia coli for long chain alkane and alcohol production. Metabolic Engineering, 2018, 46, 1-12.	7.0	65
7	Stoichiometric analysis of the energetics and metabolic impact of photorespiration in C3 plants. Plant Journal, 2018, 96, 1228-1241.	5.7	16
8	Genotype to phenotype mapping still needs underpinning by research in metabolism and enzymology. Bioscience Reports, 2018, 38, .	2.4	0
9	Model-based biotechnological potential analysis of <i>Kluyveromyces marxianus</i> central metabolism. Journal of Industrial Microbiology and Biotechnology, 2017, 44, 1177-1190.	3.0	38
10	A Genome Scale Model of Geobacillus thermoglucosidasius (C56-YS93) reveals its biotechnological potential on rice straw hydrolysate. Journal of Biotechnology, 2017, 251, 30-37.	3.8	25
11	Modelling metabolism of the diatom <i>Phaeodactylum tricornutum</i>. Biochemical Society Transactions, 2015, 43, 1182-1186.	3.4	30
12	Identification of potential drug targets in Salmonella enterica sv. Typhimurium using metabolic modelling and experimental validation. Microbiology (United Kingdom), 2014, 160, 1252-1266.	1.8	45
13	Metabolic trade-offs between biomass synthesis and photosynthate export at different light intensities in a genomeÃ¢â‚¬â€œscale metabolic model of rice. Frontiers in Plant Science, 2014, 5, 656.	3.6	10
14	Effects of a beetroot juice with high neobetanin content on the early-phase insulin response in healthy volunteers. Journal of Nutritional Science, 2014, 3, e9.	1.9	57
15	A Diel Flux Balance Model Captures Interactions between Light and Dark Metabolism during Day-Night Cycles in C3 and Crassulacean Acid Metabolism Leaves Â Â Â. Plant Physiology, 2014, 165, 917-929.	4.8	181
16	Modeling of Zymomonas mobilis central metabolism for novel metabolic engineering strategies. Frontiers in Microbiology, 2014, 5, 42.	3.5	32
17	A method for accounting for maintenance costs in flux balance analysis improves the prediction of plant cell metabolic phenotypes under stress conditions. Plant Journal, 2013, 75, 1050-1061.	5.7	121
18	Kinetic modelling of the Zymomonas mobilis Entnerâ€"Doudoroff pathway: insights into control and functionality. Microbiology (United Kingdom), 2013, 159, 2674-2689.	1.8	36

#	ARTICLE	IF	CITATIONS
19	Biotechnological potential of respiring Zymomonas mobilis: A stoichiometric analysis of its central metabolism. Journal of Biotechnology, 2013, 165, 1-10.	3.8	55
20	Responses to Light Intensity in a Genome-Scale Model of Rice Metabolism Â Â Â. Plant Physiology, 2013, 162, 1060-1072.	4.8	117
21	Abstract 4942: Can three-dimensional cell cultures be used to predict in vivo drug response and synergistic combinations. , 2012, , .		0
22	Abstract 4933: Modeling the sequence-sensitive gemcitabine/docetaxel combination using the Virtual Tumor. , 2011, , .		1
23	Systems Biology Approaches to Cancer Drug Development. , 2011, , 367-380.		0
24	A Genome-Scale Metabolic Model Accurately Predicts Fluxes in Central Carbon Metabolism under Stress Conditions Â Â. Plant Physiology, 2010, 154, 311-323.	4.8	124
25	Building and analysing genome-scale metabolic models. Biochemical Society Transactions, 2010, 38, 1197-1201.	3.4	30
26	Evolution of Central Carbon Metabolism. Molecular Cell, 2010, 39, 663-664.	9.7	4
27	A Genome-Scale Metabolic Model of Arabidopsis and Some of Its Properties Â Â. Plant Physiology, 2009, 151, 1570-1581.	4.8	273
28	Response to comment on 'Can sugars be produced from fatty acids? A test case for pathway analysis tools'. Bioinformatics, 2009, 25, 3330-3331.	4.1	7
29	Can sugars be produced from fatty acids? A test case for pathway analysis tools. Bioinformatics, 2009, 25, 152-158.	4.1	36
30	SysBioMed report: Advancing systems biology for medical applications. IET Systems Biology, 2009, 3, 131-136.	1.5	27
31	Contribution of NADH Increases to Ethanolâ€™s Inhibition of Retinol Oxidation by Human ADH Isoforms. Alcoholism: Clinical and Experimental Research, 2009, 33, 571-580.	2.4	20
32	Abstract A35: Computer modeling of nocodazole exposure on cell culturesin vitro. , 2009, , .		0
33	Is maximization of molar yield in metabolic networks favoured by evolution?. Journal of Theoretical Biology, 2008, 252, 497-504.	1.7	181
34	Detection of stoichiometric inconsistencies in biomolecular models. Bioinformatics, 2008, 24, 2245-2251.	4.1	85
35	Can sugars be produced from fatty acids? A test case for pathway analysis tools. Bioinformatics, 2008, 24, 2615-2621.	4.1	36
36	Getting to grips with the plant metabolic network. Biochemical Journal, 2008, 409, 27-41.	3.7	84

#	Article	IF	Citations
37	METABOLIC NETWORKS. Complex Systems and Interdisciplinary Science, 2007, , 163-197.	0.2	2
38	How can we understand metabolism?. , 2007, , 87-101.		3
39	Modular decomposition of metabolic systems via null-space analysis. Journal of Theoretical Biology, 2007, 249, 691-705.	1.7	34
40	Using a mammalian cell cycle simulation to interpret differential kinase inhibition in anti-tumour pharmaceutical development. BioSystems, 2006, 83, 91-97.	2.0	37
41	Challenges to be faced in the reconstruction of metabolic networks from public databases. IET Systems Biology, 2006, 153, 379.	2.0	61
42	Metabolic Control Analysis for the NMR Spectroscopist. , 2005, , 31-44.		0
43	Phosphorylation of Allosteric Enzymes Can Serve Homeostasis rather than Control Flux: The Example of Glycogen Synthase. , 2005, , 59-71.		2
44	Myocardial energy metabolism in ischemic preconditioning and cardioplegia: A metabolic control analysis. Molecular and Cellular Biochemistry, 2005, 278, 223-232.	3.1	10
45	Protein phosphorylation can regulate metabolite concentrations rather than control flux: The example of glycogen synthase. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 1485-1490.	7.1	27
46	Applications of metabolic modelling to plant metabolism. Journal of Experimental Botany, 2004, 55, 1177-1186.	4.8	54
47	Enzymes, metabolites and fluxes. Journal of Experimental Botany, 2004, 56, 267-272.	4.8	76
48	A method for the determination of flux in elementary modes, and its application toLactobacillus rhamnosus. Biotechnology and Bioengineering, 2004, 88, 601-612.	3.3	61
49	Metabolic pathways in the post-genome era. Trends in Biochemical Sciences, 2003, 28, 250-258.	7.5	347
50	Elementary modes analysis of photosynthate metabolism in the chloroplast stroma. FEBS Journal, 2003, 270, 430-439.	0.2	59
51	Dynamic simulation of pollutant effects on the threonine pathway in Escherichia coli. Comptes Rendus - Biologies, 2003, 326, 501-508.	0.2	12
52	Regulation of Glycolytic Flux in Ischemic Preconditioning. Journal of Biological Chemistry, 2002, 277, 24411-24419.	3.4	38
53	Metabolic control analysis of anaerobic glycolysis in human hibernating myocardium replaces traditional concepts of flux control. FEBS Letters, 2002, 517, 245-250.	2.8	14
54	Metabolic pathway analysis of a recombinant yeast for rational strain development. Biotechnology and Bioengineering, 2002, 79, 121-134.	3.3	109

#	Article	IF	Citations
55	Dependence of Control Coefficient Distribution on the Boundaries of a Metabolic System: A Generalized Analysis of the Effects of Additional Input and Output reactions to a Linear Pathway. Journal of Theoretical Biology, 2002, 215, 239-251.	1.7	1
56	Reaction routes in biochemical reaction systems: Algebraic properties, validated calculation procedure and example from nucleotide metabolism. Journal of Mathematical Biology, 2002, 45, 153-181.	1.9	204
57	Flux control of sulphate assimilation inArabidopsis thaliana: adenosine 5â€²-phosphosulphate reductase is more susceptible than ATP sulphurylase to negative control by thiols. Plant Journal, 2002, 31, 729-740.	5.7	252
58	The small world inside large metabolic networks. Proceedings of the Royal Society B: Biological Sciences, 2001, 268, 1803-1810.	2.6	798
59	RELEVANT CYCLES IN CHEMICAL REACTION NETWORKS. International Journal of Modeling, Simulation, and Scientific Computing, 2001, 04, 207-226.	1.4	61
60	Threonine synthesis from aspartate in Escherichia coli cell-free extracts: pathway dynamics. Biochemical Journal, 2001, 356, 425-432.	3.7	23
61	Control of the threonine-synthesis pathway in Escherichia coli: a theoretical and experimental approach. Biochemical Journal, 2001, 356, 433-444.	3.7	55
62	An integrated study of threonine-pathway enzyme kinetics in Escherichia coli. Biochemical Journal, 2001, 356, 415-423.	3.7	73
63	Computer modelling and experimental evidence for two steady states in the photosynthetic Calvin cycle. FEBS Journal, 2001, 268, 2810-2816.	0.2	49
64	Beyond genomics. Trends in Genetics, 2001, 17, 680-682.	6.7	49
65	An integrated study of threonine-pathway enzyme kinetics in Escherichia coli. Biochemical Journal, 2001, 356, 415.	3.7	44
66	Threonine synthesis from aspartate in Escherichia coli cell-free extracts: pathway dynamics. Biochemical Journal, 2001, 356, 425.	3.7	13
67	Control of the threonine-synthesis pathway in Escherichia coli: a theoretical and experimental approach. Biochemical Journal, 2001, 356, 433.	3.7	38
68	A general definition of metabolic pathways useful for systematic organization and analysis of complex metabolic networks. Nature Biotechnology, 2000, 18, 326-332.	17.5	860
69	The small world of metabolism. Nature Biotechnology, 2000, 18, 1121-1122.	17.5	367
70	Modelling photosynthesis and its control. Journal of Experimental Botany, 2000, 51, 319-328.	4.8	150
71	Signal transduction and the control of expression of enzyme activity. Advances in Enzyme Regulation, 2000, 40, 35-46.	2.6	12
72	Differential feedback regulation of the MAPK cascade underlies the quantitative differences in EGF and NGF signalling in PC12 cells. FEBS Letters, 2000, 482, 169-174.	2.8	210

#	Article	IF	Citations
73	Recent Developments in Metabolic Pathway Analysis and Their Potential Implications for Biotechnology and Medicine. , 2000, , 57-66.		4
74	Multisite Modulation in the Control of Glycolysis. , 2000, , 259-266.		0
75	Exercising Control When Control is Distributed. , 2000, , 267-274.		1
76	Detection of elementary flux modes in biochemical networks: a promising tool for pathway analysis and metabolic engineering. Trends in Biotechnology, 1999, 17, 53-60.	9.3	609
77	Simulation of The Epidermal Growth Factor Signal Transduction Pathway. Biochemical Society Transactions, 1999, 27, A48-A48.	3.4	0
78	Traditional concepts of metabolic control mislead more than enlighten. Biochemical Society Transactions, 1999, 27, A20-A20.	3.4	0
79	Computer simulation and evolution strategies in the study of rat heart glucose metabolism. Biochemical Society Transactions, 1999, 27, A48-A48.	3.4	0
80	Increasing the flux in a metabolic pathway: a metabolic control analysis perspective. , 1999, , 257-273.		2
81	A control analysis exploration of the role of ATP utilisation in glycolytic-flux control and glycolytic-metabolite-concentration regulation. FEBS Journal, 1998, 258, 956-967.	0.2	61
82	Increasing the flux in metabolic pathways: A metabolic control analysis perspective. , 1998, 58, 121-124.		116
83	The role of multiple enzyme activation in metabolic flux control. Advances in Enzyme Regulation, 1998, 38, 65-85.	2.6	62
84	Increasing the flux in metabolic pathways: A metabolic control analysis perspective. Biotechnology and Bioengineering, 1998, 58, 121-124.	3.3	2
85	Metabolic Control Analysis of glycolysis in tuber tissue of potato (Solanum tuberosum): explanation for the low control coefficient of phosphofructokinase over respiratory flux. Biochemical Journal, 1997, 322, 119-127.	3.7	75
86	Finite change analysis of glycolytic intermediates in tuber tissue of lines of transgenic potato (Solanum tuberosum) overexpressing phosphofructokinase. Biochemical Journal, 1997, 322, 111-117.	3.7	43
87	Dr Henrik Kacser (1918â€“1995). Journal of Theoretical Biology, 1996, 182, 193-194.	1.7	2
88	Design of Metabolic Control for Large Flux Changes. Journal of Theoretical Biology, 1996, 182, 285-298.	1.7	43
89	Distribution control of metabolic flux. Cell Biochemistry and Function, 1996, 14, 229-236.	2.9	14
90	Distribution Control of Metabolic Flux. Cell Biochemistry and Function, 1996, 14, 229-236.	2.9	1

#	Article	IF	Citations
91	Physiological control of metabolic flux: the requirement for multisite modulation. Biochemical Journal, 1995, 311, 35-39.	3.7	213
92	The control of flux. Biochemical Society Transactions, 1995, 23, 341-366.	3.4	367
93	Error and bias in control coefficients calculated from elasticities. Biochemical Society Transactions, 1995, 23, 294S-294S.	3.4	0
94	Design of experiments to measure elasticity coefficients. Biochemical Society Transactions, 1995, 23, 297S-297S.	3.4	0
95	Simulation of free radical reactions: a multi-compartment Monte Carlo approach. Biochemical Society Transactions, 1995, 23, 298S-298S.	3.4	0
96	Henrik Kacser, 1918â€“1995. Trends in Biochemical Sciences, 1995, 20, 297-298.	7.5	2
97	Reply from E-D. Schulze. Trends in Ecology and Evolution, 1995, 10, 245.	8.7	0
98	Metabolic Control Analysis: Sensitivity of Control Coefficients to Experimentally Determined Variables. Journal of Theoretical Biology, 1994, 167, 175-200.	1.7	16
99	MetaCon - A Computer Program for the Algebraic Evaluation of Control Coefficients of Metabolic Networks. , 1993, , 473-478.		1
100	A computer program for the algebraic determination of control coefficients in Metabolic Control Analysis. Biochemical Journal, 1993, 292, 351-360.	3.7	15
101	Simulation of dioxygen free radical reactions. Biochemical Society Transactions, 1993, 21, 256S-256S.	3.4	4
102	The analysis of flux in substrate cycles. Biochemical Society Transactions, 1993, 21, 257S-257S.	3.4	3
103	The Analysis of Flux in Substrate Cycles. , 1993, , 97-101.		3
104	Metabolic control analysis: a survey of its theoretical and experimental development. Biochemical Journal, 1992, 286, 313-330.	3.7	761
105	SCAMP: A metabolic simulator and control analysis program. Mathematical and Computer Modelling, 1991, 15, 15-28.	2.0	43
106	Physiological significance of metabolite channelling. Journal of Theoretical Biology, 1991, 152, 109-110.	1.7	5
107	Covalent modification and metabolic control analysis. Modification to the theorems and their application to metabolic systems containing covalently modifiable enzymes. FEBS Journal, 1990, 191, 405-411.	0.2	38
108	Metabolic control analysis. Sensitivity of control coefficients to elasticities. FEBS Journal, 1990, 191, 413-420.	0.2	17

#	Article	IF	Citations
109	Metabolic control analysis. The effects of high enzyme concentrations. FEBS Journal, 1990, 192, 183-187.	0.2	41
110	Metabolic control analysis of mammalian serine metabolism. Advances in Enzyme Regulation, 1990, 30, 13-32.	2.6	45
111	Control Coefficients and the Matrix Method. , 1990, , 139-148.		1
112	The matrix method of metabolic control analysis: its validity for complex pathway structures. Journal of Theoretical Biology, 1989, 136, 181-197.	1.7	47
113	Control analysis of mammalian serine biosynthesis. Feedback inhibition on the final step. Biochemical Journal, 1988, 256, 97-101.	3.7	93
114	The role of co-operativity in metabolism. Biochemical Society Transactions, 1987, 15, 234-235.	3.4	6
115	Responses of metabolic systems: application of control analysis to yeast glycolysis. Biochemical Society Transactions, 1987, 15, 238-238.	3.4	1
116	A sensitivity issue. Trends in Biochemical Sciences, 1987, 12, 217-218.	7.5	1
117	Metabolic control and its analysis. Extensions to the theory and matrix method. FEBS Journal, 1987, 165, 215-221.	0.2	108
118	A program for the analysis of students' enzyme kinetics results with diagnosis of experimental inadequacies. Biochemical Society Transactions, 1986, 14, 466-466.	3.4	1
119	Theoretical aspects of covalent modification in metabolic control. Biochemical Society Transactions, 1986, 14, 623-624.	3.4	4
120	Non-equilibrium/equilibrium reactions: which controls?. Biochemical Society Transactions, 1986, 14, 624-625.	3.4	6
121	Teaching the TCA cycle. Biochemical Education, 1986, 14, 173-174.	0.1	1
122	Substrate cycles: do they really cause amplification?. Biochemical Society Transactions, 1985, 13, 762-763.	3.4	3
123	Metabolic control and its analysis. Additional relationships between elasticities and control coefficients. FEBS Journal, 1985, 148, 555-561.	0.2	273
124	Phosphofructokinase and glycolytic flux. Trends in Biochemical Sciences, 1984, 9, 515-516.	7.5	9
125	Microcomputer-controlled collection of haemoglobinâ€“oxygen binding curves. Biochemical Society Transactions, 1984, 12, 1094-1095.	3.4	0
126	Comparison of the applicability of several allosteric models to the pH and 2,3-bis(phospho)glycerate dependence of oxygen binding by human blood. Journal of Molecular Biology, 1982, 156, 863-889.	4.2	8

#	Article	IF	Citations
127	Subunit Interactions and Catalytic Activity of Triose Phosphate Isomerase. Enzyme, 1982, 28, 287-293.	0.7	0
128	Computer simulations of the rate of change of concentration of adenosine 3â€²:5â€²-cyclic monophosphate after stimulation of adenylate cyclase activity. Biochemical Society Transactions, 1980, 8, 139-140.	3.4	8
129	Theoretical analyses of the functioning of the high- and low-Km cyclic nucleotide phosphodiesterases in the regulation of the concentration of adenosine 3â€²,5â€²-cyclic monophosphate in animal cells. Journal of Theoretical Biology, 1980, 84, 361-385.	1.7	40
130	Theoretical Studies of the Control of Adenosine 3â€²:5â€²-Cyclic Monophosphate by the High- and Low-<i>K</i>m Phosphodiesterases. Biochemical Society Transactions, 1979, 7, 1039-1040.	3.4	4
131	Computer simulation studies of the mixing technique and nonlinear optimizations used in the analysis of oxyhemoglobin dissociation. Mathematical Biosciences, 1979, 46, 59-69.	1.9	3
132	A Correction to Weber's Description of Ligand Binding by Allosteric Proteins. Biochemical Society Transactions, 1978, 6, 1264-1266.	3.4	0
133	Evidence that the Monomers of Dimeric Triose Phosphate Isomerase are Active. Biochemical Society Transactions, 1976, 4, 620-622.	3.4	1
134	Evidence for the activity of immobilised monomers of triose phosphate isomerase. Biochemical and Biophysical Research Communications, 1975, 67, 1013-1018.	2.1	12
135	The preparation and properties of pyruvate kinase from yeast. Biochemical Journal, 1974, 139, 665-675.	3.7	5
136	Proton-Relaxation-Enhancement Studies on the Binding to Yeast Pyruvate Kinase of a Substrate and Effectors. FEBS Journal, 1972, 29, 128-133.	0.2	3
137	Metabolic Control Analysis. , 0, , 69-80.		15
138	Modeling and Simulating Metabolic Networks. , 0, , 755-805.		11