

Douglas Kell

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571
papers

40,960
citations

100
h-index

183
g-index

625
ext. papers

45,792
ext. citations

7.9
avg, IF

7.68
L-index

#	Paper	IF	Citations
571	Procedures for large-scale metabolic profiling of serum and plasma using gas chromatography and liquid chromatography coupled to mass spectrometry. <i>Nature Protocols</i> , 2011 , 6, 1060-83	18.8	1527
570	Metabolomics by numbers: acquiring and understanding global metabolite data. <i>Trends in Biotechnology</i> , 2004 , 22, 245-52	15.1	1001
569	Oscillations in NF-kappaB signaling control the dynamics of gene expression. <i>Science</i> , 2004 , 306, 704-8	33.3	953
568	Systematic functional analysis of the yeast genome. <i>Trends in Biotechnology</i> , 1998 , 16, 373-8	15.1	906
567	A functional genomics strategy that uses metabolome data to reveal the phenotype of silent mutations. <i>Nature Biotechnology</i> , 2001 , 19, 45-50	44.5	839
566	A community-driven global reconstruction of human metabolism. <i>Nature Biotechnology</i> , 2013 , 31, 419-25	44.5	746
565	The Systems Biology Graphical Notation. <i>Nature Biotechnology</i> , 2009 , 27, 735-41	44.5	651
564	Computational cluster validation in post-genomic data analysis. <i>Bioinformatics</i> , 2005 , 21, 3201-12	7.2	625
563	The passive electrical properties of biological systems: their significance in physiology, biophysics and biotechnology. <i>Physics in Medicine and Biology</i> , 1987 , 32, 933-70	3.8	607
562	Flow cytometry and cell sorting of heterogeneous microbial populations: the importance of single-cell analyses. <i>Microbiological Reviews</i> , 1996 , 60, 641-96		591
561	Statistical strategies for avoiding false discoveries in metabolomics and related experiments. <i>Metabolomics</i> , 2007 , 2, 171-196	4.7	566
560	Non-linear optimization of biochemical pathways: applications to metabolic engineering and parameter estimation. <i>Bioinformatics</i> , 1998 , 14, 869-83	7.2	547
559	Flow cytometry and cell sorting of heterogeneous microbial populations: the importance of single-cell analyses.. <i>Microbiological Reviews</i> , 1996 , 60, 641-696		475
558	A consensus yeast metabolic network reconstruction obtained from a community approach to systems biology. <i>Nature Biotechnology</i> , 2008 , 26, 1155-60	44.5	471
557	High-throughput classification of yeast mutants for functional genomics using metabolic footprinting. <i>Nature Biotechnology</i> , 2003 , 21, 692-6	44.5	439
556	Metabolomics and systems biology: making sense of the soup. <i>Current Opinion in Microbiology</i> , 2004 , 7, 296-307	7.9	423
555	Pulsatile stimulation determines timing and specificity of NF-kappaB-dependent transcription. <i>Science</i> , 2009 , 324, 242-6	33.3	414

554	Viability and activity in readily culturable bacteria: a review and discussion of the practical issues. <i>Antonie Van Leeuwenhoek</i> , 1998 , 73, 169-87	2.1	411
553	Here is the evidence, now what is the hypothesis? The complementary roles of inductive and hypothesis-driven science in the post-genomic era. <i>BioEssays</i> , 2004 , 26, 99-105	4.1	404
552	The inhibition by CO ₂ of the growth and metabolism of micro-organisms. <i>Journal of Applied Bacteriology</i> , 1989 , 67, 109-36		385
551	Carrier-mediated cellular uptake of pharmaceutical drugs: an exception or the rule?. <i>Nature Reviews Drug Discovery</i> , 2008 , 7, 205-20	64.1	360
550	Iron behaving badly: inappropriate iron chelation as a major contributor to the aetiology of vascular and other progressive inflammatory and degenerative diseases. <i>BMC Medical Genomics</i> , 2009 , 2, 2	3.7	349
549	A bacterial cytokine. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1998 , 95, 8916-21	11.5	343
548	Functional genomic hypothesis generation and experimentation by a robot scientist. <i>Nature</i> , 2004 , 427, 247-52	50.4	341
547	Rapid identification of urinary tract infection bacteria using hyperspectral whole-organism fingerprinting and artificial neural networks. <i>Microbiology (United Kingdom)</i> , 1998 , 144 (Pt 5), 1157-1170 ^{2.9}		324
546	Hierarchical metabolomics demonstrates substantial compositional similarity between genetically modified and conventional potato crops. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005 , 102, 14458-62	11.5	323
545	Microbes and Alzheimer's Disease. <i>Journal of Alzheimer's Disease</i> , 2016 , 51, 979-84	4.3	320
544	Proposed minimum reporting standards for data analysis in metabolomics. <i>Metabolomics</i> , 2007 , 3, 231-241		317
543	Metabolic footprinting and systems biology: the medium is the message. <i>Nature Reviews Microbiology</i> , 2005 , 3, 557-65	22.2	310
542	Serum ferritin is an important inflammatory disease marker, as it is mainly a leakage product from damaged cells. <i>Metallomics</i> , 2014 , 6, 748-73	4.5	308
541	Development of a robust and repeatable UPLC-MS method for the long-term metabolomic study of human serum. <i>Analytical Chemistry</i> , 2009 , 81, 1357-64	7.8	306
540	On the functional proton current pathway of electron transport phosphorylation. An electrodic view. <i>Biochimica Et Biophysica Acta - Reviews on Bioenergetics</i> , 1979 , 549, 55-99		295
539	Towards a unifying, systems biology understanding of large-scale cellular death and destruction caused by poorly liganded iron: Parkinson's, Huntington's, Alzheimer's, prions, bactericides, chemical toxicology and others as examples. <i>Archives of Toxicology</i> , 2010 , 84, 825-89	5.8	292
538	Synthetic biology for the directed evolution of protein biocatalysts: navigating sequence space intelligently. <i>Chemical Society Reviews</i> , 2015 , 44, 1172-239	58.5	267
537	A proposed framework for the description of plant metabolomics experiments and their results. <i>Nature Biotechnology</i> , 2004 , 22, 1601-6	44.5	260

536	Detection of the dipicolinic acid biomarker in <i>Bacillus</i> spores using Curie-point pyrolysis mass spectrometry and Fourier transform infrared spectroscopy. <i>Analytical Chemistry</i> , 2000 , 72, 119-27	7.8	256
535	Rapid and quantitative detection of the microbial spoilage of meat by Fourier transform infrared spectroscopy and machine learning. <i>Applied and Environmental Microbiology</i> , 2002 , 68, 2822-8	4.8	240
534	The dormant blood microbiome in chronic, inflammatory diseases. <i>FEMS Microbiology Reviews</i> , 2015 , 39, 567-91	15.1	236
533	Systems biology, metabolic modelling and metabolomics in drug discovery and development. <i>Drug Discovery Today</i> , 2006 , 11, 1085-92	8.8	236
532	Breeding crop plants with deep roots: their role in sustainable carbon, nutrient and water sequestration. <i>Annals of Botany</i> , 2011 , 108, 407-18	4.1	233
531	Rapid assessment of bacterial viability and vitality by rhodamine 123 and flow cytometry. <i>Journal of Applied Bacteriology</i> , 1992 , 72, 410-422		231
530	Text mining and its potential applications in systems biology. <i>Trends in Biotechnology</i> , 2006 , 24, 571-9	15.1	226
529	Dormancy in non-sporulating bacteria. <i>FEMS Microbiology Letters</i> , 1993 , 10, 271-85	2.9	221
528	A systematic approach to modeling, capturing, and disseminating proteomics experimental data. <i>Nature Biotechnology</i> , 2003 , 21, 247-54	44.5	220
527	A family of autocrine growth factors in <i>Mycobacterium tuberculosis</i> . <i>Molecular Microbiology</i> , 2002 , 46, 623-35	4.1	218
526	Robust early pregnancy prediction of later preeclampsia using metabolomic biomarkers. <i>Hypertension</i> , 2010 , 56, 741-9	8.5	215
525	Mass spectrometry tools and metabolite-specific databases for molecular identification in metabolomics. <i>Analyst</i> , 2009 , 134, 1322-32	5	215
524	Genetic algorithms as a method for variable selection in multiple linear regression and partial least squares regression, with applications to pyrolysis mass spectrometry. <i>Analytica Chimica Acta</i> , 1997 , 348, 71-86	6.6	215
523	Dielectric permittivity of microbial suspensions at radio frequencies: a novel method for the real-time estimation of microbial biomass. <i>Enzyme and Microbial Technology</i> , 1987 , 9, 181-186	3.8	213
522	Growth control of the eukaryote cell: a systems biology study in yeast. <i>Journal of Biology</i> , 2007 , 6, 4		208
521	Controlled vocabularies and semantics in systems biology. <i>Molecular Systems Biology</i> , 2011 , 7, 543	12.2	195
520	An introduction to wavelet transforms for chemometricians: A time-frequency approach. <i>Chemometrics and Intelligent Laboratory Systems</i> , 1997 , 37, 215-239	3.8	193
519	Multiobjective optimization in bioinformatics and computational biology. <i>IEEE/ACM Transactions on Computational Biology and Bioinformatics</i> , 2007 , 4, 279-92	3	193

518	Dormancy in Stationary-Phase Cultures of <i>Micrococcus luteus</i> : Flow Cytometric Analysis of Starvation and Resuscitation. <i>Applied and Environmental Microbiology</i> , 1993 , 59, 3187-96	4.8	188
517	Recon 2.2: from reconstruction to model of human metabolism. <i>Metabolomics</i> , 2016 , 12, 109	4.7	184
516	A minimal hypothesis for membrane-linked free-energy transduction. The role of independent, small coupling units. <i>Biochimica Et Biophysica Acta - Reviews on Bioenergetics</i> , 1984 , 768, 257-92		182
515	Rapid identification of <i>Streptococcus</i> and <i>Enterococcus</i> species using diffuse reflectance-absorbance Fourier transform infrared spectroscopy and artificial neural networks. <i>FEMS Microbiology Letters</i> , 1996 , 140, 233-239	2.9	179
514	Muralytic activity of <i>Micrococcus luteus</i> Rpf and its relationship to physiological activity in promoting bacterial growth and resuscitation. <i>Molecular Microbiology</i> , 2006 , 59, 84-98	4.1	176
513	Molecular phenotyping of a UK population: defining the human serum metabolome. <i>Metabolomics</i> , 2015 , 11, 9-26	4.7	167
512	Large-scale sequestration of atmospheric carbon via plant roots in natural and agricultural ecosystems: why and how. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2012 , 367, 1589-97	5.8	165
511	Automated workflows for accurate mass-based putative metabolite identification in LC/MS-derived metabolomic datasets. <i>Bioinformatics</i> , 2011 , 27, 1108-12	7.2	156
510	Huntington disease patients and transgenic mice have similar pro-catabolic serum metabolite profiles. <i>Brain</i> , 2006 , 129, 877-86	11.2	155
509	Development and performance of a gas chromatography-time-of-flight mass spectrometry analysis for large-scale nontargeted metabolomic studies of human serum. <i>Analytical Chemistry</i> , 2009 , 81, 7038-46	7.8	152
508	Metabolic profiling of serum using Ultra Performance Liquid Chromatography and the LTQ-Orbitrap mass spectrometry system. <i>Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences</i> , 2008 , 871, 288-98	3.2	151
507	Pharmaceutical drug transport: the issues and the implications that it is essentially carrier-mediated only. <i>Drug Discovery Today</i> , 2011 , 16, 704-14	8.8	145
506	The estimation of microbial biomass. <i>Biosensors</i> , 1985 , 1, 17-84		144
505	The rpf gene of <i>Micrococcus luteus</i> encodes an essential secreted growth factor. <i>Molecular Microbiology</i> , 2002 , 46, 611-21	4.1	141
504	Metabolic control theory: its role in microbiology and biotechnology. <i>FEMS Microbiology Letters</i> , 1986 , 39, 305-320	2.9	141
503	Matrix method for determining steps most rate-limiting to metabolic fluxes in biotechnological processes. <i>Biotechnology and Bioengineering</i> , 1987 , 30, 101-7	4.9	141
502	A metabolome pipeline: from concept to data to knowledge. <i>Metabolomics</i> , 2005 , 1, 39-51	4.7	138
501	Formation and resuscitation of "non-culturable" cells of <i>Rhodococcus rhodochrous</i> and <i>Mycobacterium tuberculosis</i> in prolonged stationary phase. <i>Microbiology (United Kingdom)</i> , 2002 , 148, 1581-1591	2.9	138

500	Membrane transporter engineering in industrial biotechnology and whole cell biocatalysis. <i>Trends in Biotechnology</i> , 2015 , 33, 237-46	15.1	136
499	Wavelet Denoising of Infrared Spectra. <i>Analyst, The</i> , 1997 , 122, 645-652	5	134
498	Theodor Böhler Lecture. Metabolomics, modelling and machine learning in systems biology - towards an understanding of the languages of cells. Delivered on 3 July 2005 at the 30th FEBS Congress and the 9th IUBMB conference in Budapest. <i>FEBS Journal</i> , 2006 , 273, 873-94	5.7	133
497	Event extraction for systems biology by text mining the literature. <i>Trends in Biotechnology</i> , 2010 , 28, 381-90	15.1	131
496	Closed-loop, multiobjective optimization of analytical instrumentation: gas chromatography/time-of-flight mass spectrometry of the metabolomes of human serum and of yeast fermentations. <i>Analytical Chemistry</i> , 2005 , 77, 290-303	7.8	125
495	Serum metabolomics reveals many novel metabolic markers of heart failure, including pseudouridine and 2-oxoglutarate. <i>Metabolomics</i> , 2007 , 3, 413-426	4.7	124
494	Path2Models: large-scale generation of computational models from biochemical pathway maps. <i>BMC Systems Biology</i> , 2013 , 7, 116	3.5	122
493	Metabolomics and systems pharmacology: why and how to model the human metabolic network for drug discovery. <i>Drug Discovery Today</i> , 2014 , 19, 171-82	8.8	122
492	The promiscuous binding of pharmaceutical drugs and their transporter-mediated uptake into cells: what we (need to) know and how we can do so. <i>Drug Discovery Today</i> , 2013 , 18, 218-39	8.8	120
491	Metabolic profiling using direct infusion electrospray ionisation mass spectrometry for the characterisation of olive oils. <i>Analyst, The</i> , 2002 , 127, 1457-62	5	116
490	Quantifying heterogeneity: flow cytometry of bacterial cultures. <i>Antonie Van Leeuwenhoek</i> , 1991 , 60, 145-58	2.1	115
489	Real-time monitoring of cellular biomass: Methods and applications. <i>TrAC - Trends in Analytical Chemistry</i> , 1990 , 9, 190-194	14.6	115
488	How drugs get into cells: tested and testable predictions to help discriminate between transporter-mediated uptake and lipoidal bilayer diffusion. <i>Frontiers in Pharmacology</i> , 2014 , 5, 231	5.6	114
487	Primary and secondary metabolism, and post-translational protein modifications, as portrayed by proteomic analysis of <i>Streptomyces coelicolor</i> . <i>Molecular Microbiology</i> , 2002 , 46, 917-32	4.1	114
486	Comparative evaluation of software for deconvolution of metabolomics data based on GC-TOF-MS. <i>TrAC - Trends in Analytical Chemistry</i> , 2008 , 27, 215-227	14.6	110
485	Rapid assessment of the adulteration of virgin olive oils by other seed oils using pyrolysis mass spectrometry and artificial neural networks. <i>Journal of the Science of Food and Agriculture</i> , 1993 , 63, 297-307	4.3	109
484	Improving metabolic flux predictions using absolute gene expression data. <i>BMC Systems Biology</i> , 2012 , 6, 73	3.5	107
483	A GC-TOF-MS study of the stability of serum and urine metabolomes during the UK Biobank sample collection and preparation protocols. <i>International Journal of Epidemiology</i> , 2008 , 37 Suppl 1, i23-30	7.8	106

482	Insights into the behaviour of systems biology models from dynamic sensitivity and identifiability analysis: a case study of an NF-kappaB signalling pathway. <i>Molecular BioSystems</i> , 2006 , 2, 640-9		106
481	The cytochrome P450 complement (CYPome) of <i>Streptomyces coelicolor</i> A3(2). <i>Journal of Biological Chemistry</i> , 2002 , 277, 24000-5	5.4	106
480	Bacterial dormancy and culturability: the role of autocrine growth factors. <i>Current Opinion in Microbiology</i> , 2000 , 3, 238-43	7.9	106
479	The Biology of Lactoferrin, an Iron-Binding Protein That Can Help Defend Against Viruses and Bacteria. <i>Frontiers in Immunology</i> , 2020 , 11, 1221	8.4	105
478	Do bacteria need to communicate with each other for growth?. <i>Trends in Microbiology</i> , 1996 , 4, 237-42	12.4	105
477	Functional genomics via metabolic footprinting: monitoring metabolite secretion by <i>Escherichia coli</i> tryptophan metabolism mutants using FT-IR and direct injection electrospray mass spectrometry. <i>Comparative and Functional Genomics</i> , 2003 , 4, 376-91		104
476	'Metabolite-likeness' as a criterion in the design and selection of pharmaceutical drug libraries. <i>Drug Discovery Today</i> , 2009 , 14, 31-40	8.8	103
475	Sensitivity analysis of parameters controlling oscillatory signalling in the NF-kappaB pathway: the roles of IKK and I kappa B alpha. <i>IET Systems Biology</i> , 2004 , 1, 93-103		103
474	On the permeability to weak acids and bases of the cytoplasmic membrane of <i>Clostridium pasteurianum</i> . <i>Biochemical and Biophysical Research Communications</i> , 1981 , 99, 81-8	3.4	103
473	Diagnostic morphology: biophysical indicators for iron-driven inflammatory diseases. <i>Integrative Biology (United Kingdom)</i> , 2014 , 6, 486-510	3.7	102
472	Optimal construction of a fast and accurate polarisable water potential based on multipole moments trained by machine learning. <i>Physical Chemistry Chemical Physics</i> , 2009 , 11, 6365-76	3.6	101
471	Pyrolysis mass spectrometry and its applications in biotechnology. <i>Current Opinion in Biotechnology</i> , 1996 , 7, 20-8	11.4	100
470	Influence of Viable Cells on the Resuscitation of Dormant Cells in <i>Micrococcus luteus</i> Cultures Held in an Extended Stationary Phase: the Population Effect. <i>Applied and Environmental Microbiology</i> , 1994 , 60, 3284-91	4.8	100
469	On the translocation of bacteria and their lipopolysaccharides between blood and peripheral locations in chronic, inflammatory diseases: the central roles of LPS and LPS-induced cell death. <i>Integrative Biology (United Kingdom)</i> , 2015 , 7, 1339-77	3.7	98
468	An automated Design-Build-Test-Learn pipeline for enhanced microbial production of fine chemicals. <i>Communications Biology</i> , 2018 , 1, 66	6.7	97
467	Variable selection in discriminant partial least-squares analysis. <i>Analytical Chemistry</i> , 1998 , 70, 4126-33	7.8	97
466	Metabolic footprinting as a tool for discriminating between brewing yeasts. <i>Yeast</i> , 2007 , 24, 667-79	3.4	96
465	Novel biomarkers for pre-eclampsia detected using metabolomics and machine learning. <i>Metabolomics</i> , 2005 , 1, 227-234	4.7	95

464	Solvent selection for whole cell biotransformations in organic media. <i>Critical Reviews in Biotechnology</i> , 1995 , 15, 139-77	9.4	95
463	Estimation of dormant <i>Micrococcus luteus</i> cells by penicillin lysis and by resuscitation in cell-free spent culture medium at high dilution. <i>FEMS Microbiology Letters</i> , 1994 , 115, 347-352	2.9	94
462	A model of yeast glycolysis based on a consistent kinetic characterisation of all its enzymes. <i>FEBS Letters</i> , 2013 , 587, 2832-41	3.8	91
461	Variable selection in wavelet regression models. <i>Analytica Chimica Acta</i> , 1998 , 368, 29-44	6.6	87
460	Information-theoretic sensitivity analysis: a general method for credit assignment in complex networks. <i>Journal of the Royal Society Interface</i> , 2008 , 5, 223-35	4.1	87
459	Defrosting the digital library: bibliographic tools for the next generation web. <i>PLoS Computational Biology</i> , 2008 , 4, e1000204	5	87
458	Closed-loop, multiobjective optimization of two-dimensional gas chromatography/mass spectrometry for serum metabolomics. <i>Analytical Chemistry</i> , 2007 , 79, 464-76	7.8	87
457	The use of 5-cyano-2,3-ditoyl tetrazolium chloride and flow cytometry for the visualisation of respiratory activity in individual cells of <i>Micrococcus luteus</i> . <i>Journal of Microbiological Methods</i> , 1993 , 17, 115-122	2.8	87
456	Dielectric properties of human blood and erythrocytes at radio frequencies (0.2-10 MHz); dependence on cell volume fraction and medium composition. <i>European Biophysics Journal</i> , 1994 , 23, 207-15	1.9	87
455	Rapid and Quantitative Analysis of the Pyrolysis Mass Spectra of Complex Binary and Tertiary Mixtures Using Multivariate Calibration and Artificial Neural Networks. <i>Analytical Chemistry</i> , 1994 , 66, 1070-1085	7.8	87
454	Flow-injection electrospray ionization mass spectrometry of crude cell extracts for high-throughput bacterial identification. <i>Journal of the American Society for Mass Spectrometry</i> , 2002 , 13, 118-28	3.5	86
453	Metabolic profiling uncovers a phenotypic signature of small for gestational age in early pregnancy. <i>Journal of Proteome Research</i> , 2011 , 10, 3660-73	5.6	85
452	Array-based evolution of DNA aptamers allows modelling of an explicit sequence-fitness landscape. <i>Nucleic Acids Research</i> , 2009 , 37, e6	20.1	85
451	Finding novel pharmaceuticals in the systems biology era using multiple effective drug targets, phenotypic screening and knowledge of transporters: where drug discovery went wrong and how to fix it. <i>FEBS Journal</i> , 2013 , 280, 5957-80	5.7	84
450	Discrimination of aerobic endospore-forming bacteria via electrospray-ionization mass spectrometry of whole cell suspensions. <i>Analytical Chemistry</i> , 2001 , 73, 4134-44	7.8	84
449	Discrimination of the variety and region of origin of extra virgin olive oils using ¹³ C NMR and multivariate calibration with variable reduction. <i>Analytica Chimica Acta</i> , 1997 , 348, 357-374	6.6	82
448	Identification and characterization of high-flux-control genes of yeast through competition analyses in continuous cultures. <i>Nature Genetics</i> , 2008 , 40, 113-7	36.3	82
447	Rapid identification using pyrolysis mass spectrometry and artificial neural networks of <i>Propionibacterium acnes</i> isolated from dogs. <i>Journal of Applied Bacteriology</i> , 1994 , 76, 124-34		82

446	Further developments towards a genome-scale metabolic model of yeast. <i>BMC Systems Biology</i> , 2010 , 4, 145	3.5	81
445	Schemes of flux control in a model of <i>Saccharomyces cerevisiae</i> glycolysis. <i>FEBS Journal</i> , 2002 , 269, 3894-904		78
444	GMP Good modelling practice: an essential component of good manufacturing practice. <i>Trends in Biotechnology</i> , 1995 , 13, 481-492	15.1	78
443	Something from nothing: bridging the gap between constraint-based and kinetic modelling. <i>FEBS Journal</i> , 2007 , 274, 5576-85	5.7	77
442	Adoption of the transiently non-culturable state--a bacterial survival strategy?. <i>Advances in Microbial Physiology</i> , 2003 , 47, 65-129	4.4	77
441	Implications of the dominant role of transporters in drug uptake by cells. <i>Current Topics in Medicinal Chemistry</i> , 2009 , 9, 163-81	3	76
440	On-line, real-time measurements of cellular biomass using dielectric spectroscopy. <i>Biotechnology and Genetic Engineering Reviews</i> , 2000 , 17, 3-35	4.1	76
439	Diffuse reflectance absorbance spectroscopy taking in chemometrics (DRASTIC). A hyperspectral FT-IR-based approach to rapid screening for metabolite overproduction. <i>Analytica Chimica Acta</i> , 1997 , 348, 273-282	6.6	75
438	Genomic computing. Explanatory analysis of plant expression profiling data using machine learning. <i>Plant Physiology</i> , 2001 , 126, 943-51	6.6	75
437	Mosaic protonic coupling hypothesis for free energy transduction. <i>FEBS Letters</i> , 1984 , 165, 1-5	3.8	75
436	Detection and identification of novel metabolomic biomarkers in preeclampsia. <i>Reproductive Sciences</i> , 2008 , 15, 591-7	3	74
435	Monitoring of complex industrial bioprocesses for metabolite concentrations using modern spectroscopies and machine learning: application to gibberellic acid production. <i>Biotechnology and Bioengineering</i> , 2002 , 78, 527-38	4.9	74
434	Pheromones, social behaviour and the functions of secondary metabolism in bacteria. <i>Trends in Ecology and Evolution</i> , 1995 , 10, 126-9	10.9	74
433	Neural networks and olive oil. <i>Nature</i> , 1992 , 359, 594-594	50.4	73
432	On the nonlinear dielectric properties of biological systems. <i>Bioelectrochemistry</i> , 1990 , 24, 83-100		71
431	On the optimization of classes for the assignment of unidentified reading frames in functional genomics programmes: the need for machine learning. <i>Trends in Biotechnology</i> , 2000 , 18, 93-8	15.1	70
430	Noninvasive, On-Line Monitoring of the Biotransformation by Yeast of Glucose to Ethanol Using Dispersive Raman Spectroscopy and Chemometrics. <i>Applied Spectroscopy</i> , 1999 , 53, 1419-1428	3.1	70
429	Covid-19: The Rollercoaster of Fibrin(Ogen), D-Dimer, Von Willebrand Factor, P-Selectin and Their Interactions with Endothelial Cells, Platelets and Erythrocytes. <i>International Journal of Molecular Sciences</i> , 2020 , 21,	6.3	70

428	Changes in the metabolic footprint of placental explant-conditioned culture medium identifies metabolic disturbances related to hypoxia and pre-eclampsia. <i>Placenta</i> , 2009 , 30, 974-80	3.4	69
427	Discrimination of modes of action of antifungal substances by use of metabolic footprinting. <i>Applied and Environmental Microbiology</i> , 2004 , 70, 6157-65	4.8	69
426	The protonmotive force in bovine heart submitochondrial particles. Magnitude, sites of generation and comparison with the phosphorylation potential. <i>Biochemical Journal</i> , 1978 , 174, 237-56	3.8	68
425	Oscillatory, stochastic and chaotic growth rate fluctuations in permissively controlled yeast cultures. <i>BioSystems</i> , 1996 , 39, 43-61	1.9	67
424	Eryptosis as a marker of Parkinson's disease. <i>Aging</i> , 2014 , 6, 788-819	5.6	66
423	The permissostat: a novel type of turbidostat. <i>Journal of General Microbiology</i> , 1991 , 137, 735-743		66
422	Classification of pyrolysis mass spectra by fuzzy multivariate rule induction-comparison with regression, K-nearest neighbour, neural and decision-tree methods. <i>Analytica Chimica Acta</i> , 1997 , 348, 389-407	6.6	65
421	Measurement by a flow dialysis technique of the steady-state proton-motive force in chromatophores from <i>Rhodospirillum rubrum</i> . Comparison with phosphorylation potential. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 1978 , 502, 111-26	4.6	65
420	SBML Level 3: an extensible format for the exchange and reuse of biological models. <i>Molecular Systems Biology</i> , 2020 , 16, e9110	12.2	65
419	The metabolome 18 years on: a concept comes of age. <i>Metabolomics</i> , 2016 , 12, 148	4.7	65
418	Correction of mass spectral drift using artificial neural networks. <i>Analytical Chemistry</i> , 1996 , 68, 271-80	7.8	63
417	On resuscitation from the dormant state of <i>Micrococcus luteus</i> . <i>Antonie Van Leeuwenhoek</i> , 1998 , 73, 237-43	2.1	62
416	Absolute quantification of the glycolytic pathway in yeast: deployment of a complete QconCAT approach. <i>Molecular and Cellular Proteomics</i> , 2011 , 10, M111.007633	7.6	61
415	Dielectric Spectroscopy and Membrane Organisation. <i>Journal of Bioelectricity</i> , 1985 , 4, 317-348		61
414	The protonmotive force in phosphorylating membrane vesicles from <i>Paracoccus denitrificans</i> . Magnitude, sites of generation and comparison with the phosphorylation potential. <i>Biochemical Journal</i> , 1978 , 174, 257-66	3.8	61
413	A 'rule of 0.5' for the metabolite-likeness of approved pharmaceutical drugs. <i>Metabolomics</i> , 2015 , 11, 323-339	4.7	60
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