Jean-Charles Portais

List of Publications by Year
in descending order

		117625	60623
92 papers	7,088 citations	34 h-index	81 g-index
99 all docs	99 docs citations	99 times ranked	8738 citing authors

#	Article	IF	Citations
1	GC/MS-based 13C metabolic flux analysis resolves the parallel and cyclic photomixotrophic metabolism of Synechocystis sp. PCC 6803 and selected deletion mutants including the Entner-Doudoroff and phosphoketolase pathways. Microbial Cell Factories, 2022, 21, 69.	4.0	11
2	An optimization method for untargeted MS-based isotopic tracing investigations of metabolism. Metabolomics, 2022, 18, .	3.0	1
3	Lactate fluxes mediated by the monocarboxylate transporter-1 are key determinants of the metabolic activityÂof beige adipocytes. Journal of Biological Chemistry, 2021, 296, 100137.	3.4	22
4	Mitochondrial metabolism supports resistance to IDH mutant inhibitors in acute myeloid leukemia. Journal of Experimental Medicine, 2021, 218, .	8.5	56
5	Procyclic trypanosomes recycle glucose catabolites and TCA cycle intermediates to stimulate growth in the presence of physiological amounts of proline. PLoS Pathogens, 2021, 17, e1009204.	4.7	16
6	Control and regulation of acetate overflow in Escherichia coli. ELife, 2021, 10, .	6.0	33
7	Exploring the Glucose Fluxotype of the E. coli y-ome Using High-Resolution Fluxomics. Metabolites, 2021, 11, 271.	2.9	5
8	The Trypanosome UDP-Glucose Pyrophosphorylase Is Imported by Piggybacking into Glycosomes, Where Unconventional Sugar Nucleotide Synthesis Takes Place. MBio, 2021, 12, e0037521.	4.1	4
9	Lactate Fluxes and Plasticity of Adipose Tissues: A Redox Perspective. Frontiers in Physiology, 2021, 12, 689747.	2.8	26
10	IsoSolve: An Integrative Framework to Improve Isotopic Coverage and Consolidate Isotopic Measurements by Mass Spectrometry and/or Nuclear Magnetic Resonance. Analytical Chemistry, 2021, 93, 9428-9436.	6.5	5
11	Glycerol suppresses glucose consumption in trypanosomes through metabolic contest. PLoS Biology, 2021, 19, e3001359.	5.6	7
12	The emerging roles of lactate as a redox substrate and signaling molecule in adipose tissues. Journal of Physiology and Biochemistry, 2020, 76, 241-250.	3.0	26
13	Targeting MDM2-dependent serine metabolism as a therapeutic strategy for liposarcoma. Science Translational Medicine, 2020, 12, .	12.4	24
14	Simultaneous Measurement of Metabolite Concentration and Isotope Incorporation by Mass Spectrometry. Analytical Chemistry, 2020, 92, 5890-5896.	6.5	4
15	ScalaFlux: AÂscalable approach to quantify fluxes in metabolic subnetworks. PLoS Computational Biology, 2020, 16, e1007799.	3.2	12
16	ScalaFlux: A scalable approach to quantify fluxes in metabolic subnetworks. , 2020, 16, e1007799.		0
17	ScalaFlux: A scalable approach to quantify fluxes in metabolic subnetworks. , 2020, 16, e1007799.		0
18	ScalaFlux: A scalable approach to quantify fluxes in metabolic subnetworks. , 2020, 16, e1007799.		0

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19	ScalaFlux: A scalable approach to quantify fluxes in metabolic subnetworks. , 2020, 16, e1007799.		0
20	ScalaFlux: A scalable approach to quantify fluxes in metabolic subnetworks. , 2020, 16, e1007799.		0
21	ScalaFlux: A scalable approach to quantify fluxes in metabolic subnetworks. , 2020, 16, e1007799.		0
22	Functional analysis of isoprenoid precursors biosynthesis by quantitative metabolomics and isotopologue profiling. Metabolomics, 2019, 15, 115.	3.0	8
23	Combined transcriptomics–metabolomics profiling of the heat shock response in the hyperthermophilic archaeon Pyrococcus furiosus. Extremophiles, 2019, 23, 101-118.	2.3	12
24	Improved Isotopic Profiling by Pure Shift Heteronuclear 2D J-Resolved NMR Spectroscopy. Analytical Chemistry, 2018, 90, 4025-4031.	6.5	10
25	Improved riboflavin production with Ashbya gossypii from vegetable oil based on 13C metabolic network analysis with combined labeling analysis by GC/MS, LC/MS, 1D, and 2D NMR. Metabolic Engineering, 2018, 47, 357-373.	7.0	50
26	Methodology for the Validation of Isotopic Analyses by Mass Spectrometry in Stable-Isotope Labeling Experiments. Analytical Chemistry, 2018, 90, 1852-1860.	6.5	40
27	Gluconeogenesis is essential for trypanosome development in the tsetse fly vector. PLoS Pathogens, 2018, 14, e1007502.	4.7	34
28	Stable Isotope Labeling Highlights Enhanced Fatty Acid and Lipid Metabolism in Human Acute Myeloid Leukemia. International Journal of Molecular Sciences, 2018, 19, 3325.	4.1	46
29	Glycerol supports growth of the Trypanosoma brucei bloodstream forms in the absence of glucose: Analysis of metabolic adaptations on glycerol-rich conditions. PLoS Pathogens, 2018, 14, e1007412.	4.7	32
30	Metabolic flux analysis in Ashbya gossypii using 13C-labeled yeast extract: industrial riboflavin production under complex nutrient conditions. Microbial Cell Factories, 2018, 17, 162.	4.0	27
31	^{15}N-NMR-Based Approach for Amino Acids-Based ^{13}C-Metabolic Flux Analysis of Metabolism. Analytical Chemistry, 2017, 89, 2101-2106.	6.5	23
32	Multilevel interaction of the DnaK/DnaJ(HSP70/HSP40) stress-responsive chaperone machine with the central metabolism. Scientific Reports, 2017, 7, 41341.	3.3	33
33	Plasmid–encoded biosynthetic genes alleviate metabolic disadvantages while increasing glucose conversion to shikimate in an engineered *Escherichia coli* strain. Biotechnology and Bioengineering, 2017, 114, 1319-1330.	3.3	12
34	Acetate fluxes in Escherichia coli are determined by the thermodynamic control of the Pta-AckA pathway. Scientific Reports, 2017, 7, 42135.	3.3	129
35	Chemotherapy-Resistant Human Acute Myeloid Leukemia Cells Are Not Enriched for Leukemic Stem Cells but Require Oxidative Metabolism. Cancer Discovery, 2017, 7, 716-735.	9.4	582
36	The Csr System Regulates *Escherichia coli* Fitness by Controlling Glycogen Accumulation and Energy Levels. MBio, 2017, 8, .	4.1	21

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37	Bio-based succinate from sucrose: High-resolution 13C metabolic flux analysis and metabolic engineering of the rumen bacterium Basfia succiniciproducens. Metabolic Engineering, 2017, 44, 198-212.	7.0	46
38	Recent advances in high-throughput 13C-fluxomics. Current Opinion in Biotechnology, 2017, 43, 104-109.	6.6	59
39	The post‑transcriptional regulatory system CSR controls the balance of metabolic pools in upper glycolysis of <i>Escherichia coli</i>. Molecular Microbiology, 2016, 100, 686-700.	2.5	42
40	Quantitative metabolomics of the thermophilic methylotroph Bacillus methanolicus. Microbial Cell Factories, 2016, 15, 92.	4.0	22
41	Chromatin-Bound MDM2 Regulates Serine Metabolism and Redox Homeostasis Independently of p53. Molecular Cell, 2016, 62, 890-902.	9.7	96
42	Isocitrate dehydrogenase 1 mutations prime the all-trans retinoic acid myeloid differentiation pathway in acute myeloid leukemia. Journal of Experimental Medicine, 2016, 213, 483-497.	8.5	68
43	Metabolic footprint of epiphytic bacteria on <i>Arabidopsis thaliana</i> leaves. ISME Journal, 2016, 10, 632-643.	9.8	113
44	Impact of kinetic isotope effects in isotopic studies of metabolic systems. BMC Systems Biology, 2015, 9, 64.	3.0	29
45	Theoretical Basis for Dynamic Label Propagation in Stationary Metabolic Networks under Step and Periodic Inputs. PLoS ONE, 2015, 10, e0144652.	2.5	6
46	Engineering Escherichia coli for methanol conversion. Metabolic Engineering, 2015, 28, 190-201.	7.0	166
47	Production of carbon-13-labeled cadaverine by engineered Corynebacterium glutamicum using carbon-13-labeled methanol as co-substrate. Applied Microbiology and Biotechnology, 2015, 99, 10163-10176.	3.6	96
48	Isotopic Studies of Metabolic Systems by Mass Spectrometry: Using Pascal's Triangle To Produce Biological Standards with Fully Controlled Labeling Patterns. Analytical Chemistry, 2014, 86, 10288-10295.	6.5	27
49	Developmental stage-dependent metabolic regulation during meiotic differentiation in budding yeast. BMC Biology, 2014, 12, 60.	3.8	12
50	IsoDesign: A software for optimizing the design of ¹³C‑metabolic flux analysis experiments. Biotechnology and Bioengineering, 2014, 111, 202-208.	3.3	35
51	Sampling of intracellular metabolites for stationary and non-stationary 13C metabolic flux analysis in Escherichia coli. Analytical Biochemistry, 2014, 465, 38-49.	2.4	50
52	A novel platform for automated high-throughput fluxome profiling of metabolic variants. Metabolic Engineering, 2014, 25, 8-19.	7.0	33
53	Correction of MS Data for Naturally Occurring Isotopes in Isotope Labelling Experiments. Methods in Molecular Biology, 2014, 1191, 197-207.	0.9	5
54	Cytosolic NADPH Homeostasis in Glucose-starved Procyclic Trypanosoma brucei Relies on Malic Enzyme and the Pentose Phosphate Pathway Fed by Gluconeogenic Flux. Journal of Biological Chemistry, 2013, 288, 18494-18505.	3.4	61

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55	Fast Spatially Encoded 3D NMR Strategies for ¹³C-Based Metabolic Flux Analysis. Analytical Chemistry, 2013, 85, 9751-9757.	6.5	29
56	Physiological and Molecular Timing of the Glucose to Acetate Transition in Escherichia coli. Metabolites, 2013, 3, 820-837.	2.9	34
57	The Carbon Storage Regulator (Csr) System Exerts a Nutrient-Specific Control over Central Metabolism in Escherichia coli Strain Nissle 1917. PLoS ONE, 2013, 8, e66386.	2.5	57
58	IsoCor: correcting MS data in isotope labeling experiments. Bioinformatics, 2012, 28, 1294-1296.	4.1	241
59	influx_s: increasing numerical stability and precision for metabolic flux analysis in isotope labelling experiments. Bioinformatics, 2012, 28, 687-693.	4.1	65
60	ATP Synthesis-coupled and -uncoupled Acetate Production from Acetyl-CoA by Mitochondrial Acetate:Succinate CoA-transferase and Acetyl-CoA Thioesterase in Trypanosoma. Journal of Biological Chemistry, 2012, 287, 17186-17197.	3.4	39
61	The Ethylmalonyl-CoA Pathway Is Used in Place of the Glyoxylate Cycle by Methylobacterium extorquens AM1 during Growth on Acetate. Journal of Biological Chemistry, 2012, 287, 757-766.	3.4	77
62	Isotopic profiling of 13C-labeled biological samples by two-dimensional heteronuclear J-resolved nuclear magnetic resonance spectroscopy. Analytical Biochemistry, 2012, 427, 158-163.	2.4	17
63	Photobioreactor design for isotopic non€stationary ¹³C€metabolic flux analysis (INST) Tj ETQq1 1 0.784314 rgBT /Ove 109, 3030-3040.	3.3	22
64	UFJCOSY: A Fast 3D NMR Method for Measuring Isotopic Enrichments in Complex Samples. ChemPhysChem, 2012, 13, 3098-3101.	2.1	31
65	Co-Consumption of Methanol and Succinate by Methylobacterium extorquens AM1. PLoS ONE, 2012, 7, e48271.	2.5	31
66	Ultrafast Quantitative 2D NMR: An Efficient Tool for the Measurement of Specific Isotopic Enrichments in Complex Biological Mixtures. Analytical Chemistry, 2011, 83, 3112-3119.	6.5	63
67	Intuitive Visualization and Analysis of Multi-Omics Data and Application to Escherichia coli Carbon Metabolism. PLoS ONE, 2011, 6, e21318.	2.5	15
68	Transketolase in Trypanosoma brucei. Molecular and Biochemical Parasitology, 2011, 179, 1-7.	1.1	23
69	Genome-scale reconstruction and system level investigation of the metabolic network of Methylobacterium extorquensAM1. BMC Systems Biology, 2011, 5, 189.	3.0	111
70	High-Throughput Workflow for Monitoring and Mining Bioprocess Data and Its Application to Inferring the Physiological Response of Escherichia coli to Perturbations. Applied and Environmental Microbiology, 2011, 77, 7040-7049.	3.1	10
71	Synthesis of dextrans with controlled amounts of α-1,2 linkages using the transglucosidase GBD€CD2. Applied Microbiology and Biotechnology, 2010, 86, 545-554.	3.6	33
72	Ablation of Succinate Production from Glucose Metabolism in the Procyclic Trypanosomes Induces Metabolic Switches to the Glycerol 3-Phosphate/Dihydroxyacetone Phosphate Shuttle and to Proline Metabolism. Journal of Biological Chemistry, 2010, 285, 32312-32324.	3.4	35

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73	Control of ATP homeostasis during the respiro–fermentative transition in yeast. Molecular Systems Biology, 2010, 6, 344.	7.2	69
74	Demonstration of the ethylmalonyl-CoA pathway by using ^{13}C metabolomics. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 4846-4851.	7.1	232
75	Measurement of isotopic enrichments in 13C-labelled molecules by 1D selective Zero-Quantum Filtered TOCSY NMR experiments. Comptes Rendus Chimie, 2008, 11, 480-485.	0.5	5
76	Quantitative metabolome analysis using liquid chromatography–high-resolution mass spectrometry. Analytical Biochemistry, 2008, 382, 94-100.	2.4	91
77	Strigolactone inhibition of shoot branching. Nature, 2008, 455, 189-194.	27.8	1,910
78	Response of the central metabolism of *Escherichia coli* to modified expression of the gene encoding the glucose–6–phosphate dehydrogenase. FEBS Letters, 2007, 581, 3771-3776.	2.8	65
79	Sampling for Metabolome Analysis of Microorganisms. Analytical Chemistry, 2007, 79, 3843-3849.	6.5	344
80	Application of 2D-TOCSY NMR to the measurement of specific 13C-enrichments in complex mixtures of 13C-labeled metabolites. Metabolic Engineering, 2007, 9, 252-257.	7.0	48
81	Determination of carbon labeling distribution of intracellular metabolites from single fragment ions by ion chromatography tandem mass spectrometry. Analytical Biochemistry, 2007, 360, 182-188.	2.4	88
82	NMR-based fluxomics: Quantitative 2D NMR methods for isotopomers analysis. Phytochemistry, 2007, 68, 2330-2340.	2.9	68
83	In vivo 13C NMR determines metabolic fluxes and steady state in linseed embryos. Phytochemistry, 2007, 68, 2341-2350.	2.9	28
84	Strigolactones Stimulate Arbuscular Mycorrhizal Fungi by Activating Mitochondria. PLoS Biology, 2006, 4, e226.	5.6	693
85	Carbohydrate cycling in micro-organisms: what can13C-NMR tell us?. FEMS Microbiology Reviews, 2002, 26, 375-402.	8.6	56
86	A deeper investigation on carbohydrate cycling inSinorhizobium meliloti. FEBS Letters, 2001, 499, 45-49.	2.8	17
87	Cyclic organization of the carbohydrate metabolism in Sinorhizobium meliloti. FEBS Journal, 1999, 265, 473-480.	0.2	22
88	In vivo13C-NMR studies of polymer synthesis inRhizobium meliloti M5N1 strain. , 1998, 58, 250-253.		9
89	Mechanism of gluconate synthesis inRhizobium melilotiby using in vivo NMR. FEBS Letters, 1997, 412, 485-489.	2.8	12
90	Comparative Analysis of 13C-Enriched Metabolites Released in the Medium of Cerebellar and Cortical Astrocytes Incubated with [1-13C]Glucose. FEBS Journal, 1995, 231, 697-703.	0.2	13

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91	Metabolic flux determination in C6 glioma cells using carbon-13 distribution upon [1-13C]glucose incubation. FEBS Journal, 1993, 217, 457-468.	0.2	101
92	IDH1 Mutation Enhances Catabolic Flexibility and Mitochondrial Dependencies to Favor Drug Resistance in Acute Myeloid Leukemia. SSRN Electronic Journal, 0, , .	0.4	0