

Ralf Takors

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

91
papers

2,302
citations

24
h-index

46
g-index

98
ext. papers

2,845
ext. citations

5
avg, IF

5.28
L-index

| # | Paper | IF | Citations |
|----|---|-----|-----------|
| 91 | CRISPRi enables fast growth followed by stable aerobic pyruvate formation in without auxotrophy.. <i>Engineering in Life Sciences</i> , 2022 , 22, 70-84 | 3.4 | 2 |
| 90 | Compartment-specific C metabolic flux analysis reveals boosted NADPH availability coinciding with increased cell-specific productivity for IgG1 producing CHO cells after MTA treatment.. <i>Engineering in Life Sciences</i> , 2021 , 21, 832-847 | 3.4 | 0 |
| 89 | Towards valorization of pectin-rich agro-industrial residues: Engineering of <i>Saccharomyces cerevisiae</i> for co-fermentation of d-galacturonic acid and glycerol. <i>Metabolic Engineering</i> , 2021 , 69, 1-14 | 9.7 | 1 |
| 88 | Transcriptional profiling of the stringent response mutant strain <i>E. coli</i> SR reveals enhanced robustness to large-scale conditions. <i>Microbial Biotechnology</i> , 2021 , 14, 993-1010 | 6.3 | |
| 87 | Euler-Lagrangian Simulations: A Proper Tool for Predicting Cellular Performance in Industrial Scale Bioreactors. <i>Advances in Biochemical Engineering/Biotechnology</i> , 2021 , 177, 229-254 | 1.7 | 0 |
| 86 | Micro-aerobic production of isobutanol with engineered. <i>Engineering in Life Sciences</i> , 2021 , 21, 475-488 | 3.4 | 3 |
| 85 | Identifying and Engineering Bottlenecks of Autotrophic Isobutanol Formation in Recombinant by Systemic Analysis. <i>Frontiers in Bioengineering and Biotechnology</i> , 2021 , 9, 647853 | 5.8 | 5 |
| 84 | A transhydrogenase-like mechanism in CHO cells comprising concerted cytosolic reaction and mitochondrial shuttling activities. <i>Biochemical Engineering Journal</i> , 2021 , 170, 107986 | 4.2 | |
| 83 | Data-driven in silico prediction of regulation heterogeneity and ATP demands of <i>Escherichia coli</i> in large-scale bioreactors. <i>Biotechnology and Bioengineering</i> , 2021 , 118, 265-278 | 4.9 | 2 |
| 82 | Balancing glucose and oxygen uptake rates to enable high amorpha-4,11-diene production in <i>Escherichia coli</i> via the methylerythritol phosphate pathway. <i>Biotechnology and Bioengineering</i> , 2021 , 118, 1317-1329 | 4.9 | 2 |
| 81 | Engineering of a robust <i>Escherichia coli</i> chassis and exploitation for large-scale production processes. <i>Metabolic Engineering</i> , 2021 , 67, 75-87 | 9.7 | 0 |
| 80 | <i>Pseudomonas putida</i> KT2440 endures temporary oxygen limitations. <i>Biotechnology and Bioengineering</i> , 2021 , 118, 4735-4750 | 4.9 | 1 |
| 79 | Compartment-specific metabolome labeling enables the identification of subcellular fluxes that may serve as promising metabolic engineering targets in CHO cells. <i>Bioprocess and Biosystems Engineering</i> , 2021 , 44, 2567-2578 | 3.7 | 0 |
| 78 | Predicting By-Product Gradients of Baker's Yeast Production at Industrial Scale: A Practical Simulation Approach. <i>Processes</i> , 2020 , 8, 1554 | 2.9 | 1 |
| 77 | Revisiting the Growth Modulon of Under Glucose Limited Chemostat Conditions. <i>Frontiers in Bioengineering and Biotechnology</i> , 2020 , 8, 584614 | 5.8 | 2 |
| 76 | Simulated oxygen and glucose gradients as a prerequisite for predicting industrial scale performance a priori. <i>Biotechnology and Bioengineering</i> , 2020 , 117, 2760-2770 | 4.9 | 9 |
| 75 | S-adenosylmethionine and methylthioadenosine boost cellular productivities of antibody forming Chinese hamster ovary cells. <i>Biotechnology and Bioengineering</i> , 2020 , 117, 3239-3247 | 4.9 | 4 |

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| 74 | Synergistically applying 1-D modeling and CFD for designing industrial scale bubble column syngas bioreactors. <i>Engineering in Life Sciences</i> , 2020 , 20, 239-251 | 3.4 | 2 |
| 73 | Engineering KT2440 for the production of isobutanol. <i>Engineering in Life Sciences</i> , 2020 , 20, 148-159 | 3.4 | 9 |
| 72 | <i>Pseudomonas putida</i> KT2440 is naturally endowed to withstand industrial-scale stress conditions. <i>Microbial Biotechnology</i> , 2020 , 13, 1145-1161 | 6.3 | 22 |
| 71 | CO/HCO Accelerates Iron Reduction through Phenolic Compounds. <i>MBio</i> , 2020 , 11, | 7.8 | 4 |
| 70 | Reduced and Minimal Cell Factories in Bioprocesses: Towards a Streamlined Chassis 2020 , 1-44 | | 1 |
| 69 | Prediction of novel non-coding RNAs relevant for the growth of in a bioreactor. <i>Microbiology (United Kingdom)</i> , 2020 , 166, 149-156 | 2.9 | 3 |
| 68 | Biochemical engineering provides mindset, tools and solutions for the driving questions of a sustainable future. <i>Engineering in Life Sciences</i> , 2020 , 20, 5-6 | 3.4 | 3 |
| 67 | Comparison of L-tyrosine containing dipeptides reveals maximum ATP availability for L-prolyl-L-tyrosine in CHO cells. <i>Engineering in Life Sciences</i> , 2020 , 20, 384-394 | 3.4 | 3 |
| 66 | Modeling Cell-Free Protein Synthesis Systems-Approaches and Applications. <i>Frontiers in Bioengineering and Biotechnology</i> , 2020 , 8, 584178 | 5.8 | 2 |
| 65 | Streamlining the Analysis of Dynamic C-Labeling Patterns for the Metabolic Engineering of as L-Histidine Production Host. <i>Metabolites</i> , 2020 , 10, | 5.6 | 2 |
| 64 | Methylthioadenosine (MTA) boosts cell-specific productivities of Chinese hamster ovary cultures: dosage effects on proliferation, cell cycle and gene expression. <i>FEBS Open Bio</i> , 2020 , 10, 2791-2804 | 2.7 | 2 |
| 63 | Electron availability in CO , CO and H mixtures constrains flux distribution, energy management and product formation in <i>Clostridium ljungdahlii</i> . <i>Microbial Biotechnology</i> , 2020 , 13, 1831-1846 | 6.3 | 12 |
| 62 | Comprehensive Analysis of Anaplerotic Deletion Mutants Under Defined d-Glucose Conditions. <i>Frontiers in Bioengineering and Biotechnology</i> , 2020 , 8, 602936 | 5.8 | 2 |
| 61 | Protein production in <i>Escherichia coli</i> is guided by the trade-off between intracellular substrate availability and energy cost. <i>Microbial Cell Factories</i> , 2019 , 18, 8 | 6.4 | 8 |
| 60 | Perfusion cultures require optimum respiratory ATP supply to maximize cell-specific and volumetric productivities. <i>Biotechnology and Bioengineering</i> , 2019 , 116, 951-960 | 4.9 | 11 |
| 59 | The impact of CO gradients on <i>C. ljungdahlii</i> in a 125 m ³ bubble column: Mass transfer, circulation time and lifeline analysis. <i>Chemical Engineering Science</i> , 2019 , 207, 410-423 | 4.4 | 19 |
| 58 | Identifying the Growth Modulon of. <i>Frontiers in Microbiology</i> , 2019 , 10, 974 | 5.7 | 2 |
| 57 | The Less the Better: How Suppressed Base Addition Boosts Production of Monoclonal Antibodies With Chinese Hamster Ovary Cells. <i>Frontiers in Bioengineering and Biotechnology</i> , 2019 , 7, 76 | 5.8 | 7 |

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| 56 | Grand Research Challenges for Sustainable Industrial Biotechnology. <i>Trends in Biotechnology</i> , 2019 , 37, 1042-1050 | 15.1 | 53 |
| 55 | HILIC-Enabled C Metabolomics Strategies: Comparing Quantitative Precision and Spectral Accuracy of QTOF High- and QQQ Low-Resolution Mass Spectrometry. <i>Metabolites</i> , 2019 , 9, | 5.6 | 22 |
| 54 | From nutritional wealth to autophagy: In vivo metabolic dynamics in the cytosol, mitochondrion and shuttles of IgG producing CHO cells. <i>Metabolic Engineering</i> , 2019 , 54, 145-159 | 9.7 | 15 |
| 53 | Modular systems metabolic engineering enables balancing of relevant pathways for l-histidine production with. <i>Biotechnology for Biofuels</i> , 2019 , 12, 65 | 7.8 | 13 |
| 52 | Continuous Adaptive Evolution of a Fast-Growing Strain Independent of Protocatechuate. <i>Frontiers in Microbiology</i> , 2019 , 10, 1648 | 5.7 | 13 |
| 51 | Exploiting <i>Hydrogenophaga pseudoflava</i> for aerobic syngas-based production of chemicals. <i>Metabolic Engineering</i> , 2019 , 55, 220-230 | 9.7 | 10 |
| 50 | Quantitative Profiling of Endogenous Metabolites Using Hydrophilic Interaction Liquid Chromatography-Tandem Mass Spectrometry (HILIC-MS/MS). <i>Methods in Molecular Biology</i> , 2019 , 1859, 185-207 | 1.4 | 4 |
| 49 | Metabolic engineering to guide evolution - Creating a novel mode for L-valine production with <i>Corynebacterium glutamicum</i> . <i>Metabolic Engineering</i> , 2018 , 47, 31-41 | 9.7 | 30 |
| 48 | Deciphering the Adaptation of in Transition from Aerobiosis via Microaerobiosis to Anaerobiosis. <i>Genes</i> , 2018 , 9, | 4.2 | 11 |
| 47 | In Silico Prediction of Large-Scale Microbial Production Performance: Constraints for Getting Proper Data-Driven Models. <i>Computational and Structural Biotechnology Journal</i> , 2018 , 16, 246-256 | 6.8 | 10 |
| 46 | Systembiologie in der Bioverfahrenstechnik 2018 , 545-569 | | |
| 45 | Wachstumskinetik 2018 , 45-70 | | 2 |
| 44 | Harnessing novel chromosomal integration loci to utilize an organosolv-derived hemicellulose fraction for isobutanol production with engineered <i>Corynebacterium glutamicum</i> . <i>Microbial Biotechnology</i> , 2018 , 11, 257-263 | 6.3 | 25 |
| 43 | A guide to gene regulatory network inference for obtaining predictive solutions: Underlying assumptions and fundamental biological and data constraints. <i>BioSystems</i> , 2018 , 174, 37-48 | 1.9 | 17 |
| 42 | Physiological Response of to Increasingly Nutrient-Rich Growth Conditions. <i>Frontiers in Microbiology</i> , 2018 , 9, 2058 | 5.7 | 10 |
| 41 | Using gas mixtures of CO, CO and H as microbial substrates: the do's and don'ts of successful technology transfer from laboratory to production scale. <i>Microbial Biotechnology</i> , 2018 , 11, 606-625 | 6.3 | 83 |
| 40 | <i>Escherichia coli</i> HGT: Engineered for high glucose throughput even under slowly growing or resting conditions. <i>Metabolic Engineering</i> , 2017 , 40, 93-103 | 9.7 | 30 |
| 39 | Switching between nitrogen and glucose limitation: Unraveling transcriptional dynamics in <i>Escherichia coli</i> . <i>Journal of Biotechnology</i> , 2017 , 258, 2-12 | 3.7 | 14 |

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|----|---|-----|-----|
| 38 | Transcriptional response of Escherichia coli to ammonia and glucose fluctuations. <i>Microbial Biotechnology</i> , 2017 , 10, 858-872 | 6.3 | 34 |
| 37 | Experimentally Validated Model Enables Debottlenecking of in Vitro Protein Synthesis and Identifies a Control Shift under in Vivo Conditions. <i>ACS Synthetic Biology</i> , 2017 , 6, 1913-1921 | 5.7 | 19 |
| 36 | Valorization of pyrolysis water: a biorefinery side stream, for 1,2-propanediol production with engineered. <i>Biotechnology for Biofuels</i> , 2017 , 10, 277 | 7.8 | 20 |
| 35 | Dynamic modeling reveals a three-step response of Saccharomyces cerevisiae to high CO2 levels accompanied by increasing ATP demands. <i>FEMS Yeast Research</i> , 2017 , 17, | 3.1 | 5 |
| 34 | High Substrate Uptake Rates Empower Vibrio natriegens as Production Host for Industrial Biotechnology. <i>Applied and Environmental Microbiology</i> , 2017 , 83, | 4.8 | 59 |
| 33 | Bioprocess scale-up/down as integrative enabling technology: from fluid mechanics to systems biology and beyond. <i>Microbial Biotechnology</i> , 2017 , 10, 1267-1274 | 6.3 | 39 |
| 32 | Zero-growth bioprocesses: A challenge for microbial production strains and bioprocess engineering. <i>Engineering in Life Sciences</i> , 2017 , 17, 27-35 | 3.4 | 18 |
| 31 | Lagrangian Trajectories to Predict the Formation of Population Heterogeneity in Large-Scale Bioreactors. <i>Bioengineering</i> , 2017 , 4, | 5.3 | 25 |
| 30 | Repetitive Short-Term Stimuli Imposed in Poor Mixing Zones Induce Long-Term Adaptation of Cultures in Large-Scale Bioreactors: Experimental Evidence and Mathematical Model. <i>Frontiers in Microbiology</i> , 2017 , 8, 1195 | 5.7 | 18 |
| 29 | Tracking dipeptides at work-uptake and intracellular fate in CHO culture. <i>AMB Express</i> , 2016 , 6, 48 | 4.1 | 4 |
| 28 | Engineering E. coli for large-scale production - Strategies considering ATP expenses and transcriptional responses. <i>Metabolic Engineering</i> , 2016 , 38, 73-85 | 9.7 | 50 |
| 27 | Hyperosmotic stimulus study discloses benefits in ATP supply and reveals miRNA/mRNA targets to improve recombinant protein production of CHO cells. <i>Biotechnology Journal</i> , 2016 , 11, 1037-47 | 5.6 | 19 |
| 26 | Predictability of kLa in stirred tank reactors under multiple operating conditions using an Euler-Lagrange approach. <i>Engineering in Life Sciences</i> , 2016 , 16, 633-642 | 3.4 | 18 |
| 25 | Host Organisms: Mammalian Cells 2016 , 643-671 | | 1 |
| 24 | Dynamics of benzoate metabolism in KT2440. <i>Metabolic Engineering Communications</i> , 2016 , 3, 97-110 | 6.5 | 29 |
| 23 | Environmental stress speeds up DNA replication in Pseudomonas putida in chemostat cultivations. <i>Biotechnology Journal</i> , 2016 , 11, 155-63 | 5.6 | 13 |
| 22 | Genome reduction boosts heterologous gene expression in Pseudomonas putida. <i>Microbial Cell Factories</i> , 2015 , 14, 23 | 6.4 | 108 |
| 21 | Monitoring intracellular protein degradation in antibody-producing Chinese hamster ovary cells. <i>Engineering in Life Sciences</i> , 2015 , 15, 499-508 | 3.4 | 2 |

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| 20 | Applying systems biology tools to study n-butanol degradation in <i>Pseudomonas putida</i> KT2440. <i>Engineering in Life Sciences</i> , 2015 , 15, 760-771 | 3.4 | 20 |
| 19 | Compartment-specific metabolomics for CHO reveals that ATP pools in mitochondria are much lower than in cytosol. <i>Biotechnology Journal</i> , 2015 , 10, 1639-50 | 5.6 | 27 |
| 18 | Changes in intracellular ATP-content of CHO cells as response to hyperosmolality. <i>Biotechnology Progress</i> , 2015 , 31, 1212-6 | 2.8 | 18 |
| 17 | CO ₂ - Intrinsic Product, Essential Substrate, and Regulatory Trigger of Microbial and Mammalian Production Processes. <i>Frontiers in Bioengineering and Biotechnology</i> , 2015 , 3, 108 | 5.8 | 29 |
| 16 | Alkaline conditions in hydrophilic interaction liquid chromatography for intracellular metabolite quantification using tandem mass spectrometry. <i>Analytical Biochemistry</i> , 2015 , 475, 4-13 | 3.1 | 57 |
| 15 | Phosphate limited fed-batch processes: impact on carbon usage and energy metabolism in <i>Escherichia coli</i> . <i>Journal of Biotechnology</i> , 2014 , 190, 96-104 | 3.7 | 19 |
| 14 | CO ₂ /HCO ₃ ⁻ perturbations of simulated large scale gradients in a scale-down device cause fast transcriptional responses in <i>Corynebacterium glutamicum</i> . <i>Applied Microbiology and Biotechnology</i> , 2014 , 98, 8563-72 | 5.7 | 42 |
| 13 | Subpopulation-proteomics reveal growth rate, but not cell cycling, as a major impact on protein composition in <i>Pseudomonas putida</i> KT2440. <i>AMB Express</i> , 2014 , 4, 71 | 4.1 | 13 |
| 12 | Improving the carbon balance of fermentations by total carbon analyses. <i>Biochemical Engineering Journal</i> , 2014 , 90, 162-169 | 4.2 | 22 |
| 11 | Platform engineering of <i>Corynebacterium glutamicum</i> with reduced pyruvate dehydrogenase complex activity for improved production of L-lysine, L-valine, and 2-ketoisovalerate. <i>Applied and Environmental Microbiology</i> , 2013 , 79, 5566-75 | 4.8 | 80 |
| 10 | Impact of different CO ₂ /HCO ₃ ⁻ levels on metabolism and regulation in <i>Corynebacterium glutamicum</i> . <i>Journal of Biotechnology</i> , 2013 , 168, 331-40 | 3.7 | 25 |
| 9 | Production of 1-Octanol from n-Octane by <i>Pseudomonas putida</i> KT2440. <i>Chemie-Ingenieur-Technik</i> , 2013 , 85, 841-848 | 0.8 | 14 |
| 8 | Simplified absolute metabolite quantification by gas chromatography-isotope dilution mass spectrometry on the basis of commercially available source material. <i>Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences</i> , 2011 , 879, 3859-70 | 3.2 | 50 |
| 7 | The identification of enzyme targets for the optimization of a valine producing <i>Corynebacterium glutamicum</i> strain using a kinetic model. <i>Biotechnology Progress</i> , 2009 , 25, 754-62 | 2.8 | 20 |
| 6 | Simultaneous determination of multiple intracellular metabolites in glycolysis, pentose phosphate pathway and tricarboxylic acid cycle by liquid chromatography-mass spectrometry. <i>Journal of Chromatography A</i> , 2007 , 1147, 153-64 | 4.5 | 386 |
| 5 | Monitoring and modeling of the reaction dynamics in the valine/leucine synthesis pathway in <i>Corynebacterium glutamicum</i> . <i>Biotechnology Progress</i> , 2006 , 22, 1071-83 | 2.8 | 40 |
| 4 | Process strategies to enhance pyruvate production with recombinant <i>Escherichia coli</i> : from repetitive fed-batch to in situ product recovery with fully integrated electrodialysis. <i>Biotechnology and Bioengineering</i> , 2004 , 85, 638-46 | 4.9 | 75 |
| 3 | Metabolomics: quantification of intracellular metabolite dynamics. <i>New Biotechnology</i> , 2002 , 19, 5-15 | | 175 |

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| 2 | Quantification of intracellular metabolites in Escherichia coli K12 using liquid chromatographic-electrospray ionization tandem mass spectrometric techniques. <i>Analytical Biochemistry</i> , 2001 , 295, 129-37 | 3.1 | 198 |
| 1 | FAIR research data management as community approach in bioengineering. <i>Engineering in Life Sciences</i> , | 3.4 | 0 |