

# Carl-Fredrik Mandenius

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/2256317/publications.pdf>

Version: 2024-02-01

92  
papers

3,029  
citations

147566

31  
h-index

189595

50  
g-index

123  
all docs

123  
docs citations

123  
times ranked

3316  
citing authors

#	ARTICLE	IF	CITATIONS
1	Realization of user-friendly bioanalytical tools to quantify and monitor critical components in bio-industrial processes through conceptual design. <i>Engineering in Life Sciences</i> , 2022, 22, 217-228.	2.0	2
2	Measurement Technologies for Upstream and Downstream Bioprocessing. <i>Processes</i> , 2021, 9, 143.	1.3	2
3	Real-Time Nanoplasmonic Sensor for IgG Monitoring in Bioproduction. <i>Processes</i> , 2020, 8, 1302.	1.3	14
4	Dynamic peptide-folding mediated biofunctionalization and modulation of hydrogels for 4D bioprinting. <i>Biofabrication</i> , 2020, 12, 035031.	3.7	41
5	Single-Use Printed Biosensor for L-Lactate and Its Application in Bioprocess Monitoring. <i>Processes</i> , 2020, 8, 321.	1.3	8
6	In situ scanning capacitance sensor with spectral analysis reveals morphological states in cultures for production of biopharmaceuticals. <i>Sensors and Actuators B: Chemical</i> , 2020, 313, 128052.	4.0	6
7	Evaluating the Effect of Drug Compounds on Cardiac Spheroids Using the Cardiac Cell Outgrowth Assay. <i>Methods in Molecular Biology</i> , 2019, 1994, 185-193.	0.4	3
8	Cell-Based Assays Using Differentiated Human Induced Pluripotent Cells. <i>Methods in Molecular Biology</i> , 2019, 1994, 1-14.	0.4	8
9	Using a Microfluidic Device for Culture and Drug Toxicity Testing of 3D Cells. <i>Methods in Molecular Biology</i> , 2019, 1994, 235-241.	0.4	6
10	Fabrication of a Microfluidic Cell Culture Device Using Photolithographic and Soft Lithographic Techniques. <i>Methods in Molecular Biology</i> , 2019, 1994, 227-233.	0.4	9
11	Effect of inoculum density on human-induced pluripotent stem cell expansion in 3D bioreactors. <i>Cell Proliferation</i> , 2019, 52, e12604.	2.4	14
12	Online measurement of oxygen enables continuous noninvasive evaluation of human-induced pluripotent stem cell ( <i>hiPSC</i> ) culture in a perfused 3D hollow-fiber bioreactor. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , 2019, 13, 1203-1216.	1.3	4
13	In situ microscopy as online tool for detecting microbial contaminations in cell culture. <i>Journal of Biotechnology</i> , 2019, 296, 53-60.	1.9	7
14	Model-based monitoring of industrial reversed phase chromatography to predict insulin variants. <i>Biotechnology Progress</i> , 2019, 35, e2813.	1.3	0
15	Fabrication of modular hyaluronan-PEG hydrogels to support 3D cultures of hepatocytes in a perfused liver-on-a-chip device. <i>Biofabrication</i> , 2019, 11, 015013.	3.7	61
16	A clip-on electroosmotic pump for oscillating flow in microfluidic cell culture devices. <i>Microfluidics and Nanofluidics</i> , 2018, 22, 1.	1.0	17
17	On-line soft sensing in upstream bioprocessing. <i>Critical Reviews in Biotechnology</i> , 2018, 38, 106-121.	5.1	51
18	A Microbore Tubing Based Spiral for Multistep Cell Fractionation. <i>Analytical Chemistry</i> , 2018, 90, 12909-12916.	3.2	8

#	ARTICLE	IF	CITATIONS
19	Advances in Micro-Bioreactor Design for Organ Cell Studies. <i>Bioengineering</i> , 2018, 5, 64.	1.6	2
20	A Cardiac Cell Outgrowth Assay for Evaluating Drug Compounds Using a Cardiac Spheroid-on-a-Chip Device. <i>Bioengineering</i> , 2018, 5, 36.	1.6	33
21	Conceptual Design of Micro-Bioreactors and Organ-on-Chips for Studies of Cell Cultures. <i>Bioengineering</i> , 2018, 5, 56.	1.6	30
22	Modeling Suspension Cultures of Microbial and Mammalian Cells with an Adaptable Six-Compartment Model. <i>Chemical Engineering and Technology</i> , 2017, 40, 956-966.	0.9	7
23	Developing organ-on-a-chip concepts using bio-mechatronic design methodology. <i>Biofabrication</i> , 2017, 9, 025023.	3.7	12
24	Operator Training Simulator for an Industrial Bioethanol Plant. <i>Processes</i> , 2016, 4, 34.	1.3	2
25	A Microfluidic Bioreactor for Toxicity Testing of Stem Cell Derived 3D Cardiac Bodies. <i>Methods in Molecular Biology</i> , 2016, 1502, 159-168.	0.4	12
26	On-line monitoring of downstream bioprocesses. <i>Current Opinion in Chemical Engineering</i> , 2016, 14, 112-120.	3.8	26
27	Operator training simulation for integrating cultivation and homogenisation in protein production. <i>Biotechnology Reports (Amsterdam, Netherlands)</i> , 2015, 6, 91-99.	2.1	7
28	Conceptual Design of an Operator Training Simulator for a Bio-Ethanol Plant. <i>Processes</i> , 2015, 3, 664-683.	1.3	12
29	Mini-review: soft sensors as means for $\langle scp \rangle PAT \langle /scp \rangle$ in the manufacture of bio-therapeutics. <i>Journal of Chemical Technology and Biotechnology</i> , 2015, 90, 215-227.	1.6	57
30	Stem cell derived in vivo-like human cardiac bodies in a microfluidic device for toxicity testing by beating frequency imaging. <i>Lab on A Chip</i> , 2015, 15, 3242-3249.	3.1	58
31	Control of specific carbon dioxide production in a fed-batch culture producing recombinant protein using a soft sensor. <i>Journal of Biotechnology</i> , 2015, 200, 44-51.	1.9	4
32	An azide functionalized oligothiophene ligand – A versatile tool for multimodal detection of disease associated protein aggregates. <i>Biosensors and Bioelectronics</i> , 2015, 63, 204-211.	5.3	24
33	A Soft Sensor for Bioprocess Control Based on Sequential Filtering of Metabolic Heat Signals. <i>Sensors</i> , 2014, 14, 17864-17882.	2.1	23
34	Design of large-scale manufacturing of induced pluripotent stem cell derived cardiomyocytes. <i>Chemical Engineering Research and Design</i> , 2014, 92, 1142-1152.	2.7	17
35	A highly UV-transparent fused silica biochip for sensitive hepatotoxicity testing by autofluorescence. <i>Biochip Journal</i> , 2014, 8, 115-121.	2.5	3
36	Comparison of weak affinity chromatography and surface plasmon resonance in determining affinity of small molecules. <i>Analytical Biochemistry</i> , 2014, 461, 57-59.	1.1	16

#	ARTICLE	IF	CITATIONS
37	Operator training in recombinant protein production using a structured simulator model. Journal of Biotechnology, 2014, 177, 53-59.	1.9	15
38	Soft sensor control of metabolic fluxes in a recombinant Escherichia coli fed-batch cultivation producing green fluorescence protein. Bioprocess and Biosystems Engineering, 2013, 36, 1375-1384.	1.7	21
39	Virtual bioreactor cultivation for operator training and simulation: application to ethanol and protein production. Journal of Chemical Technology and Biotechnology, 2013, 88, 2159-2168.	1.6	18
40	Biomechatronics for designing bioprocess monitoring and control systems: Application to stem cell production. Journal of Biotechnology, 2012, 162, 430-440.	1.9	8
41	Monitoring and control of microbioreactors: An expert opinion on development needs. Biotechnology Journal, 2012, 7, 1308-1314.	1.8	30
42	How can measurement, monitoring, modeling and control advance cell culture in industrial biotechnology?. Biotechnology Journal, 2012, 7, 1522-1529.	1.8	49
43	Scale-up of cell culture bioreactors using biomechatronic design. Biotechnology Journal, 2012, 7, 1026-1039.	1.8	14
44	Soft sensors in bioprocessing: A status report and recommendations. Biotechnology Journal, 2012, 7, 1040-1048.	1.8	180
45	Toward Preclinical Predictive Drug Testing for Metabolism and Hepatotoxicity by Using <i>In Vitro</i> Models Derived from Human Embryonic Stem Cells and Human Cell Lines – A Report on the Vitrocellomics EU-project. ATLA Alternatives To Laboratory Animals, 2011, 39, 147-171.	0.7	38
46	Process analytical technology (PAT) for biopharmaceuticals. Biotechnology Journal, 2011, 6, 369-377.	1.8	163
47	Cardiotoxicity testing using pluripotent stem cell-derived human cardiomyocytes and state-of-the-art bioanalytics: a review. Journal of Applied Toxicology, 2011, 31, 191-205.	1.4	71
48	Orientation and capturing of antibody affinity ligands: Applications to surface plasmon resonance biochips. Sensors and Actuators B: Chemical, 2011, 158, 265-270.	4.0	45
49	Report and recommendation of a workshop on education and training for measurement, monitoring, modelling and control (M <sup>3</sup> C) in biochemical engineering. Biotechnology Journal, 2010, 5, 359-367.	1.8	4
50	Fluorescent cell-based sensing approaches for toxicity testing. Analytical and Bioanalytical Chemistry, 2010, 398, 181-191.	1.9	39
51	Monitoring of troponin release from cardiomyocytes during exposure to toxic substances using surface plasmon resonance biosensing. Analytical and Bioanalytical Chemistry, 2010, 398, 1395-1402.	1.9	22
52	Mechatronics design principles for biotechnology product development. Trends in Biotechnology, 2010, 28, 230-236.	4.9	17
53	Evaluation of software sensors for on-line estimation of culture conditions in an Escherichia coli cultivation expressing a recombinant protein. Journal of Biotechnology, 2010, 147, 37-45.	1.9	38
54	Assaying cardiac biomarkers for toxicity testing using biosensing and cardiomyocytes derived from human embryonic stem cells. Journal of Biotechnology, 2010, 150, 175-181.	1.9	48

#	ARTICLE	IF	CITATIONS
55	Mechatronic design methodology for biotechnology products. <i>New Biotechnology</i> , 2009, 25, S190.	2.4	1
56	A cell-based sensor system for toxicity testing using multiwavelength fluorescence spectroscopy. <i>Analytical Biochemistry</i> , 2009, 387, 271-275.	1.1	16
57	Quality-by-Design for biotechnology-related pharmaceuticals. <i>Biotechnology Journal</i> , 2009, 4, 600-609.	1.8	54
58	Evaluation and optimization of hepatocyte culture media factors by design of experiments (DoE) methodology. <i>Cytotechnology</i> , 2008, 57, 251-261.	0.7	35
59	Bioprocess optimization using design-of-experiments methodology. <i>Biotechnology Progress</i> , 2008, 24, 1191-1203.	1.3	317
60	Monitoring of influenza virus hemagglutinin in process samples using weak affinity ligands and surface plasmon resonance. <i>Analytica Chimica Acta</i> , 2008, 623, 66-75.	2.6	58
61	Engineering Design Methodology for Bio-Mechatronic Products. <i>Biotechnology Progress</i> , 2008, 24, 232-244.	1.3	25
62	On-line multi-analyzer monitoring of biomass, glucose and acetate for growth rate control of a <i>Vibrio cholerae</i> fed-batch cultivation. <i>Journal of Biotechnology</i> , 2005, 115, 67-79.	1.9	74
63	Intracellular monitoring of superoxide dismutase expression in an <i>Escherichia coli</i> fed-batch cultivation using on-line disruption with at-line surface plasmon resonance detection. <i>Analytical Biochemistry</i> , 2005, 342, 152-159.	1.1	13
64	On-Line Detection of Microbial Contaminations in Animal Cell Reactor Cultures Using an Electronic Nose Device. <i>Cytotechnology</i> , 2005, 48, 41-58.	0.7	17
65	Enhancement of anthraquinone accumulation in <i>Morinda citrifolia</i> suspension cultures. <i>Plant Science</i> , 2005, 168, 1337-1344.	1.7	58
66	Growth behavior in plant cell cultures based on emissions detected by a multisensor array. <i>Biotechnology Progress</i> , 2004, 20, 1245-1250.	1.3	13
67	Bioprocess control from a multivariate process trajectory. <i>Bioprocess and Biosystems Engineering</i> , 2004, 26, 401-411.	1.7	24
68	Recent developments in the monitoring, modeling and control of biological production systems. <i>Bioprocess and Biosystems Engineering</i> , 2004, 26, 347-351.	1.7	68
69	On-line Multisensor Monitoring of Yogurt and Filmjölk Fermentations on Production Scale. <i>Journal of Agricultural and Food Chemistry</i> , 2004, 52, 415-420.	2.4	80
70	Evaluation of disruption methods for the release of intracellular recombinant protein from <i>Escherichia coli</i> for analytical purposes. <i>Biotechnology and Applied Biochemistry</i> , 2004, 40, 83.	1.4	6
71	Off-line monitoring of bacterial stress response during recombinant protein production using an optical biosensor. <i>Journal of Biotechnology</i> , 2004, 111, 191-201.	1.9	12
72	Monitoring of the heat-shock response in <i>Escherichia coli</i> using an optical biosensor. <i>Analytical Biochemistry</i> , 2003, 322, 156-163.	1.1	10

#	ARTICLE	IF	CITATIONS
73	Integration of distributed multi-analyzer monitoring and control in bioprocessing based on a real-time expert system. <i>Journal of Biotechnology</i> , 2003, 103, 237-248.	1.9	42
74	Sensor fusion for on-line monitoring of yoghurt fermentation. <i>Journal of Biotechnology</i> , 2002, 99, 237-248.	1.9	88
75	Online monitoring of a bioprocess based on a multi-analyser system and multivariate statistical process modelling. <i>Journal of Chemical Technology and Biotechnology</i> , 2002, 77, 1157-1168.	1.6	44
76	Gas sensor arrays for early detection of infection in mammalian cell culture. <i>Biosensors and Bioelectronics</i> , 2002, 17, 395-403.	5.3	26
77	Assessment of the Performance of a Fed-Batch Cultivation from the Preculture Quality Using an Electronic Nose. <i>Biotechnology Progress</i> , 2002, 18, 380-386.	1.3	16
78	Quantitation of intracellular recombinant human superoxide dismutase using surface plasmon resonance. <i>Analytica Chimica Acta</i> , 2002, 456, 193-200.	2.6	16
79	Improving the Sensitivity of a Quartz Crystal Microbalance for Biosensing by Using Porous Gold. <i>Mikrochimica Acta</i> , 2001, 136, 49-53.	2.5	24
80	Neoglycoconjugates as affinity ligands in surface plasmon resonance analysis. <i>Analytica Chimica Acta</i> , 2001, 449, 51-58.	2.6	5
81	Monitoring growth of the methanogenic archaea <i>Methanobacterium formicicum</i> using an electronic nose. <i>Biotechnology Letters</i> , 2001, 23, 241-248.	1.1	5
82	Analysis of Carbohydrates Using Liquid Chromatography–Surface Plasmon Resonance Immunosensing Systems. <i>Analytical Biochemistry</i> , 2000, 281, 151-158.	1.1	37
83	Porous gold surfaces for biosensor applications. <i>Biosensors and Bioelectronics</i> , 2000, 15, 203-209.	5.3	84
84	Continuous weak-affinity immunosensing. <i>Trends in Biotechnology</i> , 2000, 18, 49-52.	4.9	49
85	Silicon based affinity biochips viewed with imaging ellipsometry. <i>Measurement Science and Technology</i> , 2000, 11, 801-808.	1.4	28
86	On-line determination of non-volatile or low-concentration metabolites in a yeast cultivation using an electronic nose. <i>Analyst</i> , 2000, 125, 1123-1128.	1.7	20
87	Electronic Noses for Bioreactor Monitoring. <i>Advances in Biochemical Engineering/Biotechnology</i> , 1999, 66, 65-82.	0.6	5
88	Predicting Fermentability of Wood Hydrolyzates with Responses from Electronic Noses. <i>Biotechnology Progress</i> , 1999, 15, 617-621.	1.3	15
89	On-line monitoring of a cultivation using an electronic nose. <i>Analytica Chimica Acta</i> , 1998, 361, 223-231.	2.6	31
90	Monitoring specific interaction of low molecular weight biomolecules on oxidized porous silicon using ellipsometry. <i>Biosensors and Bioelectronics</i> , 1998, 13, 439-449.	5.3	31

#	ARTICLE	IF	CITATIONS
91	A multisensor array for visualizing continuous state transitions in biopharmaceutical processes using principal component analysis. <i>Biosensors and Bioelectronics</i> , 1998, 13, 193-199.	5.3	17
92	A Carbohydrate Biosensor Surface for the Detection of Uropathogenic Bacteria. <i>Nature Biotechnology</i> , 1994, 12, 1376-1378.	9.4	18