Olivier Frey

List of Publications by Year
in descending order

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52 papers	2,447 citations	257101 24 h-index	223531 46 g-index
52 all docs	52 docs citations	52 times ranked	3235 citing authors

#	Article	IF	Citations
1	Reconfigurable microfluidic hanging drop network for multi-tissue interaction and analysis. Nature Communications, 2014, 5, 4250.	5.8	319
2	A guide to the organ-on-a-chip. Nature Reviews Methods Primers, 2022, 2, .	11.8	247
3	Biology-inspired microphysiological system approaches to solve the prediction dilemma of substance testing. ALTEX: Alternatives To Animal Experimentation, 2016, 33, 272-321.	0.9	214
4	Electrochemical comparison of IrO2 prepared by anodic oxidation of pure iridium and IrO2 prepared by thermal decomposition of H2IrCl6 precursor solution. Journal of Applied Electrochemistry, 2009, 39, 1361-1367.	1.5	141
5	Multi-analyte biosensor interface for real-time monitoring of 3D microtissue spheroids in hanging-drop networks. Microsystems and Nanoengineering, 2016, 2, 16022.	3.4	124
6	Biology-inspired microphysiological systems to advance medicines for patient benefit and animal welfare. ALTEX: Alternatives To Animal Experimentation, 2020, 37, 365-394.	0.9	123
7	3D spherical microtissues and microfluidic technology for multi-tissue experiments and analysis. Journal of Biotechnology, 2015, 205, 24-35.	1.9	121
8	A Synthetic Multifunctional Mammalian pH Sensor and CO2 Transgene-Control Device. Molecular Cell, 2014, 55, 397-408.	4.5	96
9	Electrochemical oxidation of ammonia (NH4+/NH3) on thermally and electrochemically prepared IrO2 electrodes. Electrochimica Acta, 2011, 56, 1361-1365.	2.6	71
10	Microfluidic single-cell cultivation chip with controllable immobilization and selective release of yeast cells. Lab on A Chip, 2012, 12, 906-915.	3.1	68
11	96-Well Format-Based Microfluidic Platform for Parallel Interconnection of Multiple Multicellular Spheroids. Journal of the Association for Laboratory Automation, 2015, 20, 274-282.	2.8	68
12	Fully Integrated CMOS Microsystem for Electrochemical Measurements on 32 Ã— 32 Working Electrodes at 90 Frames Per Second. Analytical Chemistry, 2014, 86, 6425-6432.	3.2	64
13	Enzyme-based choline and l-glutamate biosensor electrodes on silicon microprobe arrays. Biosensors and Bioelectronics, 2010, 26, 477-484.	5.3	59
14	Electrical Impedance Spectroscopy for Microtissue Spheroid Analysis in Hanging-Drop Networks. ACS Sensors, 2016, 1, 1028-1035.	4.0	52
15	Adding the â€˜heartâ€™ to hanging drop networks for microphysiological multi-tissue experiments. Lab on A Chip, 2015, 15, 4138-4147.	3.1	51
16	Autonomous microfluidic multi-channel chip for real-time PCR with integrated liquid handling. Biomedical Microdevices, 2007, 9, 711-718.	1.4	50
17	In Vitro Platform for Studying Human Insulin Release Dynamics of Single Pancreatic Islet Microtissues at High Resolution. Advanced Biology, 2020, 4, e1900291.	3.0	50
18	Time-lapse electrical impedance spectroscopy for monitoring the cell cycle of single immobilized S. pombe cells. Scientific Reports, 2015, 5, 17180.	1.6	40

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19	Automated, Multiplexed Electrical Impedance Spectroscopy Platform for Continuous Monitoring of Microtissue Spheroids. Analytical Chemistry, 2016, 88, 10876-10883.	3.2	40
20	Microfluidic Multitissue Platform for Advanced Embryotoxicity Testing In Vitro. Advanced Science, 2019, 6, 1900294.	5.6	35
21	Real-time monitoring of immobilized single yeast cells through multifrequency electrical impedance spectroscopy. Analytical and Bioanalytical Chemistry, 2014, 406, 7015-7025.	1.9	32
22	Scalable Microfluidic Platform for Flexible Configuration of and Experiments with Microtissue Multiorgan Models. SLAS Technology, 2019, 24, 79-95.	1.0	32
23	Integrating impedance-based growth-rate monitoring into a microfluidic cell culture platform for live-cell microscopy. Microsystems and Nanoengineering, 2018, 4, 8.	3.4	31
24	A novel enzyme entrapment in SU-8 microfabricated films for glucose micro-biosensors. Biosensors and Bioelectronics, 2010, 26, 1582-1587.	5.3	27
25	Versatile, Simple-to-Use Microfluidic Cell-Culturing Chip for Long-Term, High-Resolution, Time-Lapse Imaging. Analytical Chemistry, 2015, 87, 4144-4151.	3.2	26
26	Seamless Combination of Fluorescence-Activated Cell Sorting and Hanging-Drop Networks for Individual Handling and Culturing of Stem Cells and Microtissue Spheroids. Analytical Chemistry, 2016, 88, 1222-1229.	3.2	23
27	Multiple extraâ€synaptic spillover mechanisms regulate prolonged activity in cerebellar Golgi cellâ€“granule cell loops. Journal of Physiology, 2011, 589, 3837-3854.	1.3	22
28	Multi-target electrochemical biosensing enabled by integrated CMOS electronics. Journal of Micromechanics and Microengineering, 2011, 21, 054010.	1.5	21
29	The fibrotic response of primary liver spheroids recapitulates in vivo hepatic stellate cell activation. Biomaterials, 2020, 261, 120335.	5.7	21
30	Biosensor microprobes with integrated microfluidic channels for bi-directional neurochemical interaction. Journal of Neural Engineering, 2011, 8, 066001.	1.8	20
31	A Framework for Optimizing High-Content Imaging of 3D Models for Drug Discovery. SLAS Discovery, 2020, 25, 709-722.	1.4	19
32	Continuous-flow multi-analyte biosensor cartridge with controllable linear response range. Lab on A Chip, 2010, 10, 2226.	3.1	17
33	Predicting Metabolismâ€Related Drugâ€“Drug Interactions Using a Microphysiological Multitissue System. Advanced Biology, 2020, 4, e2000079.	3.0	16
34	Electrochemical behaviour of ammonia (NH4+/NH3) on electrochemically grown anodic iridium oxide film (AIROF) electrode. Electrochemistry Communications, 2009, 11, 1590-1592.	2.3	15
35	Tubing-Free Microfluidic Microtissue Culture System Featuring Gradual, in vivo-Like Substance Exposure Profiles. Frontiers in Bioengineering and Biotechnology, 2019, 7, 72.	2.0	15
36	Simultaneous neurochemical stimulation and recording using an assembly of biosensor silicon microprobes and SU-8 microinjectors. Sensors and Actuators B: Chemical, 2011, 154, 96-105.	4.0	13

#	Article	IF	Citations
37	Microfluidic Hydrogel Hangingâ€Drop Network for Longâ€Term Culturing of 3D Microtissues and Simultaneous Highâ€Resolution Imaging. Advanced Biology, 2018, 2, 1800054.	3.0	13
38	Robust Functionalization of Large Microelectrode Arrays by Using Pulsed Potentiostatic Deposition. Sensors, 2017, 17, 22.	2.1	11
39	The CellClamper: A Convenient Microfluidic Device for Time-Lapse Imaging of Yeast. Methods in Molecular Biology, 2018, 1672, 537-555.	0.4	9
40	Fabrication and Operation of Microfluidic Hanging-Drop Networks. Methods in Molecular Biology, 2018, 1771, 183-202.	0.4	8
41	A Microphysiological Cell-Culturing System for Pharmacokinetic Drug Exposure and High-Resolution Imaging of Arrays of 3D Microtissues. Frontiers in Pharmacology, 2021, 12, 785851.	1.6	6
42	Microelectrode-array of IrO2 prepared by thermal treatment of pure Ir. Electrochemistry Communications, 2010, 12, 587-591.	2.3	4
43	A Tubing-Free, Microfluidic Platform for the Realization of Physiologically Relevant Dosing Curves on Cellular Models. Proceedings (mdpi), 2017, 1, .	0.2	4
44	Design and engineering of multiorgan systems. , 2020, , 393-427.		4
45	Wide-band Electrical Impedance Spectroscopy (EIS) Measures S. pombe Cell Growth in vivo. Methods in Molecular Biology, 2018, 1721, 135-153.	0.4	2
46	Microfluidic Cell Culturing Platform Combining Long-term, High-resolution Imaging with Impedance Spectroscopy. Procedia Engineering, 2015, 120, 154-157.	1.2	1
47	Microfluidic hanging-drop platform for parallel closed-loop multi-tissue experiments. , 2015, , .		1
48	Miniature Fluidic Microtissue Culturing Device for Rapid Biological Detection. Integrated Analytical Systems, 2018, , 207-225.	0.4	1
49	Multisite monitoring of choline using biosensor microprobe arrays in combination with CMOS circuitry. Biomedizinische Technik, 2014, 59, 305-14.	0.9	0
50	Pro-drug activation in dynamic microphysiological fluidic systems interconnecting liver and tumor microtissues. Toxicology Letters, 2015, 238, S179.	0.4	0
51	Integrating multi-electrode arrays in microfluidic hanging-drop networks. , 2017, , .		0
52	Microfluidics: Microfluidic Hydrogel Hanging-Drop Network for Long-Term Culturing of 3D Microtissues and Simultaneous High-Resolution Imaging (Adv. Biosys. 7/2018). Advanced Biology, 2018, 2, 1870062.	3.0	0