Peter Ertl

List of Publications by Year
in descending order

80 papers	2,893 citations	147801 31 h-index	182427 51 g-index
84 all docs	84 docs citations	84 times ranked	4203 citing authors

#	Article	IF	Citations
1	Microfluidic Systems for Pathogen Sensing: A Review. Sensors, 2009, 9, 4804-4823.	3.8	239
2	Recent advances in microfluidic technologies for cell-to-cell interaction studies. Lab on A Chip, 2018, 18, 249-270.	6.0	219
3	A comparative study of five physiological key parameters between four different human trophoblast-derived cell lines. Scientific Reports, 2017, 7, 5892.	3.3	119
4	Lab-on-a-chip technologies for stem cell analysis. Trends in Biotechnology, 2014, 32, 245-253.	9.3	110
5	Multi-layered, membrane-integrated microfluidics based on replica molding of a thiolâ€“ene epoxy thermoset for organ-on-a-chip applications. Lab on A Chip, 2015, 15, 4542-4554.	6.0	98
6	Capillary Electrophoresis Chips with a Sheath-Flow Supported Electrochemical Detection System. Analytical Chemistry, 2004, 76, 3749-3755.	6.5	89
7	Detection of viruses with molecularly imprinted polymers integrated on a microfluidic biochip using contact-less dielectric microsensors. Lab on A Chip, 2009, 9, 3549.	6.0	89
8	Microfluidic oxygen imaging using integrated optical sensor layers and a color camera. Lab on A Chip, 2013, 13, 1593.	6.0	83
9	Tomorrow today: organ-on-a-chip advances towards clinically relevant pharmaceutical and medical in vitro models. Current Opinion in Biotechnology, 2019, 55, 81-86.	6.6	81
10	Rapid identification of viable Escherichia coli subspecies with an electrochemical screen-printed biosensor array. Biosensors and Bioelectronics, 2003, 18, 907-916.	10.1	71
11	Nanobiotechnology advanced antifouling surfaces for the continuous electrochemical monitoring of glucose in whole blood using a lab-on-a-chip. Lab on A Chip, 2013, 13, 1780.	6.0	71
12	Latest Trends in Biosensing for Microphysiological Organs-on-a-Chip and Body-on-a-Chip Systems. Biosensors, 2019, 9, 110.	4.7	71
13	Development of a microfluidic biochip for online monitoring of fungal biofilm dynamics. Lab on A Chip, 2007, 7, 1723.	6.0	67
14	Small Force, Big Impact: Next Generation Organ-on-a-Chip Systems Incorporating Biomechanical Cues. Frontiers in Physiology, 2018, 9, 1417.	2.8	66
15	Every Breath You Take: Non-invasive Real-Time Oxygen Biosensing in Two- and Three-Dimensional Microfluidic Cell Models. Frontiers in Physiology, 2018, 9, 815.	2.8	66
16	Stiffness Matters: Fine-Tuned Hydrogel Elasticity Alters Chondrogenic Redifferentiation. Frontiers in Bioengineering and Biotechnology, 2020, 8, 373.	4.1	60
17	Recent advances and future applications of microfluidic live-cell microarrays. Biotechnology Advances, 2015, 33, 948-961.	11.7	57
18	Effect of Spheroidal Age on Sorafenib Diffusivity and Toxicity in a 3D HepG2 Spheroid Model. Scientific Reports, 2019, 9, 4863.	3.3	52

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19	Microfluidic platforms for advanced risk assessments of nanomaterials. Nanotoxicology, 2015, 9, 381-395.	3.0	47
20	A Microfluidic Multisize Spheroid Array for Multiparametric Screening of Anticancer Drugs and Bloodâ€“Brain Barrier Transport Properties. Advanced Science, 2021, 8, e2004856.	11.2	46
21	Monitoring cellular stress responses to nanoparticles using a lab-on-a-chip. Lab on A Chip, 2011, 11, 2551.	6.0	45
22	Optimized alamarBlue assay protocol for drug dose-response determination of 3D tumor spheroids. MethodsX, 2018, 5, 781-787.	1.6	44
23	Microfluidic Migration and Wound Healing Assay Based on Mechanically Induced Injuries of Defined and Highly Reproducible Areas. Analytical Chemistry, 2017, 89, 2326-2333.	6.5	42
24	Oxygen Management at the Microscale: A Functional Biochip Material with Long-Lasting and Tunable Oxygen Scavenging Properties for Cell Culture Applications. ACS Applied Materials & Interfaces, 2019, 11, 9730-9739.	8.0	42
25	Microfluidic Impedimetric Cell Regeneration Assay to Monitor the Enhanced Cytotoxic Effect of Nanomaterial Perfusion. Biosensors, 2015, 5, 736-749.	4.7	40
26	Simultaneous Determination of Oxygen and pH Inside Microfluidic Devices Using Coreâ€“Shell Nanosensors. Analytical Chemistry, 2016, 88, 9796-9804.	6.5	40
27	Monitoring Dynamic Interactions of Tumor Cells with Tissue and Immune Cells in a Lab-on-a-Chip. Analytical Chemistry, 2013, 85, 11471-11478.	6.5	39
28	Engineering of three-dimensional pre-vascular networks within fibrin hydrogel constructs by microfluidic control over reciprocal cell signaling. Biomicrofluidics, 2018, 12, 042216.	2.4	39
29	Monitoring tissue-level remodelling during inflammatory arthritis using a three-dimensional synovium-on-a-chip with non-invasive light scattering biosensing. Lab on A Chip, 2020, 20, 1461-1471.	6.0	39
30	Development of a Disposable Microfluidic Biochip for Multiparameter Cell Population Measurements. Analytical Chemistry, 2009, 81, 8503-8512.	6.5	38
31	PDMS Nano-Modified Scaffolds for Improvement of Stem Cells Proliferation and Differentiation in Microfluidic Platform. Nanomaterials, 2020, 10, 668.	4.1	36
32	A lab-on-a-chip system with an embedded porous membrane-based impedance biosensor array for nanoparticle risk assessment on placental Bewo trophoblast cells. Sensors and Actuators B: Chemical, 2020, 312, 127946.	7.8	34
33	A combined microfluidic deep learning approach for lung cancer cell high throughput screening toward automatic cancer screening applications. Scientific Reports, 2021, 11, 9804.	3.3	30
34	Exploitation of S-Layer Anisotropy: pH-Dependent Nanolayer Orientation for Cellular Micropatterning. ACS Nano, 2013, 7, 8020-8030.	14.6	29
35	An on-chip wound healing assay fabricated by xurography for evaluation of dermal fibroblast cell migration and wound closure. Scientific Reports, 2020, 10, 16192.	3.3	29
36	Standardization of microfluidic cell cultures using integrated organic photodiodes and electrode arrays. Lab on A Chip, 2013, 13, 785-797.	6.0	28

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37	Measurement of respiration and acidification rates of mammalian cells in thermoplastic microfluidic devices. Sensors and Actuators B: Chemical, 2021, 334, 129664.	7.8	27
38	Establishment of a human three-dimensional chip-based chondro-synovial coculture joint model for reciprocal cross talk studies in arthritis research. Lab on A Chip, 2021, 21, 4128-4143.	6.0	26
39	Gold Nanowires/Fibrin Nanostructure as Microfluidics Platforms for Enhancing Stem Cell Differentiation: Bio-AFM Study. Micromachines, 2020, 11, 50.	2.9	23
40	A Decade of Organs-on-a-Chip Emulating Human Physiology at the Microscale: A Critical Status Report on Progress in Toxicology and Pharmacology. Micromachines, 2021, 12, 470.	2.9	23
41	Breaking the Third Wall: Implementing 3D-Printing Techniques to Expand the Complexity and Abilities of Multi-Organ-on-a-Chip Devices. Micromachines, 2021, 12, 627.	2.9	23
42	Automated, Miniaturized, and Integrated Quality Control-on-Chip (QC-on-a-Chip) for Cell-Based Cancer Therapy Applications. Frontiers in Materials, 2015, 2, .	2.4	22
43	Monitoring the neurotransmitter release of human midbrain organoids using a redox cycling microsensor as a novel tool for personalized Parkinson's disease modelling and drug screening. Analyst, The, 2021, 146, 2358-2367.	3.5	22
44	Zirconium dioxide nanolayer passivated impedimetric sensors for cell-based assays. Sensors and Actuators B: Chemical, 2015, 213, 35-44.	7.8	21
45	3D numerical simulation of a lab-on-a-chipâ€"increasing measurement sensitivity of interdigitated capacitors by passivation optimization. Lab on A Chip, 2011, 11, 1318.	6.0	20
46	A Fast Alternative to Soft Lithography for the Fabrication of Organâ€onâ€aâ€Chip Elastomericâ€Based Devices and Microactuators. Advanced Science, 2021, 8, 2003273.	11.2	19
47	Bridging the academicâ€"industrial gap: application of an oxygen and pH sensor-integrated lab-on-a-chip in nanotoxicology. Lab on A Chip, 2021, 21, 4237-4248.	6.0	19
48	Rapid liposome quality assessment using a lab-on-a-chip. Lab on A Chip, 2011, 11, 2753.	6.0	16
49	Anisotropic Crystalline Protein Nanolayers as Multiâ€Functional Biointerface for Patterned Coâ€Cultures of Adherent and Nonâ€Adherent Cells in Microfluidic Devices. Advanced Materials Interfaces, 2015, 2, 1400309.	3.7	16
50	Microfluidic and Lab-on-a-Chip Systems for Cutaneous Wound Healing Studies. Pharmaceutics, 2021, 13, 793.	4.5	15
51	Recent Advances in Additive Manufacturing and 3D Bioprinting for Organs-On-A-Chip and Microphysiological Systems. Frontiers in Bioengineering and Biotechnology, 2022, 10, 837087.	4.1	15
52	Monitoring cellular stress responses using integrated high-frequency impedance spectroscopy and time-resolved ELISA. Analyst, The, 2014, 139, 5271-5282.	3.5	14
53	Combinatorial in Vitro and in Silico Approach To Describe Shear-Force Dependent Uptake of Nanoparticles in Microfluidic Vascular Models. Analytical Chemistry, 2018, 90, 3651-3655.	6.5	14
54	Emerging Biosensor Trends in Organ-on-a-Chip. Advances in Biochemical Engineering/Biotechnology, 2020, , 343-354.	1.1	13

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55	Nextâ€Generation Magnetic Nanocomposites: Cytotoxic and Genotoxic Effects of Coated and Uncoated Ferric Cobalt Boron (FeCoB) Nanoparticles In Vitro. Basic and Clinical Pharmacology and Toxicology, 2018, 122, 355-363.	2.5	12
56	Monitoring transient cell-to-cell interactions in a multi-layered and multi-functional allergy-on-a-chip system. Lab on A Chip, 2019, 19, 1916-1921.	6.0	12
57	Cell Microarrays for Biomedical Applications. Methods in Molecular Biology, 2016, 1368, 273-291.	0.9	10
58	A microfluidic microparticle-labeled impedance sensor array for enhancing immunoassay sensitivity. Analyst, The, 2021, 146, 3289-3298.	3.5	9
59	Recent Advances of Biologically Inspired 3D Microfluidic Hydrogel Cell Culture Systems. HSOA Journal of Cell Biology & Cell Metabolism, 2015, 2, 1-14.	0.2	9
60	Oxygen imaging in microfluidic devices with optical sensors applying color cameras. Procedia Engineering, 2010, 5, 456-459.	1.2	8
61	Influence of HepG2 cell shape on nanoparticle uptake. Microscopy Research and Technique, 2014, 77, 560-565.	2.2	8
62	Microplate-Compatible Biamperometry Array for Parallel 48-Channel Amperometric or Coulometric Measurements. Analytical Chemistry, 2008, 80, 2988-2992.	6.5	7
63	Improving the measurement sensitivity of interdigital dielectric capacitors (IDC) by optimizing the dielectric property of the homogeneous passivation layer. Sensors and Actuators B: Chemical, 2012, 162, 418-424.	7.8	7
64	Downscaling screening cultures in a multifunctional bioreactor arrayâ€onâ€aâ€chip for speeding up optimization of yeastâ€based lactic acid bioproduction. Biotechnology and Bioengineering, 2020, 117, 2046-2057.	3.3	7
65	Microscale Perfusionâ€Based Cultivation for Pichia pastoris Clone Screening Enables Accelerated and Optimized Recombinant Protein Production Processes. Biotechnology Journal, 2021, 16, e2000215.	3.5	7
66	Cytotoxicity, Retention, and Anti-inflammatory Effects of a CeO₂ Nanoparticle-Based Supramolecular Complex in a 3D Liver Cell Culture Model. ACS Pharmacology and Translational Science, 2021, 4, 101-106.	4.9	6
67	Fingerprinting Metabolic Activity and Tissue Integrity of 3D Lung Cancer Spheroids under Gold Nanowire Treatment. Cells, 2022, 11, 478.	4.1	6
68	Characterization of Double Layer Alterations Induced by Charged Particles and Proteinâ€“Membrane Interactions Using Contactless Impedance Spectroscopy. Journal of Physical Chemistry B, 2012, 116, 10461-10469.	2.6	5
69	A microfluidic impedance-based extended infectivity assay: combining retroviral amplification and cytopathic effect monitoring on a single lab-on-a-chip platform. Lab on A Chip, 2021, 21, 1364-1372.	6.0	5
70	Development of a Multifunctional Nanobiointerface Based on Self-Assembled Fusion-Protein rSbpA/ZZ for Blood Cell Enrichment and Phenotyping. ACS Applied Materials & Interfaces, 2017, 9, 34423-34434.	8.0	4
71	Optimized plasma-assisted bi-layer photoresist fabrication protocol for high resolution microfabrication of thin-film metal electrodes on porous polymer membranes. MethodsX, 2019, 6, 2606-2613.	1.6	4
72	Microfluidic Platform for Multiplexed Cell Sampling and Time-Resolved SPR-Based Cytokine Sensing. IFMBE Proceedings, 2015, , 785-788.	0.3	4

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73	The Usual Suspects 2019: of Chips, Droplets, Synthesis, and Artificial Cells. Micromachines, 2019, 10, 285.	2.9	3
74	Dependence of mitochondrial function on the filamentous actin cytoskeleton in cultured mesenchymal stem cells treated with cytochalasin B. Journal of Bioscience and Bioengineering, 2021, 132, 310-320.	2.2	3
75	Crystalline Bacterial Protein Nanolayers for Cell Micropatterning. IFMBE Proceedings, 2015, , 337-340.	0.3	2
76	Next-Generation Live-Cell Microarray Technologies. Methods in Molecular Biology, 2018, 1771, 3-8.	0.9	1
77	A Self-Assembled Antifouling Nano-Biointerface for the Generation of Spheroids. Methods in Molecular Biology, 2018, 1771, 251-258.	0.9	1
78	FTIR spectroscopy as a novel analytical approach for investigation of glucose transport and glucose transport inhibition studies in transwell in vitro barrier models. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2020, 237, 118388.	3.9	1
79	04.19â€…3D synovial organoid culture reveals cellular mechanisms of tissue formation and inflammatory remodelling. , 2017, , .		0
80	Screening for Best Neuronal-Glial Differentiation Protocols of Neuralizing Agents Using a Multi-Sized Microfluidic Embryoid Body Array. Pharmaceutics, 2022, 14, 339.	4.5	0