

Heiko Zimmermann

List of Publications by Year in descending order

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Version: 2024-02-01

90
papers

2,083
citations

201385

27
h-index

276539

41
g-index

96
all docs

96
docs citations

96
times ranked

3356
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 1 | Alginate-based encapsulation of cells: Past, present, and future. <i>Current Diabetes Reports</i> , 2007, 7, 314-320. | 1.7 | 179 |
| 2 | Long-Term Graft Function of Adult Rat and Human Islets Encapsulated in Novel Alginate-Based Microcapsules After Transplantation in Immunocompetent Diabetic Mice. <i>Diabetes</i> , 2005, 54, 687-693. | 0.3 | 134 |
| 3 | A Novel Class of Amitogenic Alginate Microcapsules for Long-Term Immunoisolated Transplantation. <i>Annals of the New York Academy of Sciences</i> , 2001, 944, 199-215. | 1.8 | 78 |
| 4 | Temperature fluctuations during deep temperature cryopreservation reduce PBMC recovery, viability and T-cell function. <i>Cryobiology</i> , 2013, 67, 193-200. | 0.3 | 68 |
| 5 | Physical and biological properties of barium cross-linked alginate membranes. <i>Biomaterials</i> , 2007, 28, 1327-1345. | 5.7 | 64 |
| 6 | Towards ready-to-use 3-D scaffolds for regenerative medicine: adhesion-based cryopreservation of human mesenchymal stem cells attached and spread within alginate-gelatin cryogel scaffolds. <i>Journal of Materials Science: Materials in Medicine</i> , 2014, 25, 857-871. | 1.7 | 63 |
| 7 | Hydrogel-based encapsulation of biological, functional tissue: fundamentals, technologies and applications. <i>Applied Physics A: Materials Science and Processing</i> , 2007, 89, 909-922. | 1.1 | 58 |
| 8 | Rapid establishment of the European Bank for induced Pluripotent Stem Cells (EBiSC) - the Hot Start experience. <i>Stem Cell Research</i> , 2017, 20, 105-114. | 0.3 | 51 |
| 9 | Alginate Encapsulation as a Novel Strategy for the Cryopreservation of Neurospheres. <i>Tissue Engineering - Part C: Methods</i> , 2010, 16, 965-977. | 1.1 | 50 |
| 10 | A biophysical approach to the optimisation of dendritic-tumour cell electrofusion. <i>Biochemical and Biophysical Research Communications</i> , 2006, 346, 829-839. | 1.0 | 46 |
| 11 | Physicochemical features of ultra-high viscosity alginates. <i>Carbohydrate Research</i> , 2009, 344, 985-995. | 1.1 | 46 |
| 12 | Cryopreservation of Adherent Cells: Strategies to Improve Cell Viability and Function After Thawing. <i>Tissue Engineering - Part C: Methods</i> , 2009, 15, 373-386. | 1.1 | 39 |
| 13 | Volume regulation of murine T lymphocytes relies on voltage-dependent and two-pore domain potassium channels. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2011, 1808, 2036-2044. | 1.4 | 39 |
| 14 | Poly(amidoamine)-alginate hydrogels: directing the behavior of mesenchymal stem cells with charged hydrogel surfaces. <i>Journal of Materials Science: Materials in Medicine</i> , 2018, 29, 105. | 1.7 | 39 |
| 15 | Study of SEM preparation artefacts with correlative microscopy: Cell shrinkage of adherent cells by HMDS-drying. <i>Scanning</i> , 2016, 38, 625-633. | 0.7 | 38 |
| 16 | Viscoelastic properties of ultra-high viscosity alginates. <i>Rheologica Acta</i> , 2010, 49, 155-167. | 1.1 | 37 |
| 17 | A complete workflow for the differentiation and the dissociation of hiPSC-derived cardiospheres. <i>Stem Cell Research</i> , 2018, 32, 65-72. | 0.3 | 37 |
| 18 | Biological and Physicochemical Characterization of a Serum-and Xeno-Free Chemically Defined Cryopreservation Procedure for Adult Human Progenitor Cells. <i>Cell Transplantation</i> , 2011, 20, 1241-1257. | 1.2 | 36 |

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|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 19 | Standardized Serum-Free Cryomedia Maintain Peripheral Blood Mononuclear Cell Viability, Recovery, and Antigen-Specific T-Cell Response Compared to Fetal Calf Serum-Based Medium. <i>Biopreservation and Biobanking</i> , 2011, 9, 229-236. | 0.5 | 34 |
| 20 | Toward Optimal Cryopreservation and Storage for Achievement of High Cell Recovery and Maintenance of Cell Viability and T Cell Functionality. <i>Biopreservation and Biobanking</i> , 2016, 14, 539-547. | 0.5 | 33 |
| 21 | Effective surface-based cryopreservation of human embryonic stem cells by vitrification. <i>Cryobiology</i> , 2011, 63, 175-185. | 0.3 | 32 |
| 22 | A New Approach to Standardize Multicenter Studies: Mobile Lab Technology for the German Environmental Specimen Bank. <i>PLoS ONE</i> , 2014, 9, e105401. | 1.1 | 32 |
| 23 | Tyramine- ϵ -conjugated alginate hydrogels as a platform for bioactive scaffolds. <i>Journal of Biomedical Materials Research - Part A</i> , 2019, 107, 114-121. | 2.1 | 32 |
| 24 | Migration pattern, actin cytoskeleton organization and response to PI3K-, mTOR-, and Hsp90-inhibition of glioblastoma cells with different invasive capacities. <i>Oncotarget</i> , 2017, 8, 45298-45310. | 0.8 | 31 |
| 25 | Cell Traces $\hat{=}$ Footprints of Individual Cells during Locomotion and Adhesion. <i>Biological Chemistry</i> , 1998, 379, 1161-1174. | 1.2 | 28 |
| 26 | Actin cytoskeleton organization, cell surface modification and invasion rate of 5 glioblastoma cell lines differing in PTEN and p53 status. <i>Experimental Cell Research</i> , 2015, 330, 346-357. | 1.2 | 28 |
| 27 | Differential effects of the Akt inhibitor MK-2206 on migration and radiation sensitivity of glioblastoma cells. <i>BMC Cancer</i> , 2019, 19, 299. | 1.1 | 28 |
| 28 | A comparative study of freezing single cells and spheroids: Towards a new model system for optimizing freezing protocols for cryobanking of human tumours. <i>Cryobiology</i> , 2009, 58, 119-127. | 0.3 | 26 |
| 29 | Towards a xeno-free and fully chemically defined cryopreservation medium for maintaining viability, recovery, and antigen-specific functionality of PBMC during long-term storage. <i>Journal of Immunological Methods</i> , 2012, 382, 24-31. | 0.6 | 25 |
| 30 | Bioactive surfaces from seaweed-derived alginates for the cultivation of human stem cells. <i>Journal of Applied Phycology</i> , 2017, 29, 2451-2461. | 1.5 | 25 |
| 31 | Entrapment of Embryonic Stem Cells-Derived Cardiomyocytes in Macroporous Biodegradable Microspheres: Preparation and Characterization. <i>Cellular Physiology and Biochemistry</i> , 2008, 22, 665-672. | 1.1 | 23 |
| 32 | Hsp90 inhibition by NVP-AUY922 and NVP-BEP800 decreases migration and invasion of irradiated normoxic and hypoxic tumor cell lines. <i>Cancer Letters</i> , 2013, 331, 200-210. | 3.2 | 23 |
| 33 | Identification of two-pore domain potassium channels as potent modulators of osmotic volume regulation in human T lymphocytes. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2013, 1828, 699-707. | 1.4 | 23 |
| 34 | Magnetic separation of encapsulated islet cells labeled with superparamagnetic iron oxide nano particles. <i>Xenotransplantation</i> , 2013, 20, 219-226. | 1.6 | 21 |
| 35 | Hydrohalite spatial distribution in frozen cell cultures measured using confocal Raman microscopy. <i>Cryobiology</i> , 2014, 69, 41-47. | 0.3 | 21 |
| 36 | Capacitive Sensing for Non-Invasive Breathing and Heart Monitoring in Non-Restrained, Non-Sedated Laboratory Mice. <i>Sensors</i> , 2016, 16, 1052. | 2.1 | 20 |

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|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 37 | EBiSC best practice: How to ensure optimal generation, qualification, and distribution of iPSC lines. <i>Stem Cell Reports</i> , 2021, 16, 1853-1867. | 2.3 | 20 |
| 38 | Pore size of swelling-activated channels for organic osmolytes in Jurkat lymphocytes, probed by differential polymer exclusion. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2009, 1788, 1841-1850. | 1.4 | 19 |
| 39 | Dispensing of very low volumes of ultra high viscosity alginate gels: a new tool for encapsulation of adherent cells and rapid prototyping of scaffolds and implants. <i>BioTechniques</i> , 2009, 46, 31-43. | 0.8 | 17 |
| 40 | Dual PI3K- and mTOR-inhibitor PI-103 can either enhance or reduce the radiosensitizing effect of the Hsp90 inhibitor NVP-AUY922 in tumor cells: The role of drug-irradiation schedule. <i>Oncotarget</i> , 2016, 7, 38191-38209. | 0.8 | 17 |
| 41 | Topography of cell traces studied by atomic force microscopy. <i>European Biophysics Journal</i> , 1999, 28, 516-525. | 1.2 | 16 |
| 42 | Surface-based cryopreservation strategies for human embryonic stem cells: A comparative study. <i>Biotechnology Progress</i> , 2012, 28, 1079-1087. | 1.3 | 16 |
| 43 | Alterations in Human Liver Metabolome during Prolonged Cryostorage. <i>Journal of Proteome Research</i> , 2015, 14, 2758-2768. | 1.8 | 16 |
| 44 | An Automated HIV-1 Env-Pseudotyped Virus Production for Global HIV Vaccine Trials. <i>PLoS ONE</i> , 2012, 7, e51715. | 1.1 | 15 |
| 45 | Nanostructure of DNA repair foci revealed by superresolution microscopy. <i>FASEB Journal</i> , 2018, 32, 6469-6477. | 0.2 | 15 |
| 46 | Zooming in on Cryopreservation of hiPSCs and Neural Derivatives: A Dual-Center Study Using Adherent Vitrification. <i>Stem Cells Translational Medicine</i> , 2019, 8, 247-259. | 1.6 | 15 |
| 47 | FocAn: automated 3D analysis of DNA repair foci in image stacks acquired by confocal fluorescence microscopy. <i>BMC Bioinformatics</i> , 2020, 21, 27. | 1.2 | 15 |
| 48 | Nanoparticle-Mediated Gene Transfer From Electrophoretically Coated Metal Surfaces. <i>Journal of Physical Chemistry B</i> , 2013, 117, 1550-1555. | 1.2 | 14 |
| 49 | Biocompatible Coating of Encapsulated Cells Using Ionotropic Gelation. <i>PLoS ONE</i> , 2013, 8, e73498. | 1.1 | 14 |
| 50 | UHV-Alginate as Matrix for Neurotrophic Factor Producing Cells—A Novel Biomaterial for Cochlear Implant Optimization to Preserve Inner Ear Neurons From Degeneration. <i>Otology and Neurotology</i> , 2013, 34, 1127-1133. | 0.7 | 13 |
| 51 | Towards Harmonized Biobanking for Biomonitoring: A Comparison of Human Biomonitoring-Related and Clinical Biorepositories. <i>Biopreservation and Biobanking</i> , 2020, 18, 122-135. | 0.5 | 13 |
| 52 | Trace formation during locomotion of L929 mouse fibroblasts continuously recorded by interference reflection microscopy (IRM). <i>Cytoskeleton</i> , 2000, 47, 38-47. | 4.4 | 12 |
| 53 | Multiphoton microscopy for the <i>in situ</i> investigation of cellular processes and integrity in cryopreservation. <i>Biotechnology Journal</i> , 2009, 4, 1215-1220. | 1.8 | 12 |
| 54 | The individual-cell-based cryo-chip for the cryopreservation, manipulation and observation of spatially identifiable cells. I: Methodology. <i>BMC Cell Biology</i> , 2010, 11, 54. | 3.0 | 12 |

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|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 55 | Encapsulation of Langerhans' islets: Microtechnological developments for transplantation. <i>Engineering in Life Sciences</i> , 2011, 11, 165-173. | 2.0 | 12 |
| 56 | Cryogenic electronic memory infrastructure for physically related "continuity of care records" of frozen cells. <i>Cryogenics</i> , 2006, 46, 312-320. | 0.9 | 10 |
| 57 | Batch screening of commercial serial flash-memory integrated circuits for low-temperature applications. <i>Cryogenics</i> , 2015, 71, 39-46. | 0.9 | 10 |
| 58 | The individual-cell-based cryo-chip for the cryopreservation, manipulation and observation of spatially identifiable cells. II: Functional activity of cryopreserved cells. <i>BMC Cell Biology</i> , 2010, 11, 83. | 3.0 | 9 |
| 59 | Changes in the dielectric properties of medaka fish embryos during development, studied by electrorotation. <i>Biochemical and Biophysical Research Communications</i> , 2012, 428, 127-131. | 1.0 | 9 |
| 60 | The EBiSC iPSC bank for disease studies. <i>Stem Cell Research</i> , 2020, 49, 102034. | 0.3 | 9 |
| 61 | Scalable expansion of iPSC and their derivatives across multiple lineages. <i>Reproductive Toxicology</i> , 2022, , . | 1.3 | 9 |
| 62 | Noninvasive Quality Control of Cryopreserved Samples. <i>Biopreservation and Biobanking</i> , 2012, 10, 529-531. | 0.5 | 8 |
| 63 | A Novel Approach for Automated Analysis of Cell Attachment and Spreading Based on Backscattered Electron Imaging by Scanning Electron Microscopy. <i>Materials</i> , 2009, 2, 1402-1416. | 1.3 | 7 |
| 64 | A large-scale cryoelectronic system for biological sample banking. <i>Cryogenics</i> , 2009, 49, 638-642. | 0.9 | 7 |
| 65 | The technology of the Global HIV Vaccine Research Cryorepository. <i>Engineering in Life Sciences</i> , 2009, 9, 376-383. | 2.0 | 7 |
| 66 | Quantitative analysis of F-actin alterations in adherent human mesenchymal stem cells: Influence of slow-freezing and vitrification-based cryopreservation. <i>PLoS ONE</i> , 2019, 14, e0211382. | 1.1 | 7 |
| 67 | Distributed automated manufacturing of pluripotent stem cell products. <i>International Journal of Advanced Manufacturing Technology</i> , 2020, 106, 1085-1103. | 1.5 | 7 |
| 68 | First steps towards the successful surface-based cultivation of human embryonic stem cells in hanging drop systems. <i>Engineering in Life Sciences</i> , 2012, 12, 584-587. | 2.0 | 6 |
| 69 | Towards standardized automated immunomonitoring: an automated ELISpot assay for safe and parallelized functionality analysis of immune cells. <i>Cytotechnology</i> , 2017, 69, 57-73. | 0.7 | 6 |
| 70 | An automated and high-throughput-screening compatible pluripotent stem cell-based test platform for developmental and reproductive toxicity assessment of small molecule compounds. <i>Cell Biology and Toxicology</i> , 2021, 37, 229-243. | 2.4 | 6 |
| 71 | Cryopreservation in micro-volumes: Impact upon caco-2 colon adenocarcinoma cell proliferation and differentiation. <i>Biotechnology and Bioengineering</i> , 2007, 98, 155-166. | 1.7 | 5 |
| 72 | 3D printing of hydrogels in a temperature controlled environment with high spatial resolution. <i>Current Directions in Biomedical Engineering</i> , 2016, 2, 109-112. | 0.2 | 5 |

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|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 73 | A new validation method for clinical grade micro-encapsulation: quantitative high speed video analysis of alginate capsule. <i>Microsystem Technologies</i> , 2015, 21, 75-84. | 1.2 | 4 |
| 74 | Droplet-based vitrification of adherent human induced pluripotent stem cells on alginate microcarrier influenced by adhesion time and matrix elasticity. <i>Cryobiology</i> , 2021, 103, 57-69. | 0.3 | 4 |
| 75 | Naturwissenschaftliche Grundlagen im Kontext einer klinischen Anwendung von humanen induzierten pluripotenten Stammzellen. <i>Veröffentlichungen Des Instituts Für Deutsches, Europäisches Und Internationales Medizinrecht, Gesundheitsrecht Und Bioethik Der Universitäten Heidelberg Und Mannheim</i> , 2020, , 19-127. | 0.2 | 4 |
| 76 | Trehalose conserves expression of bullous pemphigoid antigen 180 during desiccation and freezing. <i>Journal of Immunological Methods</i> , 2003, 275, 179-190. | 0.6 | 3 |
| 77 | Frozen Cells and Bits: Cryoelectronics Advances Biopreservation. <i>IEEE Pulse</i> , 2013, 4, 35-43. | 0.1 | 3 |
| 78 | Efficient Cryopreservation of Human Pluripotent Stem Cells by Surface-Based Vitrification. <i>Methods in Molecular Biology</i> , 2015, 1257, 321-328. | 0.4 | 3 |
| 79 | Global HIV Vaccine Research Cryorepository-GHRC. <i>Procedia in Vaccinology</i> , 2009, 1, 49-62. | 0.4 | 2 |
| 80 | RFID for anonymous biological samples and pseudonyms. , 2011, , . | | 2 |
| 81 | Chapter 17 Sterile Plate-Based Vitrification of Adherent Human Pluripotent Stem Cells and Their Derivatives Using the TWIST Method. <i>Methods in Molecular Biology</i> , 2017, 1568, 231-241. | 0.4 | 2 |
| 82 | Towards a Full Automation of the ELISpot Assay for Safe and Parallelized Immunomonitoring. <i>Methods in Molecular Biology</i> , 2018, 1808, 237-247. | 0.4 | 2 |
| 83 | On the assessment of the stability of vitrified cryo-media by differential scanning calorimetry: A new tool for biobanks to derive standard operating procedures for storage, access and transport. <i>Cryobiology</i> , 2019, 89, 26-34. | 0.3 | 2 |
| 84 | Kinetic masks: a new approach and device for dispersing biologically relevant fluids. <i>Microsystem Technologies</i> , 2009, 15, 1407-1416. | 1.2 | 1 |
| 85 | Evaluation of cryo-preserved skin tissues using two-photon microscopy. , 2010, , . | | 1 |
| 86 | RFID system for the identification of biological samples. , 2010, , . | | 1 |
| 87 | Labbag® - a versatile bag-based cultivation system for expansion, differentiation and cryopreservation of human stem cells. <i>Current Directions in Biomedical Engineering</i> , 2017, 3, 371-374. | 0.2 | 1 |
| 88 | Validation of an automated system for aliquoting of HIV-1 Env-pseudotyped virus stocks. <i>PLoS ONE</i> , 2018, 13, e0190669. | 1.1 | 1 |
| 89 | Laser Scanning Microscopy in Cryobiology. <i>Methods in Molecular Biology</i> , 2015, 1257, 229-241. | 0.4 | 1 |
| 90 | Diffraction-based technology for the monitoring of contraction dynamics in 3D and 2D tissue models. <i>Biomedical Optics Express</i> , 2020, 11, 517. | 1.5 | 0 |