# Yi-Chung Tung

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/5348814/publications.pdf

Version: 2024-02-01

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|---|---|---|---|
| 100 papers | 5,302 citations | 147566 31 h-index | 85405 71 g-index |
| 101 all docs | 101 docs citations | 101 times ranked | 6661 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | High-throughput 3D spheroid culture and drug testing using a 384 hanging drop array. Analyst, The, 2011, 136, 473-478. | 1.7 | 805 |
| 2 | Acoustically detectable cellular-level lung injury induced by fluid mechanical stresses in microfluidic airway systems. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 18886-18891. | 3.3 | 439 |
| 3 | Microfluidic Endothelium for Studying the Intravascular Adhesion of Metastatic Breast Cancer Cells. PLoS ONE, 2009, 4, e5756. | 1.1 | 283 |
| 4 | Microfluidic system for formation of PC-3 prostate cancer co-culture spheroids. Biomaterials, 2009, 30, 3020-3027. | 5.7 | 274 |
| 5 | MCT-1/miR-34a/IL-6/IL-6R signaling axis promotes EMT progression, cancer stemness and M2 macrophage polarization in triple-negative breast cancer. Molecular Cancer, 2019, 18, 42. | 7.9 | 254 |
| 6 | Integrated elastomeric components for autonomous regulation of sequential and oscillatory flow switching in microfluidic devices. Nature Physics, 2010, 6, 433-437. | 6.5 | 229 |
| 7 | Characterization and Resolution of Evaporation-Mediated Osmolality Shifts That Constrain Microfluidic Cell Culture in Poly(dimethylsiloxane) Devices. Analytical Chemistry, 2007, 79, 1126-1134. | 3.2 | 214 |
| 8 | Combination of fluid and solid mechanical stresses contribute to cell death and detachment in a microfluidic alveolar model. Lab on A Chip, 2011, 11, 609-619. | 3.1 | 197 |
| 9 | PDMS-based opto-fluidic micro flow cytometer with two-color, multi-angle fluorescence detection capability using PIN photodiodes. Sensors and Actuators B: Chemical, 2004, 98, 356-367. | 4.0 | 176 |
| 10 | Generation of oxygen gradients in microfluidic devices for cell culture using spatially confined chemical reactions. Lab on A Chip, 2011, 11, 3626. | 3.1 | 156 |
| 11 | Drug testing and flow cytometry analysis on a large number of uniform sized tumor spheroids using a microfluidic device. Scientific Reports, 2016, 6, 21061. | 1.6 | 155 |
| 12 | Fabrication of Two-Layered Channel System with Embedded Electrodes to Measure Resistance Across Epithelial and Endothelial Barriers. Analytical Chemistry, 2010, 82, 2505-2511. | 3.2 | 119 |
| 13 | A polydimethylsiloxaneâ€“polycarbonate hybrid microfluidic device capable of generating perpendicular chemical and oxygen gradients for cell culture studies. Lab on A Chip, 2014, 14, 3762-3772. | 3.1 | 117 |
| 14 | Individually programmable cell stretching microwell arrays actuated by a Braille display. Biomaterials, 2008, 29, 2646-2655. | 5.7 | 114 |
| 15 | 384 hanging drop arrays give excellent Zâ€factors and allow versatile formation of coâ€culture spheroids. Biotechnology and Bioengineering, 2012, 109, 1293-1304. | 1.7 | 114 |
| 16 | Micro-ring structures stabilize microdroplets to enable long term spheroid culture in 384 hanging drop array plates. Biomedical Microdevices, 2012, 14, 313-323. | 1.4 | 106 |
| 17 | Hard Top Soft Bottom Microfluidic Devices for Cell Culture and Chemical Analysis. Analytical Chemistry, 2009, 81, 3714-3722. | 3.2 | 104 |
| 18 | Integrated ionic liquid-based electrofluidic circuits for pressure sensing within polydimethylsiloxane microfluidic systems. Lab on A Chip, 2011, 11, 1740. | 3.1 | 104 |

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|---|---|---|---|
| 19 | Title is missing!. Biomedical Microdevices, 2002, 4, 141-149. | 1.4 | 102 |
| 20 | A microfluidic device for uniform-sized cell spheroids formation, culture, harvesting and flow cytometry analysis. Biomicrofluidics, 2013, 7, 54114. | 1.2 | 87 |
| 21 | Electrofluidic pressure sensor embedded microfluidic device: a study of endothelial cells under hydrostatic pressure and shear stress combinations. Lab on A Chip, 2013, 13, 1743. | 3.1 | 80 |
| 22 | Flexible Localized Surface Plasmon Resonance Sensor with Metalâ€“Insulatorâ€“Metal Nanodisks on PDMS Substrate. Scientific Reports, 2018, 8, 11812. | 1.6 | 73 |
| 23 | A microfluidic cell culture array with various oxygen tensions. Lab on A Chip, 2013, 13, 3239. | 3.1 | 72 |
| 24 | Differentiation of lung stem/progenitor cells into alveolar pneumocytes and induction of angiogenesis within a 3D gelatin â€“ Microbubble scaffold. Biomaterials, 2014, 35, 5660-5669. | 5.7 | 55 |
| 25 | Patterned Electrode-Based Amperometric Gas Sensor for Direct Nitric Oxide Detection within Microfluidic Devices. Analytical Chemistry, 2010, 82, 3300-3305. | 3.2 | 45 |
| 26 | Single channel layer, single sheath-flow inlet microfluidic flow cytometer with three-dimensional hydrodynamic focusing. Lab on A Chip, 2012, 12, 3135. | 3.1 | 43 |
| 27 | Multiplexed hydraulic valve actuation using ionic liquid filled soft channels and Braille displays. Applied Physics Letters, 2007, 90, 033505. | 1.5 | 42 |
| 28 | Small volume low mechanical stress cytometry using computer-controlled Braille display microfluidics. Lab on A Chip, 2007, 7, 1497. | 3.1 | 38 |
| 29 | Optofluidic detection for cellular phenotyping. Lab on A Chip, 2012, 12, 3552. | 3.1 | 38 |
| 30 | Nanoimprinted strain-controlled elastomeric gratings for optical wavelength tuning. Applied Physics Letters, 2005, 86, 161113. | 1.5 | 34 |
| 31 | Migration and vascular lumen formation of endothelial cells in cancer cell spheroids of various sizes. Biomicrofluidics, 2014, 8, 052109. | 1.2 | 34 |
| 32 | Microfluidic Collective Cell Migration Assay for Study of Endothelial Cell Proliferation and Migration under Combinations of Oxygen Gradients, Tensions, and Drug Treatments. Scientific Reports, 2019, 9, 8234. | 1.6 | 32 |
| 33 | Electrically Programmable Surfaces for Configurable Patterning of Cells. Advanced Materials, 2008, 20, 1418-1423. | 11.1 | 29 |
| 34 | A single-layer PDMS-on-silicon hybrid microactuator with multi-axis out-of-plane motion capabilities-part II: fabrication and characterization. Journal of Microelectromechanical Systems, 2005, 14, 558-566. | 1.7 | 27 |
| 35 | A single-layer PDMS-on-silicon hybrid microactuator with multi-axis out-of-plane motion capabilities-Part i: design and analysis. Journal of Microelectromechanical Systems, 2005, 14, 548-557. | 1.7 | 27 |
| 36 | Design of a MEMS Tunable Polymer Grating for Single Detector Spectroscopy. International Journal of Optomechatronics, 2008, 2, 75-87. | 3.3 | 25 |

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|---|---|---|---|
| 37 | Electrofluidic Circuit-Based Microfluidic Viscometer for Analysis of Newtonian and Non-Newtonian Liquids under Different Temperatures. Analytical Chemistry, 2018, 90, 2317-2325. | 3.2 | 24 |
| 38 | A low sample volume particle separation device with electrokinetic pumping based on circular travelling-wave electroosmosis. Lab on A Chip, 2013, 13, 3082. | 3.1 | 21 |
| 39 | Review of microfluidic cell culture devices for the control of gaseous microenvironmentsin vitro. Journal of Micromechanics and Microengineering, 2018, 28, 043001. | 1.5 | 21 |
| 40 | Electro-elastic characteristics of asymmetric rectangular piezoelectric laminae. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 1999, 46, 950-960. | 1.7 | 20 |
| 41 | Interaction between lung cancer cell and myofibroblast influenced by cyclic tensile strain. Lab on A Chip, 2013, 13, 1114. | 3.1 | 20 |
| 42 | Magnet-assisted device-level alignment for the fabrication of membrane-sandwiched polydimethylsiloxane microfluidic devices. Journal of Micromechanics and Microengineering, 2012, 22, 075006. | 1.5 | 19 |
| 43 | Polydimethylsiloxane SlipChip for mammalian cell culture applications. Analyst, The, 2015, 140, 7355-7365. | 1.7 | 18 |
| 44 | Study of oxygen tension variation within live tumor spheroids using microfluidic devices and multi-photon laser scanning microscopy. RSC Advances, 2018, 8, 30320-30329. | 1.7 | 17 |
| 45 | A Low-Power CMOS Microfluidic Pump Based on Travelling-Wave Electroosmosis for Diluted Serum Pumping. Scientific Reports, 2019, 9, 14794. | 1.6 | 17 |
| 46 | Widefield frequency domain fluorescence lifetime imaging microscopy (FD-FLIM) for accurate measurement of oxygen gradients within microfluidic devices. Analyst, The, 2019, 144, 3494-3504. | 1.7 | 17 |
| 47 | Evaluation of Nanoparticle Penetration in the Tumor Spheroid Using Two-Photon Microscopy. Biomedicines, 2021, 9, 10. | 1.4 | 15 |
| 48 | Multiplexed Spectral Signature Detection for Microfluidic Color-Coded Bioparticle Flow. Analytical Chemistry, 2010, 82, 9506-9512. | 3.2 | 14 |
| 49 | Comparison of VEGF-A secretion from tumor cells under cellular stresses in conventional monolayer culture and microfluidic three-dimensional spheroid models. PLoS ONE, 2020, 15, e0240833. | 1.1 | 14 |
| 50 | Integrated electrofluidic circuits: pressure sensing with analog and digital operation functionalities for microfluidics. Lab on A Chip, 2012, 12, 3943. | 3.1 | 13 |
| 51 | Plasmonic gel films for time-lapse LSPR detection of hydrogen peroxide secreted from living cells. Sensors and Actuators B: Chemical, 2021, 336, 129725. | 4.0 | 13 |
| 52 | A Flexible Nanograting Integrated Onto Silicon Micromachines by Soft Lithographic Replica Molding and Assembly. Journal of Microelectromechanical Systems, 2008, 17, 393-401. | 1.7 | 12 |
| 53 | High-speed tuning of visible laser wavelength using a nanoimprinted grating optical tunable filter. Applied Physics Letters, 2009, 95, 211106. | 1.5 | 12 |
| 54 | Measurement of in-plane elasticity of live cell layers using a pressure sensor embedded microfluidic device. Scientific Reports, 2016, 6, 36425. | 1.6 | 12 |

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| 55 | Two dimensional thermoelectric platforms for thermocapillary droplet actuation. RSC Advances, 2012, 2, 1639-1642. | 1.7 | 11 |
| 56 | Study 3D Endothelial Cell Network Formation under Various Oxygen Microenvironment and Hydrogel Composition Combinations Using Upsideâ€Down Microfluidic Devices. Small, 2021, 17, e2006091. | 5.2 | 10 |
| 57 | Transwell Insert-Embedded Microfluidic Devices for Time-Lapse Monitoring of Alveolar Epithelium Barrier Function under Various Stimulations. Micromachines, 2021, 12, 406. | 1.4 | 10 |
| 58 | High-speed deformation of soft lithographic nanograting patterns for ultrasensitive optical spectroscopy. Applied Physics Letters, 2008, 92, 051116. | 1.5 | 9 |
| 59 | A frequency-control particle separation device based on resultant effects of electroosmosis and dielectrophoresis. Applied Physics Letters, 2016, 109, 053701. | 1.5 | 9 |
| 60 | Polydimethylsiloxane-polycarbonate Microfluidic Devices for Cell Migration Studies Under Perpendicular Chemical and Oxygen Gradients. Journal of Visualized Experiments, 2017, , . | 0.2 | 8 |
| 61 | External Compression-Induced Fracture Patterning on the Surface of Poly(dimethylsiloxane) Cubes and Microspheres. Langmuir, 2009, 25, 3102-3107. | 1.6 | 7 |
| 62 | Generation of nitric oxide gradients in microfluidic devices for cell culture using spatially controlled chemical reactions. Biomicrofluidics, 2013, 7, 64104. | 1.2 | 7 |
| 63 | Dynamically programmable surface micro-wrinkles on PDMS-SMA composite. Smart Materials and Structures, 2014, 23, 115007. | 1.8 | 7 |
| 64 | Flip channel: A microfluidic device for uniform-sized embryoid body formation and differentiation. Biomicrofluidics, 2015, 9, 054111. | 1.2 | 6 |
| 65 | Epidermal growth factor-like repeats of SCUBE1 derived from platelets are critical for thrombus formation. Cardiovascular Research, 2020, 116, 193-201. | 1.8 | 6 |
| 66 | Increased vasculogenesis of endothelial cells in hyaluronic acid augmented fibrin-based natural hydrogels â€“ from in vitro to in vivo models. , 2020, 40, 133-145. | | 6 |
| 67 | Cav3.2 Tâ€type calcium channel regulates mouse platelet activation and arterial thrombosis. Journal of Thrombosis and Haemostasis, 2022, 20, 1887-1899. | 1.9 | 6 |
| 68 | A PDMS-on-Silicon Deformable Grating for Spectral Differentiation of Mixed Wavelength Signals. , 2007, , . | | 5 |
| 69 | An in-situ filtering pump for particle-sample filtration based on low-voltage electrokinetic mechanism. Sensors and Actuators B: Chemical, 2017, 238, 809-816. | 4.0 | 5 |
| 70 | A sheathless inertial focusing technique for optofluidic devices. Microfluidics and Nanofluidics, 2019, 23, 1. | 1.0 | 5 |
| 71 | Effects of hydraulic pressure on cardiomyoblasts in a microfluidic device. Biomicrofluidics, 2015, 9, 024111. | 1.2 | 4 |
| 72 | Editorial: Medical and Industrial Applications of Microfluidic-Based Cell/Tissue Culture and Organs-on-a-Chip. Frontiers in Bioengineering and Biotechnology, 2019, 7, 151. | 2.0 | 4 |

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| 73 | Editorial for the Special Issue on Organs-on-Chips. Micromachines, 2020, 11, 369. | 1.4 | 4 |
| 74 | Revealing anisotropic elasticity of endothelium under fluid shear stress. Acta Biomaterialia, 2022, 145, 316-328. | 4.1 | 4 |
| 75 | A novel design of piezo-driven dual-dimension optical scanning mechanism. Review of Scientific Instruments, 1998, 69, 3277-3282. | 0.6 | 3 |
| 76 | MEMS tunable polymer grating for advantageous spectroscopic measurements. Proceedings of SPIE, 2007, , . | 0.8 | 3 |
| 77 | Fully disposable and optically transparent microfluidic viscometer based on electrofluidic pressure sensor. , 2017, , . | | 3 |
| 78 | Study Effects of Drug Treatment and Physiological Physical Stimulation on Surfactant Protein Expression of Lung Epithelial Cells Using a Biomimetic Microfluidic Cell Culture Device. Micromachines, 2019, 10, 400. | 1.4 | 3 |
| 79 | Comparison of Hydrogen Peroxide Secretion From Living Cells Cultured in Different Formats Using Hydrogel-Based LSPR Substrates. Frontiers in Bioengineering and Biotechnology, 2022, 10, 869184. | 2.0 | 3 |
| 80 | Multi-axis single-layer PDMS-on-silicon micro optical reflector. , 2004, , . | | 2 |
| 81 | A metal-coated polymer micromirror for strain-driven high-speed multiaxis optical scanning. IEEE Photonics Technology Letters, 2005, 17, 1193-1195. | 1.3 | 2 |
| 82 | A nanoimprinted strain-induced reconfigurable polymer micro-optical grating. , 0, , . | | 1 |
| 83 | A seamlessly integrated microfluidic pressure sensor based on an ionic liquid electrofluidic circuit. , 2011, , . | | 1 |
| 84 | Interfacial adhesion and superhydrophobicity modulated with polymeric nanopillars using integrated nanolithography. Journal of Micromechanics and Microengineering, 2012, 22, 125026. | 1.5 | 1 |
| 85 | Single step sequential polydimethylsiloxane wet etching to fabricate a microfluidic channel with various cross-sectional geometries. Journal of Micromechanics and Microengineering, 2017, 27, 115003. | 1.5 | 1 |
| 86 | A microfluidic device to study effects of physical stimulation and steroid treatment on lung epithelial cell surfactant protein expression. , 2017, , . | | 1 |
| 87 | One-Step Approach to Fabricating Polydimethylsiloxane Microfluidic Channels of Different Geometric Sections by Sequential Wet Etching Processes. Journal of Visualized Experiments, 2018, , . | 0.2 | 1 |
| 88 | Microfluidic Devices: Study 3D Endothelial Cell Network Formation under Various Oxygen Microenvironment and Hydrogel Composition Combinations Using Upsideâ€Down Microfluidic Devices (Small 15/2021). Small, 2021, 17, 2170069. | 5.2 | 1 |
| 89 | Identifying distinct oxygen diffusivity through type I pneumocyte-like cell layers using microfluidic device. Talanta, 2022, 236, 122882. | 2.9 | 1 |
| 90 | Design Optimization of a Novel, Large-Displacement, Multi-Axis, Silicon/Polymer Hybrid Actuator for Micro Optics. , 2003, , 197. | | 0 |

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|---|---|---|---|
| 91 | Biological Micro/Nanofluidics. , 2008, , . | | 0 |
| 92 | Ionic Liquids for Microfluidic Actuation. ACS Symposium Series, 2010, , 157-173. | 0.5 | 0 |
| 93 | Multi-spectral tunable excitation fluorescence microscopy with a nanoimprinted PDMS-on-silicon grating optical filter. , 2012, , . | | 0 |
| 94 | Generation of perpendicular chemical and oxygen gradients for cell culture in a microfluidic device. , 2013, , . | | 0 |
| 95 | Research on imaging, sensing, and characterization of cells at Research Center for Applied Sciences (RCAS), Academia Sinica. Proceedings of SPIE, 2015, , . | 0.8 | 0 |
| 96 | Study Endothelial Cell Networking in Hydrogel Under Oxygen Gradients Using Microfluidic Devices. , 2019, , . | | 0 |
| 97 | Development of in Vitro Microfluidic Circulatory System. , 2020, , . | | 0 |
| 98 | Multiscale, Hierarchical Integration of Soft Polymer Micro- and Nanostructures into Optical MEMS. , 2012, , 491-518. | | 0 |
| 99 | Ionic Liquid-based Physical Sensors. RSC Smart Materials, 2017, , 296-320. | 0.1 | 0 |
| 100 | Reveal Anisotropic Elasticity of Endothelium Under Fluidic Shear Stress. SSRN Electronic Journal, 0, , . | 0.4 | 0 |