

Ji-Yen Cheng

List of Publications by Year in descending order

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83
papers

1,901
citations

218381

26
h-index

276539

41
g-index

83
all docs

83
docs citations

83
times ranked

2205
citing authors

#	ARTICLE	IF	CITATIONS
1	Direct-write laser micromachining and universal surface modification of PMMA for device development. <i>Sensors and Actuators B: Chemical</i> , 2004, 99, 186-196.	4.0	220
2	Crack-free direct-writing on glass using a low-power UV laser in the manufacture of a microfluidic chip. <i>Journal of Micromechanics and Microengineering</i> , 2005, 15, 1147-1156.	1.5	104
3	Electrotaxis of lung cancer cells in a multiple-electric-field chip. <i>Biosensors and Bioelectronics</i> , 2009, 24, 3510-3516.	5.3	97
4	Using a microfluidic device for 1 Ål DNA microarray hybridization in 500 s. <i>Nucleic Acids Research</i> , 2005, 33, e78-e78.	6.5	85
5	Electrotaxis of lung cancer cells in ordered three-dimensional scaffolds. <i>Biomicrofluidics</i> , 2012, 6, 14102-1410214.	1.2	69
6	A transparent cell-culture microchamber with a variably controlled concentration gradient generator and flow field rectifier. <i>Biomicrofluidics</i> , 2008, 2, 24105.	1.2	64
7	A planar interdigitated ring electrode array via dielectrophoresis for uniform patterning of cells. <i>Biosensors and Bioelectronics</i> , 2008, 24, 869-875.	5.3	62
8	Dielectrophoresis-based cellular microarray chip for anticancer drug screening in perfusion microenvironments. <i>Lab on A Chip</i> , 2011, 11, 2333.	3.1	48
9	<i>In vitro</i> electrical-stimulated wound-healing chip for studying electric field-assisted wound-healing process. <i>Biomicrofluidics</i> , 2012, 6, 34117.	1.2	47
10	High throughput parallel synthesis of oligonucleotides with 1536 channel synthesizer. <i>Nucleic Acids Research</i> , 2002, 30, 93e-93.	6.5	46
11	Performing microchannel temperature cycling reactions using reciprocating reagent shuttling along a radial temperature gradient. <i>Analyst</i> , The, 2005, 130, 931.	1.7	46
12	Elucidating <i>in vitro</i> cell-cell interaction using a microfluidic coculture system. <i>Biomedical Microdevices</i> , 2006, 8, 65-71.	1.4	46
13	Rapid cell-patterning and microfluidic chip fabrication by crack-free CO ₂ laser ablation on glass. <i>Journal of Micromechanics and Microengineering</i> , 2006, 16, 1143-1153.	1.5	46
14	Enhanced localized plasmonic detections using partially-embedded gold nanoparticles and ellipsometric measurements. <i>Biomedical Optics Express</i> , 2012, 3, 899.	1.5	42
15	Evaluation of EGFR and RTK Signaling in the Electrotaxis of Lung Adenocarcinoma Cells under Direct-Current Electric Field Stimulation. <i>PLoS ONE</i> , 2013, 8, e73418.	1.1	41
16	Asymmetric cancer-cell filopodium growth induced by electric-fields in a microfluidic culture chip. <i>Lab on A Chip</i> , 2011, 11, 695-699.	3.1	40
17	Magnetic nanoparticle-enhanced SPR on gold nanoslits for ultra-sensitive, label-free detection of nucleic acid biomarkers. <i>Analyst</i> , The, 2013, 138, 2740.	1.7	37
18	Urinary micro-RNA biomarker detection using capped gold nanoslit SPR in a microfluidic chip. <i>Analyst</i> , The, 2015, 140, 4097-4104.	1.7	34

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19	Crack-free micromachining on glass using an economic Q-switched 532 nm laser. <i>Journal of Micromechanics and Microengineering</i> , 2006, 16, 2420-2424.	1.5	32
20	Pulsed DC Electric Field-Induced Differentiation of Cortical Neural Precursor Cells. <i>PLoS ONE</i> , 2016, 11, e0158133.	1.1	32
21	Gene Expression of Human Lung Cancer Cell Line CL1-5 in Response to a Direct Current Electric Field. <i>PLoS ONE</i> , 2011, 6, e25928.	1.1	31
22	Water pollutant monitoring by a whole cell array through lens-free detection on CCD. <i>Lab on A Chip</i> , 2015, 15, 1472-1480.	3.1	31
23	A compact 3D-printed interface for coupling open digital microchips with Venturi easy ambient sonic-spray ionization mass spectrometry. <i>Analyst, The</i> , 2015, 140, 1495-1501.	1.7	30
24	Electrotaxis of oral squamous cell carcinoma cells in a multiple-electric-field chip with uniform flow field. <i>Biomicrofluidics</i> , 2012, 6, 34116.	1.2	29
25	Correlation between cell migration and reactive oxygen species under electric field stimulation. <i>Biomicrofluidics</i> , 2015, 9, 054120.	1.2	29
26	Label-Free Detection of Rare Cell in Human Blood Using Gold Nano Slit Surface Plasmon Resonance. <i>Biosensors</i> , 2015, 5, 98-117.	2.3	28
27	Electrowetting (EW)-Based Valve Combined with Hydrophilic Teflon Microfluidic Guidance in Controlling Continuous Fluid Flow. <i>Biomedical Microdevices</i> , 2004, 6, 341-347.	1.4	27
28	Multiplex detection of urinary miRNA biomarkers by transmission surface plasmon resonance. <i>Analyst, The</i> , 2018, 143, 4715-4722.	1.7	26
29	A Smartphone-Based Whole-Cell Array Sensor for Detection of Antibiotics in Milk. <i>Sensors</i> , 2019, 19, 3882.	2.1	26
30	Vibrational Investigation of DODC Cation for Recognition of Guanine Dimeric Hairpin Quadruplex Studied by Satellite Holes. <i>Journal of Physical Chemistry B</i> , 1998, 102, 5542-5546.	1.2	21
31	Programmable Laser-Assisted Surface Microfabrication on a Poly(Vinyl Alcohol)-Coated Glass Chip with Self-Changing Cell Adhesivity for Heterotypic Cell Patterning. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 22322-22332.	4.0	21
32	ITO patterning by a low power Q-switched green laser and its use in the fabrication of a transparent flow meter. <i>Journal of Micromechanics and Microengineering</i> , 2007, 17, 2316-2323.	1.5	20
33	Microbial biosensing of ciprofloxacin residues in food by a portable lens-free CCD-based analyzer. <i>Analytical and Bioanalytical Chemistry</i> , 2018, 410, 1257-1263.	1.9	20
34	Morphological studies of living cells using gold nanoparticles and dark-field optical section microscopy. <i>Journal of Biomedical Optics</i> , 2009, 14, 1.	1.4	18
35	Crack-free micromachining on glass substrates by visible LIBWE using liquid metallic absorbers. <i>Applied Surface Science</i> , 2010, 257, 87-92.	3.1	16
36	Investigation of guanine-rich DNA telomeric structure by a covalently linked BODIPY dye. <i>Physical Chemistry Chemical Physics</i> , 1999, 1, 3783-3787.	1.3	15

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37	Modulating chemotaxis of lung cancer cells by using electric fields in a microfluidic device. <i>Biomicrofluidics</i> , 2014, 8, 024107.	1.2	15
38	Uniform electric field generation in circular multi-well culture plates using polymeric inserts. <i>Scientific Reports</i> , 2016, 6, 26222.	1.6	15
39	Simultaneous chemical and electrical stimulation on lung cancer cells using a multichannel-dual-electric-field chip. <i>Biomicrofluidics</i> , 2014, 8, 052007.	1.2	14
40	Alteration of mesenchymal stem cells polarity by laminar shear stimulation promoting β -catenin nuclear localization. <i>Biomaterials</i> , 2019, 190-191, 1-10.	5.7	14
41	Satellite hole investigations of the hole-burning mechanism and vibrational mode coupling of 9-aminoacridine doped in glycerol-water glasses at different pH values. <i>Journal of the Chemical Society, Faraday Transactions</i> , 1997, 93, 1297-1304.	1.7	13
42	Simultaneous assessment of cell morphology and adhesion using aluminum nanoslit-based plasmonic biosensing chips. <i>Scientific Reports</i> , 2019, 9, 7204.	1.6	12
43	Use microfluidic chips to study the effects of ultraviolet lights on human fibroblasts. <i>Microfluidics and Nanofluidics</i> , 2017, 21, 1.	1.0	11
44	Doxycycline inhibits electric field-induced migration of non-small cell lung cancer (NSCLC) cells. <i>Scientific Reports</i> , 2019, 9, 8094.	1.6	11
45	High-Throughput and Dynamic Study of Drug and Cell Interactions Using Contrast Images in Aluminum-Based Nanoslit Arrays. <i>Analytical Chemistry</i> , 2020, 92, 9674-9681.	3.2	11
46	Crack-free Micromachining of Glass Ceramic Using Visible LIBWE. <i>Journal of Laser Micro Nanoengineering</i> , 2013, 8, 253-258.	0.4	11
47	Label-free quantification of asymmetric cancer-cell filopodium activities in a multi-gradient chip. <i>Lab on A Chip</i> , 2009, 9, 884.	3.1	10
48	Investigation of tautomeric structures of thionin by satellite holes: matrix dependence. <i>Chemical Physics Letters</i> , 1999, 302, 347-353.	1.2	9
49	Promising urinary miRNA biomarkers t-SPR profiling for urothelial cell carcinoma. <i>Sensors and Actuators B: Chemical</i> , 2020, 322, 128605.	4.0	9
50	Phenanthrene-olefin exciplexes. Substituent effects. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 1992, 66, 53-60.	2.0	8
51	Using optical profilometry to characterize cell membrane roughness influenced by amyloid-beta 42 aggregates and electric fields. <i>Journal of Biomedical Optics</i> , 2013, 19, 011009.	1.4	8
52	Electrotaxis Studies of Lung Cancer Cells using a Multichannel Dual-electric-field Microfluidic Chip. <i>Journal of Visualized Experiments</i> , 2015, , e53340.	0.2	8
53	Satellite holes of dye molecules doped in polymer films: intermolecular hydrogen-bond effect. <i>Chemical Physics Letters</i> , 1995, 239, 95-102.	1.2	7
54	Hole-Burning Structure and Mechanism of Acridine and Aminoacridines Doped in Polyvinyl Alcohol Films. <i>Molecular Crystals and Liquid Crystals</i> , 1996, 291, 175-181.	0.3	6

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55	Cost-effective trapezoidal modified Boyden chamber with comparable accuracy to a commercial apparatus. <i>BioTechniques</i> , 2004, 37, 724-726.	0.8	6
56	Simple Method in Diagnosing Cancer Cells by a Novel Fluorescence Probe BMVC. <i>Journal of the Chinese Chemical Society</i> , 2005, 52, 1069-1072.	0.8	6
57	ELECTROOSMOTIC MIXING INDUCED BY NON-UNIFORM ZETA POTENTIAL AND APPLICATION FOR DNA MICROARRAY IN MICROFLUIDIC CHANNEL. <i>Biomedical Engineering - Applications, Basis and Communications</i> , 2005, 17, 281-283.	0.3	6
58	Blue light emission from a glass/liquid interface for real-time monitoring of a laser-induced etching process. <i>Journal of Micromechanics and Microengineering</i> , 2011, 21, 075019.	1.5	6
59	Electrokinetic acceleration of DNA hybridization in microsystems. <i>Talanta</i> , 2015, 138, 149-154.	2.9	6
60	Microfluidic ARray Synthesizer (MArS) for rapid preparation and hybridization of custom DNA microarray. <i>Biotechnology and Bioengineering</i> , 2009, 104, 400-407.	1.7	5
61	Screening anti-metastasis drugs by cell adhesion-induced color change in a biochip. <i>Lab on A Chip</i> , 2021, 21, 2955-2970.	3.1	5
62	Blue Light Plasma Emission During LIBWE Using 532 nm Q-switched Nanosecond Laser. <i>Journal of Laser Micro Nanoengineering</i> , 2012, 7, 87-92.	0.4	5
63	Machine-learning assisted antibiotic detection and categorization using a bacterial sensor array. <i>Sensors and Actuators B: Chemical</i> , 2022, 355, 131257.	4.0	5
64	Satellite Hole Investigation of the Vibrational Modes of 9- β -Aminoacridine upon Binding to DNA. <i>Journal of the Chinese Chemical Society</i> , 1997, 44, 97-100.	0.8	4
65	Investigation of DNA-protein recognition by satellite hole spectra of labeling dye. <i>Journal of Luminescence</i> , 2002, 98, 149-152.	1.5	4
66	Study of gold nanoparticles and live cells interactions by using planar evanescent wave excitation. <i>Journal of Biomedical Optics</i> , 2009, 14, 021005.	1.4	4
67	Towards fast nanopattern fabrication by local laser annealing of block copolymer (BCP) films. <i>Applied Surface Science</i> , 2019, 470, 639-644.	3.1	3
68	Dispersion-enhancing surface treatment of AuNPs for a reduced probe loading and detection limit using t-SPR detection. <i>Analyst</i> , 2021, 146, 5584-5591.	1.7	3
69	High-Quality Surface Micromachining on Polymer Using Visible-LIBWE. <i>Journal of Laser Micro Nanoengineering</i> , 2016, 11, 117-123.	0.4	3
70	Styrylpyridine-amine exciplexes: substituent effects. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 1994, 84, 161-166.	2.0	2
71	Verifying expressed transcript variants by detecting and assembling stretches of consecutive exons. <i>Nucleic Acids Research</i> , 2010, 38, e187-e187.	6.5	2
72	Designing Microfluidic Devices for Studying Cellular Responses Under Single or Coexisting Chemical/Electrical/Shear Stress Stimuli. <i>Journal of Visualized Experiments</i> , 2016, , .	0.2	2

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73	Surface micromachining on a polymethylmethacrylate substrate using visible laser-induced backside wet etching with a KMnO4 solution as an absorber. Journal of Laser Applications, 2020, 32, .	0.8	2
74	<title>Crack-free laser direct-writing on quartz and glass for microfluidic chip development</title>. , 2004, , .		1
75	Electric-Field-Induced Neural Precursor Cell Differentiation in Microfluidic Devices. Journal of Visualized Experiments, 2021, , .	0.2	1
76	Cell Patterning on Chip. , 2013, , 1-3.		1
77	Rapid printing of a Bacterial array for a Solid-Phase Assay (BacSPA) of heavy metal ions. Sensors and Actuators B: Chemical, 2022, 359, 131540.	4.0	1
78	A microfluidic coculture system for cell-cell interaction study. , 0, , .		0
79	Optical measurement on membrane roughness of neuroblastoma cells treated with amyloid-beta peptide and electric fields. , 2013, , .		0
80	Research on imaging, sensing, and characterization of cells at Research Center for Applied Sciences (RCAS), Academia Sinica. Proceedings of SPIE, 2015, , .	0.8	0
81	Optical Approaches to Visualization of Cellular Activity. , 2019, , 1-15.		0
82	Optical Approaches to Visualization of Cellular Activity. , 2022, , 189-203.		0
83	Asymmetric Growth of Cancer Cell Filopodia under Electric Field Stimulation Measured by Structured Illumination Nano-profilometry. , 2010, , .		0