

Ji-Yen Cheng

List of Publications by Year in descending order

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83
papers

1,901
citations

218677

26
h-index

276875

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.	7.8	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.	2.6	104
3	Electrotaxis of lung cancer cells in a multiple-electric-field chip. <i>Biosensors and Bioelectronics</i> , 2009, 24, 3510-3516.	10.1	97
4	Using a microfluidic device for 1 Ål DNA microarray hybridization in 500 s. <i>Nucleic Acids Research</i> , 2005, 33, e78-e78.	14.5	85
5	Electrotaxis of lung cancer cells in ordered three-dimensional scaffolds. <i>Biomicrofluidics</i> , 2012, 6, 14102-1410214.	2.4	69
6	A transparent cell-culture microchamber with a variably controlled concentration gradient generator and flow field rectifier. <i>Biomicrofluidics</i> , 2008, 2, 24105.	2.4	64
7	A planar interdigitated ring electrode array via dielectrophoresis for uniform patterning of cells. <i>Biosensors and Bioelectronics</i> , 2008, 24, 869-875.	10.1	62
8	Dielectrophoresis-based cellular microarray chip for anticancer drug screening in perfusion microenvironments. <i>Lab on A Chip</i> , 2011, 11, 2333.	6.0	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.	2.4	47
10	High throughput parallel synthesis of oligonucleotides with 1536 channel synthesizer. <i>Nucleic Acids Research</i> , 2002, 30, 93e-93.	14.5	46
11	Performing microchannel temperature cycling reactions using reciprocating reagent shuttling along a radial temperature gradient. <i>Analyst</i> , The, 2005, 130, 931.	3.5	46
12	Elucidating in vitro cell-cell interaction using a microfluidic coculture system. <i>Biomedical Microdevices</i> , 2006, 8, 65-71.	2.8	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.	2.6	46
14	Enhanced localized plasmonic detections using partially-embedded gold nanoparticles and ellipsometric measurements. <i>Biomedical Optics Express</i> , 2012, 3, 899.	2.9	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.	2.5	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.	6.0	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.	3.5	37
18	Urinary micro-RNA biomarker detection using capped gold nanoslit SPR in a microfluidic chip. <i>Analyst</i> , The, 2015, 140, 4097-4104.	3.5	34

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19	Crack-free micromachining on glass using an economic Q-switched 532 nm laser. Journal of Micromechanics and Microengineering, 2006, 16, 2420-2424.	2.6	32
20	Pulsed DC Electric Field-Induced Differentiation of Cortical Neural Precursor Cells. PLoS ONE, 2016, 11, e0158133.	2.5	32
21	Gene Expression of Human Lung Cancer Cell Line CL1-5 in Response to a Direct Current Electric Field. PLoS ONE, 2011, 6, e25928.	2.5	31
22	Water pollutant monitoring by a whole cell array through lens-free detection on CCD. Lab on A Chip, 2015, 15, 1472-1480.	6.0	31
23	A compact 3D-printed interface for coupling open digital microchips with Venturi easy ambient sonic-spray ionization mass spectrometry. Analyst, The, 2015, 140, 1495-1501.	3.5	30
24	Electrotaxis of oral squamous cell carcinoma cells in a multiple-electric-field chip with uniform flow field. Biomicrofluidics, 2012, 6, 34116.	2.4	29
25	Correlation between cell migration and reactive oxygen species under electric field stimulation. Biomicrofluidics, 2015, 9, 054120.	2.4	29
26	Label-Free Detection of Rare Cell in Human Blood Using Gold Nano Slit Surface Plasmon Resonance. Biosensors, 2015, 5, 98-117.	4.7	28
27	Electrowetting (EW)-Based Valve Combined with Hydrophilic Teflon Microfluidic Guidance in Controlling Continuous Fluid Flow. Biomedical Microdevices, 2004, 6, 341-347.	2.8	27
28	Multiplex detection of urinary miRNA biomarkers by transmission surface plasmon resonance. Analyst, The, 2018, 143, 4715-4722.	3.5	26
29	A Smartphone-Based Whole-Cell Array Sensor for Detection of Antibiotics in Milk. Sensors, 2019, 19, 3882.	3.8	26
30	Vibrational Investigation of DODC Cation for Recognition of Guanine Dimeric Hairpin Quadruplex Studied by Satellite Holes. Journal of Physical Chemistry B, 1998, 102, 5542-5546.	2.6	21
31	Programmable Laser-Assisted Surface Microfabrication on a Poly(Vinyl Alcohol)-Coated Glass Chip with Self-Changing Cell Adhesivity for Heterotypic Cell Patterning. ACS Applied Materials & Interfaces, 2015, 7, 22322-22332.	8.0	21
32	ITO patterning by a low power Q-switched green laser and its use in the fabrication of a transparent flow meter. Journal of Micromechanics and Microengineering, 2007, 17, 2316-2323.	2.6	20
33	Microbial biosensing of ciprofloxacin residues in food by a portable lens-free CCD-based analyzer. Analytical and Bioanalytical Chemistry, 2018, 410, 1257-1263.	3.7	20
34	Morphological studies of living cells using gold nanoparticles and dark-field optical section microscopy. Journal of Biomedical Optics, 2009, 14, 1.	2.6	18
35	Crack-free micromachining on glass substrates by visible LIBWE using liquid metallic absorbers. Applied Surface Science, 2010, 257, 87-92.	6.1	16
36	Investigation of guanine-rich DNA telomeric structure by a covalently linked BODIPY dye. Physical Chemistry Chemical Physics, 1999, 1, 3783-3787.	2.8	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.	2.4	15
38	Uniform electric field generation in circular multi-well culture plates using polymeric inserts. <i>Scientific Reports</i> , 2016, 6, 26222.	3.3	15
39	Simultaneous chemical and electrical stimulation on lung cancer cells using a multichannel-dual-electric-field chip. <i>Biomicrofluidics</i> , 2014, 8, 052007.	2.4	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.	11.4	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.	3.3	12
43	Use microfluidic chips to study the effects of ultraviolet lights on human fibroblasts. <i>Microfluidics and Nanofluidics</i> , 2017, 21, 1.	2.2	11
44	Doxycycline inhibits electric field-induced migration of non-small cell lung cancer (NSCLC) cells. <i>Scientific Reports</i> , 2019, 9, 8094.	3.3	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.	6.5	11
46	Crack-free Micromachining of Glass Ceramic Using Visible LIBWE. <i>Journal of Laser Micro Nanoengineering</i> , 2013, 8, 253-258.	0.1	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.	6.0	10
48	Investigation of tautomeric structures of thionin by satellite holes: matrix dependence. <i>Chemical Physics Letters</i> , 1999, 302, 347-353.	2.6	9
49	Promising urinary miRNA biomarkers t-SPR profiling for urothelial cell carcinoma. <i>Sensors and Actuators B: Chemical</i> , 2020, 322, 128605.	7.8	9
50	Phenanthrene-olefin exciplexes. Substituent effects. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 1992, 66, 53-60.	3.9	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.	2.6	8
52	Electrotaxis Studies of Lung Cancer Cells using a Multichannel Dual-electric-field Microfluidic Chip. <i>Journal of Visualized Experiments</i> , 2015, , e53340.	0.3	8
53	Satellite holes of dye molecules doped in polymer films: intermolecular hydrogen-bond effect. <i>Chemical Physics Letters</i> , 1995, 239, 95-102.	2.6	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.	1.8	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.	1.4	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.	0.6	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.	2.6	6
59	Electrokinetic acceleration of DNA hybridization in microsystems. <i>Talanta</i> , 2015, 138, 149-154.	5.5	6
60	Microfluidic ARray Synthesizer (MARs) for rapid preparation and hybridization of custom DNA microarray. <i>Biotechnology and Bioengineering</i> , 2009, 104, 400-407.	3.3	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.	6.0	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.	0.1	5
63	Machine-learning assisted antibiotic detection and categorization using a bacterial sensor array. <i>Sensors and Actuators B: Chemical</i> , 2022, 355, 131257.	7.8	5
64	Satellite Hole Investigation of the Vibrational Modes of 9- <i>aminoacridine</i> upon Binding to DNA. <i>Journal of the Chinese Chemical Society</i> , 1997, 44, 97-100.	1.4	4
65	Investigation of DNA-protein recognition by satellite hole spectra of labeling dye. <i>Journal of Luminescence</i> , 2002, 98, 149-152.	3.1	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.	2.6	4
67	Towards fast nanopattern fabrication by local laser annealing of block copolymer (BCP) films. <i>Applied Surface Science</i> , 2019, 470, 639-644.	6.1	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.	3.5	3
69	High-Quality Surface Micromachining on Polymer Using Visible-LIBWE. <i>Journal of Laser Micro Nanoengineering</i> , 2016, 11, 117-123.	0.1	3
70	Styrylpyridine-amine exciplexes: substituent effects. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 1994, 84, 161-166.	3.9	2
71	Verifying expressed transcript variants by detecting and assembling stretches of consecutive exons. <i>Nucleic Acids Research</i> , 2010, 38, e187-e187.	14.5	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, , .	0.3	2

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73	Surface micromachining on a polymethylmethacrylate substrate using visible laser-induced backside wet etching with a KMnO ₄ solution as an absorber. Journal of Laser Applications, 2020, 32, .	1.7	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, , .	0.3	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.	7.8	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