Da-jeng Yao

List of Publications by Year
in descending order

99 papers	2,006 citations	279798 23 h-index	265206 42 g-index
103 all docs	103 docs citations	103 times ranked	2619 citing authors

#	Article	IF	Citations
1	Experiments and simulations on low-temperature waste heat harvesting system by thermoelectric power generators. Applied Energy, 2011, 88, 1291-1297.	10.1	334
2	An effective Seebeck coefficient obtained by experimental results of a thermoelectric generator module. Applied Energy, 2011, 88, 5173-5179.	10.1	119
3	EWOD microfluidic systems for biomedical applications. Microfluidics and Nanofluidics, 2014, 16, 965-987.	2.2	100
4	A flexible hydrophilic-modified graphene microprobe for neural and cardiac recording. Nanomedicine: Nanotechnology, Biology, and Medicine, 2013, 9, 600-604.	3.3	86
5	Thermal conductivity measurement and interface thermal resistance estimation using SiO2 thin film. Review of Scientific Instruments, 2008, 79, 054902.	1.3	70
6	Molecular-level dengue fever diagnostic devices made out of paper. Lab on A Chip, 2013, 13, 2686.	6.0	68
7	DNA ligation of ultramicro volume using an EWOD microfluidic system with coplanar electrodes. Journal of Micromechanics and Microengineering, 2008, 18, 045017.	2.6	57
8	Renewable energy of waste heat recovery system for automobiles. Journal of Renewable and Sustainable Energy, 2010, 2, .	2.0	52
9	Improving the adhesion of carbon nanotubes to a substrate using microwave treatment. Carbon, 2010, 48, 805-812.	10.3	51
10	Magnetic bead-based DNA detection with multi-layers quantum dots labeling for rapid detection of Escherichia coli O157:H7. Biosensors and Bioelectronics, 2008, 24, 558-565.	10.1	49
11	A three-dimensional flexible microprobe array for neural recording assembled through electrostatic actuation. Lab on A Chip, 2011, 11, 1647.	6.0	46
12	Digital Microfluidic Dynamic Culture of Mammalian Embryos on an Electrowetting on Dielectric (EWOD) Chip. PLoS ONE, 2015, 10, e0124196.	2.5	43
13	Optimization of a waste heat recovery system with thermoelectric generators by three-dimensional thermal resistance analysis. Energy Conversion and Management, 2016, 126, 581-594.	9.2	41
14	Measurement and evaluation of the interfacial thermal resistance between a metal and a dielectric. Applied Physics Letters, 2008, 93, .	3.3	40
15	A cone-shaped 3D carbon nanotube probe for neural recording. Biosensors and Bioelectronics, 2010, 26, 220-227.	10.1	39
16	Intelligent gas-sensing systems and their applications. Journal of Micromechanics and Microengineering, 2018, 28, 093001.	2.6	33
17	Get to Understand More from Single-Cells: Current Studies of Microfluidic-Based Techniques for Single-Cell Analysis. International Journal of Molecular Sciences, 2015, 16, 16763-16777.	4.1	32
18	Hydrophilic modification of neural microelectrode arrays based on multi-walled carbon nanotubes. Nanotechnology, 2010, 21, 485501.	2.6	30

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19	Realization of an ultra-sensitive hydrogen peroxide sensor with conductance change of horseradish peroxidase-immobilized polyaniline and investigation of the sensing mechanism. Biosensors and Bioelectronics, 2014, 55, 294-300.	10.1	28
20	Simultaneous detection of two growth factors from human single-embryo culture medium by a bead-based digital microfluidic chip. Biosensors and Bioelectronics, 2020, 150, 111851.	10.1	28
21	Applications of EWOD Systems for DNA Reaction and Analysis. Journal of Adhesion Science and Technology, 2012, 26, 1789-1804.	2.6	24
22	Polymer/Ordered Mesoporous Carbon Nanocomposite Platelets as Superior Sensing Materials for Gas Detection with Surface Acoustic Wave Devices. Langmuir, 2012, 28, 11639-11645.	3.5	24
23	Synthesis and characterization of magnetic nanoparticles coated with polystyrene sulfonic acid for biomedical applications. Science and Technology of Advanced Materials, 2020, 21, 471-481.	6.1	24
24	Improving the dielectric properties of an electrowetting-on-dielectric microfluidic device with a low-pressure chemical vapor deposited Si3N4 dielectric layer. Biomicrofluidics, 2015, 9, 022403.	2.4	22
25	Micro-multi-probe electrode array to measure neural signals. Biosensors and Bioelectronics, 2009, 24, 1911-1917.	10.1	21
26	A highly efficient bead extraction technique with low bead number for digital microfluidic immunoassay. Biomicrofluidics, 2016, 10, 011901.	2.4	21
27	Isolation of Motile Spermatozoa with a Microfluidic Chip Having a Surface-Modified Microchannel. Journal of the Association for Laboratory Automation, 2014, 19, 91-99.	2.8	20
28	Efficient reuse of waste energy. IEEE Nanotechnology Magazine, 2009, 3, 28-33.	1.3	19
29	Microwells support high-resolution time-lapse imaging and development of preimplanted mouse embryos. Biomicrofluidics, 2015, 9, 022407.	2.4	19
30	Extraction of Cell-free Dna from An Embryo-culture Medium Using Micro-scale Bio-reagents on Ewod. Scientific Reports, 2020, 10, 9708.	3.3	19
31	Using a Microfluidic Gradient Generator to Characterize BG-11 Medium for the Growth of Cyanobacteria Synechococcus elongatus PCC7942. Micromachines, 2015, 6, 1755-1767.	2.9	18
32	A Review on Microfluidics: An Aid to Assisted Reproductive Technology. Molecules, 2021, 26, 4354.	3.8	18
33	Embryo formation from low sperm concentration by using dielectrophoretic force. Biomicrofluidics, 2015, 9, 022404.	2.4	17
34	Womb-on-a-chip biomimetic system for improved embryo culture and development. Sensors and Actuators B: Chemical, 2016, 226, 218-226.	7.8	17
35	Frequency Shift of a SH-SAW Biosensor with Glutaraldehyde and 3-Aminopropyltriethoxysilane Functionalized Films for Detection of Epidermal Growth Factor. Biosensors, 2020, 10, 92.	4.7	17
36	Enhanced efficiency of sorting sperm motility utilizing a microfluidic chip. Microsystem Technologies, 2017, 23, 305-312.	2.0	16

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37	The Separation of Microalgae Using Dean Flow in a Spiral Microfluidic Device. Inventions, 2018, 3, 40.	2.5	15
38	An Easily Accessible Microfluidic Chip for High-Throughput Microalgae Screening for Biofuel Production. Energies, 2021, 14, 1817.	3.1	14
39	Detection of third-hand smoke on clothing fibers with a surface acoustic wave gas sensor. Biomicrofluidics, 2016, 10, 011907.	2.4	12
40	Dielectrophoretic Microfluidic Device for in Vitro Fertilization. Micromachines, 2018, 9, 135.	2.9	12
41	Printed Resistive Sensor Array Combined with a Flexible Substrate for Ethanol and Methane Detection. ECS Journal of Solid State Science and Technology, 2020, 9, 115008.	1.8	12
42	Evaluation of Temperature-Dependent Effective Material Properties and Performance of a Thermoelectric Module. Journal of Electronic Materials, 2013, 42, 2362-2370.	2.2	11
43	Thermal conductivity of thermoelectric thick films prepared by electrodeposition. Applied Thermal Engineering, 2013, 51, 75-83.	6.0	11
44	Detection of Cells Captured with Antigens on Shear Horizontal Surface-Acoustic-Wave Sensors. Journal of the Association for Laboratory Automation, 2013, 18, 69-76.	2.8	11
45	Fertilization of Mouse Gametes in Vitro Using a Digital Microfluidic System. IEEE Transactions on Nanobioscience, 2015, 14, 857-863.	3.3	11
46	Molecular-Level Dengue Fever Diagnostics: Developing a Combination of RT-LAMP and Paper-Based Devices. IEEE Nanotechnology Magazine, 2012, 6, 26-30.	1.3	10
47	A multilayer concentric filter device to diminish clogging for separation of particles and microalgae based on size. Lab on A Chip, 2014, 14, 1459-1468.	6.0	10
48	Paper-based device for separation and cultivation of single microalga. Talanta, 2015, 145, 60-65.	5.5	10
49	A medical innovation: a new and improved method of DNA extraction with electrowetting-on-dielectric of genetic testing in-vitro fertilization (IVF). Microfluidics and Nanofluidics, 2020, 24, 1.	2.2	10
50	Fission and fusion of droplets in a 3-D crossing microstructure. Microfluidics and Nanofluidics, 2012, 13, 239-247.	2.2	9
51	Detection of Cigarette Smoke Using a Surface-Acoustic-Wave Gas Sensor with Non-Polymer-Based Oxidized Hollow Mesoporous Carbon Nanospheres. Micromachines, 2019, 10, 276.	2.9	8
52	Synergic Effect of Novel WS2 Carriers Holding Spherical Cobalt Ferrite @cubic Fe3O4 (WS2/s-CoFe2O4@c-Fe3O4) Nanocomposites in Magnetic Resonance Imaging and Photothermal Therapy for Ocular Treatments and Investigation of Corneal Endothelial Cell Migration. Nanomaterials, 2020, 10, 2555.	4.1	8
53	Extracellular and intracellular intermittent magnetic-fluid hyperthermia treatment of SK-Hep1 hepatocellular carcinoma cells based on magnetic nanoparticles coated with polystyrene sulfonic acid. PLoS ONE, 2021, 16, e0245286.	2.5	7
54	Design and Analysis of an In-Plane Thermoelectric Microcooler. Nanoscale and Microscale Thermophysical Engineering, 2010, 14, 95-109.	2.6	6

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55	Model for Increasing the Power Obtained from a Thermoelectric Generator Module. Journal of Electronic Materials, 2014, 43, 2337-2343.	2.2	6
56	Detection of Hazardous Vapors Including Mixtures in Varied Conditions Using a Surface-Acoustic-Wave Device. ECS Journal of Solid State Science and Technology, 2018, 7, Q3120-Q3125.	1.8	6
57	Discrimination of Red Wines with a Gas-Sensor Array Based on a Surface-Acoustic-Wave Technique. Micromachines, 2019, 10, 725.	2.9	6
58	Using a Dielectrophoretic Microfluidic Biochip Enhanced Fertilization of Mouse Embryo in Vitro. Micromachines, 2020, 11, 714.	2.9	6
59	Application of a Terahertz System Combined with an X-Shaped Metamaterial Microfluidic Cartridge. Micromachines, 2020, 11, 74.	2.9	6
60	Utilization of a Gas-Sensing System to Discriminate Smell and to Monitor Fermentation during the Manufacture of Oolong Tea Leaves. Micromachines, 2021, 12, 93.	2.9	6
61	A High-Voltage TENG-Based Droplet Energy Generator With Ultralow Liquid Consumption. IEEE Transactions on Nanobioscience, 2022, 21, 358-362.	3.3	6
62	Synthesis of ironâ€oxide magnetic nanoparticles coated with dextran of varied molecular mass using a facile ballâ€milling method. Micro and Nano Letters, 2020, 15, 645-650.	1.3	6
63	Microfluidic patterning using a digital microfluidic system. AIP Advances, 2020, 10, .	1.3	6
64	Gas sensor array based on surface acoustic wave devices for vapors detection and analysis. , 2010, , .		5
65	Gas sensor array based on surface acoustic wave devices for rapid multi-detection. , 2012, , .		5
66	An effective temperature compensation algorithm for CMOS-MEMS thermal-piezoresistive oscillators with SUB PPM/Â°C thermal stability. , 2017, , .		5
67	Detection of Particulate Matter of Size 2.5 Î¼m with a Surface-Acoustic-Wave Sensor Combined with a Cyclone Separator. Micromachines, 2018, 9, 398.	2.9	5
68	Detection of Cancer Cells on a Chip. Current Topics in Medicinal Chemistry, 2015, 15, 1543-1550.	2.1	5
69	Two-Dimensional Thermal Resistance Analysis of a Waste Heat Recovery System with Thermoelectric Generators. Journal of Electronic Materials, 2013, 42, 1982-1987.	2.2	4
70	A Simple Imaging Device for Fluorescence-Relevant Applications. Micromachines, 2018, 9, 418.	2.9	4
71	Detection of the Freshness of Kiwifruit With a TD-GC-MS and a Gas-Sensing Array Based on the Surface-Acoustic-Wave Technique. IEEE Transactions on Nanobioscience, 2022, 21, 363-369.	3.3	4
72	Motility-driven Sperm-sorting Microfluidic Chip with Little Cell Damage for Oligozoospermia Patients. Sensors and Materials, 2020, 32, 2585.	0.5	4

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73	An approach to enhance self-compensation capability in paper-based devices for chemical sensing. Talanta, 2015, 145, 29-34.	5.5	3
74	Centrifugal Filter Device for Detection of Rare Cells With Immuno-Binding. IEEE Transactions on Nanobioscience, 2015, 14, 864-869.	3.3	3
75	ACâ€electricâ€fieldâ€induced parthenogenesis of mouse oocyte. Micro and Nano Letters, 2018, 13, 794-797.	1.3	3
76	A microfluidic lab chip for the manipulation and co-culturing of embryos with stromal cells. Sensors and Actuators B: Chemical, 2021, 349, 130820.	7.8	3
77	Microfluidic Microalgae System: A Review. Molecules, 2022, 27, 1910.	3.8	3
78	Guest Editorial: Selected Papers from the 13th Annual IEEE International Conference on Nano/Micro Engineered and Molecular Systems (IEEEâ€NEMS 2018). Micro and Nano Letters, 2018, 13, 1510-1510.	1.3	2
79	Unveiling the Potential of Droplet Generation, Sorting, Expansion, and Restoration in Microfluidic Biochips. Micromachines, 2019, 10, 756.	2.9	2
80	Detection of Transferrin Receptor CD71 on a Shear Horizontal Surface Acoustic Wave Biosensor. IEEE Open Journal of Nanotechnology, 2021, 2, 1-7.	2.0	2
81	Virtual Stencil for Patterning and Modeling in a Quantitative Volume Using EWOD and DEP Devices for Microfluidics. Micromachines, 2021, 12, 1104.	2.9	2
82	Identification of Microorganisms Using an EWOD System. Micromachines, 2022, 13, 189.	2.9	2
83	Sensitivity Enhancement and Probiotic Detection of Microfluidic Chips Based on Terahertz Radiation Combined with Metamaterial Technology. Micromachines, 2022, 13, 904.	2.9	2
84	A large uniform monolayer area obtained by droplet evaporation in microwells. , 2010, , .		1
85	SNP detection based on temperature-controllable EWOD digital microfluidics system. , 2012, , .		1
86	In vitro dynamic fertilization by using EWOD device. , 2015, , .		1
87	Using EWOD chip for the culture medium movement and dynamic culture of mouse embryos. , 2018, , .		1
88	Using a Digital Microfluidic System to Evaluate the Stretch Length of a Droplet with a L-DEP and Varied Parameters. Inventions, 2020, 5, 21.	2.5	1
89	Effects of Electromagnets on Bovine Corneal Endothelial Cells Treated with Dendrimer Functionalized Magnetic Nanoparticles. Polymers, 2021, 13, 3306.	4.5	1
90	Shapeâ€Mediated Magnetocrystalline Anisotropy and Relaxation Controls by Cobalt Ferrite Coreâ€“Shell Heterostructures for Magnetothermal Penetration Delivery. Advanced Materials Interfaces, 0, , 2200022.	3.7	1

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91	DNA Sequencing from Subcritical Concentration of Cell-Free DNA Extracted from Electrowetting-on-Dielectric Platform. Micromachines, 2022, 13, 507.	2.9	1
92	Design process of a vacuum freeze dryer: Simultaneous endpoint determination using measurement of both temperature and relative humidity. Journal of Food Process Engineering, 2022, 45, .	2.9	1
93	Contactless Micro-Droplet Manipulation of Liquid Released from a Parallel Plate to an Open Region in Electrowetting-on-Dielectric Platform. Micromachines, 2022, 13, 898.	2.9	1
94	Optimal Design of Micro Rayleigh-Benard Convection Polymerase Chain Reaction System. , 0, , .		0
95	Preface to Special Topic: Select Papers from the 8th IEEE International Conference on Nano/Molecular Medicine and Engineering Held in Kaohsiung, Taiwan. Biomicrofluidics, 2015, 9, 022301.	2.4	0
96	Bead-based digital microfluidic immunoassay for IL-1Î² detection in embryo culture medium. , 2017, , .		0
97	Cell Detection in Microfluidic System by Terahertz Technique. , 2018, , .		0
98	Low DNA damage sperm sorting with varied viscosities in microfluidic chip. , 2018, , .		0
99	Shapeâ€Mediated Magnetocrystalline Anisotropy and Relaxation Controls by Cobalt Ferrite Coreâ€“Shell Heterostructures for Magnetothermal Penetration Delivery (Adv. Mater. Interfaces 12/2022). Advanced Materials Interfaces, 2022, 9, .	3.7	0