

Lung-Ming Fu

List of Publications by Year in descending order

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148
papers

6,456
citations

71102

41
h-index

74163

75
g-index

151
all docs

151
docs citations

151
times ranked

5774
citing authors

#	ARTICLE	IF	CITATIONS
1	Microfluidic Mixing: A Review. International Journal of Molecular Sciences, 2011, 12, 3263-3287.	4.1	831
2	Passive mixers in microfluidic systems: A review. Chemical Engineering Journal, 2016, 288, 146-160.	12.7	399
3	Rapid prototyping of PMMA microfluidic chips utilizing a CO2 laser. Microfluidics and Nanofluidics, 2010, 9, 1125-1133.	2.2	210
4	Detection methods and applications of microfluidic paper-based analytical devices. TrAC - Trends in Analytical Chemistry, 2018, 107, 196-211.	11.4	194
5	Recent advances and applications of micromixers. Sensors and Actuators B: Chemical, 2018, 259, 677-702.	7.8	190
6	Electrokinetically driven micro flow cytometers with integrated fiber optics for on-line cell/particle detection. Analytica Chimica Acta, 2004, 507, 163-169.	5.4	188
7	Micropumps and biomedical applications – A review. Microelectronic Engineering, 2018, 195, 121-138.	2.4	178
8	Micro-magnetofluidics in microfluidic systems: A review. Sensors and Actuators B: Chemical, 2016, 224, 1-15.	7.8	158
9	MEMS-based gas flow sensors. Microfluidics and Nanofluidics, 2009, 6, 333-346.	2.2	138
10	Microfluidic paper-based analytical devices for environmental analysis of soil, air, ecology and river water. Sensors and Actuators B: Chemical, 2019, 301, 126855.	7.8	125
11	A rapid three-dimensional vortex micromixer utilizing self-rotation effects under low Reynolds number conditions. Journal of Micromechanics and Microengineering, 2005, 15, 935-943.	2.6	110
12	Review and perspectives on microfluidic flow cytometers. Sensors and Actuators B: Chemical, 2018, 266, 26-45.	7.8	104
13	Rapid magnetic microfluidic mixer utilizing AC electromagnetic field. Electrophoresis, 2009, 30, 4179-4186.	2.4	98
14	Electrokinetically driven active micro-mixers utilizing zeta potential variation induced by field effect. Journal of Micromechanics and Microengineering, 2004, 14, 1390-1398.	2.6	94
15	A novel microfluidic mixer utilizing electrokinetic driving forces under low switching frequency. Electrophoresis, 2005, 26, 1814-1824.	2.4	90
16	Microfluidic T-Form Mixer Utilizing Switching Electroosmotic Flow. Analytical Chemistry, 2004, 76, 5265-5272.	6.5	85
17	Electrokinetic Focusing Injection Methods on Microfluidic Devices. Analytical Chemistry, 2003, 75, 1905-1910.	6.5	84
18	Vertical Focusing Device Utilizing Dielectrophoretic Force and Its Application on Microflow Cytometer. Journal of Microelectromechanical Systems, 2004, 13, 923-932.	2.5	84

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19	Microfluidic paper-based platform for whole blood creatinine detection. <i>Chemical Engineering Journal</i> , 2018, 348, 117-124.	12.7	81
20	Microfluidic paper-based chip platform for benzoic acid detection in food. <i>Food Chemistry</i> , 2018, 249, 162-167.	8.2	75
21	An optimal three-dimensional focusing technique for micro-flow cytometers. <i>Microfluidics and Nanofluidics</i> , 2008, 5, 827-836.	2.2	74
22	A MEMS-based Benzene Gas Sensor with a Self-heating WO ₃ Sensing Layer. <i>Sensors</i> , 2009, 9, 2895-2906.	3.8	73
23	Microfluidic synthesis control technology and its application in drug delivery, bioimaging, biosensing, environmental analysis and cell analysis. <i>Chemical Engineering Journal</i> , 2020, 399, 125748.	12.7	73
24	Rapid microfluidic paper-based platform for low concentration formaldehyde detection. <i>Sensors and Actuators B: Chemical</i> , 2018, 255, 3623-3629.	7.8	69
25	Numerical simulation of electrokinetic injection techniques in capillary electrophoresis microchips. <i>Electrophoresis</i> , 2005, 26, 674-686.	2.4	64
26	Application of electrokinetic instability flow for enhanced micromixing in cross-shaped microchannel. <i>Biomedical Microdevices</i> , 2006, 8, 309-315.	2.8	62
27	Numerical analysis of a rapid magnetic microfluidic mixer. <i>Electrophoresis</i> , 2011, 32, 3268-3276.	2.4	60
28	Recent advances in microfluidic paper-based assay devices for diagnosis of human diseases using saliva, tears and sweat samples. <i>Sensors and Actuators B: Chemical</i> , 2021, 342, 130078.	7.8	59
29	Capabilities and limitations of 2-dimensional and 3-dimensional numerical methods in modeling the fluid flow in sudden expansion microchannels. <i>Microfluidics and Nanofluidics</i> , 2006, 3, 13-18.	2.2	55
30	A comprehensive review of micro-distillation methods. <i>Chemical Engineering Journal</i> , 2017, 313, 1509-1520.	12.7	53
31	Microfluidic colorimetric system for nitrite detection in foods. <i>Chemical Engineering Journal</i> , 2020, 398, 125573.	12.7	51
32	Numerical Analysis and Experimental Estimation of a Low-Leakage Injection Technique for Capillary Electrophoresis. <i>Analytical Chemistry</i> , 2003, 75, 5790-5796.	6.5	50
33	Sample preconcentration from dilute solutions on micro/nanofluidic platforms: A review. <i>Electrophoresis</i> , 2018, 39, 289-310.	2.4	50
34	Fabrication and characterization of semicircular detection electrodes for contactless conductivity detector "CE microchips. <i>Electrophoresis</i> , 2006, 27, 5043-5050.	2.4	48
35	Rapid integrated microfluidic paper-based system for sulfur dioxide detection. <i>Chemical Engineering Journal</i> , 2017, 316, 790-796.	12.7	48
36	Microfluidic paper-based chip platform for formaldehyde concentration detection. <i>Chemical Engineering Journal</i> , 2018, 332, 695-701.	12.7	48

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37	A rapid paper-based detection system for determination of human serum albumin concentration. <i>Chemical Engineering Journal</i> , 2018, 352, 241-246.	12.7	48
38	Rapid prototyping of glass-based microfluidic chips utilizing two-pass defocused CO ₂ laser beam method. <i>Microfluidics and Nanofluidics</i> , 2013, 14, 479-487.	2.2	47
39	A rapid DNA digestion system. <i>Biomedical Microdevices</i> , 2007, 9, 277-286.	2.8	45
40	Analysis of geometry effects on band spreading of microchip electrophoresis. <i>Electrophoresis</i> , 2002, 23, 602-612.	2.4	44
41	Variable-volume-injection methods using electrokinetic focusing on microfluidic chips. <i>Journal of Separation Science</i> , 2002, 25, 996-1010.	2.5	43
42	Integrated optical-fiber capillary electrophoresis microchips with novel spin-on-glass surface modification. <i>Biosensors and Bioelectronics</i> , 2004, 20, 83-90.	10.1	43
43	Computational aero-acoustic analysis of a passenger car with a rear spoiler. <i>Applied Mathematical Modelling</i> , 2009, 33, 3661-3673.	4.2	43
44	Multiple injection techniques for microfluidic sample handling. <i>Electrophoresis</i> , 2003, 24, 3026-3032.	2.4	41
45	A high-resolution microflow cytometer with microweir structure. <i>Electrophoresis</i> , 2008, 29, 1874-1880.	2.4	41
46	Rapid glucose concentration detection utilizing disposable integrated microfluidic chip. <i>Microfluidics and Nanofluidics</i> , 2011, 11, 479-487.	2.2	40
47	Distillation and detection of SO ₂ using a microfluidic chip. <i>Lab on A Chip</i> , 2012, 12, 622-626.	6.0	40
48	A PET/paper chip platform for high resolution sulphur dioxide detection in foods. <i>Food Chemistry</i> , 2019, 286, 316-321.	8.2	40
49	Electroosmotic flow of non-Newtonian fluids in a constriction microchannel. <i>Electrophoresis</i> , 2019, 40, 1387-1394.	2.4	40
50	Electrophoresis separation and electrochemical detection on a novel thread-based microfluidic device. <i>Microfluidics and Nanofluidics</i> , 2013, 14, 583-590.	2.2	39
51	Integrated microfluidic paper-based system for determination of whole blood albumin. <i>Sensors and Actuators B: Chemical</i> , 2018, 273, 1091-1097.	7.8	39
52	Micromixer utilizing electrokinetic instability-induced shedding effect. <i>Electrophoresis</i> , 2006, 27, 4982-4990.	2.4	37
53	Microflow cytometer incorporating sequential micro-weir structure for three-dimensional focusing. <i>Microfluidics and Nanofluidics</i> , 2011, 11, 469-478.	2.2	36
54	High-resolution DNA separation in microcapillary electrophoresis chips utilizing double-L injection techniques. <i>Electrophoresis</i> , 2004, 25, 3652-3659.	2.4	33

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55	Rapid circular microfluidic mixer utilizing unbalanced driving force. <i>Biomedical Microdevices</i> , 2007, 9, 43-50.	2.8	33
56	MEMS-based formaldehyde gas sensor integrated with a micro-hotplate. <i>Microsystem Technologies</i> , 2006, 12, 893-898.	2.0	32
57	Design and characterization of MEMS-based flow-rate and flow-direction microsensors. <i>Microfluidics and Nanofluidics</i> , 2009, 6, 363-371.	2.2	32
58	Integrated microfluidic chip for rapid DNA digestion and time-resolved capillary electrophoresis analysis. <i>Biomicrofluidics</i> , 2012, 6, 12818-1281811.	2.4	31
59	Low-voltage driven control in electrophoresis microchips by traveling electric field. <i>Electrophoresis</i> , 2003, 24, 1253-1260.	2.4	30
60	Improving the separation efficiency of DNA biosamples in capillary electrophoresis microchips using high-voltage pulsed DC electric fields. <i>Microfluidics and Nanofluidics</i> , 2008, 5, 403-410.	2.2	30
61	An integrated microfluidic chip for formaldehyde analysis in Chinese herbs. <i>Chemical Engineering Journal</i> , 2014, 244, 422-428.	12.7	30
62	Dispersion control in microfluidic chips by localized zeta potential variation using the field effect. <i>Electrophoresis</i> , 2004, 25, 1879-1887.	2.4	29
63	Double-L injection technique for high performance capillary electrophoresis detection in microfluidic chips. <i>Journal of Micromechanics and Microengineering</i> , 2004, 14, 639-646.	2.6	29
64	Experimental and numerical investigation into microfluidic flow cytometer with 3D hydrodynamic focusing effect and microfluidic weir structure. <i>Electrophoresis</i> , 2009, 30, 2507-2515.	2.4	28
65	Chaotic vortex micromixer utilizing gas pressure driving force. <i>Chemical Engineering Journal</i> , 2013, 214, 1-7.	12.7	28
66	Micro-distillation system for formaldehyde concentration detection. <i>Chemical Engineering Journal</i> , 2016, 304, 419-425.	12.7	28
67	Recent advances in lab-on-paper diagnostic devices using blood samples. <i>Lab on A Chip</i> , 2021, 21, 1433-1453.	6.0	28
68	Design of Interactively Time-Pulsed Microfluidic Mixers in Microchips using Numerical Simulation. <i>Japanese Journal of Applied Physics</i> , 2007, 46, 420-429.	1.5	27
69	Novel continuous particle sorting in microfluidic chip utilizing cascaded squeeze effect. <i>Microfluidics and Nanofluidics</i> , 2009, 7, 499-508.	2.2	27
70	Manipulation of Microparticles Using New Modes of Traveling-Wave-Dielectrophoretic Forces: Numerical Simulation and Experiments. <i>IEEE/ASME Transactions on Mechatronics</i> , 2004, 9, 377-383.	5.8	26
71	Rapid vortex microfluidic mixer utilizing double-heart chamber. <i>Chemical Engineering Journal</i> , 2014, 249, 246-251.	12.7	26
72	Microfluidic colorimetric analysis system for sodium benzoate detection in foods. <i>Food Chemistry</i> , 2021, 345, 128773.	8.2	26

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73	Enhanced sensing characteristics in MEMS-based formaldehyde gas sensors. <i>Microsystem Technologies</i> , 2008, 14, 995-1000.	2.0	25
74	High-performance microfluidic rectifier based on sudden expansion channel with embedded block structure. <i>Biomicrofluidics</i> , 2012, 6, 024108.	2.4	25
75	Microfluidic detection platform with integrated micro-spectrometer system. <i>Chemical Engineering Journal</i> , 2020, 393, 124700.	12.7	25
76	A microcantilever-based gas flow sensor for flow rate and direction detection. <i>Microsystem Technologies</i> , 2009, 15, 1201-1205.	2.0	24
77	Experimental and numerical investigation into the joule heating effect for electrokinetically driven microfluidic chips utilizing total internal reflection fluorescence microscopy. <i>Microfluidics and Nanofluidics</i> , 2009, 6, 499-507.	2.2	24
78	Lab-on-Paper Devices for Diagnosis of Human Diseases Using Urine Samples—A Review. <i>Biosensors</i> , 2021, 11, 260.	4.7	24
79	Levels of Phthalates, Bisphenol-A, Nonylphenol, and Microplastics in Fish in the Estuaries of Northern Taiwan and the Impact on Human Health. <i>Toxics</i> , 2021, 9, 246.	3.7	24
80	Design and Analysis of Impedance Pumps Utilizing Electromagnetic Actuation. <i>Sensors</i> , 2010, 10, 4040-4052.	3.8	23
81	Integrated microfluidic array chip and LED photometer system for sulfur dioxide and methanol concentration detection. <i>Chemical Engineering Journal</i> , 2014, 243, 421-427.	12.7	22
82	Experimental and numerical analysis of the geometry effects of low-dispersion turns in microfluidic systems. <i>Journal of Micromechanics and Microengineering</i> , 2005, 15, 377-385.	2.6	20
83	An integrated microfluidic loop-mediated isothermal amplification platform for koi herpesvirus detection. <i>Chemical Engineering Journal</i> , 2018, 334, 1828-1834.	12.7	20
84	Multifunctional microchip-based distillation apparatus I - Steam distillation for formaldehyde detection. <i>Analytica Chimica Acta</i> , 2019, 1062, 94-101.	5.4	20
85	Microfluidic colorimetric detection platform with sliding hybrid PMMA/paper microchip for human urine and blood sample analysis. <i>Talanta</i> , 2021, 231, 122362.	5.5	20
86	Process Optimization of Silver Nanoparticle Synthesis and Its Application in Mercury Detection. <i>Micromachines</i> , 2021, 12, 1123.	2.9	20
87	High performance microfluidic capillary electrophoresis devices. <i>Biomedical Microdevices</i> , 2007, 9, 405-412.	2.8	19
88	A hydrodynamic focusing microchannel based on micro-weir shear lift force. <i>Biomicrofluidics</i> , 2012, 6, 34110.	2.4	19
89	Rapid Paper-Based System for Human Serum Creatinine Detection. <i>Inventions</i> , 2018, 3, 34.	2.5	19
90	Formation of recirculation zones in a sudden expansion microchannel with a rectangular block structure over a wide Reynolds number range. <i>Microfluidics and Nanofluidics</i> , 2012, 12, 213-220.	2.2	18

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91	Multifunctional microchip-based distillation apparatus II - Aerated distillation for sulfur dioxide detection. <i>Analytica Chimica Acta</i> , 2019, 1071, 44-52.	5.4	18
92	Rapid Microfluidic Mixers Utilizing Dispersion Effect and Interactively Time-Pulsed Injection. <i>Japanese Journal of Applied Physics</i> , 2007, 46, 5345.	1.5	17
93	Experimental and numerical investigation into leakage effect in injectors of microfluidic devices. <i>Electrophoresis</i> , 2006, 27, 4991-4998.	2.4	16
94	Convenient quantification of methanol concentration detection utilizing an integrated microfluidic chip. <i>Biomicrofluidics</i> , 2012, 6, 034111.	2.4	16
95	Experimental study of particle electrophoresis in shear-thinning fluids. <i>Physics of Fluids</i> , 2019, 31, .	4.0	15
96	Fabrication and testing of high-performance detection sensor for capillary electrophoresis microchips. <i>Biomedical Microdevices</i> , 2008, 10, 73-80.	2.8	14
97	Rapid electrochemical-biosensor microchip platform for determination of microalbuminuria in CKD patients. <i>Analytica Chimica Acta</i> , 2021, 1146, 70-76.	5.4	14
98	Elasticâ€“plastic modeling of heat-treated bimorph micro-cantilevers. <i>Microsystem Technologies</i> , 2006, 12, 979-986.	2.0	13
99	Microfluidic distillation chip for methanol concentration detection. <i>Analytica Chimica Acta</i> , 2016, 912, 97-104.	5.4	13
100	Rapid microfluidic analysis detection system for sodium dehydroacetate in foods. <i>Chemical Engineering Journal</i> , 2022, 427, 131530.	12.7	13
101	Microfluidic aptasensor POC device for determination of whole blood potassium. <i>Analytica Chimica Acta</i> , 2022, 1203, 339722.	5.4	13
102	Association between Enzyme-Linked Immunosorbent Assay-Measured Kidney Injury Markers and Urinary Cadmium Levels in Chronic Kidney Disease. <i>Journal of Clinical Medicine</i> , 2022, 11, 156.	2.4	13
103	Band spreading control in electrophoresis microchips by localized zeta-potential variation using field-effect. <i>Analyst</i> , 2004, 129, 931.	3.5	12
104	Electrokinetic instability effects in microchannels with and without nanofilm coatings. <i>Electrophoresis</i> , 2008, 29, 4871-4879.	2.4	12
105	Microfluidic flow meter and viscometer utilizing flow-induced vibration on an optic fiber cantilever. , 2011, , .		12
106	Recent Advances in Microfluidic Devices for Contamination Detection and Quality Inspection of Milk. <i>Micromachines</i> , 2021, 12, 558.	2.9	12
107	Novel sliding hybrid microchip detection system for determination of whole blood phosphorus concentration. <i>Chemical Engineering Journal</i> , 2021, 419, 129592.	12.7	12
108	Optimal configuration of capillary electrophoresis microchip with expansion chamber in separation channel. <i>Journal of Chromatography A</i> , 2006, 1121, 120-128.	3.7	11

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109	Optical microflow cytometer based on external total reflection. <i>Electrophoresis</i> , 2012, 33, 3229-3235.	2.4	11
110	Rapid detection of artificial sweeteners in food using microfluidic chromatography detection system. <i>Chemical Engineering Journal</i> , 2021, 425, 131528.	12.7	11
111	Microfluidic rectifier based on poly(dimethylsiloxane) membrane and its application to a micropump. <i>Biomicrofluidics</i> , 2013, 7, 044118.	2.4	7
112	Design of High-resolution Analysis Technique for Capillary Electrophoresis Microchip. <i>Japanese Journal of Applied Physics</i> , 2007, 46, 6865-6870.	1.5	6
113	A Ferrofluidic Magnetic Micropump for Variable-Flow-Rate Applications. <i>Japanese Journal of Applied Physics</i> , 2012, 51, 047201.	1.5	6
114	Design of an Integrated Microfluidic Paper-Based Chip and Inspection Machine for the Detection of Mercury in Food with Silver Nanoparticles. <i>Biosensors</i> , 2021, 11, 491.	4.7	6
115	Microfluidic Sliding Paper-Based Device for Point-of-Care Determination of Albumin-to-Creatine Ratio in Human Urine. <i>Biosensors</i> , 2022, 12, 496.	4.7	6
116	Particle analysis and differentiation using a photovoltaic cell. <i>Journal of Micromechanics and Microengineering</i> , 2012, 22, 105023.	2.6	5
117	A microcantilever-based gas flow sensor for flow rate and direction detection. , 2008, , .		4
118	Experimental and Numerical Analysis of High-Resolution Injection Technique for Capillary Electrophoresis Microchip. <i>International Journal of Molecular Sciences</i> , 2011, 12, 3594-3605.	4.1	4
119	Capillary electrophoresis electrochemical (CE-EC) detection on a novel thread-based microfluidic device with 3D sensing electrodes. , 2012, , .		4
120	Particles small angle forward-scattered light measurement based on photovoltaic cell microflow cytometer. <i>Electrophoresis</i> , 2014, 35, 337-344.	2.4	4
121	Rapid Fabrication of Glass-Based Microfluidic Chips Utilizing a Femtosecond Laser. <i>Advanced Science Letters</i> , 2012, 8, 416-420.	0.2	4
122	A Ferrofluidic Magnetic Micropump for Variable-Flow-Rate Applications. <i>Japanese Journal of Applied Physics</i> , 2012, 51, 047201.	1.5	4
123	Effect of Substrate-Thickness on Voltage Responsivity of MEMS-Based ZnO Pyroelectric Infrared Sensors. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 9074.	2.5	3
124	An Integrated Microfluidic Chip for Rapid Methanol Detection. <i>International Journal of Automation and Smart Technology</i> , 2012, 2, 21-27.	0.4	3
125	MÑ—N micro flow switches using electrokinetic forces. , 0, , .		2
126	A low-leakage sample plug injection scheme for crossform microfluidic capillary electrophoresis devices incorporating a restricted cross-channel intersection. <i>Electrophoresis</i> , 2008, 29, 3135-3144.	2.4	2

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127	Numerical Simulation of Electromagnetic Actuator for Impedance Pumping. Key Engineering Materials, 0, 483, 305-310.	0.4	2
128	Design and Fabrication of PDMS/PMMA-Based Rotary Micropump. Applied Mechanics and Materials, 0, 829, 29-34.	0.2	2
129	Electrokinetic Sample Injection. , 2014, , 1-10.		2
130	Low azeotropic solvent sealing of PMMA microfluidic devices. , 0, , .		1
131	A Novel Microfabricated Formaldehyde Gas Sensor with NiO Thin Film. , 2005, , .		1
132	Magnetic Microfluidic Mixer. Key Engineering Materials, 2011, 483, 354-358.	0.4	1
133	Design and Application of MEMS-Based Hall Sensor Array for Magnetic Field Mapping. Micromachines, 2021, 12, 299.	2.9	1
134	Electromagnetic Actuator Utilizing Magnetic Film of Electroplated Alloy and Its Application to Valveless Pumps. Advanced Science Letters, 2012, 14, 244-248.	0.2	1
135	Experimental and Numerical Investigation into Mixing Efficiency of Micromixers with Different Geometric Barriers. Materials Science Forum, 0, , 391-396.	0.3	1
136	A novel dispersion control in CE chips by /spl seta/-potential variation using field-effect. , 0, , .		0
137	A novel pinched-switching T-form mixer for fast DNA digestion. , 0, , .		0
138	Continuous Particle Sorting Utilizing Cascade Squeeze-Jumping Effect Under Microfluidic Configuration. , 0, , .		0
139	Experimental and numerical investigations into high-voltage pulsed DC electric fields for enhancing CE chip performance. , 2009, , .		0
140	Novel flow cytometrer utilizing wavelength-resolved detection under a diasopic illumination configuration. , 2010, , .		0
141	High performance microfluidic rectifier utilizing self-induced virtual valves in a sudden expansion channel with a block structure. , 2010, , .		0
142	Rapid Detection of Methanol in an Integration Microfluidic Chip. Key Engineering Materials, 2011, 483, 364-369.	0.4	0
143	A micro gas sensor based on a WO$\times 3$ thin film for aromatic hydrocarbon detection. , 2011, , .		0
144	Three-dimensional focusing for microflow cytometer with sequence micro-weir structures. , 2011, , .		0

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145	Electrical current measurement based on Joule heating of micro-resistors. , 2011, , .		0
146	Design and Fabrication of Micro Oxygen Sensor. Key Engineering Materials, 0, 483, 237-242.	0.4	0
147	Rapid Microfluidic Biochips Fabrication by Femtosecond Laser on Glass Substrate. Key Engineering Materials, 2011, 483, 359-363.	0.4	0
148	MEMS-based humidity sensor based on thiol-coated gold nanoparticles. , 2014, , .		0