

Hyo-Il Jung

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/5972561/publications.pdf>

Version: 2024-02-01

113
papers

4,151
citations

109321

35
h-index

128289

60
g-index

114
all docs

114
docs citations

114
times ranked

5858
citing authors

#	ARTICLE	IF	CITATIONS
1	Continuous separation of breast cancer cells from blood samples using multi-orifice flow fractionation (MOFF) and dielectrophoresis (DEP). <i>Lab on A Chip</i> , 2011, 11, 1118.	6.0	389
2	Epithelial-to-mesenchymal transition leads to loss of EpCAM and different physical properties in circulating tumor cells from metastatic breast cancer. <i>Oncotarget</i> , 2016, 7, 24677-24687.	1.8	202
3	Continuous focusing of microparticles using inertial lift force and vorticity via multi-orifice microfluidic channels. <i>Lab on A Chip</i> , 2009, 9, 939-948.	6.0	200
4	A planar split-ring resonator-based microwave biosensor for label-free detection of biomolecules. <i>Sensors and Actuators B: Chemical</i> , 2012, 169, 26-31.	7.8	192
5	Multiorifice Flow Fractionation: Continuous Size-Based Separation of Microspheres Using a Series of Contraction/Expansion Microchannels. <i>Analytical Chemistry</i> , 2009, 81, 8280-8288.	6.5	127
6	ZnO nanowire biosensors for detection of biomolecular interactions in enhancement mode. <i>Sensors and Actuators B: Chemical</i> , 2010, 148, 577-582.	7.8	113
7	Microfluidic flow fractionation device for label-free isolation of circulating tumor cells (CTCs) from breast cancer patients. <i>Biosensors and Bioelectronics</i> , 2013, 40, 206-212.	10.1	113
8	Advances and critical concerns with the microfluidic enrichments of circulating tumor cells. <i>Lab on A Chip</i> , 2014, 14, 45-56.	6.0	109
9	Negative Enrichment of Circulating Tumor Cells Using a Geometrically Activated Surface Interaction Chip. <i>Analytical Chemistry</i> , 2013, 85, 4439-4445.	6.5	89
10	Soft, skin-interfaced microfluidic systems with integrated immunoassays, fluorometric sensors, and impedance measurement capabilities. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 27906-27915.	7.1	84
11	Two-stage microfluidic chip for selective isolation of circulating tumor cells (CTCs). <i>Biosensors and Bioelectronics</i> , 2015, 67, 86-92.	10.1	83
12	A rapid and simple fabrication method for 3-dimensional circular microfluidic channel using metal wire removal process. <i>Microfluidics and Nanofluidics</i> , 2010, 9, 533-540.	2.2	77
13	Real-time measurement of human salivary cortisol for the assessment of psychological stress using a smartphone. <i>Sensing and Bio-Sensing Research</i> , 2014, 2, 8-11.	4.2	74
14	Isolation and enrichment of circulating biomarkers for cancer screening, detection, and diagnostics. <i>Analyst</i> , 2016, 141, 382-392.	3.5	74
15	An integrated microfluidic chip for one-step isolation of circulating tumor cells. <i>Sensors and Actuators B: Chemical</i> , 2017, 238, 1144-1150.	7.8	74
16	Detection of Apoptosis Using the C2A Domain of Synaptotagmin I. <i>Bioconjugate Chemistry</i> , 2004, 15, 983-987.	3.6	72
17	Smart Forensic Phone: Colorimetric analysis of a bloodstain for age estimation using a smartphone. <i>Sensors and Actuators B: Chemical</i> , 2017, 243, 221-225.	7.8	72
18	DNA replication licensing in somatic and germ cells. <i>Journal of Cell Science</i> , 2004, 117, 5875-5886.	2.0	67

#	ARTICLE	IF	CITATIONS
19	Detachable microfluidic device implemented with electrochemical aptasensor (DeMEA) for sequential analysis of cancerous exosomes. <i>Biosensors and Bioelectronics</i> , 2020, 169, 112622.	10.1	66
20	Continual collection and re-separation of circulating tumor cells from blood using multi-stage multi-orifice flow fractionation. <i>Biomicrofluidics</i> , 2013, 7, 14105.	2.4	63
21	Microfluidic devices for the isolation of circulating rare cells: A focus on affinity-based, dielectrophoresis, and hydrophoresis. <i>Electrophoresis</i> , 2013, 34, 1028-1041.	2.4	57
22	Asymmetric split-ring resonator-based biosensor for detection of label-free stress biomarkers. <i>Applied Physics Letters</i> , 2013, 103, .	3.3	56
23	A microfluidic ATP-bioluminescence sensor for the detection of airborne microbes. <i>Sensors and Actuators B: Chemical</i> , 2008, 132, 443-448.	7.8	54
24	Dielectrophoretic Separation of Airborne Microbes and Dust Particles Using a Microfluidic Channel for Real-Time Bioaerosol Monitoring. <i>Environmental Science & Technology</i> , 2009, 43, 5857-5863.	10.0	53
25	Multistage-multiorifice flow fractionation (MS-MOFF): continuous size-based separation of microspheres using multiple series of contraction/expansion microchannels. <i>Lab on A Chip</i> , 2011, 11, 93-99.	6.0	53
26	An impedimetric biosensor for real-time monitoring of bacterial growth in a microbial fermentor. <i>Sensors and Actuators B: Chemical</i> , 2009, 138, 270-277.	7.8	49
27	Optimization of microscale vortex generators in a microchannel using advanced response surface method. <i>International Journal of Heat and Mass Transfer</i> , 2011, 54, 118-125.	4.8	48
28	A symmetric metamaterial element-based RF biosensor for rapid and label-free detection. <i>Applied Physics Letters</i> , 2011, 99, .	3.3	46
29	Electrochemical biosensor for nucleic acid amplification-free and sensitive detection of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) RNA via CRISPR/Cas13a trans-cleavage reaction. <i>Biosensors and Bioelectronics</i> , 2022, 201, 113960.	10.1	46
30	Thermodynamic analysis of the binding of component enzymes in the assembly of the pyruvate dehydrogenase multienzyme complex of <i>Bacillus stearothermophilus</i> . <i>Protein Science</i> , 2002, 11, 1091-1100.	7.6	44
31	Continuous labeling of circulating tumor cells with microbeads using a vortex micromixer for highly selective isolation. <i>Biosensors and Bioelectronics</i> , 2013, 40, 63-67.	10.1	40
32	Graphene-Iodine Nanocomposites: Highly Potent Bacterial Inhibitors that are Bio-compatible with Human Cells. <i>Scientific Reports</i> , 2016, 6, 20015.	3.3	38
33	A photothermal biosensor for detection of C-reactive protein in human saliva. <i>Sensors and Actuators B: Chemical</i> , 2017, 246, 471-476.	7.8	38
34	Salivary Exosome and Cell-Free DNA for Cancer Detection. <i>Micromachines</i> , 2018, 9, 340.	2.9	38
35	A microfluidic electrochemical aptasensor for enrichment and detection of bisphenol A.. <i>Biosensors and Bioelectronics</i> , 2018, 117, 457-463.	10.1	36
36	Mechanical detection of liposomes using piezoresistive cantilever. <i>Sensors and Actuators B: Chemical</i> , 2006, 117, 415-419.	7.8	35

#	ARTICLE	IF	CITATIONS
37	Progress in Circulating Tumor Cell Research Using Microfluidic Devices. <i>Micromachines</i> , 2018, 9, 353.	2.9	32
38	Electromagnetic microfluidic cell labeling device using on-chip microelectromagnet and multi-layered channels. <i>Sensors and Actuators B: Chemical</i> , 2009, 141, 210-216.	7.8	30
39	Single-cell assay on CD-like lab chip using centrifugal massive single-cell trap. <i>Sensors and Actuators A: Physical</i> , 2008, 143, 64-69.	4.1	29
40	Highly sensitive paper-based immunoassay using photothermal laser speckle imaging. <i>Biosensors and Bioelectronics</i> , 2018, 117, 385-391.	10.1	29
41	Multi-miRNA panel of tumor-derived extracellular vesicles as promising diagnostic biomarkers of early-stage breast cancer. <i>Cancer Science</i> , 2021, 112, 5078-5087.	3.9	29
42	All-in-one platform for salivary cotinine detection integrated with a microfluidic channel and an electrochemical biosensor. <i>Lab on A Chip</i> , 2020, 20, 320-331.	6.0	28
43	Degradation of Kidney and Psoas Muscle Proteins as Indicators of Post-Mortem Interval in a Rat Model, with Use of Lateral Flow Technology. <i>PLoS ONE</i> , 2016, 11, e0160557.	2.5	26
44	Identification of Key Amino Acid Residues in the Assembly of Enzymes into the Pyruvate Dehydrogenase Complex of <i>Bacillus stearothermophilus</i> : A Kinetic and Thermodynamic Analysis. <i>Biochemistry</i> , 2002, 41, 10446-10453.	2.5	25
45	A high-Q resonator using biocompatible materials at microwave frequencies. <i>Applied Physics Letters</i> , 2014, 104, .	3.3	25
46	Continuous enrichment of circulating tumor cells using a microfluidic lateral flow filtration chip. <i>Journal of Chromatography A</i> , 2015, 1377, 100-105.	3.7	24
47	Quantitative analysis of sialic acid on erythrocyte membranes using a photothermal biosensor. <i>Biosensors and Bioelectronics</i> , 2012, 35, 484-488.	10.1	23
48	Smartphone Diagnostics Unit (SDU) for the assessment of human stress and inflammation level assisted by biomarker ink, fountain pen, and origami holder for strip biosensor. <i>Sensors and Actuators B: Chemical</i> , 2017, 241, 80-84.	7.8	23
49	Direct pattern formation of bacterial cells using micro-droplets generated by electrohydrodynamic forces. <i>Microfluidics and Nanofluidics</i> , 2009, 7, 829-839.	2.2	22
50	Solid-medium-integrated impedimetric biosensor for real-time monitoring of microorganisms. <i>Sensors and Actuators B: Chemical</i> , 2009, 137, 357-362.	7.8	22
51	Smart Fatigue Phone: Real-time estimation of driver fatigue using smartphone-based cortisol detection. <i>Biosensors and Bioelectronics</i> , 2019, 136, 106-111.	10.1	22
52	Highly sensitive and accurate estimation of bloodstain age using smartphone. <i>Biosensors and Bioelectronics</i> , 2019, 130, 414-419.	10.1	22
53	Microfluidic chip for rapid and selective isolation of tumor-derived extracellular vesicles for early diagnosis and metastatic risk evaluation of breast cancer. <i>Biosensors and Bioelectronics</i> , 2021, 192, 113495.	10.1	22
54	Site-directed mutagenesis of a loop at the active site of E1 ($\hat{1}\pm 2\hat{1}^2$) of the pyruvate dehydrogenase complex. <i>FEBS Journal</i> , 2003, 270, 861-870.	0.2	21

#	ARTICLE	IF	CITATIONS
55	Direct measurement of the in vitro hemoglobin content of erythrocytes using the photo-thermal effect of the heme group. <i>Analyst, The</i> , 2010, 135, 2365.	3.5	21
56	Review of Recent Progress in Micro-Systems for the Detection and Analysis of Airborne Microorganisms. <i>Analytical Letters</i> , 2012, 45, 113-129.	1.8	21
57	High-throughput microfluidic chip for magnetic enrichment and photothermal DNA extraction of foodborne bacteria. <i>Sensors and Actuators B: Chemical</i> , 2019, 294, 62-68.	7.8	21
58	Chronic Low-Dose Nonylphenol or Di-(2-ethylhexyl) Phthalate has a Different Estrogen-like Response in Mouse Uterus. <i>Development & Reproduction</i> , 2018, 22, 379-391.	0.4	20
59	Circulating Tumor Cells: Detection Methods and Potential Clinical Application in Breast Cancer. <i>Journal of Breast Cancer</i> , 2010, 13, 125.	1.9	20
60	A highly sensitive and label free biosensing platform for wireless sensor node system. <i>Biosensors and Bioelectronics</i> , 2013, 50, 362-367.	10.1	19
61	Sites of limited proteolysis in the pyruvate decarboxylase component of the pyruvate dehydrogenase multienzyme complex of <i>Bacillus stearothermophilus</i> and their role in catalysis. <i>FEBS Journal</i> , 2000, 267, 7158-7169.	0.2	18
62	Dual thermopile integrated microfluidic calorimeter for biochemical thermodynamics. <i>Microfluidics and Nanofluidics</i> , 2008, 5, 255-262.	2.2	18
63	Application of spectral SPR imaging for the surface analysis of C-reactive protein binding. <i>Sensors and Actuators B: Chemical</i> , 2006, 119, 673-675.	7.8	17
64	Novel application of Joule heating to maintain biocompatible temperatures in a fully integrated electromagnetic cell sorting system. <i>Sensors and Actuators A: Physical</i> , 2009, 151, 64-70.	4.1	17
65	Mobile diagnostics: next-generation technologies for <i>in vitro</i> diagnostics. <i>Analyst, The</i> , 2018, 143, 1515-1525.	3.5	17
66	Automatically Controlled Microfluidic System for Continuous Separation of Rare Bacteria from Blood. <i>Cytometry Part A: the Journal of the International Society for Analytical Cytology</i> , 2019, 95, 1135-1144.	1.5	17
67	Separation of apoptotic cells using a microfluidic device. <i>Biotechnology Letters</i> , 2007, 29, 1659-1663.	2.2	16
68	Emotion-on-a-chip (EOC): Evolution of biochip technology to measure human emotion using body fluids. <i>Medical Hypotheses</i> , 2012, 79, 827-832.	1.5	16
69	Biochip technology for monitoring posttraumatic stress disorder (PTSD). <i>Biochip Journal</i> , 2013, 7, 195-200.	4.9	16
70	A microfluidic magnetic bead impact generator for physical stimulation of osteoblast cell. <i>Electrophoresis</i> , 2010, 31, 2762-2770.	2.4	15
71	On-chip isolation and enrichment of circulating cell-free DNA using microfluidic device. <i>Biomicrofluidics</i> , 2019, 13, 024113.	2.4	15
72	Disturbing Effects of Chronic Low-dose 4-Nonylphenol exposing on Gonadal Weight and Reproductive Outcome over One-generation. <i>Development & Reproduction</i> , 2017, 21, 121-130.	0.4	15

#	ARTICLE	IF	CITATIONS
73	Nonmonotonic Effects of Chronic Low-Dose Di(2-ethylhexyl) Phthalate on Gonadal Weight and Reproductive. <i>Development & Reproduction</i> , 2018, 22, 85-94.	0.4	15
74	Real-time detection of food-borne bacterial adenosine triphosphate (ATP) using dielectrophoretic force and a bioluminescence sensor. <i>Mikrochimica Acta</i> , 2010, 170, 283-288.	5.0	14
75	Microfluidic device to separate micro-beads with various fluorescence intensities. <i>Sensors and Actuators B: Chemical</i> , 2011, 160, 1536-1543.	7.8	14
76	Diagnosis of diabetes mellitus using sialic acid expression of erythrocyte and a microfluidic resistive temperature detector (micro-RTD). <i>Sensors and Actuators B: Chemical</i> , 2014, 191, 305-312.	7.8	14
77	Photothermal spectral-domain optical coherence reflectometry for direct measurement of hemoglobin concentration of erythrocytes. <i>Biosensors and Bioelectronics</i> , 2014, 57, 59-64.	10.1	14
78	Economical and rapid manufacturing of lateral flow immunosensor using fountain pens and gold colloidal solution. <i>Analytical Methods</i> , 2015, 7, 1834-1842.	2.7	14
79	Interactions of the peripheral subunit-binding domain of the dihydrolipoyl acetyltransferase component in the assembly of the pyruvate dehydrogenase multienzyme complex of <i>Bacillus stearothermophilus</i> . <i>FEBS Journal</i> , 2003, 270, 4488-4496.	0.2	13
80	Kojyl cinnamate ester derivatives promote adiponectin production during adipogenesis in human adipose tissue-derived mesenchymal stem cells. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2014, 24, 2141-2145.	2.2	13
81	Continuous adsorption and photothermal lysis of airborne bacteria using a gold-nanoparticle-embedded-geometrically activated surface interaction (gold-GASI) chip.. <i>Sensors and Actuators B: Chemical</i> , 2017, 248, 580-588.	7.8	13
82	Salivary biomarkers in oral squamous cell carcinoma. <i>Journal of the Korean Association of Oral and Maxillofacial Surgeons</i> , 2020, 46, 301-312.	0.8	13
83	A simple and direct biomolecule detection scheme based on a microwave resonator. <i>Sensors and Actuators B: Chemical</i> , 2008, 130, 823-828.	7.8	12
84	An integrated photo-thermal sensing system for rapid and direct diagnosis of anemia. <i>Biosensors and Bioelectronics</i> , 2010, 26, 1679-1683.	10.1	12
85	Microfluidic recapitulation of circulating tumor cell-neutrophil clusters via double spiral channel-induced deterministic encapsulation. <i>Lab on A Chip</i> , 2021, 21, 3483-3497.	6.0	12
86	Ultrasensitive detection and risk assessment of di(2-ethylhexyl) phthalate migrated from daily-use plastic products using a nanostructured electrochemical aptasensor. <i>Sensors and Actuators B: Chemical</i> , 2022, 357, 131381.	7.8	12
87	The opposite effect of isotype-selective monoamine oxidase inhibitors on adipogenesis in human bone marrow mesenchymal stem cells. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2013, 23, 3273-3276.	2.2	11
88	Si-type Si-nanowire-based Field-effect Transistors for Electric Detection of a Biomarker: Matrix Metalloproteinase-9. <i>Journal of the Korean Physical Society</i> , 2009, 55, 232-235.	0.7	11
89	Signal amplification in a microfluidic paper-based analytical device (μ -PAD) by confinement of the fluidic flow. <i>Biochip Journal</i> , 2015, 9, 116-123.	4.9	10
90	Simple ultrasensitive electrochemical detection of the DBP plasticizer for the risk assessment of South Korean river waters. <i>Analyst</i> , 2022, 147, 3525-3533.	3.5	9

#	ARTICLE	IF	CITATIONS
91	A modular microfluidic platform for serial enrichment and harvest of pure extracellular vesicles. <i>Analyst</i> , The, 2022, 147, 1117-1127.	3.5	8
92	Effects of PDMS curing ratio and 3D micro-pyramid structure on the formation of an in vitro neural network. <i>Current Applied Physics</i> , 2009, 9, e294-e297.	2.4	7
93	Bi nanowire-based thermal biosensor for the detection of salivary cortisol using the Thomson effect. <i>Applied Physics Letters</i> , 2013, 103, 143114.	3.3	6
94	Enrichment of circulating tumor cells using a centrifugal affinity plate system. <i>Journal of Chromatography A</i> , 2014, 1373, 25-30.	3.7	6
95	Prediction of the binding site on E1 in the assembly of the pyruvate dehydrogenase multienzyme complex of <i>Bacillus stearothermophilus</i> . <i>FEBS Letters</i> , 2003, 555, 405-410.	2.8	5
96	Physical stimulation of mammalian cells using micro-bead impact within a microfluidic environment to enhance growth rate. <i>Microfluidics and Nanofluidics</i> , 2009, 6, 131-138.	2.2	5
97	Analysis and utilization of Joule heating in an electromagnet integrated microfluidic device for biological applications. <i>Current Applied Physics</i> , 2009, 9, e287-e290.	2.4	5
98	A cost-effective and sensitive photothermal biosensor for the diagnosis of diabetes based on quantifying the sialic acid content on erythrocytes. <i>Sensors and Actuators B: Chemical</i> , 2021, 329, 129259.	7.8	5
99	Fully Automated System for Rapid Enrichment and Precise Detection of Enterobacteria Using Magneto-Electrochemical Impedance Measurements. <i>Biochip Journal</i> , 2021, 15, 233-242.	4.9	5
100	Structural basis for the presence of a monoglucosylated oligosaccharide in mature glycoproteins. <i>Biochemical and Biophysical Research Communications</i> , 2005, 331, 100-106.	2.1	4
101	Highly sensitive spin valve devices for chip cytometers. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2009, 206, 1636-1640.	1.8	4
102	Microfluidic sorting of fluorescently activated cells depending on gene expression level. <i>Electrophoresis</i> , 2013, 34, 3103-3110.	2.4	4
103	Direct Force Measurement of the Interaction Between Liposome and the C2A Domain of Synaptotagmin I using Atomic Force Microscopy. <i>Biotechnology Letters</i> , 2006, 28, 505-509.	2.2	3
104	Relationship analysis of speech communication between salivary cortisol levels and personal characteristics using the Smartphone Linked Stress Measurement (SLSM). <i>Biochip Journal</i> , 2017, 11, 101-107.	4.9	3
105	Circulating miR-122-5p and miR-375 as Potential Biomarkers for Bone Mass Recovery after Parathyroidectomy in Patients with Primary Hyperparathyroidism: A Proof-of-Concept Study. <i>Diagnostics</i> , 2021, 11, 1704.	2.6	3
106	Label-free detection of protein-protein interactions on multi-scale micro-well arrays using spatial light modulator. <i>Applied Physics Letters</i> , 2014, 105, .	3.3	2
107	High-throughput detection of human salivary cortisol using a multiple optical probe based scanning system with micro-optics and nanograting coupled label-free microarray. <i>Sensors and Actuators B: Chemical</i> , 2016, 233, 520-527.	7.8	2
108	Single cell assay on cd-like lab chip using centrifugal single cell trap. , 2007, , .		1

#	ARTICLE	IF	CITATIONS
109	Manipulation of Phospholiposome in Microfluidic Channel Using Lorentz Force. , 2007, , .		1
110	Microfluidic ATP-Bioluminescence Sensor for Detection of Airborne Microbe. , 2007, , .		1
111	Dual Micro-Thermopile Based Biocalorimeter for Enzyme-Substrate Reaction. , 2007, , .		1
112	Micro cell analysis device using cellular photothermal effect and thermal sensor. , 2009, , .		0
113	Smart forensic kit: Real-time estimation of postmortem interval using a highly sensitive gas sensor for microbial forensics. Sensors and Actuators B: Chemical, 2020, 322, 128612.	7.8	0