

P Ravi Selvaganapathy

List of Publications by Year in descending order

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122
papers

2,812
citations

201385

27
h-index

214527

47
g-index

129
all docs

129
docs citations

129
times ranked

3733
citing authors

#	ARTICLE	IF	CITATIONS
1	A Review on Macroscale and Microscale Cell Lysis Methods. <i>Micromachines</i> , 2017, 8, 83.	1.4	293
2	Microfabricated Reference Electrodes and their Biosensing Applications. <i>Sensors</i> , 2010, 10, 1679-1715.	2.1	248
3	Polymer integration for packaging of implantable sensors. <i>Sensors and Actuators B: Chemical</i> , 2014, 202, 758-778.	4.0	136
4	Electrotaxis of <i>Caenorhabditis elegans</i> in a microfluidic environment. <i>Lab on A Chip</i> , 2010, 10, 220-226.	3.1	121
5	Electrical sorting of <i>Caenorhabditis elegans</i> . <i>Lab on A Chip</i> , 2012, 12, 1831.	3.1	72
6	Raman Spectroscopy for In-Line Water Quality Monitoring—Instrumentation and Potential. <i>Sensors</i> , 2014, 14, 17275-17303.	2.1	71
7	Haloperidol-loaded intranasally administered lectin functionalized poly(ethylene Terephthalate) for the treatment of schizophrenia. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , 2014, 87, 30-39.	2.0	70
8	Inkjet-printed bifunctional carbon nanotubes for pH sensing. <i>Materials Letters</i> , 2016, 176, 68-70.	1.3	58
9	3D bioprinting of heterogeneous bi- and tri-layered hollow channels within gel scaffolds using scalable multi-axial microfluidic extrusion nozzle. <i>Biofabrication</i> , 2019, 11, 015012.	3.7	55
10	Polyurethane-based microfluidic devices for blood contacting applications. <i>Lab on A Chip</i> , 2012, 12, 960.	3.1	53
11	An Integrated Array of Microfluidic Oxygenators as a Neonatal Lung Assist Device: In Vitro Characterization and In Vivo Demonstration. <i>Artificial Organs</i> , 2014, 38, 856-866.	1.0	51
12	Fluid Dynamics and Biofilm Removal Generated by Syringe-delivered and 2 Ultrasonic-assisted Irrigation Methods: A Novel Experimental Approach. <i>Journal of Endodontics</i> , 2015, 41, 884-889.	1.4	50
13	Microinjection in a microfluidic format using flexible and compliant channels and electroosmotic dosage control. <i>Lab on A Chip</i> , 2009, 9, 3202.	3.1	48
14	A carbon nanotube based resettable sensor for measuring free chlorine in drinking water. <i>Applied Physics Letters</i> , 2015, 106, .	1.5	46
15	Lung assist device: development of microfluidic oxygenators for preterm infants with respiratory failure. <i>Lab on A Chip</i> , 2013, 13, 2641.	3.1	44
16	Multiple modulus silicone elastomers using 3D extrusion printing of low viscosity inks. <i>Additive Manufacturing</i> , 2018, 24, 86-92.	1.7	42
17	All printable snow-based triboelectric nanogenerator. <i>Nano Energy</i> , 2019, 60, 17-25.	8.2	42
18	Suppression of Biofouling on a Permeable Membrane for Dissolved Oxygen Sensing Using a Lubricant-Infused Coating. <i>ACS Sensors</i> , 2019, 4, 687-693.	4.0	41

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19	A microfluidic device for rapid quantification of cell-free DNA in patients with severe sepsis. <i>Lab on A Chip</i> , 2015, 15, 3925-3933.	3.1	39
20	Solid State Sensors for Hydrogen Peroxide Detection. <i>Biosensors</i> , 2021, 11, 9.	2.3	38
21	Development of a Low-Cost Hemin-Based Dissolved Oxygen Sensor With Anti-Biofouling Coating for Water Monitoring. <i>IEEE Sensors Journal</i> , 2014, 14, 3400-3407.	2.4	37
22	Influence of wastewater microbial community on the performance of miniaturized microbial fuel cell biosensor. <i>Bioresource Technology</i> , 2020, 302, 122777.	4.8	36
23	Behavior of <i>Caenorhabditis elegans</i> in alternating electric field and its application to their localization and control. <i>Applied Physics Letters</i> , 2010, 96, 153702.	1.5	34
24	Plasma enhanced bonding of polydimethylsiloxane with parylene and its optimization. <i>Journal of Micromechanics and Microengineering</i> , 2011, 21, 065024.	1.5	32
25	Microfluidic Devices and Their Applications. <i>Springer Handbooks</i> , 2017, , 487-536.	0.3	32
26	An artificial placenta type microfluidic blood oxygenator with double-sided gas transfer microchannels and its integration as a neonatal lung assist device. <i>Biomicrofluidics</i> , 2018, 12, 044101.	1.2	32
27	<i>C. elegans</i> MANF Homolog Is Necessary for the Protection of Dopaminergic Neurons and ER Unfolded Protein Response. <i>Frontiers in Neuroscience</i> , 2018, 12, 544.	1.4	30
28	Surface Modification of PDMS-Based Microfluidic Devices with Collagen Using Polydopamine as a Spacer to Enhance Primary Human Bronchial Epithelial Cell Adhesion. <i>Micromachines</i> , 2021, 12, 132.	1.4	29
29	Design of a flat field concave-grating-based micro-Raman spectrometer for environmental applications. <i>Applied Optics</i> , 2012, 51, 6855.	0.9	28
30	Development of a xurographically fabricated miniaturized low-cost, high-performance microbial fuel cell and its application for sensing biological oxygen demand. <i>Sensors and Actuators B: Chemical</i> , 2020, 304, 127432.	4.0	28
31	Effect of pulse direct current signals on electrotactic movement of nematodes <i>Caenorhabditis elegans</i> and <i>Caenorhabditis briggsae</i> . <i>Biomicrofluidics</i> , 2011, 5, 044116.	1.2	27
32	Reagent-Free Quantification of Aqueous Free Chlorine via Electrical Readout of Colorimetrically Functionalized Pencil Lines. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 20748-20761.	4.0	27
33	Extracellular matrix surface regulates self-assembly of three-dimensional placental trophoblast spheroids. <i>PLoS ONE</i> , 2018, 13, e0199632.	1.1	27
34	Biomimetic collagen-sodium alginate-titanium oxide (TiO ₂) 3D matrix supports differentiated periodontal ligament fibroblasts growth for periodontal tissue regeneration. <i>International Journal of Biological Macromolecules</i> , 2020, 163, 9-18.	3.6	26
35	Pencil-Drawn Chemiresistive Sensor for Free Chlorine in Water. , 2017, 1, 1-4.		25
36	Surface modification of poly(dimethylsiloxane) with a covalent antithrombinâ€“heparin complex for the prevention of thrombosis: use of polydopamine as bonding agent. <i>Journal of Materials Chemistry B</i> , 2015, 3, 6032-6036.	2.9	24

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37	Microfluidic devices for imaging neurological response of <i>Drosophila melanogaster</i> larva to auditory stimulus. <i>Lab on A Chip</i> , 2015, 15, 1116-1122.	3.1	23
38	Low-temperature solution processing of palladium/palladium oxide films and their pH sensing performance. <i>Talanta</i> , 2016, 146, 517-524.	2.9	23
39	An ultra-thin highly flexible microfluidic device for blood oxygenation. <i>Lab on A Chip</i> , 2018, 18, 3780-3789.	3.1	23
40	Steel reinforced composite silicone membranes and its integration to microfluidic oxygenators for high performance gas exchange. <i>Biomicrofluidics</i> , 2018, 12, 014107.	1.2	22
41	A rapid biofabrication technique for self-assembled collagen-based multicellular and heterogeneous 3D tissue constructs. <i>Acta Biomaterialia</i> , 2019, 92, 172-183.	4.1	22
42	Electrochemical growth of high-aspect ratio nanostructured silver chloride on silver and its application to miniaturized reference electrodes. <i>Nanotechnology</i> , 2011, 22, 315601.	1.3	21
43	Electrophoretic Concentration and Electrical Lysis of Bacteria in a Microfluidic Device Using a Nanoporous Membrane. <i>Micromachines</i> , 2017, 8, 45.	1.4	20
44	An ultra-thin, all PDMS-based microfluidic lung assist device with high oxygenation capacity. <i>Biomicrofluidics</i> , 2019, 13, 034116.	1.2	20
45	A microfluidic microinjector for toxicological and developmental studies in <i>Drosophila</i> embryos. <i>Lab on A Chip</i> , 2017, 17, 3898-3908.	3.1	18
46	Rapid and Inexpensive Method for Fabrication and Integration of Electrodes in Microfluidic Devices. <i>Journal of Microelectromechanical Systems</i> , 2019, 28, 597-605.	1.7	18
47	Use of flame activation of surfaces to bond PDMS to variety of substrates for fabrication of multimaterial microchannels. <i>Journal of Micromechanics and Microengineering</i> , 2018, 28, 087001.	1.5	16
48	Chemiresistive detection of silver ions in aqueous media. <i>Sensors and Actuators B: Chemical</i> , 2021, 328, 129023.	4.0	16
49	<i>C. elegans</i> electrotaxis behavior is modulated by heat shock response and unfolded protein response signaling pathways. <i>Scientific Reports</i> , 2021, 11, 3115.	1.6	16
50	Defect Engineering of Graphene to Modulate pH Response of Graphene Devices. <i>Langmuir</i> , 2021, 37, 12163-12178.	1.6	16
51	Microfluidic Reference Electrode with Free-Diffusion Liquid Junction. <i>Journal of the Electrochemical Society</i> , 2013, 160, B177-B183.	1.3	15
52	Silicon Carbide Nanoparticles as an Effective Bioadhesive to Bond Collagen Containing Composite Gel Layers for Tissue Engineering Applications. <i>Advanced Healthcare Materials</i> , 2018, 7, 1701385.	3.9	15
53	Optofluidic Dissolved Oxygen Sensing With Sensitivity Enhancement Through Multiple Reflections. <i>IEEE Sensors Journal</i> , 2019, 19, 10452-10460.	2.4	13
54	Microfluidic blood oxygenators with integrated hollow chambers for enhanced air exchange from all four sides. <i>Journal of Membrane Science</i> , 2020, 596, 117741.	4.1	13

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55	A Pumpless Microfluidic Neonatal Lung Assist Device for Support of Preterm Neonates in Respiratory Distress. <i>Advanced Science</i> , 2020, 7, 2001860.	5.6	13
56	Electrokinetic transport and distribution of antibacterial nanoparticles for endodontic disinfection. <i>International Endodontic Journal</i> , 2020, 53, 1120-1130.	2.3	13
57	Engineering Murine Adipocytes and Skeletal Muscle Cells in Meat-like Constructs Using Self-Assembled Layer-by-Layer Biofabrication: A Platform for Development of Cultivated Meat. <i>Cells Tissues Organs</i> , 2022, 211, 304-312.	1.3	13
58	Characterization of microfluidic clamps for immobilizing and imaging of <i>Drosophila melanogaster</i> larva's central nervous system. <i>Biomicrofluidics</i> , 2017, 11, 034113.	1.2	13
59	Development of Oxygen-Plasma-Surface-Treated UHMWPE Fabric Coated with a Mixture of SiC/Polyurethane for Protection against Puncture and Needle Threats. <i>Fibers</i> , 2019, 7, 46.	1.8	12
60	Rapid and inexpensive method for fabrication of multi-material multi-layer microfluidic devices. <i>Journal of Micromechanics and Microengineering</i> , 2019, 29, 015013.	1.5	12
61	Detection of free chlorine in water using graphene-like carbon based chemiresistive sensors. <i>RSC Advances</i> , 2022, 12, 2485-2496.	1.7	12
62	Use of pressure sensitive adhesives to create flexible ballistic composite laminates from UHMWPE fabric. <i>Composite Structures</i> , 2022, 287, 115362.	3.1	12
63	Surface micromachined PDMS microfluidic devices fabricated using a sacrificial photoresist. <i>Journal of Micromechanics and Microengineering</i> , 2009, 19, 015013.	1.5	11
64	Development of flexible particle-laden elastomeric textiles with improved penetration resistance to hypodermic needles. <i>Materials and Design</i> , 2018, 156, 419-428.	3.3	11
65	A 3D Self-Assembled In Vitro Model to Simulate Direct and Indirect Interactions between Adipocytes and Skeletal Muscle Cells. <i>Advanced Biology</i> , 2020, 4, 2000034.	3.0	11
66	Impact of Surface Adsorption on Metal-Ligand Binding of Phenanthrolines. <i>Journal of Physical Chemistry C</i> , 2021, 125, 21112-21123.	1.5	11
67	Bottom-Up Top-Down Fabrication of Structurally and Functionally Tunable Hierarchical Palladium Materials. <i>Journal of the Electrochemical Society</i> , 2014, 161, D3078-D3086.	1.3	10
68	An automated microfluidic system for screening <i>Caenorhabditis elegans</i> behaviors using electrotaxis. <i>Biomicrofluidics</i> , 2016, 10, 014117.	1.2	10
69	Postnatal dilatation of umbilical cord vessels and its impact on wall integrity: Prerequisite for the artificial placenta. <i>International Journal of Artificial Organs</i> , 2018, 41, 393-399.	0.7	10
70	Facile fabrication of conductive MoS ₂ thin films by sonication in hot water and evaluation of their electrocatalytic performance in the hydrogen evolution reaction. <i>Nanoscale Advances</i> , 2021, 4, 125-137.	2.2	10
71	TiO ₂ nanofibrous interface development for Raman detection of environmental pollutants. <i>Applied Physics Letters</i> , 2012, 101, .	1.5	9
72	Low-cost and versatile integration of microwire electrodes and optical waveguides into silicone elastomeric devices using modified xurographic methods. <i>Microsystems and Nanoengineering</i> , 2017, 3, 17040.	3.4	9

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73	Peroxide-Induced Tuning of the Conductivity of Nanometer-Thick MoS ₂ Films for Solid-State Sensors. <i>ACS Applied Nano Materials</i> , 2020, 3, 10864-10877.	2.4	9
74	Microfluidic Device for Microinjection of <i>Caenorhabditis elegans</i> . <i>Micromachines</i> , 2020, 11, 295.	1.4	9
75	ExCel: combining extrusion printing on cellulose scaffolds with lamination to create <i>in vitro</i> biological models. <i>Biofabrication</i> , 2019, 11, 035002.	3.7	8
76	High-resolution fabrication of nanopatterns by multistep iterative miniaturization of hot-embossed prestressed polymer films and constrained shrinking. <i>Microsystems and Nanoengineering</i> , 2022, 8, 20.	3.4	8
77	Defect Density-Dependent pH Response of Graphene Derivatives: Towards the Development of pH-Sensitive Graphene Oxide Devices. <i>Nanomaterials</i> , 2022, 12, 1801.	1.9	8
78	Robust Chemiresistive Sensor for Continuous Monitoring of Free Chlorine Using Graphene-like Carbon. <i>ACS Sensors</i> , 2018, 3, 451-457.	4.0	7
79	Continuous flow microreactor for protein PEGylation. <i>Biomicrofluidics</i> , 2018, 12, 044114.	1.2	7
80	PHAIR: a biosensor for pH measurement in air-liquid interface cell culture. <i>Scientific Reports</i> , 2021, 11, 3477.	1.6	7
81	A microfluidic printhead with integrated hybrid mixing by sequential injection for multimaterial 3D printing. <i>Additive Manufacturing</i> , 2022, 50, 102559.	1.7	7
82	Reagent-Free Hydrogen Peroxide Sensing Using Carbon Nanotube Chemiresistors with Electropolymerized Crystal Violet. <i>ACS Applied Nano Materials</i> , 2022, 5, 3957-3966.	2.4	7
83	Effect of doping ferrocene in the working fluid of electrohydrodynamic (EHD) micropumps. <i>Microfluidics and Nanofluidics</i> , 2016, 20, 1.	1.0	6
84	Chloroform and desflurane immobilization with recovery of viable <i>Drosophila</i> larvae for confocal imaging. <i>Journal of Insect Physiology</i> , 2019, 117, 103900.	0.9	6
85	Miniaturization of Artificial Lungs toward Portability. <i>Advanced Materials Technologies</i> , 2020, 5, 2000136.	3.0	6
86	Review—Solid State Sensors for Phosphate Detection in Environmental and Medical Diagnostics. <i>Journal of the Electrochemical Society</i> , 2022, 169, 077505.	1.3	6
87	Tissue-in-a-Tube: three-dimensional <i>in vitro</i> tissue constructs with integrated multimodal environmental stimulation. <i>Materials Today Bio</i> , 2020, 7, 100070.	2.6	5
88	Adhesive-Based Fabrication Technique for Culture of Lung Airway Epithelial Cells with Applications in Cell Patterning and Microfluidics. <i>ACS Biomaterials Science and Engineering</i> , 2021, 7, 5301-5314.	2.6	5
89	Graphene-silicon Schottky devices for operation in aqueous environments: Device performance and sensing application. <i>Carbon</i> , 2022, 194, 140-153.	5.4	5
90	Fast and Inexpensive Detection of Bacterial Viability and Drug Effectiveness through Metabolic Monitoring. <i>Sensors</i> , 2016, 16, 1879.	2.1	4

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91	A Bioprinted In Vitro Model for Osteoblast to Osteocyte Transformation by Changing Mechanical Properties of the ECM. <i>Advanced Biology</i> , 2019, 3, 1900126.	3.0	4
92	Hydrogen peroxide chemiresistive detection platform with wide range of detection. , 2019, , .		4
93	ĩ€-SACS: pH Induced Self-Assembled Cell Sheets Without the Need for Modified Surfaces. <i>ACS Biomaterials Science and Engineering</i> , 2020, 6, 5346-5356.	2.6	4
94	Electroplating of Multiple Materials in Parallel Using Patterned Gels with Applications in Electrochemical Sensing. <i>Sensors</i> , 2020, 20, 886.	2.1	4
95	Micro-haemodynamics at the maternalâ€fetal interface: Experimental, theoretical and clinical perspectives. <i>Current Opinion in Biomedical Engineering</i> , 2022, 22, 100387.	1.8	4
96	Tuning the Chemical and Mechanical Properties of Conductive MoS ₂ Thin Films by Surface Modification with Aryl Diazonium Salts. <i>Langmuir</i> , 2022, 38, 3666-3675.	1.6	4
97	Fast and inexpensive detection of bacterial viability and drug resistance through metabolic monitoring. , 2014, , .		3
98	Complete Solid State Dissolved Oxygen Sensor Using Hemin Electrocatalyst and Palladium-Reusable Reference Electrode. <i>IEEE Sensors Journal</i> , 2017, , 1-1.	2.4	3
99	Multi-step proportional miniaturization to sub-micron dimensions using pre-stressed polymer films. <i>Nanoscale Advances</i> , 2020, 2, 5461-5467.	2.2	3
100	10.1063/1.3383223.1. , 2010, , .		3
101	A xurography based rapid prototyping method to fabricate low-cost and high quality metal thin film micropatterns using metal leaves. <i>Materials Today Communications</i> , 2022, 30, 103132.	0.9	3
102	Engineering a Novel Stem Cells from Apical Papilla-Macrophages Organoid for Regenerative Endodontics. <i>Journal of Endodontics</i> , 2022, , .	1.4	3
103	Microfluidic Printheads for Highly Switchable Multimaterial 3D Printing of Soft Materials. <i>Advanced Materials Technologies</i> , 2022, 7, .	3.0	3
104	Microfluidic device for single step measurement of protein C in plasma samples for sepsis prognosis. <i>Lab on A Chip</i> , 2022, 22, 2566-2577.	3.1	3
105	Measurement of periodic micro flows using micro-particle image velocimetry with phase sampling. <i>Microfluidics and Nanofluidics</i> , 2013, 15, 127-135.	1.0	2
106	Stable and reusable electrochemical sensor for continuous monitoring of phosphate in water. , 2014, , .		2
107	Development of a xurographically fabricated miniaturized low-cost, high-performance microbial fuel cell and its application for sensing biological oxygen demand. , 2019, , .		2
108	Deciphering Stem Cell from Apical Papilla - Macrophage Choreography using a Novel 3D Organoid System. <i>Journal of Endodontics</i> , 2022, , .	1.4	2

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109	Integrated microfluidic oxygenator bundles for blood gas exchange in premature infants. , 2012, , .		1
110	A carbon nanotube based resettable sensor for measuring free chlorine in drinking water. , 2014, , .		1
111	Electrical Tweezer for Droplet Transportation, Extraction, Merging and DNA Analysis. Micromachines, 2017, 8, 353.	1.4	1
112	Elution of Artificial Sputum from Swab by Rotating Magnetic Field-Induced Mechanical Impingement. Applied Sciences (Switzerland), 2017, 7, 1255.	1.3	1
113	Tissue Engineering: Silicon Carbide Nanoparticles as an Effective Bioadhesive to Bond Collagen Containing Composite Gel Layers for Tissue Engineering Applications (Adv. Healthcare Mater. 5/2018). Advanced Healthcare Materials, 2018, 7, 1870023.	3.9	1
114	Constrained shrinking of nanoimprinted pre-stressed polymer films to achieve programmable, high-resolution, miniaturized nanopatterns. Nanotechnology, 2021, 32, 505301.	1.3	1
115	Patterned threads as solid-state reagent storage and delivery medium for automated periodic colorimetric monitoring of the environment. Microfluidics and Nanofluidics, 2021, 25, 1.	1.0	1
116	Colorimetric Detection of Heavy Metal Ions Using Superabsorptive Hydrogels and Evaporative Concentration for Water Quality Monitoring. ACS ES&T Water, 2022, 2, 658-666.	2.3	1
117	Single-step measurement of cell-free DNA for sepsis prognosis using a thread-based microfluidic device. Mikrochimica Acta, 2022, 189, 146.	2.5	1
118	Separation of caenorhabditis elegans by electrotaxis in a microdevice. , 2011, , .		0
119	Development of a low cost Hemin based dissolved oxygen sensor with anti-biofouling coating for water monitoring. , 2013, , .		0
120	Microfluidic devices for DNA amplification. , 2019, , 721-763.		0
121	Parallel Electroplating of Multiple Materials Using Patterned Gels for Electrochemical Sensing. , 2019, , .		0
122	Reply to the "Comment on "A Pumpless Microfluidic Neonatal Lung Assist Device for Support of Preterm Neonates in Respiratory Distress" by Li Wang, Fang Li, Zhichun Feng, Yuan Shi. Advanced Science, 2021, 8, 2100831.	5.6	0