Seokheun Choi

List of Publications by Year
in descending order

100 papers	3,423 citations	117571 34 h-index	149623 56 g-index
101 all docs	101 docs citations	101 times ranked	3470 citing authors

#	Article	IF	Citations
1	Microfluidic-based biosensors toward point-of-care detection of nucleic acids and proteins. Microfluidics and Nanofluidics, 2011, 10, 231-247.	1.0	211
2	Paper-based batteries: A review. Biosensors and Bioelectronics, 2014, 54, 640-649.	5.3	207
3	Microscale microbial fuel cells: Advances and challenges. Biosensors and Bioelectronics, 2015, 69, 8-25.	5.3	197
4	A paper-based microbial fuel cell: Instant battery for disposable diagnostic devices. Biosensors and Bioelectronics, 2013, 49, 410-414.	5.3	128
5	A Î¼L-scale micromachined microbial fuel cell having high power density. Lab on A Chip, 2011, 11, 1110.	3.1	126
6	Powering point-of-care diagnostic devices. Biotechnology Advances, 2016, 34, 321-330.	6.0	97
7	A 3D paper-based enzymatic fuel cell for self-powered, low-cost glucose monitoring. Biosensors and Bioelectronics, 2016, 79, 193-197.	5.3	91
8	An origami paper-based bacteria-powered battery. Nano Energy, 2015, 15, 549-557.	8.2	89
9	Optimal biofilm formation and power generation in a micro-sized microbial fuel cell (MFC). Sensors and Actuators A: Physical, 2013, 195, 206-212.	2.0	85
10	A stackable, two-chambered, paper-based microbial fuel cell. Biosensors and Bioelectronics, 2016, 83, 27-32.	5.3	74
11	Methods of reducing non-specific adsorption in microfluidic biosensors. Journal of Micromechanics and Microengineering, 2010, 20, 075015.	1.5	72
12	A microliter-scale microbial fuel cell array for bacterial electrogenic screening. Sensors and Actuators A: Physical, 2013, 201, 532-537.	2.0	69
13	A Single-Use, Self-Powered, Paper-Based Sensor Patch for Detection of Exercise-Induced Hypoglycemia. Micromachines, 2017, 8, 265.	1.4	67
14	Bacteria-powered battery on paper. Physical Chemistry Chemical Physics, 2014, 16, 26288-26293.	1.3	64
15	Flexible and Stretchable Biobatteries: Monolithic Integration of Membraneâ€Free Microbial Fuel Cells in a Single Textile Layer. Advanced Energy Materials, 2018, 8, 1702261.	10.2	64
16	An array of microliter-sized microbial fuel cells generating 100Î¼W of power. Sensors and Actuators A: Physical, 2012, 177, 10-15.	2.0	59
17	Fast and sensitive water quality assessment: A Î¼L-scale microbial fuel cell-based biosensor integrated with an air-bubble trap and electrochemical sensing functionality. Sensors and Actuators B: Chemical, 2016, 226, 191-195.	4.0	59
18	Surface plasmon resonance protein sensor using Vroman effect. Biosensors and Bioelectronics, 2008, 24, 893-899.	5.3	56

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19	A contour-mode film bulk acoustic resonator of high quality factor in a liquid environment for biosensing applications. Applied Physics Letters, 2010, 96, .	1.5	55
20	A micro-sized bio-solar cell for self-sustaining power generation. Lab on A Chip, 2015, 15, 391-398.	3.1	55
21	A Multianode Paper-Based Microbial Fuel Cell: A Potential Power Source for Disposable Biosensors. IEEE Sensors Journal, 2014, 14, 3385-3390.	2.4	53
22	A microfluidic biosensor based on competitive protein adsorption for thyroglobulin detection. Biosensors and Bioelectronics, 2009, 25, 118-123.	5.3	48
23	Self-sustainable, high-power-density bio-solar cells for lab-on-a-chip applications. Lab on A Chip, 2017, 17, 3817-3825.	3.1	47
24	A Papertronic, Onâ€Demand and Disposable Biobattery: Salivaâ€Activated Electricity Generation from Lyophilized Exoelectrogens Preinoculated on Paper. Advanced Materials Technologies, 2017, 2, 1700127.	3.0	47
25	Flexible and stretchable microbial fuel cells with modified conductive and hydrophilic textile. Biosensors and Bioelectronics, 2018, 100, 504-511.	5.3	46
26	A High-Quality-Factor Film Bulk Acoustic Resonator in Liquid for Biosensing Applications. Journal of Microelectromechanical Systems, 2011, 20, 213-220.	1.7	45
27	Self-sustaining, solar-driven bioelectricity generation in micro-sized microbial fuel cell using co-culture of heterotrophic and photosynthetic bacteria. Journal of Power Sources, 2017, 348, 138-144.	4.0	45
28	A paper-based microbial fuel cell array for rapid and high-throughput screening of electricity-producing bacteria. Analyst, The, 2015, 140, 4277-4283.	1.7	43
29	Biopower-on-Skin: Electricity generation from sweat-eating bacteria for self-powered E-Skins. Nano Energy, 2020, 75, 104994.	8.2	43
30	A disposable power source in resource-limited environments: A paper-based biobattery generating electricity from wastewater. Biosensors and Bioelectronics, 2016, 85, 190-197.	5.3	42
31	A 96-well high-throughput, rapid-screening platform of extracellular electron transfer in microbial fuel cells. Biosensors and Bioelectronics, 2020, 162, 112259.	5.3	42
32	Reusable biosensors via in situ electrochemical surface regeneration in microfluidic applications. Biosensors and Bioelectronics, 2009, 25, 527-531.	5.3	37
33	Stepping Toward Selfâ€Powered Papertronics: Integrating Biobatteries into a Single Sheet of Paper. Advanced Materials Technologies, 2017, 2, 1600194.	3.0	37
34	Biopower generation in a microfluidic bio-solar panel. Sensors and Actuators B: Chemical, 2016, 228, 151-155.	4.0	36
35	Merging Electric Bacteria with Paper. Advanced Materials Technologies, 2018, 3, 1800118.	3.0	36
36	A regenerative biosensing surface in microfluidics using electrochemical desorption of short-chain self-assembled monolayer. Microfluidics and Nanofluidics, 2009, 7, 819-827.	1.0	31

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37	A laminar-flow based microbial fuel cell array. Sensors and Actuators B: Chemical, 2017, 243, 292-297.	4.0	31
38	Applications and Technology of Electronic Nose for Clinical Diagnosis. Open Journal of Applied Biosensor, 2013, 02, 39-50.	1.6	30
39	Green Biobatteries: Hybrid Paperâ€“Polymer Microbial Fuel Cells. Advanced Sustainable Systems, 2018, 2, 1800041.	2.7	30
40	A self-charging cyanobacterial supercapacitor. Biosensors and Bioelectronics, 2019, 140, 111354.	5.3	30
41	From Microbial Fuel Cells to Biobatteries: Moving toward Onâ€Demand Micropower Generation for Smallâ€Scale Singleâ€Use Applications. Advanced Materials Technologies, 2019, 4, 1900079.	3.0	29
42	A fully disposable 64-well papertronic sensing array for screening electroactive microorganisms. Nano Energy, 2019, 65, 104026.	8.2	27
43	A simple, inexpensive, and rapid method to assess antibiotic effectiveness against exoelectrogenic bacteria. Biosensors and Bioelectronics, 2020, 168, 112518.	5.3	27
44	Characterization of Electrogenic Gut Bacteria. ACS Omega, 2020, 5, 29439-29446.	1.6	27
45	Bacterial growth and respiration in laminar flow microbial fuel cells. Journal of Renewable and Sustainable Energy, 2014, 6, .	0.8	26
46	Portable, Disposable, Paper-Based Microbial Fuel Cell Sensor Utilizing Freeze-Dried Bacteria for In Situ Water Quality Monitoring. ACS Omega, 2020, 5, 13940-13947.	1.6	26
47	Enhanced biophotoelectricity generation in cyanobacterial biophotovoltaics with intracellularly biosynthesized gold nanoparticles. Journal of Power Sources, 2021, 506, 230251.	4.0	25
48	Electrogenic Bacteria Promise New Opportunities for Powering, Sensing, and Synthesizing. Small, 2022, 18, e2107902.	5.2	25
49	PEDOT:PSS/MnO₂/CNT Ternary Nanocomposite Anodes for Supercapacitive Energy Storage in Cyanobacterial Biophotovoltaics. ACS Applied Energy Materials, 2020, 3, 10224-10233.	2.5	24
50	A Dual-Channel, Interference-Free, Bacteria-Based Biosensor for Highly Sensitive Water Quality Monitoring. IEEE Sensors Journal, 2016, 16, 8672-8677.	2.4	23
51	A paper-based cantilever array sensor: Monitoring volatile organic compounds with naked eye. Talanta, 2016, 158, 57-62.	2.9	23
52	Paper Robotics: Selfâ€Folding, Gripping, and Locomotion. Advanced Materials Technologies, 2020, 5, 1901054.	3.0	22
53	Miniature microbial solar cells to power wireless sensor networks. Biosensors and Bioelectronics, 2021, 177, 112970.	5.3	22
54	An Equipment-Free, Paper-Based Electrochemical Sensor for Visual Monitoring of Glucose Levels in Urine. SLAS Technology, 2019, 24, 499-505.	1.0	21

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55	Biobatteries: From Microbial Fuel Cells to Biobatteries: Moving toward Onâ€Demand Micropower Generation for Smallâ€Scale Singleâ€Use Applications (Adv. Mater. Technol. 7/2019). Advanced Materials Technologies, 2019, 4, 1970039.	3.0	20
56	A sweat-activated, wearable microbial fuel cell for long-term, on-demand power generation. Biosensors and Bioelectronics, 2022, 205, 114128.	5.3	20
57	A Microsized Microbial Solar Cell: A demonstration of photosynthetic bacterial electrogenic capabilities. IEEE Nanotechnology Magazine, 2014, 8, 24-29.	0.9	18
58	A scalable yarn-based biobattery for biochemical energy harvesting in smart textiles. Nano Energy, 2020, 74, 104897.	8.2	18
59	A Portable, Single-Use, Paper-Based Microbial Fuel Cell Sensor for Rapid, On-Site Water Quality Monitoring. Sensors, 2019, 19, 5452.	2.1	17
60	Horizontally structured microbial fuel cells in yarns and woven fabrics for wearable bioenergy harvesting. Journal of Power Sources, 2021, 484, 229271.	4.0	17
61	Spatial Engineering of Microbial Consortium for Longâ€Lasting, Selfâ€Sustaining, and Highâ€Power Generation in a Bacteriaâ€Powered Biobattery. Advanced Energy Materials, 2021, 11, 2100713.	10.2	17
62	Rapid Characterization of Bacterial Electrogenicity Using a Single-Sheet Paper-Based Electrofluidic Array. Frontiers in Bioengineering and Biotechnology, 2017, 5, 44.	2.0	16
63	A miniaturized, self-sustaining, and integrable bio-solar power system. Nano Energy, 2020, 72, 104668.	8.2	16
64	Bioelectricity production from sweat-activated germination of bacterial endospores. Biosensors and Bioelectronics, 2021, 186, 113293.	5.3	16
65	Monitoring protein distributions based on patterns generated by protein adsorption behavior in a microfluidic channel. Lab on A Chip, 2011, 11, 3681.	3.1	14
66	A solid phase bacteria-powered biobattery for low-power, low-cost, internet of Disposable Things. Journal of Power Sources, 2019, 429, 105-110.	4.0	14
67	Monitoring electron and proton diffusion flux through three-dimensional, paper-based, variable biofilm and liquid media layers. Analyst, The, 2015, 140, 5901-5907.	1.7	13
68	Cellular flow in paper-based microfluidics. Sensors and Actuators B: Chemical, 2016, 237, 1021-1026.	4.0	12
69	A whole blood sample-to-answer polymer lab-on-a-chip with superhydrophilic surface toward point-of-care technology. Journal of Pharmaceutical and Biomedical Analysis, 2019, 162, 28-33.	1.4	11
70	A Paper-Based Biological Solar Cell. SLAS Technology, 2020, 25, 75-81.	1.0	11
71	A Disposable, Papertronic Three-Electrode Potentiostat for Monitoring Bacterial Electrochemical Activity. ACS Omega, 2020, 5, 24717-24723.	1.6	11
72	Paper-Supported High-Throughput 3D Culturing, Trapping, and Monitoring of Caenorhabditis Elegans. Micromachines, 2020, 11, 99.	1.4	10

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73	Small-scale, storable paper biobatteries activated via human bodily fluids. Nano Energy, 2022, 97, 107227.	8.2	10
74	Selective Sensing and Imaging of <i>Penicillium italicum</i> Spores and Hyphae Using Carbohydrateâ€"Lectin Interactions. ACS Sensors, 2018, 3, 648-654.	4.0	8
75	Using competitive protein adsorption to measure fibrinogen in undiluted human serum. Applied Physics Letters, 2010, 97, 253701.	1.5	6
76	Effects of light on the performance of electricity-producing bacteria in a miniaturized microbial fuel cell array. Journal of Renewable and Sustainable Energy, 2014, 6, 063110.	0.8	6
77	On-Demand Micro-Power Generation from an Origami-Inspired Paper Biobattery Stack. Batteries, 2018, 4, 14.	2.1	5
78	Plug-and-play modular biobatteries with microbial consortia. Journal of Power Sources, 2022, 535, 231487.	4.0	5
79	Moisture-Responsive Paper Robotics. Journal of Microelectromechanical Systems, 2020, 29, 1049-1053.	1.7	4
80	A portable papertronic sensing system for rapid, high-throughput, and visual screening of bacterial electrogenicity. Biosensors and Bioelectronics, 2020, 165, 112348.	5.3	4
81	Additive Manufacturing of Living Electrodes. Journal of Microelectromechanical Systems, 2020, 29, 1069-1073.	1.7	4
82	Separation of beta-human chorionic gonadotropin from fibrinogen using a MEMS size exclusion chromatography column. Microfluidics and Nanofluidics, 2010, 8, 477-484.	1.0	3
83	A multi-anode paper-based microbial fuel cell for disposable biosensors. , 2013, , .		3
84	A regenerative biosensing surface using electrochemical desorption of self-assembled monolayer in microfluidics. , 2009, , .		2
85	A paper-based bacteria-powered battery having high power generation. , 2014, , .		2
86	A Paper-based Enzymatic Sensor Array for Visual Detection of Glucose Levels in Urine. , 2018, , .		2
87	A Cyanobacterial Artificial Leaf for Simultaneous Carbon Dioxide Reduction and Bioelectricity Generation. , 2020, , .		2
88	A micro-sized microbial solar cell. , 2014, , .		1
89	A miniaturized parallel analyses platform for rapid electrochemical discoveries of microbial activities. , 2014, , .		1
90	A biomicrosystem for simultaneous optical and electrochemical monitoring of electroactive microbial biofilm. , 2015, , .		1

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91	A Portable and Visual Electrobiochemical Sensor for Lactate Monitoring in Sweat. , 2018, , .		1
92	A 3D Printed Cyanobacterial Leaf for Carbon Dioxide Reduction. , 2019, , .		1
93	Flexible and Scalable Biochemical Energy Harvesting: A Yarn-Based Biobattery. , 2019, , .		1
94	Supercapacitive Micro-Bio-Photovoltaics. Journal of Physics: Conference Series, 2019, 1407, 012027.	0.3	1
95	A Papertronic Sensing System for Rapid Visual Screening of Bacterial Electrogenicity. Journal of Physics: Conference Series, 2019, 1407, 012094.	0.3	1
96	Biogenic Palladium Nanoparticles for Improving Bioelectricity Generation in Microbial Fuel Cells. , 2020, , .		1
97	A microfluidic prototype for scaling-up microbial fuel cell systems. , 2015, , .		0
98	A two-channel bacteria-based biosensor for water quality monitoring. , 2015, , .		0
99	3D Bioprinting of Cyanobacteria for Solar-driven Bioelectricity Generation in Resource-limited Environments. , 2018, 2018, 5329-5332.		0
100	A 1-D Yarn-Based Biobattery for Scalable Power Generation in 2-D and 3-D Structured Textiles. Journal of Microelectromechanical Systems, 2020, 29, 1064-1068.	1.7	0