Seokheun Choi

List of Publications by Year
in descending order

100 papers	3,423 citations	117453 34 h-index	149479 56 g-index
101 all docs	101 docs citations	101 times ranked	3470 citing authors

#	Article	IF	Citations
1	Electrogenic Bacteria Promise New Opportunities for Powering, Sensing, and Synthesizing. Small, 2022, 18, e2107902.	5.2	25
2	Small-scale, storable paper biobatteries activated via human bodily fluids. Nano Energy, 2022, 97, 107227.	8.2	10
3	A sweat-activated, wearable microbial fuel cell for long-term, on-demand power generation. Biosensors and Bioelectronics, 2022, 205, 114128.	5.3	20
4	Plug-and-play modular biobatteries with microbial consortia. Journal of Power Sources, 2022, 535, 231487.	4.0	5
5	Horizontally structured microbial fuel cells in yarns and woven fabrics for wearable bioenergy harvesting. Journal of Power Sources, 2021, 484, 229271.	4.0	17
6	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
7	Miniature microbial solar cells to power wireless sensor networks. Biosensors and Bioelectronics, 2021, 177, 112970.	5.3	22
8	Bioelectricity production from sweat-activated germination of bacterial endospores. Biosensors and Bioelectronics, 2021, 186, 113293.	5.3	16
9	Enhanced biophotoelectricity generation in cyanobacterial biophotovoltaics with intracellularly biosynthesized gold nanoparticles. Journal of Power Sources, 2021, 506, 230251.	4.0	25
10	A Paper-Based Biological Solar Cell. SLAS Technology, 2020, 25, 75-81.	1.0	11
11	A simple, inexpensive, and rapid method to assess antibiotic effectiveness against exoelectrogenic bacteria. Biosensors and Bioelectronics, 2020, 168, 112518.	5.3	27
12	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
13	Characterization of Electrogenic Gut Bacteria. ACS Omega, 2020, 5, 29439-29446.	1.6	27
14	A Disposable, Papertronic Three-Electrode Potentiostat for Monitoring Bacterial Electrochemical Activity. ACS Omega, 2020, 5, 24717-24723.	1.6	11
15	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
16	Moisture-Responsive Paper Robotics. Journal of Microelectromechanical Systems, 2020, 29, 1049-1053.	1.7	4
17	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
18	Biopower-on-Skin: Electricity generation from sweat-eating bacteria for self-powered E-Skins. Nano Energy, 2020, 75, 104994.	8.2	43

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19	A portable papertronic sensing system for rapid, high-throughput, and visual screening of bacterial electrogenicity. Biosensors and Bioelectronics, 2020, 165, 112348.	5.3	4
20	A miniaturized, self-sustaining, and integrable bio-solar power system. Nano Energy, 2020, 72, 104668.	8.2	16
21	Additive Manufacturing of Living Electrodes. Journal of Microelectromechanical Systems, 2020, 29, 1069-1073.	1.7	4
22	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
23	Paper-Supported High-Throughput 3D Culturing, Trapping, and Monitoring of Caenorhabditis Elegans. Micromachines, 2020, 11, 99.	1.4	10
24	Paper Robotics: Selfâ€Folding, Gripping, and Locomotion. Advanced Materials Technologies, 2020, 5, 1901054.	3.0	22
25	A Cyanobacterial Artificial Leaf for Simultaneous Carbon Dioxide Reduction and Bioelectricity Generation. , 2020, , .		2
26	Biogenic Palladium Nanoparticles for Improving Bioelectricity Generation in Microbial Fuel Cells. , 2020, , .		1
27	A scalable yarn-based biobattery for biochemical energy harvesting in smart textiles. Nano Energy, 2020, 74, 104897.	8.2	18
28	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
29	A 3D Printed Cyanobacterial Leaf for Carbon Dioxide Reduction. , 2019, , .		1
30	Flexible and Scalable Biochemical Energy Harvesting: A Yarn-Based Biobattery. , 2019, , .		1
31	A fully disposable 64-well papertronic sensing array for screening electroactive microorganisms. Nano Energy, 2019, 65, 104026.	8.2	27
32	A self-charging cyanobacterial supercapacitor. Biosensors and Bioelectronics, 2019, 140, 111354.	5.3	30
33	An Equipment-Free, Paper-Based Electrochemical Sensor for Visual Monitoring of Glucose Levels in Urine. SLAS Technology, 2019, 24, 499-505.	1.0	21
34	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
35	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
36	Supercapacitive Micro-Bio-Photovoltaics. Journal of Physics: Conference Series, 2019, 1407, 012027.	0.3	1

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37	A Papertronic Sensing System for Rapid Visual Screening of Bacterial Electrogenicity. Journal of Physics: Conference Series, 2019, 1407, 012094.	0.3	1
38	A Portable, Single-Use, Paper-Based Microbial Fuel Cell Sensor for Rapid, On-Site Water Quality Monitoring. Sensors, 2019, 19, 5452.	2.1	17
39	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
40	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
41	Flexible and stretchable microbial fuel cells with modified conductive and hydrophilic textile. Biosensors and Bioelectronics, 2018, 100, 504-511.	5.3	46
42	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
43	A Paper-based Enzymatic Sensor Array for Visual Detection of Glucose Levels in Urine. , 2018, , .		2
44	A Portable and Visual Electrobiochemical Sensor for Lactate Monitoring in Sweat. , 2018, , .		1
45	3D Bioprinting of Cyanobacteria for Solar-driven Bioelectricity Generation in Resource-limited Environments. , 2018, 2018, 5329-5332.		0
46	Green Biobatteries: Hybrid Paperâ€“Polymer Microbial Fuel Cells. Advanced Sustainable Systems, 2018, 2, 1800041.	2.7	30
47	On-Demand Micro-Power Generation from an Origami-Inspired Paper Biobattery Stack. Batteries, 2018, 4, 14.	2.1	5
48	Merging Electric Bacteria with Paper. Advanced Materials Technologies, 2018, 3, 1800118.	3.0	36
49	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
50	A laminar-flow based microbial fuel cell array. Sensors and Actuators B: Chemical, 2017, 243, 292-297.	4.0	31
51	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
52	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
53	Stepping Toward Selfâ€Powered Papertronics: Integrating Biobatteries into a Single Sheet of Paper. Advanced Materials Technologies, 2017, 2, 1600194.	3.0	37
54	A Single-Use, Self-Powered, Paper-Based Sensor Patch for Detection of Exercise-Induced Hypoglycemia. Micromachines, 2017, 8, 265.	1.4	67

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55	Rapid Characterization of Bacterial Electrogenicity Using a Single-Sheet Paper-Based Electrofluidic Array. Frontiers in Bioengineering and Biotechnology, 2017, 5, 44.	2.0	16
56	A Dual-Channel, Interference-Free, Bacteria-Based Biosensor for Highly Sensitive Water Quality Monitoring. IEEE Sensors Journal, 2016, 16, 8672-8677.	2.4	23
57	A paper-based cantilever array sensor: Monitoring volatile organic compounds with naked eye. Talanta, 2016, 158, 57-62.	2.9	23
58	A stackable, two-chambered, paper-based microbial fuel cell. Biosensors and Bioelectronics, 2016, 83, 27-32.	5.3	74
59	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
60	A 3D paper-based enzymatic fuel cell for self-powered, low-cost glucose monitoring. Biosensors and Bioelectronics, 2016, 79, 193-197.	5.3	91
61	Powering point-of-care diagnostic devices. Biotechnology Advances, 2016, 34, 321-330.	6.0	97
62	Cellular flow in paper-based microfluidics. Sensors and Actuators B: Chemical, 2016, 237, 1021-1026.	4.0	12
63	Biopower generation in a microfluidic bio-solar panel. Sensors and Actuators B: Chemical, 2016, 228, 151-155.	4.0	36
64	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
65	An origami paper-based bacteria-powered battery. Nano Energy, 2015, 15, 549-557.	8.2	89
66	A microfluidic prototype for scaling-up microbial fuel cell systems. , 2015, , .		0
67	A biomicrosystem for simultaneous optical and electrochemical monitoring of electroactive microbial biofilm. , 2015, , .		1
68	A two-channel bacteria-based biosensor for water quality monitoring. , 2015, , .		0
69	Microscale microbial fuel cells: Advances and challenges. Biosensors and Bioelectronics, 2015, 69, 8-25.	5.3	197
70	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
71	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
72	A micro-sized bio-solar cell for self-sustaining power generation. Lab on A Chip, 2015, 15, 391-398.	3.1	55

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73	Bacterial growth and respiration in laminar flow microbial fuel cells. Journal of Renewable and Sustainable Energy, 2014, 6, .	0.8	26
74	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
75	A micro-sized microbial solar cell. , 2014, , .		1
76	A miniaturized parallel analyses platform for rapid electrochemical discoveries of microbial activities. , 2014, , .		1
77	Paper-based batteries: A review. Biosensors and Bioelectronics, 2014, 54, 640-649.	5.3	207
78	Bacteria-powered battery on paper. Physical Chemistry Chemical Physics, 2014, 16, 26288-26293.	1.3	64
79	A paper-based bacteria-powered battery having high power generation. , 2014, , .		2
80	A Multianode Paper-Based Microbial Fuel Cell: A Potential Power Source for Disposable Biosensors. IEEE Sensors Journal, 2014, 14, 3385-3390.	2.4	53
81	A Microsized Microbial Solar Cell: A demonstration of photosynthetic bacterial electrogenic capabilities. IEEE Nanotechnology Magazine, 2014, 8, 24-29.	0.9	18
82	A paper-based microbial fuel cell: Instant battery for disposable diagnostic devices. Biosensors and Bioelectronics, 2013, 49, 410-414.	5.3	128
83	A microliter-scale microbial fuel cell array for bacterial electrogenic screening. Sensors and Actuators A: Physical, 2013, 201, 532-537.	2.0	69
84	A multi-anode paper-based microbial fuel cell for disposable biosensors. , 2013, , .		3
85	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
86	Applications and Technology of Electronic Nose for Clinical Diagnosis. Open Journal of Applied Biosensor, 2013, 02, 39-50.	1.6	30
87	An array of microliter-sized microbial fuel cells generating 100Î¼W of power. Sensors and Actuators A: Physical, 2012, 177, 10-15.	2.0	59
88	A High-Quality-Factor Film Bulk Acoustic Resonator in Liquid for Biosensing Applications. Journal of Microelectromechanical Systems, 2011, 20, 213-220.	1.7	45
89	A Î¼L-scale micromachined microbial fuel cell having high power density. Lab on A Chip, 2011, 11, 1110.	3.1	126
90	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

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91	Microfluidic-based biosensors toward point-of-care detection of nucleic acids and proteins. Microfluidics and Nanofluidics, 2011, 10, 231-247.	1.0	211
92	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
93	Methods of reducing non-specific adsorption in microfluidic biosensors. Journal of Micromechanics and Microengineering, 2010, 20, 075015.	1.5	72
94	Using competitive protein adsorption to measure fibrinogen in undiluted human serum. Applied Physics Letters, 2010, 97, 253701.	1.5	6
95	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
96	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
97	Reusable biosensors via in situ electrochemical surface regeneration in microfluidic applications. Biosensors and Bioelectronics, 2009, 25, 527-531.	5.3	37
98	A microfluidic biosensor based on competitive protein adsorption for thyroglobulin detection. Biosensors and Bioelectronics, 2009, 25, 118-123.	5.3	48
99	A regenerative biosensing surface using electrochemical desorption of self-assembled monolayer in microfluidics. , 2009, , .		2
100	Surface plasmon resonance protein sensor using Vroman effect. Biosensors and Bioelectronics, 2008, 24, 893-899.	5.3	56