

# Kyu-Jung Chae

## List of Publications by Year in descending order

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Version: 2024-02-01

101  
papers

6,125  
citations

81743

39  
h-index

71532

76  
g-index

102  
all docs

102  
docs citations

102  
times ranked

5687  
citing authors

#	ARTICLE	IF	CITATIONS
1	High energy storage quasi-solid-state supercapacitor enabled by metal chalcogenide nanowires and iron-based nitrogen-doped graphene nanostructures. <i>Journal of Colloid and Interface Science</i> , 2022, 608, 711-719.	5.0	31
2	Structural engineering and surface modification of nickel double hydroxide nanosheets for all-solid-state asymmetric supercapacitors. <i>Journal of Energy Storage</i> , 2022, 45, 103720.	3.9	8
3	Scalability of microbial electrochemical technologies: Applications and challenges. <i>Bioresource Technology</i> , 2022, 345, 126498.	4.8	46
4	Addressing scale-up challenges and enhancement in performance of hydrogen-producing microbial electrolysis cell through electrode modifications. <i>Energy Reports</i> , 2022, 8, 2726-2746.	2.5	49
5	Enhancing the Dye-Rejection Efficiencies and Stability of Graphene Oxide-Based Nanofiltration Membranes via Divalent Cation Intercalation and Mild Reduction. <i>Membranes</i> , 2022, 12, 402.	1.4	5
6	Recent Application of Nanomaterials to Overcome Technological Challenges of Microbial Electrolysis Cells. <i>Nanomaterials</i> , 2022, 12, 1316.	1.9	3
7	2D materials-based membranes for hydrogen purification: Current status and future prospects. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 11389-11410.	3.8	35
8	Long-term effects of anti-biofouling proton exchange membrane using silver nanoparticles and polydopamine on the performance of microbial electrolysis cells. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 11345-11356.	3.8	24
9	Eye-glass polishing wastewater as significant microplastic source: Microplastic identification and quantification. <i>Journal of Hazardous Materials</i> , 2021, 403, 123991.	6.5	22
10	A systematic protocol of microplastics analysis from their identification to quantification in water environment: A comprehensive review. <i>Journal of Hazardous Materials</i> , 2021, 403, 124049.	6.5	71
11	Environmental impacts of solar energy systems: A review. <i>Science of the Total Environment</i> , 2021, 754, 141989.	3.9	373
12	Real-time biomonitoring of oxygen uptake rate and biochemical oxygen demand using a novel optical biogas respirometric system. <i>Journal of Environmental Management</i> , 2021, 277, 111467.	3.8	12
13	Operational strategies for brackish water desalination plants in island regions of South Korea. <i>Journal of Cleaner Production</i> , 2021, 278, 123540.	4.6	7
14	A review on self-sustainable microbial electrolysis cells for electro-biohydrogen production via coupling with carbon-neutral renewable energy technologies. <i>Bioresource Technology</i> , 2021, 320, 124363.	4.8	89
15	A critical review on environmental impacts of renewable energy systems and mitigation strategies: Wind, hydro, biomass and geothermal. <i>Science of the Total Environment</i> , 2021, 766, 144505.	3.9	252
16	Enhancing power generation in microbial fuel cell using tungsten carbide on reduced graphene oxide as an efficient anode catalyst material. <i>Energy</i> , 2021, 229, 120702.	4.5	32
17	Discharge of microplastics fibres from wet wipes in aquatic and solid environments under different release conditions. <i>Science of the Total Environment</i> , 2021, 784, 147144.	3.9	26
18	The role of beneficial microorganisms in an anoxic-oxic (AO) process for treatment of ammonium-rich landfill leachates: Nitrogen removal and excess sludge reduction. <i>Journal of Environmental Chemical Engineering</i> , 2021, 9, 105188.	3.3	10

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19	Outstanding performance of direct urea/hydrogen peroxide fuel cell based on precious metal-free catalyst electrodes. <i>Energy</i> , 2021, 228, 120584.	4.5	10
20	Synthesis and performance evaluation of various metal chalcogenides as active anodes for direct urea fuel cells. <i>Renewable and Sustainable Energy Reviews</i> , 2021, 150, 111470.	8.2	54
21	Contributions of enhanced endogenous microbial metabolism via inoculation with a novel microbial consortium into an anoxic side-stream reactor to in-situ sludge reduction for landfill leachate treatment. <i>Journal of Environmental Management</i> , 2021, 295, 113088.	3.8	6
22	Tunable atomic level surface functionalization of a multi-layered graphene oxide membrane to break the permeability-selectivity trade-off in salt removal of brackish water. <i>Separation and Purification Technology</i> , 2021, 274, 119047.	3.9	8
23	Bioaugmentation treatment of a novel microbial consortium for degradation of organic pollutants in tannery wastewater under a full-scale oxic process. <i>Biochemical Engineering Journal</i> , 2021, 175, 108131.	1.8	20
24	Recent Progress in One- and Two-Dimensional Nanomaterial-Based Electro-Responsive Membranes: Versatile and Smart Applications from Fouling Mitigation to Tuning Mass Transport. <i>Membranes</i> , 2021, 11, 5.	1.4	9
25	Modified bentonite as a conditioning agent for stabilising heavy metals and retaining nutrients in sewage sludge for agricultural uses. <i>Water Science and Technology</i> , 2021, 84, 2252-2264.	1.2	5
26	Electrophoretically fabricated nickel/nickel oxides as cost effective nanocatalysts for the oxygen reduction reaction in air-cathode microbial fuel cell. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 5960-5970.	3.8	31
27	Nickel nanorods over nickel foam as standalone anode for direct alkaline methanol and ethanol fuel cell. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 5948-5959.	3.8	56
28	Nonprecious anodic catalysts for low-molecular-hydrocarbon fuel cells: Theoretical consideration and current progress. <i>Progress in Energy and Combustion Science</i> , 2020, 77, 100805.	15.8	107
29	Refractory oil wastewater treatment by dissolved air flotation, electrochemical advanced oxidation process, and magnetic biochar integrated system. <i>Journal of Water Process Engineering</i> , 2020, 36, 101358.	2.6	48
30	Mitigation via physiochemically enhanced primary treatment of antibiotic resistance genes in influent from a municipal wastewater treatment plant. <i>Separation and Purification Technology</i> , 2020, 247, 116946.	3.9	14
31	Atomic layer deposition and electrospinning as membrane surface engineering methods for water treatment: a short review. <i>Environmental Science: Water Research and Technology</i> , 2020, 6, 1765-1785.	1.2	12
32	Transition metal/carbon nanoparticle composite catalysts as platinum substitutes for bioelectrochemical hydrogen production using microbial electrolysis cells. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 2258-2265.	3.8	35
33	Methanogenesis stimulation and inhibition for the production of different target electrobiofuels in microbial electrolysis cells through an on-demand control strategy using the coenzyme M and 2-bromoethanesulfonate. <i>Environment International</i> , 2019, 131, 105006.	4.8	58
34	Nitrite and nitrate as electron acceptors for bioelectrochemical ammonium oxidation under electrostatic field. <i>Journal of Environmental Management</i> , 2019, 250, 109517.	3.8	15
35	Direct urea fuel cells: Challenges and opportunities. <i>Journal of Power Sources</i> , 2019, 417, 159-175.	4.0	234
36	Biofouling of membranes in microbial electrochemical technologies: Causes, characterization methods and mitigation strategies. <i>Bioresource Technology</i> , 2019, 279, 327-338.	4.8	71

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37	Rapid detection of heavy metal-induced toxicity in water using a fed-batch sulfur-oxidizing bacteria (SOB) bioreactor. <i>Journal of Microbiological Methods</i> , 2019, 161, 35-42.	0.7	20
38	Evaluation of foam-glass media in a high-rate filtration process for the removal of particulate matter containing phosphorus in municipal wastewater. <i>Journal of Environmental Management</i> , 2019, 239, 159-166.	3.8	9
39	Effects of beneficial microorganisms on nutrient removal and excess sludge production in an anaerobic-anoxic/oxic (A2O) process for municipal wastewater treatment. <i>Bioresource Technology</i> , 2019, 281, 90-98.	4.8	54
40	Assessment of benzene, toluene, ethyl-benzene, and xylene (BTEX) toxicity in soil using sulfur-oxidizing bacterial (SOB) bioassay. <i>Chemosphere</i> , 2019, 220, 651-657.	4.2	20
41	Critical review of bioelectrochemical systems integrated with membrane-based technologies for desalination, energy self-sufficiency, and high-efficiency water and wastewater treatment. <i>Desalination</i> , 2019, 452, 40-67.	4.0	98
42	Combined use of polymeric ferric sulfate and chitosan as a conditioning aid for enhanced digested sludge dewatering. <i>Environmental Technology (United Kingdom)</i> , 2019, 40, 2695-2704.	1.2	4
43	Optimum dimensionally stable anode with volatilization and electrochemical advanced oxidation for volatile organic compounds treatment. <i>Journal of the Korean Society of Water and Wastewater</i> , 2019, 33, 31-41.	0.3	1
44	High-rate algal pond coupled with a matrix of <i>Spirogyra</i> sp. for treatment of rural streams with nutrient pollution. <i>Journal of Environmental Management</i> , 2018, 213, 297-308.	3.8	12
45	A novel approach to developing a reusable marine macro-algae adsorbent with chitosan and ferric oxide for simultaneous efficient heavy metal removal and easy magnetic separation. <i>Bioresource Technology</i> , 2018, 259, 381-387.	4.8	91
46	Biochars derived from wasted marine macro-algae ( <i>Saccharina japonica</i> and <i>Sargassum fusiforme</i> ) and their potential for heavy metal removal in aqueous solution. <i>Journal of Environmental Management</i> , 2018, 206, 364-372.	3.8	143
47	Heavy metal removal from aqueous solutions using engineered magnetic biochars derived from waste marine macro-algal biomass. <i>Science of the Total Environment</i> , 2018, 615, 161-168.	3.9	320
48	Transition metal nanoparticles doped carbon paper as a cost-effective anode in a microbial fuel cell powered by pure and mixed biocatalyst cultures. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 21560-21571.	3.8	38
49	Non-selective rapid electro-oxidation of persistent, refractory VOCs in industrial wastewater using a highly catalytic and dimensionally stable Ir Pd/Ti composite electrode. <i>Chemosphere</i> , 2018, 206, 483-490.	4.2	17
50	Fe/Fe <sub>2</sub> O <sub>3</sub> nanoparticles as anode catalyst for exclusive power generation and degradation of organic compounds using microbial fuel cell. <i>Chemical Engineering Journal</i> , 2018, 349, 800-807.	6.6	79
51	Effect of Temperature Variation on the Performance of Microbial Fuel Cells. <i>Energy Technology</i> , 2017, 5, 2163-2167.	1.8	29
52	Toxicity study of reclaimed water on human embryonic kidney cells. <i>Chemosphere</i> , 2017, 189, 390-398.	4.2	6
53	A sulfonated poly(arylene ether sulfone)/polyimide nanofiber composite proton exchange membrane for microbial electrolysis cell application under the coexistence of diverse competitive cations and protons. <i>Journal of Membrane Science</i> , 2017, 540, 165-173.	4.1	52
54	Improvement in methanogenesis by incorporating transition metal nanoparticles and granular activated carbon composites in microbial electrolysis cells. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 27623-27629.	3.8	42

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55	Comparison of different semipermeable membranes for power generation and water flux in osmotic microbial fuel cells. <i>Journal of Chemical Technology and Biotechnology</i> , 2016, 91, 2305-2312.	1.6	14
56	Concurrent performance improvement and biofouling mitigation in osmotic microbial fuel cells using a silver nanoparticle-polydopamine coated forward osmosis membrane. <i>Journal of Membrane Science</i> , 2016, 513, 217-225.	4.1	64
57	Flexible and stable heat energy recovery from municipal wastewater treatment plants using a fixed-inverter hybrid heat pump system. <i>Applied Energy</i> , 2016, 179, 565-574.	5.1	28
58	Assessment of different ceramic filtration membranes as a separator in microbial fuel cells. <i>Desalination and Water Treatment</i> , 2016, 57, 28077-28085.	1.0	17
59	Evaluation of energy and water recovery in forward osmosis bioelectrochemical hybrid system with cellulose triacetate and polyamide asymmetric membrane in different orientations. <i>Desalination and Water Treatment</i> , 2016, 57, 7406-7413.	1.0	7
60	Influence of pressurized anode chamber on ion transports and power generation of UF membrane microbial fuel cells (UF-MFCs). <i>Journal of Power Sources</i> , 2015, 279, 731-736.	4.0	9
61	Physicochemical Interactions between Rhamnolipids and <i>Pseudomonas aeruginosa</i> Biofilm Layers. <i>Environmental Science &amp; Technology</i> , 2015, 49, 3718-3726.	4.6	70
62	Potential effects of damaged <i>Pseudomonas aeruginosa</i> PAO1 cells on development of reverse osmosis membrane biofouling. <i>Journal of Membrane Science</i> , 2015, 477, 86-92.	4.1	12
63	Citric acid and ethylene diamine tetra-acetic acid as effective washing agents to treat sewage sludge for agricultural reuse. <i>Waste Management</i> , 2015, 46, 440-448.	3.7	61
64	Reliable energy recovery in an existing municipal wastewater treatment plant with a flow-variable micro-hydropower system. <i>Energy Conversion and Management</i> , 2015, 101, 681-688.	4.4	38
65	Oxide-free Sb <sub>2</sub> S <sub>3</sub> sensitized solar cells fabricated by spin and heat-treatment of Sb(III)(thioacetamide) <sub>2</sub> Cl <sub>3</sub> . <i>Organic Electronics</i> , 2015, 21, 155-159.	1.4	33
66	Effect of initial salt concentrations on cell performance and distribution of internal resistance in microbial desalination cells. <i>Environmental Technology (United Kingdom)</i> , 2015, 36, 852-860.	1.2	21
67	Bioelectrochemical Production of Hydrogen from Organic Waste. <i>Biofuels and Biorefineries</i> , 2015, , 249-281.	0.5	2
68	Anode direct contact for enhancing power generation and biofouling reduction in ultrafiltration microbial fuel cells. <i>Journal of Chemical Technology and Biotechnology</i> , 2014, 89, 1767-1771.	1.6	7
69	Robust and scale-up synthesis of hollow TiO <sub>2</sub> nanospheres with sub-100-nm scale by templating of PS-b-P2VP nanospheres. <i>Macromolecular Research</i> , 2014, 22, 1-3.	1.0	4
70	Synthesis of PS-b-P2VP di-block copolymer particles with internal structure via simple reprecipitation method. <i>Macromolecular Research</i> , 2014, 22, 324-328.	1.0	7
71	Polydopamine coating effects on ultrafiltration membrane to enhance power density and mitigate biofouling of ultrafiltration microbial fuel cells (UF-MFCs). <i>Water Research</i> , 2014, 54, 62-68.	5.3	105
72	Fine size tuning of polystyrene building blocks for colloidal photonic crystals. <i>Macromolecular Research</i> , 2014, 22, 357-360.	1.0	5

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73	Sulfonated polyether ether ketone (SPEEK)-based composite proton exchange membrane reinforced with nanofibers for microbial electrolysis cells. <i>Chemical Engineering Journal</i> , 2014, 254, 393-398.	6.6	75
74	Toxicity Response of Biosensor Using Sulfur-Oxidizing Bacteria to Various Nitrogenous Compounds. <i>Korean Journal of Environmental Agriculture</i> , 2014, 33, 314-320.	0.0	0
75	Estimating the energy independence of a municipal wastewater treatment plant incorporating green energy resources. <i>Energy Conversion and Management</i> , 2013, 75, 664-672.	4.4	141
76	High-quality effluent and electricity production from non-CEM based flow-through type microbial fuel cell. <i>Chemical Engineering Journal</i> , 2013, 218, 19-23.	6.6	65
77	Effect of dead cells on biofouling in the reverse osmosis process. <i>Water Science and Technology: Water Supply</i> , 2013, 13, 1396-1401.	1.0	1
78	Micro-Hydropower System with a Semi-Kaplan Turbine for Sewage Treatment Plant Application: Kiheung Respia Case Study. <i>Daehan Hwan'gyeong Gonghag Hoeji</i> , 2013, 35, 363-370.	0.4	5
79	A Study on the Operating Control of a Heat Pump System with Screw Compressors. <i>Korean Journal of Air-Conditioning and Refrigeration Engineering</i> , 2013, 25, 168-172.	0.1	1
80	Design and Performance Prediction of Small Hydropower Plant Using Treated Effluent in Wastewater Treatment Plant. <i>Journal of the Korean Solar Energy Society</i> , 2013, 33, 78-83.	0.1	2
81	Nitrification and denitrification using biofilters packed with sulfur and limestone at a pilot-scale municipal wastewater treatment plant. <i>Environmental Technology (United Kingdom)</i> , 2012, 33, 1271-1278.	1.2	11
82	Proapoptotic effect of a micropollutant (tris-(2-chloroethyl)-phosphate) at environmental level in primary cultured renal proximal tubule cells. <i>Journal of Water and Health</i> , 2012, 10, 522-530.	1.1	13
83	Spatial distribution and viability of nitrifying, denitrifying and ANAMMOX bacteria in biofilms of sponge media retrieved from a full-scale biological nutrient removal plant. <i>Bioprocess and Biosystems Engineering</i> , 2012, 35, 1157-1165.	1.7	18
84	Effects of biofouling on ion transport through cation exchange membranes and microbial fuel cell performance. <i>Bioresource Technology</i> , 2011, 102, 298-303.	4.8	163
85	Enhanced Coulombic efficiency in glucose-fed microbial fuel cells by reducing metabolite electron losses using dual-anode electrodes. <i>Bioresource Technology</i> , 2011, 102, 4144-4149.	4.8	55
86	Development of Visible Light Responsive Nitrogen Doped Photocatalysts (TiO <sub>2</sub> , Nb <sub>2</sub> O <sub>5</sub> ) for hydrogen Evolution. <i>Daehan Hwan'gyeong Gonghag Hoeji</i> , 2011, 33, 907-912.	0.4	0
87	Selective inhibition of methanogens for the improvement of biohydrogen production in microbial electrolysis cells. <i>International Journal of Hydrogen Energy</i> , 2010, 35, 13379-13386.	3.8	146
88	Effect of hydrodynamic force and prolonged oxygen exposure on the performance of anodic biofilm in microbial electrolysis cells. <i>International Journal of Hydrogen Energy</i> , 2010, 35, 3206-3213.	3.8	38
89	Methanogenesis control by employing various environmental stress conditions in two-chambered microbial fuel cells. <i>Bioresource Technology</i> , 2010, 101, 5350-5357.	4.8	167
90	Optimization studies of bio-hydrogen production in a coupled microbial electrolysis-dye sensitized solar cell system. <i>Photochemical and Photobiological Sciences</i> , 2010, 9, 349-356.	1.6	29

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91	Optimum Recovery of Biogas from Pig Slurry with Different Compositions. Korean Journal of Environmental Agriculture, 2010, 29, 197-205.	0.0	7
92	Effect of different substrates on the performance, bacterial diversity, and bacterial viability in microbial fuel cells. Bioresource Technology, 2009, 100, 3518-3525.	4.8	577
93	Photocurrent and photoelectrochemical hydrogen production with tin porphyrin and platinum nanowires immobilized with nafion on glassy carbon electrode. International Journal of Hydrogen Energy, 2009, 34, 110-114.	3.8	14
94	Study of hydrogen production in light assisted microbial electrolysis cell operated with dye sensitized solar cell. International Journal of Hydrogen Energy, 2009, 34, 9297-9304.	3.8	43
95	A Solar-Powered Microbial Electrolysis Cell with a Platinum Catalyst-Free Cathode To Produce Hydrogen. Environmental Science & Technology, 2009, 43, 9525-9530.	4.6	119
96	Analysis of the nitrifying bacterial community in BioCube sponge media using fluorescent in situ hybridization (FISH) and microelectrodes. Journal of Environmental Management, 2008, 88, 1426-1435.	3.8	19
97	The effects of digestion temperature and temperature shock on the biogas yields from the mesophilic anaerobic digestion of swine manure. Bioresource Technology, 2008, 99, 1-6.	4.8	330
98	Biohydrogen production via biocatalyzed electrolysis in acetate-fed bioelectrochemical cells and microbial community analysis. International Journal of Hydrogen Energy, 2008, 33, 5184-5192.	3.8	132
99	Development of pseudo-amphoteric sponge media using polyalkylene oxide modified polydimethylsiloxane (PDMS) for rapid start-up of wastewater treatment plant. Chemosphere, 2008, 71, 961-968.	4.2	12
100	Mass Transport through a Proton Exchange Membrane (Nafion) in Microbial Fuel Cells. Energy & Fuels, 2008, 22, 169-176.	2.5	376
101	Microbial Fuel Cells: Recent Advances, Bacterial Communities and Application Beyond Electricity Generation. Environmental Engineering Research, 2008, 13, 51-65.	1.5	139