

Kyu-Jung Chae

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/5043716/publications.pdf>

Version: 2024-02-01

101
papers

6,125
citations

81900
39
h-index

71685
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. Journal of Colloid and Interface Science, 2022, 608, 711-719.	9.4	31
2	Structural engineering and surface modification of nickel double hydroxide nanosheets for all-solid-state asymmetric supercapacitors. Journal of Energy Storage, 2022, 45, 103720.	8.1	8
3	Scalability of microbial electrochemical technologies: Applications and challenges. Bioresource Technology, 2022, 345, 126498.	9.6	46
4	Addressing scale-up challenges and enhancement in performance of hydrogen-producing microbial electrolysis cell through electrode modifications. Energy Reports, 2022, 8, 2726-2746.	5.1	49
5	Enhancing the Dye-Rejection Efficiencies and Stability of Graphene Oxide-Based Nanofiltration Membranes via Divalent Cation Intercalation and Mild Reduction. Membranes, 2022, 12, 402.	3.0	5
6	Recent Application of Nanomaterials to Overcome Technological Challenges of Microbial Electrolysis Cells. Nanomaterials, 2022, 12, 1316.	4.1	3
7	2D materials-based membranes for hydrogen purification: Current status and future prospects. International Journal of Hydrogen Energy, 2021, 46, 11389-11410.	7.1	35
8	Long-term effects of anti-biofouling proton exchange membrane using silver nanoparticles and polydopamine on the performance of microbial electrolysis cells. International Journal of Hydrogen Energy, 2021, 46, 11345-11356.	7.1	24
9	Eye-glass polishing wastewater as significant microplastic source: Microplastic identification and quantification. Journal of Hazardous Materials, 2021, 403, 123991.	12.4	22
10	A systematic protocol of microplastics analysis from their identification to quantification in water environment: A comprehensive review. Journal of Hazardous Materials, 2021, 403, 124049.	12.4	71
11	Environmental impacts of solar energy systems: A review. Science of the Total Environment, 2021, 754, 141989.	8.0	373
12	Real-time biomonitoring of oxygen uptake rate and biochemical oxygen demand using a novel optical biogas respirometric system. Journal of Environmental Management, 2021, 277, 111467.	7.8	12
13	Operational strategies for brackish water desalination plants in island regions of South Korea. Journal of Cleaner Production, 2021, 278, 123540.	9.3	7
14	A review on self-sustainable microbial electrolysis cells for electro-biohydrogen production via coupling with carbon-neutral renewable energy technologies. Bioresource Technology, 2021, 320, 124363.	9.6	89
15	A critical review on environmental impacts of renewable energy systems and mitigation strategies: Wind, hydro, biomass and geothermal. Science of the Total Environment, 2021, 766, 144505.	8.0	252
16	Enhancing power generation in microbial fuel cell using tungsten carbide on reduced graphene oxide as an efficient anode catalyst material. Energy, 2021, 229, 120702.	8.8	32
17	Discharge of microplastics fibres from wet wipes in aquatic and solid environments under different release conditions. Science of the Total Environment, 2021, 784, 147144.	8.0	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. Journal of Environmental Chemical Engineering, 2021, 9, 105188.	6.7	10

#	ARTICLE	IF	CITATIONS
19	Outstanding performance of direct urea/hydrogen peroxide fuel cell based on precious metal-free catalyst electrodes. <i>Energy</i> , 2021, 228, 120584.	8.8	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.	16.4	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.	7.8	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.	7.9	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.	3.6	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.	3.0	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.	2.5	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.	7.1	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.	7.1	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.	31.2	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.	5.6	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.	7.9	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.	2.4	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.	7.1	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.	10.0	58
34	Nitrite and nitrate as electron acceptors for bioelectrochemical ammonium oxidation under electrostatic field. <i>Journal of Environmental Management</i> , 2019, 250, 109517.	7.8	15
35	Direct urea fuel cells: Challenges and opportunities. <i>Journal of Power Sources</i> , 2019, 417, 159-175.	7.8	234
36	Biofouling of membranes in microbial electrochemical technologies: Causes, characterization methods and mitigation strategies. <i>Bioresource Technology</i> , 2019, 279, 327-338.	9.6	71

#	ARTICLE	IF	CITATIONS
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.	1.6	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.	7.8	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.	9.6	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.	8.2	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.	8.2	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.	2.2	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.	7.8	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.	9.6	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.	7.8	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.	8.0	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.	7.1	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.	8.2	17
50	Fe/Fe ₂ O ₃ 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.	12.7	79
51	Effect of Temperature Variation on the Performance of Microbial Fuel Cells. <i>Energy Technology</i> , 2017, 5, 2163-2167.	3.8	29
52	Toxicity study of reclaimed water on human embryonic kidney cells. <i>Chemosphere</i> , 2017, 189, 390-398.	8.2	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.	8.2	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.	7.1	42

#	ARTICLE	IF	CITATIONS
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.	3.2	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.	8.2	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.	10.1	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.	7.8	9
61	Physicochemical Interactions between Rhamnolipids and <i>Pseudomonas aeruginosa</i> Biofilm Layers. <i>Environmental Science & Technology</i> , 2015, 49, 3718-3726.	10.0	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.	8.2	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.	7.4	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.	9.2	38
65	Oxide-free Sb ₂ S ₃ sensitized solar cells fabricated by spin and heat-treatment of Sb(III)(thioacetamide) ₂ Cl ₃ . <i>Organic Electronics</i> , 2015, 21, 155-159.	2.6	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.	2.2	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.	3.2	7
69	Robust and scale-up synthesis of hollow TiO ₂ nanospheres with sub-100-nm scale by templating of PS-b-P2VP nanospheres. <i>Macromolecular Research</i> , 2014, 22, 1-3.	2.4	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.	2.4	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.	11.3	105
72	Fine size tuning of polystyrene building blocks for colloidal photonic crystals. <i>Macromolecular Research</i> , 2014, 22, 357-360.	2.4	5

#	ARTICLE	IF	CITATIONS
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.	12.7	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.	0.4	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.	9.2	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.	12.7	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.	2.1	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.	1.1	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.	0.4	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.	2.2	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.	2.6	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.	3.4	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.	9.6	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.	9.6	55
86	Development of Visible Light Responsive Nitrogen Doped Photocatalysts (TiO ₂ , Nb ₂ O ₅) for hydrogen Evolution. <i>Daehan Hwan'gyeong Gonghag Hoeji</i> , 2011, 33, 907-912.	1.1	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.	7.1	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.	7.1	38
89	Methanogenesis control by employing various environmental stress conditions in two-chambered microbial fuel cells. <i>Bioresource Technology</i> , 2010, 101, 5350-5357.	9.6	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.	2.9	29

#	ARTICLE	IF	CITATIONS
91	Optimum Recovery of Biogas from Pig Slurry with Different Compositions. Korean Journal of Environmental Agriculture, 2010, 29, 197-205.	0.4	7
92	Effect of different substrates on the performance, bacterial diversity, and bacterial viability in microbial fuel cells. Bioresource Technology, 2009, 100, 3518-3525.	9.6	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.	7.1	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.	7.1	43
95	A Solar-Powered Microbial Electrolysis Cell with a Platinum Catalyst-Free Cathode To Produce Hydrogen. Environmental Science & Technology, 2009, 43, 9525-9530.	10.0	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.	7.8	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.	9.6	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.	7.1	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.	8.2	12
100	Mass Transport through a Proton Exchange Membrane (Nafion) in Microbial Fuel Cells. Energy & Fuels, 2008, 22, 169-176.	5.1	376
101	Microbial Fuel Cells: Recent Advances, Bacterial Communities and Application Beyond Electricity Generation. Environmental Engineering Research, 2008, 13, 51-65.	2.5	139