## Byoung-In Sang

List of Publications by Year in descending order

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87888 106344 4,750 119 38 65 citations g-index h-index papers 119 119 119 6403 docs citations times ranked citing authors all docs

#	Article	IF	CITATIONS
1	Production of microalgae with high lipid content and their potential as sources of nutraceuticals. Phytochemistry Reviews, 2023, 22, 833-860.	6.5	38
2	Electronic wastes: A near inexhaustible and an unimaginably wealthy resource for water splitting electrocatalysts. Journal of Hazardous Materials, 2022, 421, 126687.	12.4	18
3	Metabolic cascade of complex organic wastes to medium-chain carboxylic acids: A review on the state-of-the-art multi-omics analysis for anaerobic chain elongation pathways. Bioresource Technology, 2022, 344, 126211.	9.6	27
4	Mass cultivation and harvesting of microalgal biomass: Current trends and future perspectives. Bioresource Technology, 2022, 344, 126406.	9.6	48
5	Chain elongation process for caproate production using lactate as electron donor in Megasphaera hexanoica. Bioresource Technology, 2022, 346, 126660.	9.6	15
6	Alkali Extraction to Detoxify Rice Husk-Derived Silica and Increase Its Biocompatibility. ACS Sustainable Chemistry and Engineering, 2022, 10, 7811-7817.	6.7	6
7	Anisotropic Alignment of Bacterial Nanocellulose Ionogels for Unconventionally High Combination of Stiffness and Damping. ACS Applied Materials & Samp; Interfaces, 2022, 14, 30056-30066.	8.0	5
8	Anaerobic co-digestion of bioplastics as a sustainable mode of waste management with improved energy production – A review. Bioresource Technology, 2021, 322, 124537.	9.6	93
9	Impact of Attrition Ball-Mill on Characteristics and Biochemical Methane Potential of Food Waste. Energies, 2021, 14, 2085.	3.1	2
10	Dynamic Changes of Microbiome with the Utilization of Volatile Fatty Acids as Electron Donors for Denitrification. Water (Switzerland), 2021, 13, 1556.	2.7	6
11	Recent advances in Bioprocess Technology-2020. Bioresource Technology, 2021, 327, 124824.	9.6	1
12	Two-Stage Continuous Process for the Extraction of Silica from Rice Husk Using Attrition Ball Milling and Alkaline Leaching Methods. Sustainability, 2021, 13, 7350.	3.2	17
13	Complete Genome Sequence of <i>Methanothermobacter</i> sp. Strain THM-1, a Thermophilic and Hydrogenotrophic Methanogen Isolated from an Anaerobic Reactor in South Korea. Microbiology Resource Announcements, 2021, 10, e0058721.	0.6	1
14	Characterisation of bacterial nanocellulose and nanostructured carbon produced from crude glycerol by Komagataeibacter sucrofermentans. Bioresource Technology, 2021, 342, 125918.	9.6	16
15	Anaerobic Digestion of Cigarette Butts: Microbial Community Analysis and Energy Production Estimation. Energies, 2021, 14, 8290.	3.1	1
16	Robust solid-state interface with a deformable glass interlayer in sulfide-based all-solid-state batteries. Solid State Ionics, 2020, 346, 115217.	2.7	11
17	Pretreatment strategies for enhanced biogas production from lignocellulosic biomass. Bioresource Technology, 2020, 301, 122725.	9.6	323
18	Bacterial nanocellulose as a green and flexible electrode matrix for efficient hydrogen evolution reaction in alkaline conditions. Cellulose, 2020, 27, 8135-8146.	4.9	11

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19	Application of Computational Fluid Dynamics in Chlorine-Dynamics Modeling of In-Situ Chlorination Systems for Cooling Systems. Applied Sciences (Switzerland), 2020, 10, 4455.	2.5	1
20	Enzymatic Esterification under High-pressure CO2 Conditions for in situ Recovery of Butyric Acid from Anaerobic Fermenters. Biotechnology and Bioprocess Engineering, 2020, 25, 616-622.	2.6	3
21	Efficient, Simple Production of Corresponding Alcohols from Supplemented C2-C8 Carboxylic Acids in Escherichia coli Using Acyl-CoA Transferase from Megasphaera hexanoica. Biotechnology and Bioprocess Engineering, 2020, 25, 599-606.	2.6	12
22	Antimicrobial Air Filter Coating with Plant Extracts Against Airborne Microbes. Applied Sciences (Switzerland), 2020, 10, 9120.	2.5	10
23	Impact of feedstocks and downstream processing technologies on the economics of caproic acid production in fermentation by Megasphaera elsdenii T81. Bioresource Technology, 2020, 301, 122794.	9.6	13
24	Innovations in environmental bioprocesses for sustainable development. Environmental Science and Pollution Research, 2020, 27, 27169-27171.	5.3	1
25	Complete Genomic Sequence of the Thermophilic and Hydrogenotrophic Methanogen <i>Methanothermobacter</i> sp. Strain KEPCO-1. Microbiology Resource Announcements, 2020, 9, .	0.6	2
26	An Efficient New Process for the Selective Production of Odd-Chain Carboxylic Acids by Simple Carbon Elongation Using Megasphaera hexanoica. Scientific Reports, 2019, 9, 11999.	3.3	28
27	Feasibility of Continuous Pretreatment of Corn Stover: A Comparison of Three Commercially Available Continuous Pulverizing Devices. Energies, 2019, 12, 1422.	3.1	8
28	Simultaneous production of methane and acetate by thermophilic mixed culture from carbon dioxide in bioelectrochemical system. Bioresource Technology, 2019, 281, 474-479.	9.6	30
29	Metal-organic framework derived NiMo polyhedron as an efficient hydrogen evolution reaction electrocatalyst. Applied Surface Science, 2019, 478, 916-923.	6.1	55
30	Tomographical analysis of electrochemical lithiation and delithiation of LiNi0.6Co0.2Mn0.2O2 cathodes in all-solid-state batteries. Scripta Materialia, 2019, 165, 10-14.	5.2	16
31	Aerobic denitrification by a novel Pseudomonas sp. JN5 in different bioreactor systems. Water-Energy Nexus, 2019, 2, 37-45.	4.0	5
32	Comparison between OClâ^'-Injection and In Situ Electrochlorination in the Formation of Chlorate and Perchlorate in Seawater. Applied Sciences (Switzerland), 2019, 9, 229.	2.5	7
33	Selective Removal of Water Generated during Hydrogenotrophic Methanation from Culture Medium Using Membrane Distillation. Energies, 2019, 12, 4130.	3.1	5
34	Evaluation of relationship between biogas production and microbial communities in anaerobic co-digestion. Korean Journal of Chemical Engineering, 2018, 35, 179-186.	2.7	6
35	Enhanced extraction of butyric acid under high-pressure CO2 conditions to integrate chemical catalysis for value-added chemicals and biofuels. Biotechnology for Biofuels, 2018, 11, 119.	6.2	13
36	InGaZnO transistor based on porous Ag nanowire-functionalized gate electrode for detection of bio-relevant molecules. Sensors and Actuators B: Chemical, 2018, 254, 36-43.	7.8	7

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37	Optimization of hexanoic acid production in recombinant Escherichia coli by precise flux rebalancing. Bioresource Technology, 2018, 247, 1253-1257.	9.6	21
38	Electrochemical behaviors of Li-argyrodite-based all-solid-state batteries under deep-freezing conditions. Chemical Communications, 2018, 54, 14116-14119.	4.1	30
39	Collateral hydrogenation over proton-conducting Ni/BaZr <sub>0.85</sub> Y <sub>0.15</sub> O <sub>3â^î^(</sub> catalysts for promoting CO <sub>2</sub> methanation. RSC Advances, 2018, 8, 32095-32101.	3.6	6
40	New coculture system of Clostridium spp. and Megasphaera hexanoica using submerged hollow-fiber membrane bioreactors for caproic acid production. Bioresource Technology, 2018, 270, 498-503.	9.6	24
41	Effects of water content on ball milling pretreatment and the enzymatic digestibility of corn stover. Water-Energy Nexus, 2018, 1, 61-65.	4.0	17
42	Quantitative Analysis of Microstructures and Reaction Interfaces on Composite Cathodes in All-Solid-State Batteries Using a Three-Dimensional Reconstruction Technique. ACS Applied Materials & Amp; Interfaces, 2018, 10, 23740-23747.	8.0	53
43	Catalytic behavior of metal catalysts in high-temperature RWGS reaction: In-situ FT-IR experiments and first-principles calculations. Scientific Reports, 2017, 7, 41207.	3.3	57
44	Preparation of high purity silica originated from rice husks by chemically removing metallic impurities. Journal of Industrial and Engineering Chemistry, 2017, 50, 79-85.	5.8	59
45	Simple quantification method for N -nitrosamines in atmospheric particulates based on facile pretreatment and GC-MS/MS. Environmental Pollution, 2017, 226, 324-334.	7.5	34
46	Effects of supplement additives on anaerobic biogas production. Korean Journal of Chemical Engineering, 2017, 34, 2678-2685.	2.7	16
47	A Hierarchically Modified Graphite Cathode with Au Nanoislands, Cysteamine, and Au Nanocolloids for Increased Electricity-Assisted Production of Isobutanol by Engineered <i>Shewanella oneidensis</i> MR-1. ACS Applied Materials & Samp; Interfaces, 2017, 9, 43563-43574.	8.0	14
48	Silica formation with nanofiber morphology via helical display of the silaffin R5 peptide on a filamentous bacteriophage. Scientific Reports, 2017, 7, 16212.	3.3	6
49	Perspectives for biocatalytic lignin utilization: cleaving 4-O-5 and Cα–Cβ bonds in dimeric lignin model compounds catalyzed by a promiscuous activity of tyrosinase. Biotechnology for Biofuels, 2017, 10, 212.	6.2	11
50	Megasphaera hexanoica sp. nov., a medium-chain carboxylic acid-producing bacterium isolated from a cow rumen. International Journal of Systematic and Evolutionary Microbiology, 2017, 67, 2114-2120.	1.7	57
51	Production of medium-chain carboxylic acids by Megasphaera sp. MH with supplemental electron acceptors. Biotechnology for Biofuels, 2016, 9, 129.	6.2	60
52	Metal-oxide thin-film transistor-based pH sensor with a silver nanowire top gate electrode. Journal of the Korean Physical Society, 2016, 68, 901-907.	0.7	3
53	Plasmonic-based colorimetric and spectroscopic discrimination of acetic and butyric acids produced by different types of Escherichia coli through the different assembly structures formation of gold nanoparticles. Analytica Chimica Acta, 2016, 933, 196-206.	5.4	5
54	Pyrosequencing analysis of microbial communities in hollow fiber-membrane biofilm reactors system for treating high-strength nitrogen wastewater. Chemosphere, 2016, 163, 192-201.	8.2	33

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55	Feasibility of a facile butanol bioproduction using planetary mill pretreatment. Bioresource Technology, 2016, 199, 283-287.	9.6	15
56	Extracellular electron transfer from cathode to microbes: application for biofuel production. Biotechnology for Biofuels, 2016, 9, 11.	6.2	228
57	One-dimensional InGaZnO field-effect transistor on a polyimide wire substrate for an electronic textile. Journal of the Korean Physical Society, 2016, 68, 599-603.	0.7	9
58	Improved Sugar Production by Optimizing Planetary Mill Pretreatment and Enzyme Hydrolysis Process. BioMed Research International, 2015, 2015, 1-5.	1.9	0
59	In situ detoxification of lignocellulosic hydrolysate using a surfactant for butyric acid production by Clostridium tyrobutyricum ATCC 25755. Process Biochemistry, 2015, 50, 630-635.	3.7	21
60	Enhanced Light Scattering and Trapping Effect of Ag Nanowire Mesh Electrode for High Efficient Flexible Organic Solar Cell. Small, 2015, 11, 1905-1911.	10.0	78
61	Butyric acid production from red algae by a newly isolated Clostridium sp. S1. Biotechnology Letters, 2015, 37, 1837-1844.	2.2	10
62	Isobutanol production from an engineered Shewanella oneidensis MR-1. Bioprocess and Biosystems Engineering, 2015, 38, 2147-2154.	3.4	27
63	Application of SPE followed by large-volume injection GC/MS for the analysis of geosmin and 2-methylisoborneol in water. Analytical Methods, 2015, 7, 6678-6685.	2.7	10
64	Enhanced electrochemical sensitivity of enzyme precipitate coating (EPC)-based glucose oxidase biosensors with increased free CNT loadings. Bioelectrochemistry, 2015, 101, 114-119.	4.6	25
65	Caproiciproducens galactitolivorans gen. nov., sp. nov., a bacterium capable of producing caproic acid from galactitol, isolated from a wastewater treatment plant. International Journal of Systematic and Evolutionary Microbiology, 2015, 65, 4902-4908.	1.7	153
66	Analysis of the Microbial Community in an Acidic Hollow-Fiber Membrane Biofilm Reactor (Hf-MBfR) Used for the Biological Conversion of Carbon Dioxide to Methane. PLoS ONE, 2015, 10, e0144999.	2.5	12
67	Analysis of Microbial Communities in Biofilms from CSTR-Type Hollow Fiber Membrane Biofilm Reactors for Autotrophic Nitrification and Hydrogenotrophic Denitrification. Journal of Microbiology and Biotechnology, 2015, 25, 1670-1679.	2.1	4
68	Effect of geometric lattice design on optical/electrical properties of transparent silver grid for organic solar cells. Optics Express, 2014, 22, 26891.	3.4	36
69	Clostridium vulturis sp. nov., isolated from the intestine of the cinereous vulture (Aegypius) Tj ETQq1 1 0.784314	1 rgBT /Ov	erlock 10 Tf
70	A pilot scale two-stage anaerobic digester treating food waste leachate (FWL): Performance and microbial structure analysis using pyrosequencing. Process Biochemistry, 2014, 49, 301-308.	3.7	68
71	Hydrothermal gasification of pure and crude glycerol in supercritical water: A comparative study. International Journal of Hydrogen Energy, 2014, 39, 1262-1273.	7.1	29
72	Co-culturing a novel Bacillus strain with Clostridium tyrobutyricum ATCC 25755 to produce butyric acid from sucrose. Biotechnology for Biofuels, 2013, 6, 35.	6.2	50

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73	Continuous synthesis of lithium iron phosphate nanoparticles in supercritical water: Effect of process parameters. Chemical Engineering Journal, 2013, 229, 313-323.	12.7	24
74	In Situ Biphasic Extractive Fermentation for Hexanoic Acid Production from Sucrose by Megasphaera elsdenii NCIMB 702410. Applied Biochemistry and Biotechnology, 2013, 171, 1094-1107.	2.9	85
75	Conversion of levulinic acid to 2-butanone by acetoacetate decarboxylase from Clostridium acetobutylicum. Applied Microbiology and Biotechnology, 2013, 97, 5627-5634.	3.6	28
76	Comparison of the Bacterial Communities in Anaerobic, Anoxic, and Oxic Chambers of a Pilot A2O Process Using Pyrosequencing Analysis. Current Microbiology, 2013, 66, 555-565.	2.2	62
77	In situ extractive fermentation for the production of hexanoic acid from galactitol by Clostridium sp. BS-1. Enzyme and Microbial Technology, 2013, 53, 143-151.	3.2	79
78	Thermostabilization of Candida antarctica lipase B by double immobilization: Adsorption on a macroporous polyacrylate carrier and R1 silaffin-mediated biosilicification. Process Biochemistry, 2013, 48, 1181-1187.	3.7	19
79	High-Speed Annealing of Hydrous Ruthenium Oxide Nanoparticles by Intensely Pulsed White Light for Supercapacitors. Journal of the Electrochemical Society, 2013, 160, A1772-A1776.	2.9	8
80	ABE production from yellow poplar through alkaline pre-hydrolysis, enzymatic saccharification, and fermentation. Biotechnology and Bioprocess Engineering, 2013, 18, 965-971.	2.6	8
81	Supercritical ethanol as an enhanced medium for lignocellulosic biomass liquefaction: Influence of physical process parameters. Energy, 2013, 59, 173-182.	8.8	167
82	Silaffin Peptides as a Novel Signal Enhancer for Gravimetric Biosensors. Applied Biochemistry and Biotechnology, 2013, 170, 25-31.	2.9	16
83	Production of Hydrogen and Volatile Fatty Acid by Enterobacter sp. T4384 Using Organic Waste Materials. Journal of Microbiology and Biotechnology, 2013, 23, 189-194.	2.1	4
84	The Future of Butyric Acid in Industry. Scientific World Journal, The, 2012, 2012, 1-10.	2.1	146
85	Butyrate production enhancement by <i>Clostridium tyrobutyricum</i> using electron mediators and a cathodic electron donor. Biotechnology and Bioengineering, 2012, 109, 2494-2502.	3.3	130
86	Correlation between microbial community structure and biofouling in a laboratory scale membrane bioreactor with synthetic wastewater. Desalination, 2012, 287, 209-215.	8.2	98
87	Identification of Escherichia coli biomarkers responsive to various lignin-hydrolysate compounds. Bioresource Technology, 2012, 114, 450-456.	9.6	23
88	A biosensor based on the self-entrapment of glucose oxidase within biomimetic silica nanoparticles induced by a fusion enzyme. Enzyme and Microbial Technology, 2011, 49, 441-445.	3.2	55
89	Optimization of medium compositions favoring butanol and 1,3-propanediol production from glycerol by Clostridium pasteurianum. Bioresource Technology, 2011, 102, 10561-10568.	9.6	81
90	Global Gene Response in Saccharomyces cerevisiae Exposed to Silver Nanoparticles. Applied Biochemistry and Biotechnology, 2011, 164, 1278-1291.	2.9	47

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91	Effects of carbon source and metabolic engineering on butyrate production in Escherichia coli. Korean Journal of Chemical Engineering, 2011, 28, 1587-1592.	2.7	12
92	Highly stable enzyme precipitate coatings and their electrochemical applications. Biosensors and Bioelectronics, 2011, 26, 1980-1986.	10.1	54
93	Butanol production from thin stillage using Clostridium pasteurianum. Bioresource Technology, 2011, 102, 4934-4937.	9.6	91
94	Production of hexanoic acid from d-galactitol by a newly isolated Clostridium sp. BS-1. Applied Microbiology and Biotechnology, 2010, 88, 1161-1167.	3.6	82
95	Nanoscale enzyme reactors in mesoporous carbon for improved performance and lifetime of biosensors and biofuel cells. Biosensors and Bioelectronics, 2010, 26, 655-660.	10.1	45
96	Functional expression of anti-hepatitis B virus (HBV) preS2 antigen scFv by cspA promoter system in Escherichia coli and application as a recognition molecule for single-walled carbon nanotube (SWNT) field effect transistor (FET). Biotechnology and Bioprocess Engineering, 2010, 15, 810-816.	2.6	3
97	Development of Real-Time PCR Primer and Probe Sets for Detecting Degenerated and Non-degenerated Forms of the Butanol-Producing Bacterium Clostridium acetobutylicum ATCC 824. Applied Biochemistry and Biotechnology, 2010, 161, 75-83.	2.9	7
98	Microbial Fed-batch Production of 1,3-Propanediol Using Raw Glycerol with Suspended and Immobilized Klebsiella pneumoniae. Applied Biochemistry and Biotechnology, 2010, 161, 491-501.	2.9	107
99	Effect of Biodiesel-derived Raw Glycerol on 1,3-Propanediol Production by Different Microorganisms. Applied Biochemistry and Biotechnology, 2010, 161, 502-510.	2.9	81
100	Risk Reduction of Adverse Effects Due to Di-(2-Ethylhexyl) Phthalate (DEHP) by Utilizing Microbial Degradation. Journal of Toxicology and Environmental Health - Part A: Current Issues, 2009, 72, 1388-1394.	2.3	12
101	A novel route for immobilization of proteins to silica particles incorporating silaffin domains. Biotechnology Progress, 2009, 25, 1643-1649.	2.6	31
102	Detoxification of model phenolic compounds in lignocellulosic hydrolysates with peroxidase for butanol production from Clostridium beijerinckii. Applied Microbiology and Biotechnology, 2009, 83, 1035-1043.	3.6	123
103	Continuous hydrogen and butyric acid fermentation by immobilized Clostridium tyrobutyricum ATCC 25755: Effects of the glucose concentration and hydraulic retention time. Bioresource Technology, 2009, 100, 5352-5355.	9.6	45
104	Analysis of the Toxic Mode of Action of Silver Nanoparticles Using Stressâ€Specific Bioluminescent Bacteria. Small, 2008, 4, 746-750.	10.0	374
105	A novel CSTR-type of hollow fiber membrane biofilm reactor for consecutive nitrification and denitrification. Desalination, 2008, 221, 526-533.	8.2	23
106	Effects of pH conditions on the biological conversion of carbon dioxide to methane in a hollow-fiber membrane biofilm reactor (Hf–MBfR). Desalination, 2008, 234, 409-415.	8.2	44
107	Continuous Butanol Production Using Suspended and Immobilized Clostridium beijerinckii NCIMB 8052 with Supplementary Butyrate. Energy & Energy & 2008, 22, 3459-3464.	5.1	135
108	Performance Analysis of a Proton Exchange Membrane Fuel Cell (PEMFC) Integrated with a Trickling Bed Bioreactor for Biological High-Rate Hydrogen Production. Energy & Samp; Fuels, 2008, 22, 83-86.	5.1	17

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109	Enzyme-Nanofiber Composites for Biocatalysis Applications. ACS Symposium Series, 2008, , 254-262.	0.5	2
110	Biohydrogen Production by Fermentative Process in Continuous Stirred-Tank Reactor. International Journal of Green Energy, 2007, 4, 385-395.	3.8	26
111	Stable and continuous long-term enzymatic reaction using an enzyme–nanofiber composite. Applied Microbiology and Biotechnology, 2007, 75, 1301-1307.	3.6	42
112	Purification and Characterization of Fungal Poly(3-hydroxybutyrate) Depolymerase from Paecilomyces lilacinus F4-5 and Enzymatic Degradation of Poly(3-hydroxybutyrate-co-3-hydroxyvalerate) Film. World Journal of Microbiology and Biotechnology, 2006, 22, 51-57.	3.6	11
113	CHEMOAUTOTROPHIC NITRIFICATION AND DENITRIFICATIN BY AIR- AND HYDROGEN-BASED HOLLOW-FIBER MEMBRANE BIOFILM REACTOR. Proceedings of the Water Environment Federation, 2005, 2005, 4225-4231.	0.0	0
114	The removal of nitrogen using an autotrophic hybrid hollow-fiber membrane biofilm reactor. Desalination, 2005, 183, 447-454.	8.2	43
115	A mathematical description for the fungal degradation process of biodegradable plastics. Mathematics and Computers in Simulation, 2004, 65, 147-155.	4.4	3
116	The trade-offs and effect of carrier size and oxygen-loading on gaseous toluene removal performance of a three-phase circulating-bed biofilm reactor. Applied Microbiology and Biotechnology, 2003, 61, 214-219.	3.6	1
117	Fungal contribution to in situ biodegradation of poly(3-hydroxybutyrate- co -3-hydroxyvalerate) film in soil. Applied Microbiology and Biotechnology, 2002, 58, 241-247.	3.6	74
118	A kinetic analysis of the fungal degradation process of poly(3-hydroxybutyrate-co-3-hydroxyvalerate) in soil. Biochemical Engineering Journal, 2001, 9, 175-184.	3.6	24
119	Shear effects on production of lignin peroxidase byPhanerochaete chrysosporium. Biotechnology and Bioprocess Engineering, 1996, 1, 26-31.	2.6	2