Peter Bakonyi

List of Publications by Year in descending order

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106 papers	5,024 citations	81743 39 h-index	98622 67 g-index
107 all docs	107 docs citations	107 times ranked	4542 citing authors

#	Article	IF	Citations
1	Fermentative hydrogen production from wastewaters: A review and prognosis. International Journal of Hydrogen Energy, 2012, 37, 15632-15642.	3.8	259
2	Lignocellulose biohydrogen: Practical challenges and recent progress. Renewable and Sustainable Energy Reviews, 2015, 44, 728-737.	8.2	244
3	A critical review on issues and overcoming strategies for the enhancement of dark fermentative hydrogen production in continuous systems. International Journal of Hydrogen Energy, 2016, 41, 3820-3836.	3.8	194
4	Anaerobic co-digestion on improving methane production from mixed microalgae (Scenedesmus sp.,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf Engineering Journal, 2016, 299, 332-341.	6.6	172
5	Carbon dioxide capture and bioenergy production using biological system â€“ A review. Renewable and Sustainable Energy Reviews, 2019, 110, 143-158.	8.2	152
6	A comprehensive overview on electro-active biofilms, role of exo-electrogens and their microbial niches in microbial fuel cells (MFCs). Chemosphere, 2017, 178, 534-547.	4.2	146
7	Microbial electrolysis cell platform for simultaneous waste biorefinery and clean electrofuels generation: Current situation, challenges and future perspectives. Progress in Energy and Combustion Science, 2017, 63, 119-145.	15.8	137
8	Biohydrogen purification by membranes: An overview on the operational conditions affecting the performance of non-porous, polymeric and ionic liquid based gas separation membranes. International Journal of Hydrogen Energy, 2013, 38, 9673-9687.	3.8	136
9	Promoted electromethanosynthesis in a two-chamber microbial electrolysis cells (MECs) containing a hybrid biocathode covered with graphite felt (GF). Chemical Engineering Journal, 2016, 284, 1146-1155.	6.6	119
10	A comprehensive review on thermochemical, biological, biochemical and hybrid conversion methods of bio-derived lignocellulosic molecules into renewable fuels. Fuel, 2019, 251, 352-367.	3.4	111
11	Review on the start-up experiences of continuous fermentative hydrogen producing bioreactors. Renewable and Sustainable Energy Reviews, 2014, 40, 806-813.	8.2	108
12	Enhancement of biofuel production via microbial augmentation: The case of dark fermentative hydrogen. Renewable and Sustainable Energy Reviews, 2016, 57, 879-891.	8.2	108
13	Anaerobic membrane bioreactor towards biowaste biorefinery and chemical energy harvest: Recent progress, membrane fouling and future perspectives. Renewable and Sustainable Energy Reviews, 2019, 115, 109392.	8.2	103
14	Anaerobic membrane bioreactors for biohydrogen production: Recent developments, challenges and perspectives. Bioresource Technology, 2018, 269, 452-464.	4.8	100
15	Hydrogen and methane production via a two-stage processes (H 2 -SBRÂ+ÂCH 4 -UASB) using tequila vinasses. International Journal of Hydrogen Energy, 2014, 39, 19249-19255.	3.8	93
16	Bioelectrochemical treatment of municipal waste liquor in microbial fuel cells for energy valorization. Journal of Cleaner Production, 2016, 112, 4406-4412.	4.6	91
17	Bioelectrochemical systems using microalgae â€“ A concise research update. Chemosphere, 2017, 177, 35-43.	4.2	88
18	Electro-conversion of carbon dioxide (CO2) to low-carbon methane by bioelectromethanogenesis process in microbial electrolysis cells: The current status and future perspective. Bioresource Technology, 2019, 279, 339-349.	4.8	88

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19	Research perspectives on constraints, prospects and opportunities in biohydrogen production. International Journal of Hydrogen Energy, 2017, 42, 27471-27481.	3.8	85
20	Fermentative hydrogen production in anaerobic membrane bioreactors: A review. Bioresource Technology, 2014, 156, 357-363.	4.8	81
21	A review on the biomass pretreatment and inhibitor removal methods as key-steps towards efficient macroalgae-based biohydrogen production. Bioresource Technology, 2017, 244, 1341-1348.	4.8	79
22	Microbial electrochemical systems for sustainable biohydrogen production: Surveying the experiences from a start-up viewpoint. Renewable and Sustainable Energy Reviews, 2017, 70, 589-597.	8.2	79
23	Microbiome involved in microbial electrochemical systems (MESs): A review. Chemosphere, 2017, 177, 176-188.	4.2	72
24	Hydrogen production in a microbial electrolysis cell fed with a dark fermentation effluent. Journal of Applied Electrochemistry, 2015, 45, 1223-1229.	1.5	71
25	Biofouling of membranes in microbial electrochemical technologies: Causes, characterization methods and mitigation strategies. Bioresource Technology, 2019, 279, 327-338.	4.8	71
26	Microbial electrohydrogenesis linked to dark fermentation as integrated application for enhanced biohydrogen production: A review on process characteristics, experiences and lessons. Bioresource Technology, 2018, 251, 381-389.	4.8	68
27	Simultaneous biohydrogen production and purification in a double-membrane bioreactor system. International Journal of Hydrogen Energy, 2015, 40, 1690-1697.	3.8	64
28	A novel gas separation integrated membrane bioreactor to evaluate the impact of self-generated biogas recycling on continuous hydrogen fermentation. Applied Energy, 2017, 190, 813-823.	5.1	64
29	A review on chemical mechanism of microalgae flocculation via polymers. Biotechnology Reports (Amsterdam, Netherlands), 2019, 21, e00302.	2.1	64
30	Architectural engineering of bioelectrochemical systems from the perspective of polymeric membrane separators: A comprehensive update on recent progress and future prospects. Journal of Membrane Science, 2018, 564, 508-522.	4.1	63
31	Enhanced biohydrogen production from beverage industrial wastewater using external nitrogen sources and bioaugmentation with facultative anaerobic strains. Journal of Bioscience and Bioengineering, 2015, 120, 155-160.	1.1	61
32	Biohydrogen purification using a commercial polyimide membrane module: Studying the effects of some process variables. International Journal of Hydrogen Energy, 2013, 38, 15092-15099.	3.8	55
33	Evaluation of two gas membrane modules forÂfermentative hydrogen separation. International Journal of Hydrogen Energy, 2013, 38, 14042-14052.	3.8	54
34	Enhancement of methane production from various microalgae cultures via novel ozonation pretreatment. Chemical Engineering Journal, 2017, 307, 948-954.	6.6	51
35	Municipal waste liquor treatment via bioelectrochemical and fermentation (H2Â+ÂCH4) processes: Assessment of various technological sequences. Chemosphere, 2017, 171, 692-701.	4.2	50
36	Trends and resource recovery in biological wastewater treatment system. Bioresource Technology Reports, 2019, 7, 100235.	1.5	46

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37	Improved microbial conversion of de-oiled Jatropha waste into biohydrogen via inoculum pretreatment: process optimization by experimental design approach. Biofuel Research Journal, 0, , 209-214.	7.2	46
38	Evaluation of various cheese whey treatment scenarios in single-chamber microbial electrolysis cells for improved biohydrogen production. Chemosphere, 2017, 174, 253-259.	4.2	43
39	Recovery of biohydrogen in a single-chamber microbial electrohydrogenesis cell using liquid fraction of pressed municipal solid waste (LPW) asÂsubstrate. International Journal of Hydrogen Energy, 2016, 41, 17896-17906.	3.8	41
40	Application of Plackettâ€“Burman experimental design to optimize biohydrogen fermentation by E. coli (XL1-BLUE). International Journal of Hydrogen Energy, 2011, 36, 13949-13954.	3.8	40
41	Performance evaluation of microbial electrochemical systems operated with Nafion and supported ionic liquid membranes. Chemosphere, 2017, 175, 350-355.	4.2	40
42	Supported ionic liquid membrane based on [bmim][PF6] can be a promising separator to replace Nafion in microbial fuel cells and improve energy recovery: A comparative process evaluation. Journal of Membrane Science, 2019, 570-571, 215-225.	4.1	39
43	Fermentative hydrogen production by conventionally and unconventionally heat pretreated seed cultures: A comparative assessment. International Journal of Hydrogen Energy, 2014, 39, 5589-5596.	3.8	36
44	Biomethane recovery from Egeria densa in a microbial electrolysis cell-assisted anaerobic system: Performance and stability assessment. Chemosphere, 2016, 149, 121-129.	4.2	36
45	Hydrogen and ethanol fermentation of various carbon sources by immobilized Escherichia coli (XL1-Blue). International Journal of Hydrogen Energy, 2014, 39, 6881-6888.	3.8	35
46	Enzymatically-boosted ionic liquid gas separation membranes using carbonic anhydrase of biomass origin. Chemical Engineering Journal, 2016, 303, 621-626.	6.6	34
47	Solvent-free enzymatic process for biolubricant production in continuous microfluidic reactor. Journal of Cleaner Production, 2015, 93, 140-144.	4.6	33
48	Continuous micro-current stimulation to upgrade methanolic wastewater biodegradation and biomethane recovery in an upflow anaerobic sludge blanket (UASB) reactor. Chemosphere, 2017, 180, 229-238.	4.2	33
49	A review of the innovative gas separation membrane bioreactor with mechanisms for integrated production and purification of biohydrogen. Bioresource Technology, 2018, 270, 643-655.	4.8	33
50	Evaluation of a membrane permeation system for biogas upgrading using model and real gaseous mixtures: The effect of operating conditions on separation behaviour, methane recovery and process stability. Journal of Cleaner Production, 2018, 185, 44-51.	4.6	32
51	Investigating the specific role of external load on the performance versus stability trade-off in microbial fuel cells. Bioresource Technology, 2020, 309, 123313.	4.8	32
52	Development of bioelectrochemical systems using various biogas fermenter effluents as inocula and municipal waste liquor as adapting substrate. Bioresource Technology, 2018, 259, 75-82.	4.8	31
53	Development and Application of Supported Ionic Liquid Membranes in Microbial Fuel Cell Technology: A Concise Overview. Membranes, 2020, 10, 16.	1.4	31
54	Degradation of hydrogen sulfide by immobilized Thiobacillus thioparus in continuous biotrickling reactor fed with synthetic gas mixture. International Biodeterioration and Biodegradation, 2015, 105, 185-191.	1.9	29

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55	Behavior of two-chamber microbial electrochemical systems started-up with different ion-exchange membrane separators. Bioresource Technology, 2019, 278, 279-286.	4.8	29
56	Escherichia coli (XL1-BLUE) for continuous fermentation of bioH2 and its separation by polyimide membrane. International Journal of Hydrogen Energy, 2012, 37, 5623-5630.	3.8	28
57	Modeling and Optimization of Biohydrogen Production from De-oiled Jatropha Using the Response Surface Method. Arabian Journal for Science and Engineering, 2015, 40, 15-22.	1.1	28
58	Comparison of Anaerobic Degradation Processes for Bioenergy Generation from Liquid Fraction of Pressed Solid Waste. Waste and Biomass Valorization, 2015, 6, 465-473.	1.8	27
59	On the efficiency of dual-chamber biocatalytic electrochemical cells applying membrane separators prepared with imidazolium-type ionic liquids containing [NTf 2] â^' and [PF 6] â^' anions. Chemical Engineering Journal, 2017, 324, 296-302.	6.6	27
60	Enhancement of dark fermentative H2 production by gas separation membranes: A review. Bioresource Technology, 2020, 302, 122828.	4.8	27
61	The influential role of external electrical load in microbial fuel cells and related improvement strategies: A review. Bioelectrochemistry, 2021, 140, 107749.	2.4	27
62	Biogenic H2 production from mixed microalgae biomass: impact of pH control and methanogenic inhibitor (BESA) addition. Biofuel Research Journal, 2016, 3, 470-474.	7.2	27
63	Evaluation of gradual adaptation of mixed microalgae consortia cultivation using textile wastewater via fed batch operation. Biotechnology Reports (Amsterdam, Netherlands), 2018, 20, e00289.	2.1	26
64	Assessment via the modified gompertz-model reveals new insights concerning the effects of ionic liquids on biohydrogen production. International Journal of Hydrogen Energy, 2018, 43, 18918-18924.	3.8	25
65	Continuous biogenic hydrogen production from dilute acid pretreated algal hydrolysate using hybrid immobilized mixed consortia. International Journal of Hydrogen Energy, 2018, 43, 11452-11459.	3.8	21
66	Separation of Volatile Fatty Acids from Model Anaerobic Effluents Using Various Membrane Technologies. Membranes, 2020, 10, 252.	1.4	21
67	Enzyme kinetics approach to assess biocatalyst inhibition and deactivation caused by [bmim][Cl] ionic liquid during cellulose hydrolysis. Bioresource Technology, 2017, 229, 190-195.	4.8	20
68	Possibilities for the biologically-assisted utilization of CO2-rich gaseous waste streams generated during membrane technological separation of biohydrogen. Journal of CO2 Utilization, 2020, 36, 231-243.	3.3	20
69	Relative evaluation of acid, alkali, and hydrothermal pretreatment influence on biochemical methane potential of date biomass. Journal of Environmental Chemical Engineering, 2021, 9, 106031.	3.3	20
70	Regulation and augmentation of anaerobic digestion processes via the use of bioelectrochemical systems. Bioresource Technology, 2022, 346, 126628.	4.8	20
71	The Impact of Various Natural Gas Contaminant Exposures on CO2/CH4 Separation by a Polyimide Membrane. Membranes, 2020, 10, 324.	1.4	19
72	Investigating the effect of hydrogen sulfide impurities on the separation of fermentatively produced hydrogen by PDMS membrane. Separation and Purification Technology, 2016, 157, 222-228.	3.9	18

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73	Improvement of hydrogen fermentation of galactose by combined inoculationÂstrategy. Journal of Bioscience and Bioengineering, 2017, 123, 353-357.	1.1	17
74	Improvement of methane content in a hydrogenotrophic anaerobic digester via the proper operation of membrane module integrated into an external-loop. Bioresource Technology, 2017, 245, 1294-1298.	4.8	17
75	Evaluation of pectin-reinforced supported liquid membranes containing carbonic anhydrase: The role of ionic liquid on enzyme stability and CO2 separation performance. Journal of CO2 Utilization, 2018, 24, 59-63.	3.3	17
76	Improvement of waste-fed bioelectrochemical system performance by selected electro-active microbes: Process evaluation and a kinetic study. Biochemical Engineering Journal, 2018, 137, 100-107.	1.8	17
77	H2 production in membraneless bioelectrochemical cells with optimized architecture: The effect of cathode surface area and electrode distance. Chemosphere, 2017, 171, 379-385.	4.2	16
78	Optimization of soaking in aqueous ammonia pretreatment for anaerobic digestion of African maize bran. Fuel, 2019, 253, 552-560.	3.4	16
79	Leachate valorization in anaerobic biosystems: Towards the realization of waste-to-energy concept via biohydrogen, biogas and bioelectrochemical processes. International Journal of Hydrogen Energy, 2019, 44, 17278-17296.	3.8	16
80	Effects of light intensity on biomass, carbohydrate and fatty acid compositions of three different mixed consortia from natural ecological water bodies. Journal of Environmental Management, 2019, 230, 293-300.	3.8	16
81	Electrochemical and microbiological insights into the use of 1,4-diazabicyclo[2.2.2]octane-functionalized anion exchange membrane in microbial fuel cell: A benchmarking study with Nafion. Separation and Purification Technology, 2020, 237, 116478.	3.9	15
82	Effect of shear velocity on dark fermentation for biohydrogen production using dynamic membrane. Bioresource Technology, 2020, 308, 123265.	4.8	15
83	Temporary feeding shocks increase the productivity in a continuous biohydrogen-producing reactor. Clean Technologies and Environmental Policy, 2018, 20, 1581-1588.	2.1	14
84	Optimized pH and Its Control Strategy Lead to Enhanced Itaconic Acid Fermentation by Aspergillus terreus on Glucose Substrate. Fermentation, 2019, 5, 31.	1.4	14
85	Evaluating aeration and stirring effects to improve itaconic acid production from glucose using Aspergillus terreus. Biotechnology Letters, 2019, 41, 1383-1389.	1.1	12
86	Efficiency, operational stability and biofouling of novel sulfomethylated polystyrene-block-poly(ethylene-ran-butylene)-block-polystyrene cation exchange membrane in microbial fuel cells. Bioresource Technology, 2021, 333, 125153.	4.8	12
87	Effects of anti-foaming agents on biohydrogen production. Bioresource Technology, 2016, 213, 121-128.	4.8	11
88	Comparative Evaluation of CO2 Fixation of Microalgae Strains at Various CO2 Aeration Conditions. Waste and Biomass Valorization, 2021, 12, 2999-3007.	1.8	10
89	Treatment of dark fermentative H2 production effluents by microbial fuel cells: A tutorial review on promising operational strategies and practices. International Journal of Hydrogen Energy, 2021, 46, 5556-5569.	3.8	10
90	Feasibility of quaternary ammonium and 1,4-diazabicyclo[2.2.2]octane-functionalized anion-exchange membranes for biohydrogen production in microbial electrolysis cells. Bioelectrochemistry, 2020, 133, 107479.	2.4	9

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91	Demonstration of bipolar membrane electrodialysis technique for itaconic acid recovery from real fermentation effluent of Aspergillus terreus. Chemical Engineering Research and Design, 2021, 175, 348-357.	2.7	9
92	Evaluation and ranking of polymeric ion exchange membranes used in microbial electrolysis cells for biohydrogen production. Bioresource Technology, 2021, 319, 124182.	4.8	8
93	Biohydrogen production in integrated system. Desalination and Water Treatment, 2010, 14, 116-118.	1.0	7
94	Comparative Study of VariousE. coliStrains for Biohydrogen Production Applying Response Surface Methodology. Scientific World Journal, The, 2012, 2012, 1-7.	0.8	7
95	Separation of Gases Using Membranes Containing Ionic Liquids. , 2014, , 261-273.		7
96	Influence of dilute acid, alkali and hydrothermalpretreatments on methane improvement from datepalm waste â€œTakarbouchtâ€•cultivar. Biomass Conversion and Biorefinery, 2023, 13, 2067-2077.	2.9	7
97	Carbohydrate to Itaconic Acid Conversion by Aspergillus terreus and the Evaluation of Process Monitoring Based on the Measurement of CO2. Waste and Biomass Valorization, 2020, 11, 1069-1075.	1.8	6
98	Mixed-culture H 2 fermentation performance and the relation between microbial community composition and hydraulic retention times for a fixed bed reactor fed with galactose/glucose mixtures. Journal of Bioscience and Bioengineering, 2017, 124, 339-345.	1.1	5
99	Investigation of Itaconic Acid Separation by Operating a Commercialized Electrodialysis Unit with Bipolar Membranes. Processes, 2020, 8, 1031.	1.3	3
100	Feasibility study of polyetherimide membrane for enrichment of carbon dioxide from synthetic biohydrogen mixture and subsequent utilization scenario using microalgae. International Journal of Energy Research, 2021, 45, 8327-8334.	2.2	3
101	Investigating the Proton and Ion Transfer Properties of Supported Ionic Liquid Membranes Prepared for Bioelectrochemical Applications Using Hydrophobic Imidazolium-Type Ionic Liquids. Membranes, 2021, 11, 359.	1.4	3
102	Feasibility Study of Gas Separation Membranes for Biohydrogen Separation. Procedia Engineering, 2012, 44, 976-979.	1.2	1
103	Integration of Membranes and Bioreactors. , 0, , .		1
104	Managing the Effluents of Anaerobic Fermentations by Bioprocess Schemes Involving Membrane Bioreactors and Bio-Electrochemical Systems: A Mini-Review. Energies, 2022, 15, 1643.	1.6	1
105	The Effect of Different Pretreatment Methods and Operational Conditions on the Biohydrogen Production Potential of Aged Anaerobic Culture. Current Biochemical Engineering, 2014, 1, 84-91.	1.3	0
106	Corrigendum to â€œEnhancement of biofuel production via microbial augmentation: The case of dark fermentative hydrogenâ€•[Renew Sustain Energy Rev 57 (2016) 879â€“891]. Renewable and Sustainable Energy Reviews, 2016, 66, 220.	8.2	0