

# Nandor Nemestothy

## List of Publications by Year in descending order

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105  
papers

3,745  
citations

126708

33  
h-index

138251

58  
g-index

105  
all docs

105  
docs citations

105  
times ranked

3705  
citing authors

#	ARTICLE	IF	CITATIONS
1	Lignocellulose biohydrogen: Practical challenges and recent progress. <i>Renewable and Sustainable Energy Reviews</i> , 2015, 44, 728-737.	8.2	244
2	Gas separation properties of supported liquid membranes prepared with unconventional ionic liquids. <i>Journal of Membrane Science</i> , 2010, 349, 6-11.	4.1	202
3	A critical review on issues and overcoming strategies for the enhancement of dark fermentative hydrogen production in continuous systems. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 3820-3836.	3.8	194
4	Biohydrogen purification by membranes: An overview on the operational conditions affecting the performance of non-porous, polymeric and ionic liquid based gas separation membranes. <i>International Journal of Hydrogen Energy</i> , 2013, 38, 9673-9687.	3.8	136
5	A comprehensive review on thermochemical, biological, biochemical and hybrid conversion methods of bio-derived lignocellulosic molecules into renewable fuels. <i>Fuel</i> , 2019, 251, 352-367.	3.4	111
6	Review on the start-up experiences of continuous fermentative hydrogen producing bioreactors. <i>Renewable and Sustainable Energy Reviews</i> , 2014, 40, 806-813.	8.2	108
7	Enhancement of biofuel production via microbial augmentation: The case of dark fermentative hydrogen. <i>Renewable and Sustainable Energy Reviews</i> , 2016, 57, 879-891.	8.2	108
8	Enzymatic esterification in ionic liquids integrated with pervaporation for water removal. <i>Green Chemistry</i> , 2003, 5, 236.	4.6	97
9	Bioelectrochemical treatment of municipal waste liquor in microbial fuel cells for energy valorization. <i>Journal of Cleaner Production</i> , 2016, 112, 4406-4412.	4.6	91
10	Bioelectrochemical systems using microalgae – A concise research update. <i>Chemosphere</i> , 2017, 177, 35-43.	4.2	88
11	A review on the biomass pretreatment and inhibitor removal methods as key-steps towards efficient macroalgae-based biohydrogen production. <i>Bioresource Technology</i> , 2017, 244, 1341-1348.	4.8	79
12	Microbial electrochemical systems for sustainable biohydrogen production: Surveying the experiences from a start-up viewpoint. <i>Renewable and Sustainable Energy Reviews</i> , 2017, 70, 589-597.	8.2	79
13	Separation of biohydrogen by supported ionic liquid membranes. <i>Desalination</i> , 2009, 240, 311-315.	4.0	76
14	Hydrogen production in a microbial electrolysis cell fed with a dark fermentation effluent. <i>Journal of Applied Electrochemistry</i> , 2015, 45, 1223-1229.	1.5	71
15	Biofouling of membranes in microbial electrochemical technologies: Causes, characterization methods and mitigation strategies. <i>Bioresource Technology</i> , 2019, 279, 327-338.	4.8	71
16	Microbial electrohydrogenesis linked to dark fermentation as integrated application for enhanced biohydrogen production: A review on process characteristics, experiences and lessons. <i>Bioresource Technology</i> , 2018, 251, 381-389.	4.8	68
17	Continuous enzymatic cellulose hydrolysis in a tubular membrane bioreactor. <i>Enzyme and Microbial Technology</i> , 2006, 38, 155-161.	1.6	67
18	Simultaneous biohydrogen production and purification in a double-membrane bioreactor system. <i>International Journal of Hydrogen Energy</i> , 2015, 40, 1690-1697.	3.8	64

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19	A novel gas separation integrated membrane bioreactor to evaluate the impact of self-generated biogas recycling on continuous hydrogen fermentation. <i>Applied Energy</i> , 2017, 190, 813-823.	5.1	64
20	A review on chemical mechanism of microalgae flocculation via polymers. <i>Biotechnology Reports (Amsterdam, Netherlands)</i> , 2019, 21, e00302.	2.1	64
21	Architectural engineering of bioelectrochemical systems from the perspective of polymeric membrane separators: A comprehensive update on recent progress and future prospects. <i>Journal of Membrane Science</i> , 2018, 564, 508-522.	4.1	63
22	Enhanced biohydrogen production from beverage industrial wastewater using external nitrogen sources and bioaugmentation with facultative anaerobic strains. <i>Journal of Bioscience and Bioengineering</i> , 2015, 120, 155-160.	1.1	61
23	Biohydrogen purification using a commercial polyimide membrane module: Studying the effects of some process variables. <i>International Journal of Hydrogen Energy</i> , 2013, 38, 15092-15099.	3.8	55
24	Study on gas separation by supported liquid membranes applying novel ionic liquids. <i>Desalination</i> , 2009, 245, 743-747.	4.0	54
25	Evaluation of two gas membrane modules for fermentative hydrogen separation. <i>International Journal of Hydrogen Energy</i> , 2013, 38, 14042-14052.	3.8	54
26	Hydrolysis of pectin by <i>Aspergillus niger</i> polygalacturonase in a membrane bioreactor. <i>Journal of Food Engineering</i> , 2007, 78, 438-442.	2.7	53
27	Municipal waste liquor treatment via bioelectrochemical and fermentation (H <sub>2</sub> and CH <sub>4</sub> ) processes: Assessment of various technological sequences. <i>Chemosphere</i> , 2017, 171, 692-701.	4.2	50
28	Improved microbial conversion of de-oiled <i>Jatropha</i> waste into biohydrogen via inoculum pretreatment: process optimization by experimental design approach. <i>Biofuel Research Journal</i> , 0, , 209-214.	7.2	46
29	Recovery of biohydrogen in a single-chamber microbial electrohydrogenesis cell using liquid fraction of pressed municipal solid waste (LPW) as substrate. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 17896-17906.	3.8	41
30	Application of Plackett-Burman experimental design to optimize biohydrogen fermentation by <i>E. coli</i> (XL1-BLUE). <i>International Journal of Hydrogen Energy</i> , 2011, 36, 13949-13954.	3.8	40
31	Performance evaluation of microbial electrochemical systems operated with Nafion and supported ionic liquid membranes. <i>Chemosphere</i> , 2017, 175, 350-355.	4.2	40
32	Supported ionic liquid membrane based on [bmim][PF <sub>6</sub> ] can be a promising separator to replace Nafion in microbial fuel cells and improve energy recovery: A comparative process evaluation. <i>Journal of Membrane Science</i> , 2019, 570-571, 215-225.	4.1	39
33	Fermentative hydrogen production by conventionally and unconventionally heat pretreated seed cultures: A comparative assessment. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 5589-5596.	3.8	36
34	Enzymatically-boosted ionic liquid gas separation membranes using carbonic anhydrase of biomass origin. <i>Chemical Engineering Journal</i> , 2016, 303, 621-626.	6.6	34
35	Continuous micro-current stimulation to upgrade methanolic wastewater biodegradation and biomethane recovery in an upflow anaerobic sludge blanket (UASB) reactor. <i>Chemosphere</i> , 2017, 180, 229-238.	4.2	33
36	A review of the innovative gas separation membrane bioreactor with mechanisms for integrated production and purification of biohydrogen. <i>Bioresource Technology</i> , 2018, 270, 643-655.	4.8	33

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37	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. <i>Journal of Cleaner Production</i> , 2018, 185, 44-51.	4.6	32
38	Investigating the specific role of external load on the performance versus stability trade-off in microbial fuel cells. <i>Bioresource Technology</i> , 2020, 309, 123313.	4.8	32
39	Development of bioelectrochemical systems using various biogas fermenter effluents as inocula and municipal waste liquor as adapting substrate. <i>Bioresource Technology</i> , 2018, 259, 75-82.	4.8	31
40	Development and Application of Supported Ionic Liquid Membranes in Microbial Fuel Cell Technology: A Concise Overview. <i>Membranes</i> , 2020, 10, 16.	1.4	31
41	Degradation of hydrogen sulfide by immobilized <i>Thiobacillus thioparus</i> in continuous biotrickling reactor fed with synthetic gas mixture. <i>International Biodeterioration and Biodegradation</i> , 2015, 105, 185-191.	1.9	29
42	Behavior of two-chamber microbial electrochemical systems started-up with different ion-exchange membrane separators. <i>Bioresource Technology</i> , 2019, 278, 279-286.	4.8	29
43	A study on applications of membrane techniques in bioconversion of fumaric acid to L-malic acid. <i>Desalination</i> , 2004, 162, 301-306.	4.0	28
44	<i>Escherichia coli</i> (XL1-BLUE) for continuous fermentation of bioH <sub>2</sub> and its separation by polyimide membrane. <i>International Journal of Hydrogen Energy</i> , 2012, 37, 5623-5630.	3.8	28
45	Comparison of Anaerobic Degradation Processes for Bioenergy Generation from Liquid Fraction of Pressed Solid Waste. <i>Waste and Biomass Valorization</i> , 2015, 6, 465-473.	1.8	27
46	On the efficiency of dual-chamber biocatalytic electrochemical cells applying membrane separators prepared with imidazolium-type ionic liquids containing [NTf <sub>2</sub> ] <sup>-</sup> and [PF <sub>6</sub> ] <sup>-</sup> anions. <i>Chemical Engineering Journal</i> , 2017, 324, 296-302.	6.6	27
47	Enhancement of dark fermentative H <sub>2</sub> production by gas separation membranes: A review. <i>Bioresource Technology</i> , 2020, 302, 122828.	4.8	27
48	The influential role of external electrical load in microbial fuel cells and related improvement strategies: A review. <i>Bioelectrochemistry</i> , 2021, 140, 107749.	2.4	27
49	Biogenic H <sub>2</sub> production from mixed microalgae biomass: impact of pH control and methanogenic inhibitor (BESA) addition. <i>Biofuel Research Journal</i> , 2016, 3, 470-474.	7.2	27
50	Influence of pervaporation process parameters on enzymatic catalyst deactivation. <i>Desalination</i> , 2004, 162, 307-313.	4.0	26
51	Assessment via the modified gompertz-model reveals new insights concerning the effects of ionic liquids on biohydrogen production. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 18918-18924.	3.8	25
52	Utilisation of bipolar electrodialysis for recovery of galacturonic acid. <i>Desalination</i> , 2010, 250, 1128-1131.	4.0	23
53	Lipase catalyzed synthesis of glucose palmitate in ionic liquid. <i>Journal of Cleaner Production</i> , 2016, 112, 1106-1111.	4.6	23
54	Separation of Volatile Fatty Acids from Model Anaerobic Effluents Using Various Membrane Technologies. <i>Membranes</i> , 2020, 10, 252.	1.4	21

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55	Enzyme kinetics approach to assess biocatalyst inhibition and deactivation caused by [bmim][Cl] ionic liquid during cellulose hydrolysis. <i>Bioresource Technology</i> , 2017, 229, 190-195.	4.8	20
56	Possibilities for the biologically-assisted utilization of CO <sub>2</sub> -rich gaseous waste streams generated during membrane technological separation of biohydrogen. <i>Journal of CO<sub>2</sub> Utilization</i> , 2020, 36, 231-243.	3.3	20
57	Low-waste fermentation-derived organic acid production by bipolar membrane electrodialysis—an overview. <i>Chemical Papers</i> , 2021, 75, 5223-5234.	1.0	20
58	The Impact of Various Natural Gas Contaminant Exposures on CO <sub>2</sub> /CH <sub>4</sub> Separation by a Polyimide Membrane. <i>Membranes</i> , 2020, 10, 324.	1.4	19
59	Utilization of electrodialysis for galacturonic acid recovery. <i>Desalination</i> , 2009, 241, 81-85.	4.0	18
60	Pervaporation aided enzymatic production of glycerol monostearate in organic solvents. <i>Desalination</i> , 2009, 241, 212-217.	4.0	17
61	Evaluation of pectin-reinforced supported liquid membranes containing carbonic anhydrase: The role of ionic liquid on enzyme stability and CO <sub>2</sub> separation performance. <i>Journal of CO<sub>2</sub> Utilization</i> , 2018, 24, 59-63.	3.3	17
62	Improvement of waste-fed bioelectrochemical system performance by selected electro-active microbes: Process evaluation and a kinetic study. <i>Biochemical Engineering Journal</i> , 2018, 137, 100-107.	1.8	17
63	Leachate valorization in anaerobic biosystems: Towards the realization of waste-to-energy concept via biohydrogen, biogas and bioelectrochemical processes. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 17278-17296.	3.8	16
64	Effects of light intensity on biomass, carbohydrate and fatty acid compositions of three different mixed consortia from natural ecological water bodies. <i>Journal of Environmental Management</i> , 2019, 230, 293-300.	3.8	16
65	Vacuum assisted membrane bioreactor for enzymatic hydrolysis of pectin from various agro-wastes. <i>Desalination</i> , 2009, 241, 29-33.	4.0	15
66	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. <i>Separation and Purification Technology</i> , 2020, 237, 116478.	3.9	15
67	Optimized pH and Its Control Strategy Lead to Enhanced Itaconic Acid Fermentation by <i>Aspergillus terreus</i> on Glucose Substrate. <i>Fermentation</i> , 2019, 5, 31.	1.4	14
68	Evaluating aeration and stirring effects to improve itaconic acid production from glucose using <i>Aspergillus terreus</i> . <i>Biotechnology Letters</i> , 2019, 41, 1383-1389.	1.1	12
69	Directions of membrane separator development for microbial fuel cells: A retrospective analysis using frequent itemset mining and descriptive statistical approach. <i>Journal of Power Sources</i> , 2020, 478, 229014.	4.0	12
70	Efficiency, operational stability and biofouling of novel sulfomethylated polystyrene-block-poly(ethylene-ran-butylene)-block-polystyrene cation exchange membrane in microbial fuel cells. <i>Bioresource Technology</i> , 2021, 333, 125153.	4.8	12
71	Application of polymeric foams for separation, storage and absorption of hydrogen. <i>Desalination</i> , 2009, 241, 106-110.	4.0	11
72	Effects of anti-foaming agents on biohydrogen production. <i>Bioresource Technology</i> , 2016, 213, 121-128.	4.8	11

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73	Comparative Evaluation of CO <sub>2</sub> Fixation of Microalgae Strains at Various CO <sub>2</sub> Aeration Conditions. Waste and Biomass Valorization, 2021, 12, 2999-3007.	1.8	10
74	Treatment of dark fermentative H <sub>2</sub> 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
75	Modelling of biohydrogen production and recovery by membrane gas separation. Desalination, 2009, 240, 306-310.	4.0	9
76	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
77	Demonstration of bipolar membrane electro dialysis technique for itaconic acid recovery from real fermentation effluent of <i>Aspergillus terreus</i> . Chemical Engineering Research and Design, 2021, 175, 348-357.	2.7	9
78	Membrane bioreactor for utilisation of carbohydrates in waste streams. Desalination, 2002, 149, 329-330.	4.0	8
79	Study on operation of a microbial fuel cell using mesophilic anaerobic sludge. Desalination and Water Treatment, 2011, 35, 222-226.	1.0	8
80	Evaluation and ranking of polymeric ion exchange membranes used in microbial electrolysis cells for biohydrogen production. Bioresource Technology, 2021, 319, 124182.	4.8	8
81	Enhancement of operation and storage stability of glucoamylase from <i>Aspergillus awamori</i> by a protease inhibitor preparation. Biocatalysis and Biotransformation, 2005, 23, 281-284.	1.1	7
82	Biohydrogen production in integrated system. Desalination and Water Treatment, 2010, 14, 116-118.	1.0	7
83	Comparative Study of Various <i>E. coli</i> Strains for Biohydrogen Production Applying Response Surface Methodology. Scientific World Journal, The, 2012, 2012, 1-7.	0.8	7
84	Separation of Gases Using Membranes Containing Ionic Liquids. , 2014, , 261-273.		7
85	Characterization of pectins from press residues of berries by FT-IR spectroscopy. Acta Alimentaria, 2012, 41, 94-99.	0.3	6
86	Carbohydrate to Itaconic Acid Conversion by <i>Aspergillus terreus</i> and the Evaluation of Process Monitoring Based on the Measurement of CO <sub>2</sub> . Waste and Biomass Valorization, 2020, 11, 1069-1075.	1.8	6
87	Recovery of Itaconic Acid by Electrodialysis. Hungarian Journal of Industrial Chemistry, 2018, 46, 43-46.	0.1	6
88	Functional stability of novel homogeneous and heterogeneous cation exchange membranes for abiotic and microbial electrochemical technologies. Journal of Membrane Science, 2022, 658, 120705.	4.1	6
89	Utilisation of a membrane bioreactor for pectin hydrolysis by <i>Aspergillus niger</i> polygalacturonase. Desalination, 2006, 200, 507-508.	4.0	5
90	Studying microbial fuel cells equipped with heterogeneous ion exchange membranes: Electrochemical performance and microbial community assessment of anodic and membrane-surface biofilms. Bioresource Technology, 2022, 360, 127628.	4.8	5

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91	Application of membranes in biogas production. <i>Desalination and Water Treatment</i> , 2010, 14, 112-115.	1.0	4
92	Investigation of Itaconic Acid Separation by Operating a Commercialized Electrodialysis Unit with Bipolar Membranes. <i>Processes</i> , 2020, 8, 1031.	1.3	3
93	Feasibility study of polyetherimide membrane for enrichment of carbon dioxide from synthetic biohydrogen mixture and subsequent utilization scenario using microalgae. <i>International Journal of Energy Research</i> , 2021, 45, 8327-8334.	2.2	3
94	Investigating the Proton and Ion Transfer Properties of Supported Ionic Liquid Membranes Prepared for Bioelectrochemical Applications Using Hydrophobic Imidazolium-Type Ionic Liquids. <i>Membranes</i> , 2021, 11, 359.	1.4	3
95	Removal of COD by Two-Chamber Microbial Fuel Cells. , 2014, , .		2
96	A novel miniaturized terrestrial microbial fuel cell reveals rapid electrochemical signals. <i>Energy Procedia</i> , 2017, 142, 1482-1487.	1.8	2
97	Aerobic stabilization of organic waste effluents from anaerobic treatment for agricultural use. , 0, 192, 424-430.		2
98	The Role of Ionic Liquids in Enzyme-Membrane Integrated Systems. , 2014, , 235-259.		1
99	The Role of Biocatalysis and Membrane Techniques in Processing High-Pectin Content Food Stuffs and Wastes. , 2017, , 277-292.		1
100	Application of membranes in biogas production. <i>Desalination and Water Treatment</i> , 2010, , 112-115.	1.0	1
101	Managing the Effluents of Anaerobic Fermentations by Bioprocess Schemes Involving Membrane Bioreactors and Bio-Electrochemical Systems: A Mini-Review. <i>Energies</i> , 2022, 15, 1643.	1.6	1
102	Biotechnological Utilisation of Fusel Oil for Biolubricant Production. , 2012, , .		0
103	Corrigendum to "Enhancement of biofuel production via microbial augmentation: The case of dark fermentative hydrogen" [Renew Sustain Energy Rev 57 (2016) 879-891]. <i>Renewable and Sustainable Energy Reviews</i> , 2016, 66, 220.	8.2	0
104	Coupled Systems Based on Microbial Fuel Cells. , 2018, , 423-431.		0
105	Application of polymer membranes in downstream processes. <i>ChemistrySelect</i> , 2020, 5, .	0.7	0