Richard R Sparling

List of Publications by Year
in descending order

116 papers	5,797 citations	109264 35 h-index	79644 73 g-index
118 all docs	118 docs citations	118 times ranked	6495 citing authors

#	Article	IF	Citations
1	Methane oxidation in a landfill biowindow under wide seasonally fluctuating climatic conditions. Environmental Science and Pollution Research, 2022, 29, 24623-24638.	2.7	3
2	A meta-analysis reveals that operational parameters influence levels of antibiotic resistance genes during anaerobic digestion of animal manures. Science of the Total Environment, 2022, 814, 152711.	3.9	10
3	Optimized design of a compost layer in a landfill biocover for CH4 oxidation. Chemical Engineering Research and Design, 2022, 160, 354-361.	2.7	4
4	Enhancement of CH4 oxidation potential in bio-based landfill cover materials. Chemical Engineering Research and Design, 2021, 146, 943-951.	2.7	11
5	Analysis of the Yarrowia lipolytica proteome reveals subtle variations in expression levels between lipogenic and non-lipogenic conditions. FEMS Yeast Research, 2021, 21, .	1.1	1
6	Cross-feeding and wheat straw extractives enhance growth of Clostridium thermocellum-containing co-cultures for consolidated bioprocessing. Bioprocess and Biosystems Engineering, 2021, 44, 819-830.	1.7	3
7	Effect of ceftiofur on mesophilic anaerobic digestion of dairy manure and the reduction of the cephalosporin-resistance gene cmy-2. Bioresource Technology, 2020, 301, 122729.	4.8	20
8	Effect of mesophilic anaerobic digestion on the resistome profile of dairy manure. Bioresource Technology, 2020, 315, 123889.	4.8	33
9	Response of Microbial Community to Induced Failure of Anaerobic Digesters Through Overloading With Propionic Acid Followed by Process Recovery. Frontiers in Bioengineering and Biotechnology, 2020, 8, 604838.	2.0	20
10	Digestibility of Wheat and Cattail Biomass Using a Co-culture of Thermophilic Anaerobes for Consolidated Bioprocessing. Bioenergy Research, 2020, 13, 325-333.	2.2	14
11	A novel thermostable GH5 Î²-xylosidase from Thermogemmatispora sp. T81. New Biotechnology, 2019, 53, 57-64.	2.4	8
12	Rheological Behavior of High Cell Density Pseudomonas putida LS46 Cultures during Production of Medium Chain Length Polyhydroxyalkanoate (PHA) Polymers. Bioengineering, 2019, 6, 93.	1.6	7
13	Development of High Cell Density Cultivation Strategies for Improved Medium Chain Length Polyhydroxyalkanoate Productivity Using Pseudomonas putida LS46. Bioengineering, 2019, 6, 89.	1.6	16
14	Efficacy of medium chain-length polyhydroxyalkanoate biosynthesis from different biochemical pathways under oxygen-limited conditions using Pseudomonas putida LS46. Process Biochemistry, 2019, 82, 19-31.	1.8	10
15	Genomic comparison of facultatively anaerobic and obligatory aerobic Caldibacillus debilis strains GB1 and Tf helps explain physiological differences. Canadian Journal of Microbiology, 2019, 65, 421-428.	0.8	0
16	Microbial Population Change in Anaerobic Digestion during Copper Sulfate Inhibition and Recovery. Transactions of the ASABE, 2019, 62, 1231-1241.	1.1	2
17	Enhanced depolymerization and utilization of raw lignocellulosic material by co-cultures of Ruminiclostridium thermocellum with hemicellulose-utilizing partners. Canadian Journal of Microbiology, 2019, 65, 296-307.	0.8	9
18	Description of a cryptic thermophilic (pro)phage, CBP1 from Caldibacillus debilis strain GB1. Extremophiles, 2018, 22, 203-209.	0.9	1

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19	Analysis of carbohydrate-active enzymes in Thermogemmatispora sp. strain T81 reveals carbohydrate degradation ability. Canadian Journal of Microbiology, 2018, 64, 992-1003.	0.8	5
20	A metabolic and genomic assessment of sugar fermentation profiles of the thermophilic Thermotogales, Fervidobacterium pennivorans. Extremophiles, 2018, 22, 965-974.	0.9	6
21	Carbon flux to growth or polyhydroxyalkanoate synthesis under microaerophilic conditions is affected by fatty acid chain-length in Pseudomonas putida LS46. Applied Microbiology and Biotechnology, 2018, 102, 6437-6449.	1.7	16
22	The role of dissolved oxygen content as a modulator of microbial polyhydroxyalkanoate synthesis. World Journal of Microbiology and Biotechnology, 2018, 34, 106.	1.7	30
23	Microaerophilic environments improve the productivity of medium chain length polyhydroxyalkanoate biosynthesis from fatty acids in Pseudomonas putida LS46. Process Biochemistry, 2017, 59, 18-25.	1.8	14
24	Understanding aerobic/anaerobic metabolism in Caldibacillus debilis through a comparison with model organisms. Systematic and Applied Microbiology, 2017, 40, 245-253.	1.2	8
25	Mixotrophy drives niche expansion of verrucomicrobial methanotrophs. ISME Journal, 2017, 11, 2599-2610.	4.4	107
26	Cofactor Tail Length Modulates Catalysis of Bacterial F420-Dependent Oxidoreductases. Frontiers in Microbiology, 2017, 8, 1902.	1.5	15
27	Growth and metabolic profiling of the novel thermophilic bacterium Thermoanaerobacter sp. strain YS13. Canadian Journal of Microbiology, 2016, 62, 762-771.	0.8	2
28	Transcriptomic and proteomic analyses of core metabolism in Clostridium termitidis CT1112 during growth on Î±-cellulose, xylan, cellobiose and xylose. BMC Microbiology, 2016, 16, 91.	1.3	22
29	Global changes in the proteome of Cupriavidus necator H16 during poly-(3-hydroxybutyrate) synthesis from various biodiesel by-product substrates. AMB Express, 2016, 6, 36.	1.4	34
30	In Silico Comparative Analysis of Type VI Secretion Systems in Pseudomonas putida LS46. , 2016, , 257-279.		0
31	Polyhydroxybutyrate Production from Municipal Wastewater Activated Sludge with Different Carbon Sources. Air, Soil and Water Research, 2015, 8, ASWR.S27218.	1.2	15
32	Facultative Anaerobe Caldibacillus debilis GB1: Characterization and Use in a Designed Aerotolerant, Cellulose-Degrading Coculture with Clostridium thermocellum. Applied and Environmental Microbiology, 2015, 81, 5567-5573.	1.4	21
33	Draft Genome Sequence of Thermoanaerobacter sp. Strain YS13, a Novel Thermophilic Bacterium. Genome Announcements, 2015, 3, .	0.8	4
34	Phylogenetic Affiliation of Pseudomonas sp. MO2, a Novel Polyhydroxyalkanoate-Synthesizing Bacterium. , 2015, , 57-77.		0
35	Horizontal transfer of antibiotic resistance from Enterococcus faecium of fermented meat origin to clinical isolates of E. faecium and Enterococcus faecalis. International Journal of Food Microbiology, 2015, 199, 78-85.	2.1	57
36	Hydrogen, ethanol and cellulase production from pulp and paper primary sludge by fermentation with Clostridium thermocellum. Biomass and Bioenergy, 2015, 72, 256-262.	2.9	36

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37	Ethanol production by engineered thermophiles. Current Opinion in Biotechnology, 2015, 33, 130-141.	3.3	114
38	Omics Approaches for Designing Biofuel Producing Cocultures for Enhanced Microbial Conversion of Lignocellulosic Substrates. , 2015, , 335-363.		12
39	Effects of impurities in biodiesel-derived glycerol on growth and expression of heavy metal ion homeostasis genes and gene products in Pseudomonas putida LS46. Applied Microbiology and Biotechnology, 2015, 99, 5583-5592.	1.7	8
40	Draft Genome Sequence of the Bacteriocin-Producing Bradyrhizobium japonicum Strain FN1. Genome Announcements, 2015, 3, .	0.8	3
41	Optimization of Influential Nutrients during Direct Cellulose Fermentation into Hydrogen by Clostridium thermocellum. International Journal of Molecular Sciences, 2015, 16, 3116-3132.	1.8	21
42	Reassessment of the Transhydrogenase/Malate Shunt Pathway in Clostridium thermocellum ATCC 27405 through Kinetic Characterization of Malic Enzyme and Malate Dehydrogenase. Applied and Environmental Microbiology, 2015, 81, 2423-2432.	1.4	37
43	Role of glycoside hydrolase genes in sinigrin degradation by E. coli O157:H7. International Journal of Food Microbiology, 2015, 205, 105-111.	2.1	23
44	Quantitative proteomic analysis of the cellulolytic system of Clostridium termitidis CT1112 reveals distinct protein expression profiles upon growth on Î±-cellulose and cellobiose. Journal of Proteomics, 2015, 125, 41-53.	1.2	12
45	Lipid production in the under-characterized oleaginous yeasts, Rhodosporidium babjevae and Rhodosporidium diobovatum, from biodiesel-derived waste glycerol. Bioresource Technology, 2015, 185, 49-55.	4.8	89
46	Whole cell, label free protein quantitation with data independent acquisition: Quantitation at the MS2 level. Proteomics, 2015, 15, 16-24.	1.3	16
47	Quantitative â€˜Omics Analyses of Medium Chain Length Polyhydroxyalkanaote Metabolism in Pseudomonas putida LS46 Cultured with Waste Glycerol and Waste Fatty Acids. PLoS ONE, 2015, 10, e0142322.	1.1	21
48	Potential of thin stillage as a low-cost nutrient source for direct cellulose fermentation by Clostridium thermocellum. AIMS Energy, 2015, 3, 711-727.	1.1	2
49	Long-term Impact of Low Temperature on Anammox Process. Proceedings of the Water Environment Federation, 2015, 2015, 3039-3050.	0.0	0
50	Comparative Analysis of Carbohydrate Active Enzymes in Clostridium termitidis CT1112 Reveals Complex Carbohydrate Degradation Ability. PLoS ONE, 2014, 9, e104260.	1.1	29
51	Role of transcription and enzyme activities in redistribution of carbon and electron flux in response to N2 and H2 sparging of open-batch cultures of Clostridium thermocellum ATCC 27405. Applied Microbiology and Biotechnology, 2014, 98, 2829-2840.	1.7	16
52	Growth and neutral lipid synthesis by Yarrowia lipolytica on various carbon substrates under nutrient-sufficient and nutrient-limited conditions. Bioresource Technology, 2014, 164, 41-46.	4.8	78
53	Single-step fermentation of agricultural hemp residues for hydrogen and ethanol production. Biomass and Bioenergy, 2014, 64, 62-69.	2.9	27
54	In situ activity-based protein profiling of serine hydrolases in E. coli. EuPA Open Proteomics, 2014, 4, 18-24.	2.5	4

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55	Thermoanaerobacterthermohydrosulfuricus WC1 Shows Protein Complement Stability during Fermentation of Key Lignocellulose-Derived Substrates. Applied and Environmental Microbiology, 2014, 80, 1602-1615.	1.4	23
56	Evaluation of medium-chain-length polyhydroxyalkanoate production byPseudomonas putidaLS46 using biodiesel by-product streams. Canadian Journal of Microbiology, 2014, 60, 461-468.	0.8	25
57	Enhanced whole genome sequence and annotation of Clostridium stercorarium DSM8532T using RNA-seq transcriptomics and high-throughput proteomics. BMC Genomics, 2014, 15, 567.	1.2	19
58	Reduced catabolic protein expression in Clostridium butyricum DSM 10702 correlate with reduced 1,3-propanediol synthesis at high glycerol loading. AMB Express, 2014, 4, 63.	1.4	23
59	Genome features of Pseudomonas putida LS46, a novel polyhydroxyalkanoate producer and its comparison with other P. putida strains. AMB Express, 2014, 4, 37.	1.4	17
60	Insights into electron flux through manipulation of fermentation conditions and assessment of protein expression profiles in Clostridium thermocellum. Applied Microbiology and Biotechnology, 2014, 98, 6497-6510.	1.7	18
61	Characterization of enriched aerotolerant cellulose-degrading communities for biofuels production using differing selection pressures and inoculum sources. Canadian Journal of Microbiology, 2013, 59, 679-683.	0.8	9
62	Enhanced cellulose fermentation and end-product synthesis by Clostridium thermocellum with varied nutrient compositions under carbon-excess conditions. Biomass and Bioenergy, 2013, 48, 213-223.	2.9	14
63	A versatile and robust aerotolerant microbial community capable of cellulosic ethanol production. Bioresource Technology, 2013, 129, 156-163.	4.8	17
64	Draft Genome Sequence of the Cellulolytic, Mesophilic, Anaerobic Bacterium Clostridium termitidis Strain CT1112 (DSM 5398). Genome Announcements, 2013, 1, .	0.8	8
65	Draft Genome Sequence of the Hydrogen- and Ethanol-Producing Bacterium Clostridium intestinale Strain URNW. Genome Announcements, 2013, 1, .	0.8	4
66	Draft Genome Sequence of Medium-Chain-Length Polyhydroxyalkanoate-Producing Pseudomonas putida Strain LS46. Genome Announcements, 2013, 1, e0015113.	0.8	6
67	Genomic Evaluation of Thermoanaerobacter spp. for the Construction of Designer Co-Cultures to Improve Lignocellulosic Biofuel Production. PLoS ONE, 2013, 8, e59362.	1.1	39
68	Effects of Turbulence and Temperature on Leachate Chemistry. Journal of Environmental Engineering, ASCE, 2012, 138, 562-569.	0.7	2
69	Kinetics of medium-chain-length polyhydroxyalkanoate production by a novel isolate of Pseudomonas putida LS46. Canadian Journal of Microbiology, 2012, 58, 982-989.	0.8	34
70	Proteomic analysis of Clostridium thermocellum core metabolism: relative protein expression profiles and growth phase-dependent changes in protein expression. BMC Microbiology, 2012, 12, 214.	1.3	99
71	Linking genome content to biofuel production yields: a meta-analysis of major catabolic pathways among select H2and ethanol-producing bacteria. BMC Microbiology, 2012, 12, 295.	1.3	58
72	Informationâ€dependent <scp>LC</scp>â€<scp>MS</scp>/<scp>MS</scp> acquisition with exclusion lists potentially generated onâ€theâ€fly: Case study using a whole cell digest of <scp>C</scp>lostridium thermocellum. Proteomics, 2012, 12, 1160-1169.	1.3	23

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73	Isolation and characterization of a hydrogen- and ethanol-producing Clostridium sp. strain URNW. Canadian Journal of Microbiology, 2011, 57, 236-243.	0.8	11
74	Isolates of Thermoanaerobacter thermohydrosulfuricus from decaying wood compost display genetic and phenotypic microdiversity. FEMS Microbiology Ecology, 2011, 78, 473-487.	1.3	17
75	Predicting relatedness of bacterial genomes using the chaperonin-60 universal target (cpn60 UT): Application to Thermoanaerobacter species. Systematic and Applied Microbiology, 2011, 34, 171-179.	1.2	40
76	Biomass pretreatment: Fundamentals toward application. Biotechnology Advances, 2011, 29, 675-685.	6.0	1,544
77	End-product induced metabolic shifts in Clostridium thermocellum ATCC 27405. Applied Microbiology and Biotechnology, 2011, 92, 199-209.	1.7	62
78	Hydrogen gas production in a microbial electrolysis cell by electrohydrogenesis. Journal of Cleaner Production, 2010, 18, S105-S111.	4.6	57
79	Leachate treatment before injection into a bioreactor landfill: Clogging potential reduction and benefits of using methanogenesis. Waste Management, 2010, 30, 2030-2036.	3.7	29
80	Enhancing biological phosphorus removal with glycerol. Water Science and Technology, 2010, 61, 1837-1843.	1.2	14
81	Continuous hydrogen production during fermentation of Î±â€cellulose by the thermophillic bacterium Clostridium thermocellum. Biotechnology and Bioengineering, 2009, 102, 759-766.	1.7	41
82	Influence of initial cellulose concentration on the carbon flow distribution during batch fermentation by Clostridium thermocellum ATCC 27405. Applied Microbiology and Biotechnology, 2009, 82, 141-148.	1.7	59
83	Mercury methylation made easy. Nature Geoscience, 2009, 2, 92-93.	5.4	8
84	Challenges for biohydrogen production via direct lignocellulose fermentation. International Journal of Hydrogen Energy, 2009, 34, 7390-7403.	3.8	85
85	Growth phase-dependant enzyme profile of pyruvate catabolism and end-product formation in Clostridium thermocellum ATCC 27405. Journal of Biotechnology, 2009, 140, 169-175.	1.9	62
86	Waste activated sludge fermentation: Effect of solids retention time and biomass concentration. Water Research, 2009, 43, 5180-5186.	5.3	72
87	Pyruvate catabolism and hydrogen synthesis pathway genes of Clostridium thermocellum ATCC 27405. Indian Journal of Microbiology, 2008, 48, 252-266.	1.5	40
88	Direct hydrogen production from cellulosic waste materials with a single-step dark fermentation process. International Journal of Hydrogen Energy, 2008, 33, 5398-5403.	3.8	96
89	Hydrogen production and end-product synthesis patterns by Clostridium termitidis strain CT1112 in batch fermentation cultures with cellobiose or Î±-cellulose. International Journal of Hydrogen Energy, 2008, 33, 7006-7012.	3.8	30
90	Effect of pH on Intracellular Accumulation of Trace Concentrations of Hg(II) in Escherichia coli under Anaerobic Conditions, as Measured Using a mer-lux Bioreporter. Applied and Environmental Microbiology, 2008, 74, 667-675.	1.4	35

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91	Third Generation Biofuels via Direct Cellulose Fermentation. International Journal of Molecular Sciences, 2008, 9, 1342-1360.	1.8	252
92	Effect of Different Carbon Sources on Biological Phosphorus Removal and Polyhydroxyalkanoate Production. Proceedings of the Water Environment Federation, 2008, 2008, 193-201.	0.0	0
93	Evaluation of Mercury Toxicity as a Predictor of Mercury Bioavailability. Environmental Science & Technology, 2007, 41, 5685-5692.	4.6	35
94	Formate synthesis byClostridium thermocellumduring anaerobic fermentation. Canadian Journal of Microbiology, 2006, 52, 681-688.	0.8	47
95	Low-Temperature Inactivation of Fecal Coliforms in Sludge Digestion. Water Environment Research, 2006, 78, 680-685.	1.3	20
96	Hydrogen production by Clostridium thermocellum 27405 from cellulosic biomass substrates. International Journal of Hydrogen Energy, 2006, 31, 1496-1503.	3.8	288
97	Effect of substrate loading on hydrogen production during anaerobic fermentation by Clostridium thermocellum 27405. Applied Microbiology and Biotechnology, 2006, 72, 576-583.	1.7	79
98	Hydrogen generation via anaerobic fermentation of paper mill wastes. Bioresource Technology, 2005, 96, 1907-1913.	4.8	127
99	Effect of Sulfidogenic and Methanogenic Inhibitors on Reductive Dehalogenation of 2-Chlorophenol. Environmental Technology (United Kingdom), 2005, 26, 1383-1392.	1.2	13
100	Quantification and diversity of the archaeal community in a landfill site. Canadian Journal of Microbiology, 2003, 49, 28-36.	0.8	17
101	Evidence for facilitated uptake of Hg(II) by Vibrio anguillarum and Escherichia coli under anaerobic and aerobic conditions. Limnology and Oceanography, 2002, 47, 967-975.	1.6	85
102	High Solid Anaerobic Digestion of Chicken Manure. Biosystems Engineering, 2000, 76, 51-60.	0.4	209
103	Precipitation of iron minerals by a natural microbial consortium. Geochimica Et Cosmochimica Acta, 1999, 63, 2163-2169.	1.6	51
104	Investigation of serine hydroxymethyltransferase in methanogens. Canadian Journal of Microbiology, 1998, 44, 652-6.	0.8	8
105	Regulation in the rpoS regulon of Escherichia coli. Canadian Journal of Microbiology, 1998, 44, 707-717.	0.8	211
106	Dehalogenation of 2-chlorophenol (2-CP) in anaerobic batch cultures. Water Research, 1996, 30, 315-322.	5.3	21
107	Electron transfer reactions for the reduction of NADP+inMethanosphaera stadtmanae. FEMS Microbiology Letters, 1994, 120, 285-290.	0.7	7
108	Bioenergetic studies of Methanosphaera stadtmanae, an obligate H2â€“methanol utilising methanogen. Canadian Journal of Microbiology, 1993, 39, 742-748.	0.8	14

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109	Sodium ion dependent active transport of leucine in Methanosphaera stadtmanae. Canadian Journal of Microbiology, 1993, 39, 749-753.	0.8	9
110	Molecular Hydrogen and Energy Conservation in Methanogenic and Acetogenic Bacteria. , 1990, , 3-10.		3
111	Isolation and Ultrastructure of the Flagella of Methanococcus thermolithotrophicus and Methanospirillum hungatei. Applied and Environmental Microbiology, 1989, 55, 1414-1419.	1.4	31
112	Physiological and 15N-NMR analysis of molecular nitrogen fixation by Methanococcus thermolithotrophicus, Methanobacterium bryantii and Methanospirillum hungatei. Biochimica Et Biophysica Acta - Molecular Cell Research, 1988, 971, 233-245.	1.9	23
113	Physiological and 15N-NMR analysis of molecular nitrogen fixation by Methanococcus thermolithotrophicus, Methanobacterium bryantii and Methanospirillum hungatei. Biochimica Et Biophysica Acta - Bioenergetics, 1988, 971, 233-245.	0.5	7
114	The specificity of growth inhibition of methanogenic bacteria by bromoethanesulfonate. Canadian Journal of Microbiology, 1987, 33, 1132-1136.	0.8	68
115	The bioenergetics of methanogenesis. Biochimica Et Biophysica Acta - Reviews on Bioenergetics, 1984, 768, 113-163.	0.8	209
116	Dinitrogen fixation by a thermophilic methanogenic bacterium. Nature, 1984, 312, 286-288.	13.7	147