Serge Guiot

List of Publications by Year in descending order

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136	5,860	81743	88477
papers	citations	h-index	g-index
138 all docs	138 docs citations	138 times ranked	5232 citing authors

#	Article	IF	CITATIONS
1	Layered structure of bacterial aggregates produced in an upflow anaerobic sludge bed and filter reactor. Applied and Environmental Microbiology, 1990, 56, 1598-1607.	1.4	353
2	Liquid-to-Gas Mass Transfer in Anaerobic Processes: Inevitable Transfer Limitations of Methane and Hydrogen in the Biomethanation Process. Applied and Environmental Microbiology, 1990, 56, 1636-1644.	1.4	239
3	High rate membrane-less microbial electrolysis cell for continuous hydrogen production. International Journal of Hydrogen Energy, 2009, 34, 672-677.	3 . 8	204
4	Biomethane production from starch and lignocellulosic crops: a comparative review. Biofuels, Bioproducts and Biorefining, 2010, 4, 447-458.	1.9	190
5	Integration of microalgae cultivation with industrial waste remediation for biofuel and bioenergy production: opportunities and limitations. Photosynthesis Research, 2011, 109, 231-247.	1.6	186
6	Assessment of the bioenergy and bioremediation potentials of the microalga Scenedesmus sp. AMDD cultivated in municipal wastewater effluent in batch and continuous mode. Algal Research, 2012, 1, 155-165.	2.4	146
7	A Structured Model of the Anaerobic Granule Consortium. Water Science and Technology, 1992, 25, 1-10.	1.2	142
8	Potential of Wastewater-Treating Anaerobic Granules for Biomethanation of Synthesis Gas. Environmental Science & Environmental	4.6	136
9	Genomic Analysis of Carbon Monoxide Utilization and Butanol Production by Clostridium carboxidivorans Strain P7T. PLoS ONE, 2010, 5, e13033.	1.1	134
10	Impact of mechanical, chemical and enzymatic pre-treatments on the methane yield from the anaerobic digestion of switchgrass. Biomass and Bioenergy, 2012, 36, 1-11.	2.9	129
11	The influence of operational conditions on the performance of a microbial fuel cell seeded with mesophilic anaerobic sludge. Biochemical Engineering Journal, 2010, 51, 132-139.	1.8	125
12	The effect of real-time external resistance optimization on microbial fuel cell performance. Water Research, 2011, 45, 1571-1578.	5. 3	124
13	Biocatalyzed hydrogen production in a continuous flow microbial fuel cell with a gas phase cathode. Journal of Power Sources, 2008, 182, 291-297.	4.0	112
14	Electrolysis-enhanced anaerobic digestion of wastewater. Bioresource Technology, 2011, 102, 5685-5691.	4.8	111
15	Screening microalgae strains for their productivity in methane following anaerobic digestion. Applied Energy, 2013, 108, 100-107.	5.1	111
16	Differentiation of <i>Methanosaeta concilii</i> and <i>Methanosarcina barkeri</i> in Anaerobic Mesophilic Granular Sludge by Fluorescent In Situ Hybridization and Confocal Scanning Laser Microscopy. Applied and Environmental Microbiology, 1999, 65, 2222-2229.	1.4	110
17	Application of iron-based cathode catalysts in a microbial fuel cell. Electrochimica Acta, 2011, 56, 1505-1511.	2.6	109
18	Microbial electrolysis cell scale-up for combined wastewater treatment and hydrogen production. Bioresource Technology, 2013, 130, 584-591.	4.8	102

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19	Acidogenic digestion of food waste in a thermophilic leach bed reactor: Effect of pH and leachate recirculation rate on hydrolysis and volatile fatty acid production. Bioresource Technology, 2017, 245, 1-9.	4.8	98
20	Animal digestive strategies versus anaerobic digestion bioprocesses for biogas production from lignocellulosic biomass. Reviews in Environmental Science and Biotechnology, 2011, 10, 43-62.	3.9	97
21	A Comparison of Air and Hydrogen Peroxide Oxygenated Microbial Fuel Cell Reactors. Biotechnology Progress, 2006, 22, 241-246.	1.3	96
22	Hydrogen Production from Glycerol in a Membraneless Microbial Electrolysis Cell. Energy & Energy & Fuels, 2009, 23, 4612-4618.	2.5	89
23	Performance of an upflow anaerobic reactor combining a sludge blanket and a filter treating sugar waste. Biotechnology and Bioengineering, 1985, 27, 800-806.	1.7	85
24	Solubility of pentachlorophenol in aqueous solutions: The pH effect. Water Research, 1995, 29, 131-136.	5.3	85
25	Biodegradation of gasoline by gellan gum-encapsulated bacterial cells. Biotechnology and Bioengineering, 2002, 80, 175-184.	1.7	80
26	Effects of surfactant and temperature on biotransformation kinetics of anthracene and pyrene. Chemosphere, 2005, 61, 1042-1050.	4.2	77
27	Coupled anaerobic–aerobic treatment of whey wastewater in a sequencing batch reactor: proof of concept. Water Science and Technology, 2007, 55, 201-208.	1.2	67
28	Mesophilic, thermophilic and hyperthermophilic acidogenic fermentation of food waste in batch: Effect of inoculum source. Waste Management, 2019, 87, 279-287.	3.7	55
29	Enhanced Biodegradation of Petroleum Hydrocarbons in Contaminated Soil. Bioremediation Journal, 2003, 7, 37-51.	1.0	54
30	Long-term impact of dissolved O2 on the activity of anaerobic granules. , 2000, 49, 611-620.		53
31	Biodegradation of gasoline and BTEX in a microaerophilic biobarrier. Biodegradation, 1999, 10, 341-352.	1.5	52
32	Enhanced selection of an anaerobic pentachlorophenol-degrading consortium. Biotechnology and Bioengineering, 2001, 73, 476-483.	1.7	50
33	Performances of a full-scale novel multiplate anaerobic reactor treating cheese whey effluent. Biotechnology and Bioengineering, 1995, 45, 398-405.	1.7	48
34	Degradation of trichloroethylene in a coupled anaerobic–aerobic bioreactor: Modeling and experiment. Biochemical Engineering Journal, 2005, 26, 72-81.	1.8	46
35	Direct Interspecies Electron Transfer in Anaerobic Digestion: A Review. Advances in Biochemical Engineering/Biotechnology, 2015, 151, 101-115.	0.6	46
36	Kinetics of biodegradation of gasoline and its hydrocarbon constituents. Applied Microbiology and Biotechnology, 1998, 49, 475-481.	1.7	45

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37	Biodegradation of Pentachlorophenol in a Continuous Anaerobic Reactor Augmented with <i>Desulfitobacterium frappieri</i> PCP-1. Applied and Environmental Microbiology, 1999, 65, 4357-4362.	1.4	44
38	Effects of bioaugmentation strategies in UASB reactors with a methanogenic consortium for removal of phenolic compounds. Biotechnology and Bioengineering, 2000, 67, 417-423.	1.7	43
39	Production of size-controlled gellan gum microbeads encapsulating gasoline-degrading bacteria. Enzyme and Microbial Technology, 2002, 30, 10-18.	1.6	43
40	Electrochemical characterization of anodic biofilm development in a microbial fuel cell. Journal of Applied Electrochemistry, 2013, 43, 533-540.	1.5	43
41	Acidic and thermal pre-treatments for anaerobic digestion inoculum to improve hydrogen and volatile fatty acid production using xylose as the substrate. Renewable Energy, 2020, 145, 1388-1398.	4.3	42
42	Combining photolysis and bioprocesses for mineralization of high molecular weight polyacrylamides. Biodegradation, 2002, 13, 221-227.	1.5	40
43	Application of multi-wavelength fluorometry for on-line monitoring of an anaerobic digestion process. Water Research, 2004, 38, 3287-3296.	5.3	40
44	Anaerobic digestion model No. 1-based distributed parameter model of an anaerobic reactor: II. Model validation. Bioresource Technology, 2008, 99, 3676-3684.	4.8	40
45	Biomethanation of Syngas Using Anaerobic Sludge: Shift in the Catabolic Routes with the CO Partial Pressure Increase. Frontiers in Microbiology, 2016, 7, 1188.	1.5	40
46	The treatment of cheese whey wastewater by sequential anaerobic and aerobic steps in a single digester at pilot scale. Bioresource Technology, 2009, 100, 4156-4163.	4.8	39
47	Hydrogen monitoring in anaerobic sludge bed reactors at various hydraulic regimes and loading rates. Water Environment Research, 1993, 65, 276-280.	1.3	37
48	DEGRADATION OF AROCLOR 1242 IN A SINGLE-STAGE COUPLED ANAEROBIC/AEROBIC BIOREACTOR. Water Research, 2001, 35, 4323-4330.	5.3	37
49	Optimizing the electrode size and arrangement in a microbial electrolysis cell. Bioresource Technology, 2011, 102, 9593-9598.	4.8	37
50	Influence of the starting microbial nucleus type on the anaerobic granulation dynamics. Applied Microbiology and Biotechnology, 1997, 47, 189-194.	1.7	33
51	Long-term impact of dissolved O2 on the activity of anaerobic granules. , 1996, 49, 611.		33
52	Fate of explosives and their metabolites in bioslurrytreatment processes. Biodegradation, 1998, 8, 339-347.	1.5	32
53	Performance and biomass retention of an upflow anaerobic reactor combining a sludge blanket and a filter. Biotechnology Letters, 1984, 6, 161-164.	1.1	31
54	Enhanced Biodegradation and Fate of Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX) and Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX) in Anaerobic Soil Slurry Bioprocess. Bioremediation Journal, 2000, 4, 27-39.	1.0	30

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55	Thermophilic adaptation of a mesophilic anaerobic sludge for food waste treatment. Journal of Environmental Management, 2008, 88, 517-525.	3.8	30
56	Hydrothermal post-treatment of digestate to maximize the methane yield from the anaerobic digestion of microalgae. Waste Management, 2018, 71, 683-688.	3.7	29
57	Impact of liquid-to-gas hydrogen mass transfer on substrate conversion efficiency of an upflow anaerobic sludge bed and filter reactor. Enzyme and Microbial Technology, 1995, 17, 1080-1086.	1.6	28
58	Electricity generation from carbon monoxide in a single chamber microbial fuel cell. Enzyme and Microbial Technology, 2010, 46, 450-455.	1.6	28
59	Performance of a Carboxydothermus hydrogenoformans-immobilizing membrane reactor for syngas upgrading into hydrogen. International Journal of Hydrogen Energy, 2013, 38, 2167-2175.	3 . 8	28
60	Assessment of macroenergetic parameters for an anaerobic upflow biomass bed and filter (UBF) reactor. Biotechnology and Bioengineering, 1989, 34, 1277-1288.	1.7	27
61	Effects of oxygenation and upflow liquid velocity on a coupled anaerobic/aerobic reactor system. Water Research, 1999, 33, 2855-2863.	5.3	27
62	Detection of intermediate metabolites of benzene biodegradation under microaerophilic conditions. Biodegradation, 2001, 12, 379-391.	1.5	27
63	Liming impact on granules activity of the multiplate anaerobic reactor (MPAR) treating whey permeate. Bioprocess and Biosystems Engineering, 1995, 12, 47-53.	0.5	26
64	Evaluating limiting steps of anaerobic degradation of food waste based on methane production tests. Water Science and Technology, 2008, 57, 419-422.	1.2	25
65	Anaerobic co-digestion of dairy manure with mulched switchgrass for improvement of the methane yield. Bioprocess and Biosystems Engineering, 2012, 35, 341-349.	1.7	25
66	Characterization of the protein fraction of the extracellular polymeric substances of three anaerobic granular sludges. AMB Express, 2019, 9, 23.	1.4	25
67	Modeling and analysis of layered stationary anaerobic granular biofilms. , 1997, 54, 122-130.		24
68	Microstructure of Anaerobic Granules Bioaugmented with Desulfitobacterium frappieri PCP-1. Applied and Environmental Microbiology, 2002, 68, 4035-4043.	1.4	24
69	Transport of gellan gum microbeads through sand: an experimental evaluation for encapsulated cell bioaugmentation. Journal of Environmental Management, 2003, 69, 249-259.	3.8	24
70	In-storage psychrophilic anaerobic digestion of swine manure: Acclimation of the microbial community. Biomass and Bioenergy, 2011, 35, 3719-3726.	2.9	24
71	Influence of synthetic and natural polymers on the anaerobic granulation process. Water Science and Technology, 1998, 38, 341-347.	1.2	24
72	Acidogenic fermentation of Scenedesmus spAMDD: Comparison of volatile fatty acids yields between mesophilic and thermophilic conditions. Bioresource Technology, 2016, 200, 624-630.	4.8	23

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73	Electrolytic Methanogenicâ^'Methanotrophic Coupling for Tetrachloroethylene Bioremediation: Proof of Concept. Environmental Science & Environmental Sc	4.6	22
74	Specific inhibitors for identifying pathways for methane production from carbon monoxide by a nonadapted anaerobic mixed culture. Canadian Journal of Microbiology, 2014, 60, 407-415.	0.8	22
75	Thermodynamic evidence of trophic microniches in methanogenic granular sludge-bed reactors. Applied Microbiology and Biotechnology, 1990, 33, 88-92.	1.7	21
76	Ecotoxicological Evaluation of a Bench-Scale Bioslurry Treating Explosives-Spiked Soil. Bioremediation Journal, 1999, 3, 233-246.	1.0	21
77	Trichloroethylene Degradation in a Coupled Anaerobic/Aerobic Reactor Oxygenated Using Hydrogen Peroxide. Environmental Science & Environmental Science	4. 6	21
78	Activated sludge encapsulation in gellan gum microbeads for gasoline biodegradation. Bioprocess and Biosystems Engineering, 2004, 26, 197-204.	1.7	21
79	Electricity generation from carbon monoxide and syngas in a microbial fuel cell. Applied Microbiology and Biotechnology, 2011, 90, 827-836.	1.7	21
80	Performance of Carboxydothermus hydrogenoformans in a gas-lift reactor for syngas upgrading into hydrogen. International Journal of Hydrogen Energy, 2014, 39, 2543-2548.	3.8	21
81	Kinetics of benzene biotransformation under microaerophilic and oxygen-limited conditions. Biotechnology and Bioengineering, 2002, 79, 347-355.	1.7	20
82	Methane production from the microalga Scenedesmus sp. AMDD in a continuous anaerobic reactor. Algal Research, 2013, 2, 394-400.	2.4	20
83	Dynamic modelling of the population distribution in the anaerobic granular biofilm. Water Science and Technology, 1994, 30, 63-73.	1.2	20
84	Methanotroph and methanogen coupling in granular biofilm under O2-limited conditions. Biotechnology Letters, 1996, 18, 495-500.	1.1	19
85	ADM1 application for tuning and performance analysis of a multi-model observer-based estimator. Water Science and Technology, 2006, 54, 93-100.	1.2	19
86	Population Analysis of Mesophilic Microbial Fuel Cells Fed with Carbon Monoxide. Applied Biochemistry and Biotechnology, 2014, 172, 713-726.	1.4	19
87	High-rate biomethane production from microalgal biomass in a UASB reactor. Algal Research, 2015, 7, 86-91.	2.4	19
88	Electron microscopic examination of the extracellular polymeric substances in anaerobic granular biofilms. World Journal of Microbiology and Biotechnology, 1995, 11, 481-485.	1.7	18
89	A Market Study on the Anaerobic Waste-water Treatment Systems. Water, Air, and Soil Pollution, 2003, 143, 179-192.	1.1	18
90	Comparison of different support materials for their capacity to immobilize Mycobacterium austroafricanum IFP 2012 and to adsorb MtBE. Enzyme and Microbial Technology, 2007, 40, 1524-1530.	1.6	18

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91	Ethanol-to-methane activity of Geobacter-deprived anaerobic granules enhanced by conductive microparticles. Process Biochemistry, 2017, 63, 42-48.	1.8	18
92	Monitoring Methanotrophic Bacteria in Hybrid Anaerobic-Aerobic Reactors with PCR and a Catabolic Gene Probe. Applied and Environmental Microbiology, 1999, 65, 381-388.	1.4	17
93	Fate of explosives and their metabolites in bioslurry treatment processes. Biodegradation, 1997, 8, 339-347.	1.5	16
94	A microcosm test for potential mineralization of chlorinated compounds under coupled aerobic/anaerobic conditions. Chemosphere, 2002, 47, 695-699.	4.2	16
95	The performance of a thermophilic microbial fuel cell fed with synthesis gas. Enzyme and Microbial Technology, 2012, 51, 163-170.	1.6	16
96	Application of a Variable Structure Model in Observation and Control of an Anaerobic Digestor. Biotechnology Progress, 2002, 18, 898-903.	1.3	15
97	Fluorescence-based monitoring of tracer and substrate distribution in an UASB reactor. Chemosphere, 2006, 65, 1212-1220.	4.2	14
98	Methane production in an UASB reactor operated under periodic mesophilic–thermophilic conditions. Biotechnology and Bioengineering, 2008, 100, 1115-1121.	1.7	13
99	Use of <i> Mycobacterium austroafricanum</i> IFP 2012 in a MTBE-Degrading Bioreactor. Journal of Molecular Microbiology and Biotechnology, 2008, 15, 190-198.	1.0	13
100	Orthogonal optimization of Carboxydothermus hydrogenoformans culture medium for hydrogen production from carbon monoxide by biological water-gas shift reaction. International Journal of Hydrogen Energy, 2011, 36, 10655-10665.	3.8	13
101	Simulation and sterilization of a surrogate soil organic matter for the study of the fate of trichloroethylene in soil. Communications in Soil Science and Plant Analysis, 1997, 28, 1177-1190.	0.6	12
102	Kinetics of CO conversion into H2 by Carboxydothermus hydrogenoformans. Applied Microbiology and Biotechnology, 2011, 91, 1677-1684.	1.7	12
103	Electrolysisâ€enhanced coâ€digestion of switchgrass and cow manure. Journal of Chemical Technology and Biotechnology, 2014, 89, 1501-1506.	1.6	12
104	Synthesis of 14C-labelled octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX) for use in microcosm experiments. Journal of Labelled Compounds and Radiopharmaceuticals, 1999, 42, 1251-1264.	0.5	11
105	Origin of <i>p < /i>-cresol in the anaerobic degradation of trinitrotoluene. Canadian Journal of Microbiology, 2000, 46, 119-124.</i>	0.8	11
106	Induction of Granulation by Sulphonated‣ignin and Calcium in an Upflow Anaerobic Sludge Bed Reactor. Journal of Chemical Technology and Biotechnology, 1992, 53, 45-56.	1.6	11
107	Immobilization of anaerobic sludge using chitosan crosslinked with lignosulfonate. Journal of Industrial Microbiology and Biotechnology, 1998, 20, 45-47.	1.4	10
108	Mixing characteristics and performance of the anaerobic upflow blanket filter (UBF) reactor. Journal of Chemical Technology and Biotechnology Biotechnology, 1985, 35, 65-74.	0.2	9

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109	Use of silicone membranes to enhance gas transfer during microbial fuel cell operation on carbon monoxide. Bioresource Technology, 2011, 102, 10898-10906.	4.8	9
110	Application of a VSM-Based Process Control to a Bench-Scale Anaerobic Digestor. Industrial & Engineering Chemistry Research, 2005, 44, 106-113.	1.8	8
111	Enhanced Biodegradation of Petroleum Hydrocarbons in Contaminated Soil. Journal of Soil Contamination, 1998, 7, 37-51.	0.5	7
112	Biodegradation of Benzene in a Laboratory-Scale Biobarrier at Low Dissolved Oxygen Concentrations. Bioremediation Journal, 2001, 5, 63-77.	1.0	7
113	On-line estimation of kinetic parameters in anaerobic digestion using observer-based estimators and multiwavelength fluorometry. Water Science and Technology, 2006, 53, 77-83.	1.2	7
114	Strategy to identify the causes and to solve a sludge granulation problem in methanogenic reactors: application to a full-scale plant treating cheese wastewater. Environmental Science and Pollution Research, 2018, 25, 21318-21331.	2.7	7
115	Modeling and Analysis of Co-immobilized Aerobic/Anaerobic Mixed Cultures. Biotechnology Progress, 1998, 14, 672-679.	1.3	6
116	Anaerobic Biodegradation of Trichloroethylene Sorbed by a Surrogate Soil Organic Matter. Journal of Environmental Quality, 2000, 29, 1033-1040.	1.0	6
117	Removal of Pyrene and Benzo(a)Pyrene from Contaminated Water by Sequential and Simultaneous Ozonation and Biotreatment. Water Environment Research, 2006, 78, 2286-2292.	1.3	6
118	Thermodynamical and Microbiological Evidence of Trophic Microniches for Propionate Degradation in a Methanogenic Sludge-Bed Reactor., 1990,, 173-183.		6
119	Electricity production from synthesis gas inÂaÂmultiâ€electrode microbial fuel cell. Journal of Chemical Technology and Biotechnology, 2014, 89, 499-507.	1.6	5
120	Fungal pretreatment by Phanerochaete chrysosporium to reduce the inhibition of methanogenesis by dehydroabietic acid. Applied Microbiology and Biotechnology, 1998, 49, 538-544.	1.7	4
121	Comparison of treatment efficacy and stability of microbial populations between raw and anaerobically treated liquid pig manure, using PCR–DGGE and 16S sequencing. Canadian Journal of Microbiology, 2008, 54, 83-90.	0.8	4
122	Anaerobic Digestion as an Effective Biofuel Production Technology. , 2012, , 143-161.		4
123	The Role of Carboxydothermus hydrogenoformans in the Conversion of Calcium Phosphate from Amorphous to Crystalline State. PLoS ONE, 2014, 9, e89480.	1.1	4
124	Fate of palmitic, palmitoleic and eicosapentaenoic acids during anaerobic digestion of Phaeodactylum tricornutum at varying lipid concentration. Algal Research, 2014, 6, 46-51.	2.4	4
125	A comparison of microbial and bioelectrochemical approaches for biogas upgrade through carbon dioxide conversion to methane. Sustainable Energy Technologies and Assessments, 2021, 45, 101158.	1.7	4
126	Temperature-Based Control of an Anaerobic Reactor Using a Multi-Model Observer-Based Estimator. Environmental Science & Enviro	4.6	3

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127	In-storage psychrophilic anaerobic digestion: acclimated microbial kinetics. Environmental Technology (United Kingdom), 2012, 33, 1763-1772.	1.2	3
128	Encapsulation of Bacteria for Biodegradation of Gasoline Hydrocarbons. Methods in Biotechnology, 2006, , 415-426.	0.2	3
129	Physicochemical pretreatment selects microbial communities to produce alcohols through metabolism of volatile fatty acids. Biomass Conversion and Biorefinery, 2024, 14, 2661-2675.	2.9	3
130	Process coupling of anaerobic and aerobic biofilms for treatment of contaminated waste liquids. Studies in Environmental Science, 1997, , 591-602.	0.0	2
131	Growth profile of Carboxydothermus hydrogenoformans on pyruvate. AMB Express, 2013, 3, 60.	1.4	2
132	Effects of Dilution and Fungal Pretreatment on Anaerobic Biodegradability of Oxygen Delignification Process Spent Liquor. Water Quality Research Journal of Canada, 1999, 34, 599-614.	1.2	1
133	Ultrastructure of a bio-electrolytic methanogenic/methanotrophic granular biofilm for the complete degradation of tetrachloroethylene in contaminated groundwater. Water Science and Technology, 2007, 55, 465-471.	1.2	1
134	Microbial Characteristics and Inflence Factors During Anaerobic Fermentation for Biohydrogen Production from CO. Ying Yong Yu Huan Jing Sheng Wu Xue Bao = Chinese Journal of Applied and Environmental Biology, 2012, 18, 656.	0.1	1
135	Quantitative method based on energy and mass balance for estimating substrate transient accumulation in activated sludge during wastewater treatment. Biotechnology and Bioengineering, 1986, 28, 1637-1646.	1.7	0
136	Transport of Gellan Gum Microbeads in Soil Columns of Various Grain Size Distributions. Canadian Journal of Chemical Engineering, 2004, 82, 994-1003.	0.9	0