

JosÃ© V C Vargas

List of Publications by Year in descending order

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158
papers

2,949
citations

172207

29
h-index

205818

48
g-index

160
all docs

160
docs citations

160
times ranked

2551
citing authors

#	ARTICLE	IF	CITATIONS
1	A review on microalgae, a versatile source for sustainable energy and materials. International Journal of Energy Research, 2011, 35, 291-311.	2.2	217
2	Optimal allocation of a heat-exchanger inventory in heat driven refrigerators. International Journal of Heat and Mass Transfer, 1995, 38, 2997-3004.	2.5	124
3	Three-dimensional optimization of staggered finned circular and elliptic tubes in forced convection. International Journal of Thermal Sciences, 2004, 43, 477-487.	2.6	106
4	A comparative study of elliptical and circular sections in one- and two-row tubes and plate fin heat exchangers. International Journal of Heat and Fluid Flow, 1997, 18, 247-252.	1.1	96
5	Optimization study and heat transfer comparison of staggered circular and elliptic tubes in forced convection. International Journal of Heat and Mass Transfer, 2001, 44, 3953-3961.	2.5	96
6	Thermodynamic optimization of finned crossflow heat exchangers for aircraft environmental control systems. International Journal of Heat and Fluid Flow, 2001, 22, 657-665.	1.1	89
7	Optimally staggered finned circular and elliptic tubes in forced convection. International Journal of Heat and Mass Transfer, 2004, 47, 1347-1359.	2.5	79
8	Experimental development of an intelligent refrigeration system. International Journal of Refrigeration, 2005, 28, 165-175.	1.8	78
9	Thermodynamic Optimization of a Gas Turbine Power Plant With Pressure Drop Irreversibilities. Journal of Energy Resources Technology, Transactions of the ASME, 1998, 120, 233-240.	1.4	68
10	Constructal flow structure for a PEM fuel cell. International Journal of Heat and Mass Transfer, 2004, 47, 4177-4193.	2.5	64
11	Evaluation of flexible postconsumed polyurethane foams modified by polystyrene grafting as sorbent material for oil spills. Journal of Applied Polymer Science, 2009, 111, 1842-1849.	1.3	60
12	Modeling, simulation and optimization of a solar collector driven water heating and absorption cooling plant. Solar Energy, 2009, 83, 1232-1244.	2.9	55
13	Thermodynamic optimization of a Stirling engine. Energy, 2012, 44, 902-910.	4.5	55
14	Simulation in transient regime of a heat pump with closed-loop and on-off control. International Journal of Refrigeration, 1995, 18, 235-243.	1.8	54
15	Constructal PEM fuel cell stack design. International Journal of Heat and Mass Transfer, 2005, 48, 4410-4427.	2.5	52
16	Life cycle assessment of biomass production in microalgae compact photobioreactors. GCB Bioenergy, 2015, 7, 184-194.	2.5	48
17	Thermodynamic optimization of internal structure in a fuel cell. International Journal of Energy Research, 2004, 28, 319-339.	2.2	47
18	Integrative thermodynamic optimization of the environmental control system of an aircraft. International Journal of Heat and Mass Transfer, 2001, 44, 3907-3917.	2.5	45

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19	Microalgae derived biomass and bioenergy production enhancement through biogas purification and wastewater treatment. <i>Renewable Energy</i> , 2021, 163, 1153-1165.	4.3	45
20	Normalized methodology for medical infrared imaging. <i>Infrared Physics and Technology</i> , 2009, 52, 42-47.	1.3	44
21	Extraction of <i>Acutodesmus obliquus</i> lipids using a mixture of ethanol and hexane as solvent. <i>Biomass and Bioenergy</i> , 2018, 108, 470-478.	2.9	43
22	Thermodynamic Optimization of Solar-Driven Refrigerators. <i>Journal of Solar Energy Engineering, Transactions of the ASME</i> , 1996, 118, 130-135.	1.1	38
23	The experimental validation of a simplified PEMFC simulation model for design and optimization purposes. <i>Applied Thermal Engineering</i> , 2009, 29, 3036-3048.	3.0	37
24	Modeling, simulation and optimization of a vapor compression refrigeration system dynamic and steady state response. <i>Applied Energy</i> , 2015, 158, 540-555.	5.1	36
25	Two design aspects of defrosting refrigerators. <i>International Journal of Refrigeration</i> , 1995, 18, 76-86.	1.8	35
26	Integrative Thermodynamic Optimization of the Crossflow Heat Exchanger for an Aircraft Environmental Control System. <i>Journal of Heat Transfer</i> , 2001, 123, 760-769.	1.2	34
27	Microalgae biodiesel via <i>in situ</i> methanolysis. <i>Journal of Chemical Technology and Biotechnology</i> , 2011, 86, 1418-1427.	1.6	34
28	Single solid oxide fuel cell modeling and optimization. <i>Journal of Power Sources</i> , 2011, 196, 7519-7532.	4.0	34
29	The effect of light intensity on the production and accumulation of pigments and fatty acids in <i>Phaeodactylum tricornutum</i> . <i>Journal of Applied Phycology</i> , 2020, 32, 1017-1025.	1.5	34
30	Thermodynamic optimization of the match between two streams with phase change. <i>Energy</i> , 2000, 25, 15-33.	4.5	30
31	Enhanced biohydrogen production from microalgae by diesel engine hazardous emissions fixation. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 21463-21475.	3.8	29
32	Constructal flow structure for a single SOFC. <i>International Journal of Energy Research</i> , 2007, 31, 1337-1357.	2.2	28
33	Alkaline membrane fuel cell (AMFC) modeling and experimental validation. <i>Journal of Power Sources</i> , 2012, 213, 16-30.	4.0	28
34	Maximum microalgae biomass harvesting via flocculation in large scale photobioreactor cultivation. <i>Canadian Journal of Chemical Engineering</i> , 2016, 94, 304-309.	0.9	27
35	Enhanced microalgae biomass and lipid output for increased biodiesel productivity. <i>Renewable Energy</i> , 2021, 163, 138-145.	4.3	26
36	Nonsimilar solutions for mixed convection on a wedge embedded in a porous medium. <i>International Journal of Heat and Fluid Flow</i> , 1995, 16, 211-216.	1.1	25

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37	Optimization of single SOFC structural design for maximum power. Applied Thermal Engineering, 2013, 50, 12-25.	3.0	25
38	The microalgae derived hydrogen process in compact photobioreactors. International Journal of Hydrogen Energy, 2014, 39, 9588-9598.	3.8	25
39	Thermal treatment of clay-based ceramic membranes for microfiltration of Acutodesmus obliquus. Applied Clay Science, 2017, 150, 217-224.	2.6	25
40	The Melting of an Ice Shell on a Heated Horizontal Cylinder. Journal of Heat Transfer, 1994, 116, 702-708.	1.2	24
41	A Numerical Model to Predict the Thermal and Psychrometric Response of Electronic Packages. Journal of Electronic Packaging, Transactions of the ASME, 2001, 123, 200-210.	1.2	24
42	When to defrost a refrigerator, and when to remove the scale from the heat exchanger of a power plant. International Journal of Heat and Mass Transfer, 1994, 37, 523-532.	2.5	23
43	Power extraction from a hot stream in the presence of phase change. International Journal of Heat and Mass Transfer, 2000, 43, 191-201.	2.5	23
44	Modeling, simulation and optimization of a beer pasteurization tunnel. Journal of Food Engineering, 2006, 77, 500-513.	2.7	23
45	A two-dimensional model for simulation, control, and optimization of FCC risers. AIChE Journal, 2006, 52, 1895-1905.	1.8	23
46	A volume element model (VEM) for energy systems engineering. International Journal of Energy Research, 2015, 39, 46-74.	2.2	23
47	Production of methyl oleate with a lipase from an endophytic yeast isolated from castor leaves. Biocatalysis and Agricultural Biotechnology, 2012, 1, 295-300.	1.5	22
48	Thermodynamic Optimization of Heat-Driven Refrigerators in the Transient Regime. Heat Transfer Engineering, 2000, 21, 35-45.	1.2	21
49	A study of the thermodynamic performance and CO ₂ emissions of a vapour compression bio-trigeneration system. Applied Thermal Engineering, 2011, 31, 1411-1420.	3.0	20
50	Simulation of the transient response of heat driven refrigerators with continuous temperature control. International Journal of Refrigeration, 1998, 21, 648-660.	1.8	19
51	A simplified mathematical model to predict PVC photodegradation in photobioreactors. Polymer Testing, 2012, 31, 638-644.	2.3	19
52	Environmental study of producing microalgal biomass and bioremediation of cattle manure effluents by microalgae cultivation. Clean Technologies and Environmental Policy, 2017, 19, 1745-1759.	2.1	18
53	Thermodynamic optimization of a solar system for cogeneration of water heating and absorption cooling. International Journal of Energy Research, 2008, 32, 1210-1227.	2.2	16
54	Optimization of flocculation with tannin-based flocculant in the water reuse and lipidic production for the cultivation of <i>Acutodesmus obliquus</i> . Separation Science and Technology, 2017, 52, 936-942.	1.3	16

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55	Thermal Modeling of Helium Cooled High-Temperature Superconducting DC Transmission Cable. IEEE Transactions on Applied Superconductivity, 2011, 21, 947-952.	1.1	15
56	Reference breast temperature: proposal of an equation. Einstein (Sao Paulo, Brazil), 2015, 13, 518-524.	0.3	15
57	Mathematical formulation and demonstration of a dynamic system-level ship thermal management tool. Advances in Engineering Software, 2016, 100, 1-18.	1.8	15
58	Constructal vapor compression refrigeration (VCR) systems design. International Journal of Heat and Mass Transfer, 2017, 115, 754-768.	2.5	15
59	Optimal operating conditions for maximum biogas production in anaerobic bioreactors. Applied Thermal Engineering, 2014, 62, 197-206.	3.0	14
60	Optimally Staggered Finned Circular and Elliptic Tubes in Turbulent Forced Convection. Journal of Heat Transfer, 2007, 129, 674-678.	1.2	13
61	Analysis and diagnosis of basal cell carcinoma (BCC) via infrared imaging. Infrared Physics and Technology, 2011, 54, 367-378.	1.3	13
62	Volume element model mesh generation strategy and its application in ship thermal analysis. Advances in Engineering Software, 2015, 90, 107-118.	1.8	13
63	Thermodynamic optimization of fluidized catalytic cracking (FCC) units. International Journal of Heat and Mass Transfer, 2011, 54, 1187-1197.	2.5	12
64	The experimental validation of a transient power electronic building block (PEBB) mathematical model. Applied Thermal Engineering, 2013, 60, 411-422.	3.0	12
65	Modeling and simulation of diesel, biodiesel and biogas mixtures driven compression ignition internal combustion engines. International Journal of Energy Research, 2016, 40, 100-111.	2.2	11
66	The Optimal Shape of the Interface Between Two Conductive Bodies With Minimal Thermal Resistance. Journal of Heat Transfer, 2002, 124, 1218-1221.	1.2	11
67	Fundamentals of ice making by convection cooling followed by contact melting. International Journal of Heat and Mass Transfer, 1995, 38, 2833-2841.	2.5	10
68	Transient operation and shape optimization of a single PEM fuel cell. Journal of Power Sources, 2006, 162, 356-368.	4.0	10
69	Mathematical model of the CO ₂ solubilisation reaction rates developed for the study of photobioreactors. Canadian Journal of Chemical Engineering, 2014, 92, 787-795.	0.9	10
70	Mass transfer modeling and maximization of hydrogen rhythmic production from genetically modified microalgae biomass. International Journal of Heat and Mass Transfer, 2016, 101, 1-9.	2.5	10
71	The experimental validation of a large-scale compact tubular microalgae photobioreactor model. International Journal of Energy Research, 2017, 41, 2221-2235.	2.2	10
72	A gaset and mini-photobioreactor association for CO ₂ capturing, enhanced microalgae growth and multigeneration. Renewable Energy, 2018, 125, 985-994.	4.3	10

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73	Modeling and optimization of gaseous helium (GHe) cooled high temperature superconducting (HTS) DC cables for high power density transmission. Applied Thermal Engineering, 2018, 143, 922-934.	3.0	10
74	Optimization of pulsating heaters in forced convection. International Journal of Heat and Mass Transfer, 1995, 38, 2925-2934.	2.5	9
75	Optimal Ground Tube Length for Cooling of Electronics Shelters. Heat Transfer Engineering, 2005, 26, 8-20.	1.2	9
76	The inverse methodology of parameter estimation for model adjustment, design, simulation, control and optimization of fluid catalytic cracking (FCC) risers. Journal of Chemical Technology and Biotechnology, 2009, 84, 343-355.	1.6	9
77	Temperature and Pressure Drop Model for Gaseous Helium Cooled Superconducting DC Cables. IEEE Transactions on Applied Superconductivity, 2013, 23, 5402005-5402005.	1.1	9
78	Pumping Power Minimization in Staggered Finned Circular and Elliptic-Tube Heat Exchangers in Turbulent Flow. Experimental Heat Transfer, 2013, 26, 397-411.	2.3	9
79	Effect of defatted microalgae (<i>Scenedesmus obliquus</i>) biomass inclusion on growth performance of <i>Rhamdia quelen</i> (Quoy & Gaimard, 1824). Journal of Applied Ichthyology, 2015, 31, 98-101.	0.3	9
80	The maximization of an alkaline membrane fuel cell (AMFC) net power output. International Journal of Energy Research, 2016, 40, 924-939.	2.2	9
81	An infrared image based methodology for breast lesions screening. Infrared Physics and Technology, 2016, 76, 710-721.	1.3	9
82	Modeling microalgae derived hydrogen production enhancement via genetic modification. International Journal of Hydrogen Energy, 2016, 41, 8101-8110.	3.8	9
83	Environmental evaluation of flocculation efficiency in the separation of the microalgal biomass of <i>Scenedesmus</i> sp. cultivated in full-scale photobioreactors. Journal of Environmental Science and Health - Part A Toxic/Hazardous Substances and Environmental Engineering, 2018, 53, 938-945.	0.9	9
84	Optimization Principle for Natural Convection Pulsating Heating. Journal of Heat Transfer, 1995, 117, 942-947.	1.2	8
85	Notional all-electric ship systems integration thermal simulation and visualization. Simulation, 2012, 88, 1116-1128.	1.1	8
86	The utilization of infrared imaging for occupational disease study in industrial work. Work, 2012, 41, 503-509.	0.6	8
87	Thermodynamic optimization of a regenerator heat exchanger. Applied Thermal Engineering, 2012, 45-46, 42-51.	3.0	8
88	Composite electrode modelling and optimization for solid oxide fuel cells. International Journal of Energy Research, 2013, 37, 95-104.	2.2	8
89	A single stage absorption refrigeration system dynamic mathematical modeling, adjustment and experimental validation. International Journal of Refrigeration, 2016, 68, 130-144.	1.8	8
90	Energy consumption reduction in existing HVAC-R systems via a power law controlling kit. Applied Thermal Engineering, 2015, 82, 341-350.	3.0	7

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91	Performance comparison of tube and plate-fin circular and elliptic heat exchangers for HVAC-R systems. <i>Applied Thermal Engineering</i> , 2021, 184, 116288.	3.0	7
92	Friction and heat transfer for inclined surfaces in relative motion to an air stream under buoyancy effect. <i>International Journal of Heat and Fluid Flow</i> , 2003, 24, 713-725.	1.1	6
93	Notional all-electric ship thermal simulation and visualization. , 2009, , .		6
94	A numerical investigation of the resin flow front tracking applied to the RTM process. <i>Materials Research</i> , 2011, 14, 345-354.	0.6	6
95	Diets containing residual microalgae biomass protect fishes against oxidative stress and DNA damage. <i>Journal of Applied Phycology</i> , 2019, 31, 2933-2940.	1.5	6
96	Modeling, simulation, and optimization of a microalgae biomass drying process. <i>International Journal of Energy Research</i> , 2019, 43, 3421-3435.	2.2	6
97	Fuel Cells and Cogeneration. <i>Journal of Fuel Cell Science and Technology</i> , 2008, 5, .	0.8	5
98	Sulfonation and characterization of styrene-indene copolymers for the development of proton conducting polymer membranes. <i>Polimeros</i> , 2012, 22, 395-400.	0.2	5
99	Effects of salinity and feed temperature on permeate flux of an air gap membrane distillation unit for sea water desalination. , 2013, , .		5
100	Comprehensive system-level thermal modeling of all-electric ships: Integration of SMCS and vemESRDC. , 2015, , .		5
101	Microalgae Culture Medium Recycling: Improved Production of Biomass and Lipids, Biodiesel Properties and Cost Reduction. <i>Bioenergy Research</i> , 2022, 15, 2076-2089.	2.2	5
102	Optimisation of film condensation with periodic wall cleaning. <i>International Journal of Thermal Sciences</i> , 1999, 38, 113-120.	2.6	4
103	The optimization of rough surface supersonic nozzles. <i>Acta Astronautica</i> , 2007, 61, 866-872.	1.7	4
104	Modeling and Simulation of the Thermal and Psychrometric Transient Response of All-Electric Ships, Internal Compartments and Cabinets. <i>Simulation</i> , 2008, 84, 427-439.	1.1	4
105	Development and implementation of a dynamic vapor compression refrigeration model into vemESRDC ship thermal management tool. , 2015, , .		4
106	A sustainable alkaline membrane fuel cell (SAMFC) stack characterization, model validation and optimal operation. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 5723-5733.	3.8	4
107	Production of methyl oleate by direct addition of fermented solid <i>Penicillium sumatrense</i> and <i>Aspergillus fumigatus</i> . <i>Renewable Energy</i> , 2020, 162, 1132-1139.	4.3	4
108	Temperature distribution in expiratory speaking flow, and early detection of vocal fold pathology. <i>Journal of Medical Engineering and Technology</i> , 1997, 21, 190-198.	0.8	3

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109	A thermodynamic model to predict the thermal response of living beings during pneumoperitoneum procedures. Journal of Medical Engineering and Technology, 2005, 29, 75-81.	0.8	3
110	Thermal Model for the AC Armature Winding of a High Temperature Superconductor Airborne Motor. , 2005, , 141.		3
111	First and Second Law Thermodynamic Analysis of a Domestic Scale Trigeneration System. , 2007, , 759.		3
112	Professor Adrian Bejan on his 60th birthday. International Journal of Heat and Mass Transfer, 2008, 51, 5759-5761.	2.5	3
113	Thermal management aspects of all-electric ships. , 2013, , .		3
114	Lumped intracellular dynamics: Mathematical modeling of the microalgae Tetradismus obliquus cultivation under mixotrophic conditions with glycerol. Algal Research, 2021, 57, 102344.	2.4	3
115	Thermal Simulation of an Off-Grid Zero Emissions Building. , 2014, , .		3
116	Optimization of Pulsating Heating in Pool Boiling. Journal of Heat Transfer, 1997, 119, 298-304.	1.2	2
117	Maximum exergy input rate from a hot stream in solar-driven refrigerators. International Journal of Energy Research, 2001, 25, 751-767.	2.2	2
118	Cryogenic Thermal Modeling and Experimental Validation of a Novel Heat Sink for Helium Gas Cooled Superconducting Devices. IEEE Transactions on Applied Superconductivity, 2015, 25, 1-4.	1.1	2
119	A flocculation strategy for harvesting high lipid content microalgae biomass. , 2016, , .		2
120	Sustainable energy via biodiesel production from autotrophic and mixotrophic growth of the microalga Phaeodactylum tricornutum in compact photobioreactors. , 2016, , .		2
121	Transient Thermal Analysis of HTS DC Cables Cooled With Gaseous Helium Using a Volume Element Method. IEEE Transactions on Applied Superconductivity, 2017, 27, 1-5.	1.1	2
122	Sustainable maximum power extraction from urban solid waste incineration. , 2017, , .		2
123	Green Diesel From Microalgae. , 2019, , .		2
124	Energy Recovery from Nuisance Algae Blooms and Residues. , 2022, , 329-345.		2
125	Thermal Response of Rats to Different Types of Trauma. Journal of Trauma, 2004, 57, 1287-1298.	2.3	1
126	An International Component to Capstone Senior Design Projects. , 2006, , .		1

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127	Modeling, Simulation and Optimization of a Solar System for Water Heating and Absorption Cooling. , 2008, , .		1
128	A Finite Element Method analysis and optimisation of a polymer electrolyte membrane fuel cell with interdigitated flow field design. International Journal of Energy Technology and Policy, 2008, 6, 112.	0.1	1
129	Control volume based thermodynamic modeling applied to the thermal management of a notional all-electric ship. , 2011, , .		1
130	Modeling and simulation of the microalgae derived hydrogen process in compact photobioreactors. , 2013, , .		1
131	Stationary compression ignition internal combustion engines (CHCE) CO ₂ capturing via microalgae culture using a mini-photobioreactor. , 2015, , .		1
132	Experimental exergy analysis of the solar thermal system in the Off-Grid Zero Emissions Building. , 2015, , .		1
133	Parametric Analysis of a Single Alkaline Membrane Fuel Cell. Heat Transfer Engineering, 2015, 36, 963-973.	1.2	1
134	System-level ship thermal management tool for dynamic thermal and piping network analyses in early-design stages. , 2017, , .		1
135	All-Electric Ship Sustainable Power from Alkaline Membrane Fuel Cells. , 2019, , .		1
136	Ship HVAC System Analysis and Optimization Tool. , 2019, , .		1
137	Clean Energy From Municipal Solid Waste (MSW). , 2019, , .		1
138	The Optimal Shape for a Unit PEM Fuel Cell. , 2005, , .		1
139	Constructal alkaline membrane fuel cell (AMFC) design. International Journal of Heat and Technology, 2016, 34, S125-S132.	0.3	1
140	Enhancing Senior Capstone Design Course through International and Multidisciplinary Projects. , 0, , .		1
141	Optimal sustainable fuel cell stack with cellulosic alkaline membranes. Fuel Cells, 2022, 22, 301-309.	1.5	1
142	Discussion: "Self-Organization and Self-Similarity in Boiling Systems," [L. H. Chai, and M. Shoji, ASME J. Heat Transfer, 124(3), pp. 507-515 (2002)]. Journal of Heat Transfer, 2004, 126, 660-660.	1.2	0
143	Utilization of temperature distribution in expiratory speaking flow as a new parameter for speech production analysis. Journal of Medical Engineering and Technology, 2004, 28, 22-31.	0.8	0
144	Constructal Optimization of the Coupling Between a Hot and a Cold Stream for Power and Refrigeration. , 2004, , 263.		0

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145	Multiphysics model of a notional all-electric ship railgun “ Model development and application. , 2017, , .		0
146	Modeling and Simulation of a Solid Waste Incineration Sustainable Energy System. , 2018, , .		0
147	Sustainable Alkaline Membrane Fuel Cell (SAMFC). , 2018, , .		0
148	Experimental Calibration of a Biohydrogen Production Estimation Model. , 2018, , .		0
149	Experimental adjustment and validation of a generalized solar-assisted cogeneration system model. International Journal of Energy Research, 2019, 43, 5319-5332.	2.2	0
150	Extensão Tecnológica Inovadora para o combate ao COVID-19 através da Iniciativa Startup Experience da UFPR. Extensão Em Foco, 2021, , .	0.0	0
151	Experimental Validation of a Simplified PEMFC Simulation Model. , 2009, , .		0
152	Constructal Design of Animate and Inanimate Systems: An Answer to Consumerism?. Understanding Complex Systems, 2013, , 161-175.	0.3	0
153	Optimization and Simulation of Time Dependent Heat Driven Refrigerators with Continuous Temperature Control. , 1999, , 425-435.		0
154	Experimental Calibration of a Biohydrogen Production Estimation Model. Journal of Verification, Validation and Uncertainty Quantification, 2019, 4, .	0.3	0
155	A Hybrid Absorption System With Generator Level Optical Control and Variable Flow Rate. , 2019, , .		0
156	Hydrogen and Compounds With Biological Activity From Microalgae. , 2019, , .		0
157	Sustainable Biodiesel Production From Blends of Waste Cooking Oil and Microalgae Oil. , 2019, , .		0
158	Electronic packaging cabinets simplified modeling, simulation, and experimental validation for systems engineering. Simulation, 0, , 003754972110699.	1.1	0