Juan C Ordonez

List of Publications by Year
in descending order

175 papers	1,791 citations	279798 23 h-index	361022 35 g-index
180 all docs	180 docs citations	180 times ranked	1549 citing authors

#	Article	IF	Citations
1	Thermodynamic Modeling of Heat Engines Including Heat Transfer and Compression–Expansion Irreversibilities. Journal of Thermal Science and Engineering Applications, 2022, 14, .	1.5	3
2	Storage of Energy. , 2022, , 855-896.		0
3	Biomass. , 2022, , 577-628.		2
4	Ocean Thermal Energy Converters. , 2022, , 161-185.		0
5	Solar Radiation. , 2022, , 519-576.		0
6	Hydrogen Production. , 2022, , 419-470.		4
7	AMTEC. , 2022, , 293-308.		0
8	Photovoltaic Converters. , 2022, , 629-718.		0
9	Radio-Noise Generators. , 2022, , 309-313.		0
10	Mechanical Heat Engines. , 2022, , 105-160.		0
11	Thermionics. , 2022, , 249-291.		0
12	Thermoelectricity. , 2022, , 187-247.		2
13	A Minimum of Thermodynamics and of the Kinetic Theory of Gases. , 2022, , 49-104.		1
14	Ocean Engines. , 2022, , 795-829.		0
15	Hydrogen Storage. , 2022, , 471-516.		0
16	EXERGETIC OPTIMIZATION OF AN INTEGRATED MUNICIPAL SOLID WASTE INCINERATOR AND WASTEWATER TREATMENT PLANT. International Journal of Energy for A Clean Environment, 2022, 23, 95-108.	1.1	1
17	Energy, Exergy, Entropy Generation Minimization, and Exergoenvironmental Analyses of Energy Systems-A Mini-Review. Frontiers in Sustainability, 2022, 3, .	2.6	4
18	Optimal sustainable fuel cell stack with cellulosic alkaline membranes. Fuel Cells, 2022, 22, 301-309.	2.4	1

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19	Enhanced microalgae biomass and lipid output for increased biodiesel productivity. Renewable Energy, 2021, 163, 138-145.	8.9	26
20	Performance comparison of tube and plate-fin circular and elliptic heat exchangers for HVAC-R systems. Applied Thermal Engineering, 2021, 184, 116288.	6.0	7
21	Microalgae derived biomass and bioenergy production enhancement through biogas purification and wastewater treatment. Renewable Energy, 2021, 163, 1153-1165.	8.9	45
22	Molten Salt Based Nanofluids for Solar Thermal Power Plant: A Case Study. , 2021, , .		3
23	Thermoelectric insulation for cold temperature vaccine storage. , 2021, , .		2
24	Grid-Scale Ternary-Pumped Thermal Electricity Storage for Flexible Operation of Nuclear Power Generation under High Penetration of Renewable Energy Sources. Energies, 2021, 14, 3858.	3.1	5
25	vemPEBB: Rapid PEBB Thermal Management Tool. , 2021, , .		2
26	Development of Generic Superconducting Components Library in MATLAB/Simulink for Thermal-Hydraulic Analyses. IEEE Transactions on Applied Superconductivity, 2021, 31, 1-5.	1.7	1
27	The role of mound functions and local environment in the diversity of termite mound structures. Journal of Theoretical Biology, 2021, 527, 110823.	1.7	7
28	Virtual Prototyping Process For Assessment of Medium Voltage Grid-Connected Solid State Transformer Implementations. , 2021, , .		2
29	MICROALGAE AS SOURCE OF RENEWABLE ENERGY: A REVIEW. , 2021, , .		0
30	A MATHEMATICAL MODEL OF AN ABSORPTION REFRIGERATION SYSTEM FOR A REFRIGERATED STORAGE FOR FISHING BOATS.. , 2021, , .		0
31	HYDROGEN GENERATION BY ALUMINUM OXIDATION IN ALKALINE SOLUTION. , 2021, , .		0
32	A sustainable alkaline membrane fuel cell (SAMFC) stack characterization, model validation and optimal operation. International Journal of Hydrogen Energy, 2020, 45, 5723-5733.	7.1	4
33	Predicting the Slope of the Temperature–Entropy Vapor Saturation Curve for Working Fluid Selection Based on Lee–Kesler Modeling. Industrial & Engineering Chemistry Research, 2020, 59, 956-969.	3.7	4
34	The north–south orientation of Australian termite mounds is due to the Sun and local wind: A heat transfer investigation. Journal of Applied Physics, 2020, 128, 084903.	2.5	2
35	How the thermal environment shapes the structure of termite mounds. Royal Society Open Science, 2020, 7, 191332.	2.4	9
36	Flapping dynamics of a flag in the presence of thermal convection. Journal of Fluid Mechanics, 2020, 895, .	3.4	6

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37	SUSTAINABLE ALKALINE MEMBRANE FUEL CELL. Revista De Engenharia TÃ©rmica, 2020, 19, 07.	0.2	0
38	3D thermal-hydraulic analysis of a symmetric wavy parabolic trough absorber pipe. Energy, 2019, 189, 116320.	8.8	13
39	Component Model Development for Ship-Level Impact of High Temperature Superconducting Power Cables. , 2019, , .		7
40	Experimental adjustment and validation of a generalized solarâ€assisted cogeneration system model. International Journal of Energy Research, 2019, 43, 5319-5332.	4.5	0
41	Effect of the concentration ratio on energetic and exergetic performance of concentrating solar collectors with integrated transparent insulation materials. Sustainable Energy Technologies and Assessments, 2019, 32, 58-70.	2.7	15
42	Aircraft Weight Reduction and Onboard Combined Power Cycle Efficiency Improvementâ€"An Integrative Approach. , 2019, , .		1
43	All-Electric Ship Sustainable Power from Alkaline Membrane Fuel Cells. , 2019, , .		1
44	Shipboard PEBB Cooling Strategies. , 2019, , .		11
45	Cold Thermal Energy Storage for Reliable Ship Cooling Under Thermal Cycling and Cooling Loss. , 2019, , .		1
46	Ship HVAC System Analysis and Optimization Tool. , 2019, , .		1
47	Optimal Cooling Channel Layout in a Hot Enclosure Subject to Natural Convection. Journal of Heat Transfer, 2019, 141, .	2.1	6
48	Clean Energy From Municipal Solid Waste (MSW). , 2019, , .		1
49	Experimental Calibration of a Biohydrogen Production Estimation Model. Journal of Verification, Validation and Uncertainty Quantification, 2019, 4, .	0.4	0
50	A Hybrid Absorption System With Generator Level Optical Control and Variable Flow Rate. , 2019, , .		0
51	Hydrogen and Compounds With Biological Activity From Microalgae. , 2019, , .		0
52	Dynamic 3D volume element model of a parabolic trough solar collector for simulation and optimization. Applied Energy, 2018, 217, 509-526.	10.1	26
53	Integrative thermodynamic optimization of a vapor compression refrigeration system based on dynamic system responses. Applied Thermal Engineering, 2018, 135, 493-503.	6.0	16
54	Thermal management of a notional all-electric ship electromagnetic launcher. Energy Conversion and Management, 2018, 157, 339-350.	9.2	11

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55	Volume element model for 3D dynamic building thermal modeling and simulation. Energy, 2018, 148, 642-661.	8.8	18
56	A genset and mini-photobioreactor association for CO_2 capturing, enhanced microalgae growth and multigeneration. Renewable Energy, 2018, 125, 985-994.	8.9	10
57	Modeling and Simulation of a Solid Waste Incineration Sustainable Energy System. , 2018, , .		0
58	Sustainable Alkaline Membrane Fuel Cell (SAMFC). , 2018, , .		0
59	Modeling, cross-validation, and optimization of a shipboard integrated energy system cooling network. Applied Thermal Engineering, 2018, 145, 516-527.	6.0	7
60	Innovative Applications of Advanced Solar Thermal Technologies Using Phase Change Materials. International Journal of Photoenergy, 2018, 2018, 1-2.	2.5	1
61	Experimental Calibration of a Biohydrogen Production Estimation Model. , 2018, , .		0
62	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.	6.0	10
63	THERMAL ANALYSIS OF POWER ELECTRONIC BUILDING BLOCK-BASED CONVERTER ARRAY. , 2018, , .		0
64	THE HARVESTING OF HIGH LIPID CONTENT MICROALGAE BIOMASS THROUGH A FLOCCULATION STRATEGY. Revista De Engenharia Térmica, 2018, 17, 41.	0.2	0
65	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.	1.7	2
66	Transient Thermal Finite Element Modeling of HTS Cable Systems Cooled With Gaseous Helium. IEEE Transactions on Applied Superconductivity, 2017, 27, 1-5.	1.7	6
67	The experimental validation of a large-scale compact tubular microalgae photobioreactor model. International Journal of Energy Research, 2017, 41, 2221-2235.	4.5	10
68	Enhanced biohydrogen production from microalgae by diesel engine hazardous emissions fixation. International Journal of Hydrogen Energy, 2017, 42, 21463-21475.	7.1	29
69	Integration of transparent insulation materials into solar collector devices. Solar Energy, 2017, 147, 8-21.	6.1	39
70	Volume Element Model for Modeling, Simulation, and Optimization of Parabolic Trough Solar Collectors. , 2017, , .		0
71	Constructal vapor compression refrigeration (VCR) systems design. International Journal of Heat and Mass Transfer, 2017, 115, 754-768.	4.8	15
72	Energy analysis and exhaust emissions of a stationary engine fueled with diesel–biodiesel blends at variable loads. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2017, 39, 3237-3247.	1.6	11

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73	Shape optimization of thin flat plate fins with geometries defined by linear piecewise functions. Applied Thermal Engineering, 2017, 112, 572-584.	6.0	6
74	Investigation of solid nitrogen for cryogenic thermal storage in superconducting cable terminations for enhanced resiliency. IOP Conference Series: Materials Science and Engineering, 2017, 278, 012019.	0.6	5
75	Sustainable maximum power extraction from urban solid waste incineration. , 2017, , .		2
76	Multiphysics model of a notional all-electric ship railgun â€" Model development and application. , 2017, , .		0
77	System-level ship thermal management tool for dynamic thermal and piping network analyses in early-design stages. , 2017, , .		1
78	The maximization of an alkaline membrane fuel cell (AMFC) net power output. International Journal of Energy Research, 2016, 40, 924-939.	4.5	9
79	Heat transfer fluids for parabolic trough solar collectors - a comparative study. , 2016, , .		11
80	A flocculation strategy for harvesting high lipid content microalgae biomass. , 2016, , .		2
81	Sustainable energy via biodiesel production from autotrophic and mixotrophic growth of the microalga Phaeodactylum tricornutum in compact photobioreactors. , 2016, , .		2
82	Modeling microalgae derived hydrogen production enhancement via genetic modification. International Journal of Hydrogen Energy, 2016, 41, 8101-8110.	7.1	9
83	A single stage absorption refrigeration system dynamic mathematical modeling, adjustment and experimental validation. International Journal of Refrigeration, 2016, 68, 130-144.	3.4	8
84	Effect of multi-tank thermal energy storage, recuperator effectiveness, and solar receiver conductance on the performance of a concentrated solar supercritical CO_2-based power plant operating under different seasonal conditions. Energy, 2016, 115, 353-368.	8.8	39
85	Mathematical formulation and demonstration of a dynamic system-level ship thermal management tool. Advances in Engineering Software, 2016, 100, 1-18.	3.8	15
86	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.	4.8	10
87	Modeling and simulation of diesel, biodiesel and biogas mixtures driven compression ignition internal combustion engines. International Journal of Energy Research, 2016, 40, 100-111.	4.5	11
88	Three-Dimensional Finite-Element Analysis of Terminations for Gaseous-Helium-Cooled High-Temperature Superconducting Power Cables. IEEE Transactions on Applied Superconductivity, 2016, 26, 1-5.	1.7	5
89	Concurrent Solenoid Design Optimization From Thermal and Electromagnetic Standpoints. IEEE Transactions on Applied Superconductivity, 2016, 26, 1-5.	1.7	2
90	Dynamic analysis of concentrated solar supercritical CO_2-based power generation closed-loop cycle. Applied Thermal Engineering, 2016, 93, 920-934.	6.0	88

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91	Constructal alkaline membrane fuel cell (AMFC) design. International Journal of Heat and Technology, 2016, 34, S125-S132.	0.6	1
92	Stationary compression ignition internal combustion engines (CI-ICE) CO_2 capturing via microalgae culture using a mini-photobioreactor. , 2015, , .		1
93	Exergy analysis of discharging multi-tank thermal energy storage systems with constant heat extraction. Applied Energy, 2015, 154, 333-343.	10.1	23
94	Experimental exergy analysis of the solar thermal system in the Off-Grid Zero Emissions Building. , 2015, , .		1
95	Comprehensive system-level thermal modeling of all-electric ships: Integration of SMCS and vemESRDC. , 2015, , .		5
96	Development and implementation of a dynamic vapor compression refrigeration model into vemESRDC ship thermal management tool. , 2015, , .		4
97	Life cycle assessment of biomass production in microalgae compact photobioreactors. GCB Bioenergy, 2015, 7, 184-194.	5.6	48
98	Thermal Modeling of Gaseous Helium as a Cryogen for High Temperature Superconducting Cable Components. IEEE Transactions on Applied Superconductivity, 2015, 25, 1-5.	1.7	9
99	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.	1.7	2
100	Parametric Analysis of a Single Alkaline Membrane Fuel Cell. Heat Transfer Engineering, 2015, 36, 963-973.	1.9	1
101	A volume element model (VEM) for energy systems engineering. International Journal of Energy Research, 2015, 39, 46-74.	4.5	23
102	Energy consumption reduction in existing HVAC-R systems via a power law controlling kit. Applied Thermal Engineering, 2015, 82, 341-350.	6.0	7
103	Modeling, simulation and optimization of a vapor compression refrigeration system dynamic and steady state response. Applied Energy, 2015, 158, 540-555.	10.1	36
104	Ship weight reduction and efficiency enhancement through combined power cycles. Energy, 2015, 93, 521-533.	8.8	15
105	Volume element model mesh generation strategy and its application in ship thermal analysis. Advances in Engineering Software, 2015, 90, 107-118.	3.8	13
106	The Flat Plate Fin of Constant Thickness, Straight Base, and Symmetrical Shape. Journal of Heat Transfer, 2014, 136, .	2.1	2
107	Three-dimensional launch simulation and active cooling analysis of a single-shot electromagnetic railgun. Simulation, 2014, 90, 1312-1327.	1.8	9
108	Optimal operating conditions for maximum biogas production in anaerobic bioreactors. Applied Thermal Engineering, 2014, 62, 197-206.	6.0	14

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109	The microalgae derived hydrogen process in compact photobioreactors. International Journal of Hydrogen Energy, 2014, 39, 9588-9598.	7.1	25
110	Thermal Simulation of an Off-Grid Zero Emissions Building. , 2014, , .		3
111	Composite electrode modelling and optimization for solid oxide fuel cells. International Journal of Energy Research, 2013, 37, 95-104.	4.5	8
112	Temperature and Pressure Drop Model for Gaseous Helium Cooled Superconducting DC Cables. IEEE Transactions on Applied Superconductivity, 2013, 23, 5402005-5402005.	1.7	9
113	Effects of salinity and feed temperature on permeate flux of an air gap membrane distillation unit for sea water desalination. , 2013, , .		5
114	Simulation and Optimization of Cryogenic Heat Sink for Helium Gas Cooled Superconducting Power Devices. IEEE Transactions on Applied Superconductivity, 2013, 23, 5000605-5000605.	1.7	4
115	Thermal management aspects of all-electric ships. , 2013, , .		3
116	Global stability of flow in symmetric wavy channels. Journal of Fluid Mechanics, 2013, 733, 625-649.	3.4	10
117	The experimental validation of a transient power electronic building block (PEBB) mathematical model. Applied Thermal Engineering, 2013, 60, 411-422.	6.0	12
118	Modeling and simulation of the microalgae derived hydrogen process in compact photobioreactors. , 2013, , .		1
119	Stationary ideal flow on a free surface of a given shape. Journal of Fluid Mechanics, 2013, 721, 28-45.	3.4	4
120	Optimization of single SOFC structural design for maximum power. Applied Thermal Engineering, 2013, 50, 12-25.	6.0	25
121	Pumping Power Minimization in Staggered Finned Circular and Elliptic-Tube Heat Exchangers in Turbulent Flow. Experimental Heat Transfer, 2013, 26, 397-411.	3.2	9
122	Developing a validated real-time system-level thermal simulation for future all-electric ships. , 2013, , .		3
123	Constructal Design of High-Conductivity Inserts. Understanding Complex Systems, 2013, , 91-111.	0.6	2
124	Notional all-electric ship systems integration thermal simulation and visualization. Simulation, 2012, 88, 1116-1128.	1.8	8
125	Optimization of an Integrated SOFC-Fuel Processing System for Aircraft Propulsion. Journal of Fuel Cell Science and Technology, 2012, 9, .	0.8	0
126	Thermodynamic optimization of a Stirling engine. Energy, 2012, 44, 902-910.	8.8	55

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127	Thermodynamic optimization of a regenerator heat exchanger. Applied Thermal Engineering, 2012, 45-46, 42-51.	6.0	8
128	Alkaline membrane fuel cell (AMFC) modeling and experimental validation. Journal of Power Sources, 2012, 213, 16-30.	7.8	28
129	Control volume based thermodynamic modeling applied to the thermal management of a notional all-electric ship. , 2011, , .		1
130	Thermal Modeling of Helium Cooled High-Temperature Superconducting DC Transmission Cable. IEEE Transactions on Applied Superconductivity, 2011, 21, 947-952.	1.7	15
131	A Methodology for the Determination of the Light Distribution Profile of a Micro-Algal Photobioreactor. , 2011, , .		0
132	Optimization of an Integrated SOFC-Fuel Processing System for Aircraft Propulsion. , 2011, , .		0
133	Thermodynamic optimization of fluidized catalytic cracking (FCC) units. International Journal of Heat and Mass Transfer, 2011, 54, 1187-1197.	4.8	12
134	Single solid oxide fuel cell modeling and optimization. Journal of Power Sources, 2011, 196, 7519-7532.	7.8	34
135	Notional all-electric ship thermal simulation and visualization. , 2009, , .		6
136	Fuel Cell-Based Powertrain System Modeling and Simulation for Small Aircraft Propulsion Applications. Journal of Fuel Cell Science and Technology, 2009, 6, .	0.8	2
137	Elemental T and Y Shapes of Tree Networks of Ducts with Various Cross-Sectional Shapes. Journal of Hydraulic Engineering, 2009, 135, 132-139.	1.5	7
138	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.	3.2	9
139	Modeling, simulation and optimization of a solar collector driven water heating and absorption cooling plant. Solar Energy, 2009, 83, 1232-1244.	6.1	55
140	The experimental validation of a simplified PEMFC simulation model for design and optimization purposes. Applied Thermal Engineering, 2009, 29, 3036-3048.	6.0	37
141	Normalized methodology for medical infrared imaging. Infrared Physics and Technology, 2009, 52, 42-47.	2.9	44
142	Experimental Validation of a Simplified PEMFC Simulation Model. , 2009, , .		0
143	Thermodynamic optimization of a solar system for cogeneration of water heating and absorption cooling. International Journal of Energy Research, 2008, 32, 1210-1227.	4.5	16
144	Professor Adrian Bejan on his 60th birthday. International Journal of Heat and Mass Transfer, 2008, 51, 5759-5761.	4.8	3

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145	Modeling, Simulation and Optimization of a Solar System for Water Heating and Absorption Cooling. , 2008, , .		1
146	Modeling and Simulation of the Thermal and Psychrometric Transient Response of All-Electric Ships, Internal Compartments and Cabinets. Simulation, 2008, 84, 427-439.	1.8	4
147	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.	0.2	1
148	A constructal approach to power distribution networks design. Renewable Energy and Power Quality Journal, 2008, 1, 766-772.	0.2	4
149	Novel Integrated Energy Systems and Control Methods with Economic Analysis for Integrated Community Based Energy Systems. IEEE Power Engineering Society General Meeting, 2007, , .	0.0	14
150	First and Second Law Thermodynamic Analysis of a Domestic Scale Trigeneration System. , 2007, , 759.		3
151	Optimally Staggered Finned Circular and Elliptic Tubes in Turbulent Forced Convection. Journal of Heat Transfer, 2007, 129, 674-678.	2.1	13
152	Electro-Thermal Model for HTS Motor Design. IEEE Transactions on Applied Superconductivity, 2007, 17, 1529-1532.	1.7	14
153	Constructal flow structure for a single SOFC. International Journal of Energy Research, 2007, 31, 1337-1357.	4.5	28
154	The optimization of rough surface supersonic nozzles. Acta Astronautica, 2007, 61, 866-872.	3.2	4
155	Transient operation and shape optimization of a single PEM fuel cell. Journal of Power Sources, 2006, 162, 356-368.	7.8	10
156	Modeling, simulation and optimization of a beer pasteurization tunnel. Journal of Food Engineering, 2006, 77, 500-513.	5.2	23
157	An International Component to Capstone Senior Design Projects. , 2006, , .		1
158	Constructal dendritic geometry and the existence of asymmetric bifurcation. Journal of Applied Physics, 2006, 100, 113514.	2.5	24
159	A Higher Resolution, Local Thermal Analysis of an AC Armature Winding of a High Temperature Superconductor Motor. , 2006, , .		0
160	OPTIMIZATION OF ELEMENTAL FLOW PASSAGES OF FLUID FLOW NETWORKS. , 2006, , .		1
161	Constructal PEM fuel cell stack design. International Journal of Heat and Mass Transfer, 2005, 48, 4410-4427.	4.8	52
162	Optimal Ground Tube Length for Cooling of Electronics Shelters. Heat Transfer Engineering, 2005, 26, 8-20.	1.9	9

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163	Thermal Model for the AC Armature Winding of a High Temperature Superconductor Airborne Motor. , 2005, , 141.		3
164	The Optimal Shape for a Unit PEM Fuel Cell. , 2005, , .		1
165	Constructal flow structure for a PEM fuel cell. International Journal of Heat and Mass Transfer, 2004, 47, 4177-4193.	4.8	64
166	Constructal Optimization of the Coupling Between a Hot and a Cold Stream for Power and Refrigeration. , 2004, , 263.		0
167	Fuel Cells Constructal Optimization and Research Perspectives. , 2004, , .		0
168	Maximum Power Extraction From a Hot Stream in the Presence of Phase Change Under Limiting Collecting Temperatures. , 2004, , .		0
169	Minimum power requirement for environmental control of aircraft. Energy, 2003, 28, 1183-1202.	8.8	42
170	System-level optimization of the sizes of organs for heat and fluid flow systems. International Journal of Thermal Sciences, 2003, 42, 335-342.	4.9	9
171	Designed porous media: Optimally nonuniform flow structures connecting one point with more points. International Journal of Thermal Sciences, 2003, 42, 857-870.	4.9	42
172	Entropy generation minimization in parallel-plates counterflow heat exchangers. International Journal of Energy Research, 2000, 24, 843-864.	4.5	74
173	Power extraction from a hot stream in the presence of phase change. International Journal of Heat and Mass Transfer, 2000, 43, 191-201.	4.8	23
174	Electronic packaging cabinets simplified modeling, simulation, and experimental validation for systems engineering. Simulation, 0, , 003754972110699.	1.8	0
175	Enhancing Senior Capstone Design Course through International and Multidisciplinary Projects. , 0, , .		1