Adrian Bejan

List of Publications by Year
in descending order

687 papers	33,256 citations	7551 77 h-index	10424 139 g-index
750 all docs	750 docs citations	750 times ranked	8833 citing authors

#	Article	IF	Citations
1	Entropy generation minimization: The new thermodynamics of finiteâ€size devices and finiteâ€time processes. Journal of Applied Physics, 1996, 79, 1191-1218.	1.1	1,565
2	A Study of Entropy Generation in Fundamental Convective Heat Transfer. Journal of Heat Transfer, 1979, 101, 718-725.	1.2	1,259
3	Convection in Porous Media. , 1999, , .		1,171
4	Constructal-theory network of conducting paths for cooling a heat generating volume. International Journal of Heat and Mass Transfer, 1997, 40, 799-816.	2.5	759
5	Convection in Porous Media. , 2013, , .		658
6	Second law analysis in heat transfer. Energy, 1980, 5, 720-732.	4.5	575
7	Convection in Porous Media. , 1992, , .		511
8	Second-Law Analysis in Heat Transfer and Thermal Design. Advances in Heat Transfer, 1982, , 1-58.	0.4	430
9	Constructal theory of generation of configuration in nature and engineering. Journal of Applied Physics, 2006, 100, 041301.	1.1	394
10	The â€œHeatlineâ€• Visualization of Convective Heat Transfer. Journal of Heat Transfer, 1983, 105, 916-919.	1.2	391
11	Fundamentals of exergy analysis, entropy generation minimization, and the generation of flow architecture. International Journal of Energy Research, 2002, 26, 0-43.	2.2	374
12	Convection in Porous Media. , 2017, , .		351
13	Heat and mass transfer by natural convection in a porous medium. International Journal of Heat and Mass Transfer, 1985, 28, 909-918.	2.5	283
14	The Concept of Irreversibility in Heat Exchanger Design: Counterflow Heat Exchangers for Gas-to-Gas Applications. Journal of Heat Transfer, 1977, 99, 374-380.	1.2	281
15	Unifying constructal theory for scale effects in running, swimming and flying. Journal of Experimental Biology, 2006, 209, 238-248.	0.8	266
16	Constructal law of design and evolution: Physics, biology, technology, and society. Journal of Applied Physics, 2013, 113, .	1.1	266
17	The constructal law and the evolution of design in nature. Physics of Life Reviews, 2011, 8, 209-240.	1.5	260
18	Porous and Complex Flow Structures in Modern Technologies. , 2004, , .		255

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19	Theory of heat transfer-irreversible power plants. International Journal of Heat and Mass Transfer, 1988, 31, 1211-1219.	2.5	250
20	The optimal spacing of parallel plates cooled by forced convection. International Journal of Heat and Mass Transfer, 1992, 35, 3259-3264.	2.5	245
21	Natural convection with combined heat and mass transfer buoyancy effects in a porous medium. International Journal of Heat and Mass Transfer, 1985, 28, 1597-1611.	2.5	239
22	General criterion for rating heat-exchanger performance. International Journal of Heat and Mass Transfer, 1978, 21, 655-658.	2.5	233
23	Entropy Generation Through Heat and Fluid Flow. Journal of Applied Mechanics, Transactions ASME, 1983, 50, 475-475.	1.1	226
24	The constructal law of design and evolution in nature. Philosophical Transactions of the Royal Society B: Biological Sciences, 2010, 365, 1335-1347.	1.8	224
25	Scaling theory of melting with natural convection in an enclosure. International Journal of Heat and Mass Transfer, 1988, 31, 1221-1235.	2.5	218
26	The constructal law and the thermodynamics of flow systems with configuration. International Journal of Heat and Mass Transfer, 2004, 47, 3203-3214.	2.5	215
27	The thermodynamic design of heat and mass transfer processes and devices. International Journal of Heat and Fluid Flow, 1987, 8, 258-276.	1.1	210
28	Street network theory of organization in nature. Journal of Advanced Transportation, 1996, 30, 85-107.	0.9	208
29	On the boundary layer regime in a vertical enclosure filled with a porous medium. Letters in Heat and Mass Transfer, 1979, 6, 93-102.	0.3	201
30	Theory of heat transfer-irreversible refrigeration plants. International Journal of Heat and Mass Transfer, 1989, 32, 1631-1639.	2.5	193
31	Constructal tree networks for heat transfer. Journal of Applied Physics, 1997, 82, 89-100.	1.1	182
32	Thermodynamic optimization of geometry: T- and Y-shaped constructs of fluid streams. International Journal of Thermal Sciences, 2000, 39, 949-960.	2.6	176
33	Second Law Analysis and Synthesis of Solar Collector Systems. Journal of Solar Energy Engineering, Transactions of the ASME, 1981, 103, 23-28.	1.1	174
34	The resonance of natural convection in an enclosure heated periodically from the side. International Journal of Heat and Mass Transfer, 1993, 36, 2027-2038.	2.5	174
35	Optimal tree-shaped networks for fluid flow in a disc-shaped body. International Journal of Heat and Mass Transfer, 2002, 45, 4911-4924.	2.5	170
36	Constructal T-shaped fins. International Journal of Heat and Mass Transfer, 2000, 43, 2101-2115.	2.5	167

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37	Mass and heat transfer by natural convection in a vertical slot filled with porous medium. International Journal of Heat and Mass Transfer, 1986, 29, 403-415.	2.5	165
38	Deterministic Tree Networks for Fluid Flow: Geometry for Minimal Flow Resistance Between a Volume and One Point. Fractals, 1997, 05, 685-695.	1.8	157
39	Method of entropy generation minimization, or modeling and optimization based on combined heat transfer and thermodynamics. International Journal of Thermal Sciences, 1996, 35, 637-646.	0.2	154
40	Constructal design for cooling a disc-shaped area by conduction. International Journal of Heat and Mass Transfer, 2002, 45, 1643-1652.	2.5	153
41	Optimal distribution of discrete heat sources on a wall with natural convection. International Journal of Heat and Mass Transfer, 2004, 47, 203-214.	2.5	153
42	Fin Geometry for Minimum Entropy Generation in Forced Convection. Journal of Heat Transfer, 1982, 104, 616-623.	1.2	142
43	Combined Heat and Mass Transfer by Natural Convection in a Vertical Enclosure. Journal of Heat Transfer, 1987, 109, 104-112.	1.2	139
44	Tree-shaped flow structures designed by minimizing path lengths. International Journal of Heat and Mass Transfer, 2002, 45, 3299-3312.	2.5	136
45	Convective trees of fluid channels for volumetric cooling. International Journal of Heat and Mass Transfer, 2000, 43, 3105-3118.	2.5	134
46	Two Thermodynamic Optima in the Design of Sensible Heat Units for Energy Storage. Journal of Heat Transfer, 1978, 100, 708-712.	1.2	130
47	The fluid dynamics of an attic space. Journal of Fluid Mechanics, 1983, 131, 251.	1.4	126
48	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
49	Laminar Natural Convection Heat Transfer in a Horizontal Cavity with Different End Temperatures. Journal of Heat Transfer, 1978, 100, 641-647.	1.2	119
50	The nondarcy regime for vertical boundary layer natural convection in a porous medium. International Journal of Heat and Mass Transfer, 1984, 27, 717-722.	2.5	117
51	Unifying constructal theory of tree roots, canopies and forests. Journal of Theoretical Biology, 2008, 254, 529-540.	0.8	116
52	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
53	Optimal Arrays of Pin Fins and Plate Fins in Laminar Forced Convection. Journal of Heat Transfer, 1993, 115, 75-81.	1.2	105
54	The boundary layer regime in a porous layer with uniform heat flux from the side. International Journal of Heat and Mass Transfer, 1983, 26, 1339-1346.	2.5	100

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55	The optimal spacing of cylinders in free-stream cross-flow forced convection. International Journal of Heat and Mass Transfer, 1996, 39, 311-317.	2.5	99
56	The constructal law of organization in nature: tree-shaped flows and body size. Journal of Experimental Biology, 2005, 208, 1677-1686.	0.8	99
57	The tree of convective heat streams: its thermal insulation function and the predicted 3/4-power relation between body heat loss and body size. International Journal of Heat and Mass Transfer, 2001, 44, 699-704.	2.5	98
58	The Boundary Layer Natural Convection Regime in a Rectangular Cavity With Uniform Heat Flux From the Side. Journal of Heat Transfer, 1984, 106, 98-103.	1.2	97
59	Theory of heat transfer-irreversible power plantsâ€"II. The optimal allocation of heat exchange equipment. International Journal of Heat and Mass Transfer, 1995, 38, 433-444.	2.5	97
60	Optimal distribution of discrete heat sources on a plate with laminar forced convection. International Journal of Heat and Mass Transfer, 2004, 47, 2139-2148.	2.5	96
61	Conduction tree networks with loops for cooling a heat generating volume. International Journal of Heat and Mass Transfer, 2006, 49, 2626-2635.	2.5	95
62	Models of power plants that generate minimum entropy while operating at maximum power. American Journal of Physics, 1996, 64, 1054-1059.	0.3	94
63	Constructal multi-scale tree-shaped heat exchangers. Journal of Applied Physics, 2004, 96, 1709-1718.	1.1	94
64	Power and Refrigeration Plants for Minimum Heat Exchanger Inventory. Journal of Energy Resources Technology, Transactions of the ASME, 1993, 115, 148-150.	1.4	90
65	Constructal-theory tree networks of â€œconstantâ€•thermal resistance. Journal of Applied Physics, 1999, 86, 1136-1144.	1.1	89
66	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
67	The need for exergy analysis and thermodynamic optimization in aircraft development. Exergy an International Journal, 2001, 1, 14-24.	0.7	89
68	Constructal theory of global circulation and climate. International Journal of Heat and Mass Transfer, 2006, 49, 1857-1875.	2.5	89
69	Constructal solar chimney configuration. International Journal of Heat and Mass Transfer, 2010, 53, 327-333.	2.5	89
70	Inverted fins: geometric optimization of the intrusion into a conducting wall. International Journal of Heat and Mass Transfer, 2004, 47, 2577-2586.	2.5	88
71	Mass and heat transfer by high Rayleigh number convection in a porous medium heated from below. International Journal of Heat and Mass Transfer, 1987, 30, 2341-2356.	2.5	87
72	Evolution in thermodynamics. Applied Physics Reviews, 2017, 4, 011305.	5.5	87

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73	Svelteness, freedom to morph, and constructal multi-scale flow structures. International Journal of Thermal Sciences, 2005, 44, 1123-1130.	2.6	86
74	Constructal Law: Optimization as Design Evolution. Journal of Heat Transfer, 2015, 137, .	1.2	86
75	The optimal spacing between horizontal cylinders in a fixed volume cooled by natural convection. International Journal of Heat and Mass Transfer, 1995, 38, 2047-2055.	2.5	85
76	Dendritic constructal heat exchanger with small-scale crossflows and larger-scales counterflows. International Journal of Heat and Mass Transfer, 2002, 45, 4607-4620.	2.5	84
77	Natural convection in a partially divided enclosure. International Journal of Heat and Mass Transfer, 1983, 26, 1867-1878.	2.5	82
78	Unification of Three Different Theories Concerning the Ideal Conversion of Enclosed Radiation. Journal of Solar Energy Engineering, Transactions of the ASME, 1987, 109, 46-51.	1.1	82
79	Combined Heat and Mass Transfer by Natural Convection in a Porous Medium. Advances in Heat Transfer, 1990, 20, 315-352.	0.4	82
80	A mathematical model for skin burn injury induced by radiation heating. International Journal of Heat and Mass Transfer, 2008, 51, 5497-5510.	2.5	82
81	Constructal optimization of nonuniformly distributed tree-shaped flow structures for conduction. International Journal of Heat and Mass Transfer, 2001, 44, 4185-4194.	2.5	81
82	Constructal tree network for fluid flow between a finite-size volume and one source or sink. International Journal of Thermal Sciences, 1997, 36, 592-604.	0.2	80
83	The evolution of speed, size and shape in modern athletics. Journal of Experimental Biology, 2009, 212, 2419-2425.	0.8	80
84	Optimally staggered finned circular and elliptic tubes in forced convection. International Journal of Heat and Mass Transfer, 2004, 47, 1347-1359.	2.5	79
85	Fully developed natural counterflow in a long horizontal pipe with different end temperatures. International Journal of Heat and Mass Transfer, 1978, 21, 701-708.	2.5	78
86	Note on Gill's solution for free convection in a vertical enclosure. Journal of Fluid Mechanics, 1979, 90, 561-568.	1.4	78
87	Heatline visualization of forced convection laminar boundary layers. International Journal of Heat and Mass Transfer, 1993, 36, 3957-3966.	2.5	78
88	Vascularized materials: Tree-shaped flow architectures matched canopy to canopy. Journal of Applied Physics, 2006, 100, 063525.	1.1	78
89	Dendritic heat convection on a disc. International Journal of Heat and Mass Transfer, 2003, 46, 4381-4391.	2.5	77
90	Natural Convection Experiments in a Triangular Enclosure. Journal of Heat Transfer, 1983, 105, 652-655.	1.2	76

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91	A synthesis of analytical results for natural convection heat transfer across rectangular enclosures. International Journal of Heat and Mass Transfer, 1980, 23, 723-726.	2.5	75
92	Artificial Intelligence Evolution in Smart Buildings for Energy Efficiency. Applied Sciences (Switzerland), 2021, 11, 763.	1.3	75
93	Conduction trees with spacings at the tips. International Journal of Heat and Mass Transfer, 1999, 42, 3739-3756.	2.5	74
94	Entropy generation minimization in parallel-plates counterflow heat exchangers. International Journal of Energy Research, 2000, 24, 843-864.	2.2	74
95	Tree-shaped insulated designs for the uniform distribution of hot water over an area. International Journal of Heat and Mass Transfer, 2001, 44, 3111-3123.	2.5	74
96	Heterogeneous porous media as multiscale structures for maximum flow access. Journal of Applied Physics, 2006, 100, 114909.	1.1	74
97	Heat transfer across a vertical impermeable partition imbedded in porous medium. International Journal of Heat and Mass Transfer, 1981, 24, 1237-1245.	2.5	73
98	Constructal trees of circular fins for conductive and convective heat transfer. International Journal of Heat and Mass Transfer, 1999, 42, 3585-3597.	2.5	73
99	Thermodynamic Optimization of Flow Geometry in Mechanical and Civil Engineering. Journal of Non-Equilibrium Thermodynamics, 2001, 26, .	2.4	73
100	Networks of channels for self-healing composite materials. Journal of Applied Physics, 2006, 100, 033528.	1.1	73
101	Heat transfer through single and double vertical walls in natural convection: Theory and experiment. International Journal of Heat and Mass Transfer, 1981, 24, 1611-1620.	2.5	71
102	THE Ra-Pr DOMAIN OF LAMINAR NATURAL CONVECTION IN AN ENCLOSURE HEATED FROM THE SIDE. Numerical Heat Transfer; Part A: Applications, 1991, 19, 21-41.	1.2	71
103	Optimal Spacing Between Pin Fins With Impinging Flow. Journal of Heat Transfer, 1996, 118, 570-577.	1.2	71
104	Streets tree networks and urban growth: Optimal geometry for quickest access between a finite-size volume and one point. Physica A: Statistical Mechanics and Its Applications, 1998, 255, 211-217.	1.2	70
105	Deterministic Tree Networks for River Drainage Basins. Fractals, 1998, 06, 245-261.	1.8	70
106	Heat sinks with sloped plate fins in natural and forced convection. International Journal of Heat and Mass Transfer, 1996, 39, 1773-1783.	2.5	68
107	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
108	Constructal multi-scale structure for maximal heat transfer density in natural convection. International Journal of Heat and Fluid Flow, 2005, 26, 34-44.	1.1	68

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109	The constructal unification of biological and geophysical design. Physics of Life Reviews, 2009, 6, 85-102.	1.5	68
110	Evaluation of heat transfer augmentation techniques based on their impact on entropy generation. Letters in Heat and Mass Transfer, 1980, 7, 97-106.	0.3	67
111	From Heat Transfer Principles to Shape and Structure in Nature: Constructal Theory. Journal of Heat Transfer, 2000, 122, 430-449.	1.2	67
112	Equipartition, optimal allocation, and the constructal approach to predicting organization in nature. International Journal of Thermal Sciences, 1998, 37, 165-180.	0.2	66
113	Natural convection in vertically and horizontally layered porous media heated from the side. International Journal of Heat and Mass Transfer, 1983, 26, 1805-1814.	2.5	65
114	Vortex tube optimization theory. Energy, 1999, 24, 931-943.	4.5	65
115	Experimental study of high-Rayleigh-number convection in a horizontal cavity with different end temperatures. Journal of Fluid Mechanics, 1981, 109, 283-299.	1.4	64
116	Constructal flow structure for a PEM fuel cell. International Journal of Heat and Mass Transfer, 2004, 47, 4177-4193.	2.5	64
117	Distribution of heat sources in vertical open channels with natural convection. International Journal of Heat and Mass Transfer, 2005, 48, 1462-1469.	2.5	64
118	Constructal tree-shaped flow structures. Applied Thermal Engineering, 2007, 27, 755-761.	3.0	64
119	Constructal multi-scale pinâ€“fins. International Journal of Heat and Mass Transfer, 2010, 53, 2773-2779.	2.5	63
120	Complexity, organization, evolution, and constructal law. Journal of Applied Physics, 2016, 119, .	1.1	63
121	Constructal theory: from thermodynamic and geometric optimization to predicting shape in nature. Energy Conversion and Management, 1998, 39, 1705-1718.	4.4	62
122	Natural Convection in a Horizontal Porous Medium Subjected to an End-to-End Temperature Difference. Journal of Heat Transfer, 1978, 100, 191-198.	1.2	61
123	Transient natural convection in a rectangular enclosure with one heated side wall. International Journal of Heat and Fluid Flow, 1988, 9, 396-404.	1.1	61
124	A general variational principle for thermal insulation system design. International Journal of Heat and Mass Transfer, 1979, 22, 219-228.	2.5	60
125	Designed porous media: maximal heat transfer density at decreasing length scales. International Journal of Heat and Mass Transfer, 2004, 47, 3073-3083.	2.5	60
126	Natural convection heat transfer in a porous layer with internal flow obstructions. International Journal of Heat and Mass Transfer, 1983, 26, 815-822.	2.5	59

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127	Cylindrical trees of pin fins. International Journal of Heat and Mass Transfer, 2000, 43, 4285-4297.	2.5	59
128	The Prandtl Number Effect on the Transition in Natural Convection Along a Vertical Surface. Journal of Heat Transfer, 1990, 112, 787-790.	1.2	58
129	Constructal multi-scale cylinders in cross-flow. International Journal of Heat and Mass Transfer, 2005, 48, 1373-1383.	2.5	58
130	Thermodynamic optimization of tree-shaped flow geometries. International Journal of Heat and Mass Transfer, 2006, 49, 1619-1630.	2.5	58
131	Mass and heat transfer by natural convection in a vertical cavity. International Journal of Heat and Fluid Flow, 1985, 6, 149-159.	1.1	57
132	The departure from Darcy flow in natural convection in a vertical porous layer. Physics of Fluids, 1985, 28, 3477.	1.4	57
133	Thermodynamic Optimization of Phase-Change Energy Storage Using Two or More Materials. Journal of Energy Resources Technology, Transactions of the ASME, 1992, 114, 84-90.	1.4	57
134	Natural convection in an infinite porous medium with a concentrated heat source. Journal of Fluid Mechanics, 1978, 89, 97-107.	1.4	56
135	Constructal multi-scale structure for maximal heat transfer density. Acta Mechanica, 2003, 163, 39-49.	1.1	56
136	Tree-shaped networks with loops. International Journal of Heat and Mass Transfer, 2005, 48, 573-583.	2.5	56
137	Constructal tree-shaped parallel flow heat exchangers. International Journal of Heat and Mass Transfer, 2006, 49, 4558-4566.	2.5	56
138	â€œEntransy,â€•and Its Lack of Content in Physics. Journal of Heat Transfer, 2014, 136, .	1.2	56
139	Constructal Theory of Social Dynamics. , 2007, , .		56
140	Vascularized networks with two optimized channel sizes. Journal Physics D: Applied Physics, 2006, 39, 3086-3096.	1.3	55
141	The constructal law origin of the logistics S curve. Journal of Applied Physics, 2011, 110, .	1.1	55
142	High Rayleigh number convection in a fluid overlaying a porous bed. International Journal of Heat and Fluid Flow, 1986, 7, 109-116.	1.1	54
143	Natural Convection With Radiation in a Cavity With Open Top End. Journal of Heat Transfer, 1992, 114, 479-486.	1.2	53
144	Thermodynamic optimization of geometry in engineering flow systems. Exergy an International Journal, 2001, 1, 269-277.	0.7	53

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145	Constructal heat trees at micro and nanoscales. Journal of Applied Physics, 2004, 96, 5852-5859.	1.1	53
146	Constructal multi-scale cylinders with natural convection. International Journal of Heat and Mass Transfer, 2005, 48, 4300-4306.	2.5	53
147	Transient Natural Convection Experiments in Shallow Enclosures. Journal of Heat Transfer, 1982, 104, 533-538.	1.2	52
148	Constructal PEM fuel cell stack design. International Journal of Heat and Mass Transfer, 2005, 48, 4410-4427.	2.5	52
149	Phase change heat storage in an enclosure with vertical pipe in the center. International Journal of Heat and Mass Transfer, 2014, 72, 329-335.	2.5	52
150	The optimal cooling of a stack of heat generating boards with fixed pressure drop, flowrate or pumping power. International Journal of Heat and Mass Transfer, 1993, 36, 3677-3686.	2.5	51
151	Theory of organization in nature: pulsating physiological processes. International Journal of Heat and Mass Transfer, 1997, 40, 2097-2104.	2.5	51
152	Constructing Animal Locomotion from New Thermodynamics Theory. American Scientist, 2006, 94, 342.	0.1	51
153	Thermodynamic optimization of mechanical supports for cryogenic apparatus. Cryogenics, 1974, 14, 158-163.	0.9	50
154	MAXIMAL HEAT TRANSFER DENSITY IN VERTICAL MORPHING CHANNELS WITH NATURAL CONVECTION. Numerical Heat Transfer; Part A: Applications, 2004, 45, 135-152.	1.2	50
155	Constructal theory of pattern formation. Hydrology and Earth System Sciences, 2007, 11, 753-768.	1.9	50
156	Constructal design of latent thermal energy storage with vertical spiral heaters. International Journal of Heat and Mass Transfer, 2015, 81, 283-288.	2.5	50
157	Natural Convection on Both Sides of a Vertical Wall Separating Fluids at Different Temperatures. Journal of Heat Transfer, 1980, 102, 630-635.	1.2	49
158	Melting in an enclosure heated at constant rate. International Journal of Heat and Mass Transfer, 1989, 32, 1063-1076.	2.5	49
159	Combined `flow and strength' geometric optimization: internal structure in a vertical insulating wall with air cavities and prescribed strength. International Journal of Heat and Mass Transfer, 2002, 45, 3313-3320.	2.5	49
160	Disc cooled with high-conductivity inserts that extend inward from the perimeter. International Journal of Heat and Mass Transfer, 2004, 47, 4257-4263.	2.5	49
161	Tree networks for minimal pumping power. International Journal of Thermal Sciences, 2005, 44, 53-63.	2.6	49
162	The evolution of airplanes. Journal of Applied Physics, 2014, 116, .	1.1	49

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163	Extraction of exergy from solar collectors under time-varying conditions. International Journal of Heat and Fluid Flow, 1982, 3, 67-72.	1.1	47
164	Natural convection near 4Â°C in a water saturated porous layer heated from below. International Journal of Heat and Mass Transfer, 1984, 27, 2355-2364.	2.5	47
165	Thermodynamics of Energy Storage by Melting Due to Conduction or Natural Convection. Journal of Solar Energy Engineering, Transactions of the ASME, 1990, 112, 110-116.	1.1	47
166	Thermodynamic optimization of internal structure in a fuel cell. International Journal of Energy Research, 2004, 28, 319-339.	2.2	47
167	Tree-shaped flow structures with local junction losses. International Journal of Heat and Mass Transfer, 2006, 49, 2957-2964.	2.5	47
168	The problem of time-dependent natural convection melting with conduction in the solid. International Journal of Heat and Mass Transfer, 1989, 32, 2447-2457.	2.5	46
169	The Optimal Spacing for Cylinders in Crossflow Forced Convection. Journal of Heat Transfer, 1995, 117, 767-770.	1.2	45
170	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
171	Design in Nature. Mechanical Engineering, 2012, 134, 42-47.	0.0	45
172	The golden ratio predicted: vision, cognition and locomotion as a single design in nature. International Journal of Design and Nature and Ecodynamics, 2009, 4, 97-104.	0.3	45
173	The Fundamentals of Sliding Contact Melting and Friction. Journal of Heat Transfer, 1989, 111, 13-20.	1.2	44
174	Heatline visualization of forced convection in porous media. International Journal of Heat and Fluid Flow, 1994, 15, 42-47.	1.1	44
175	Contact Melting Heat Transfer and Lubrication. Advances in Heat Transfer, 1994, 24, 1-38.	0.4	44
176	Free stream cooling of a stack of parallel plates. International Journal of Heat and Mass Transfer, 1995, 38, 519-531.	2.5	44
177	Maximum power from a hot stream. International Journal of Heat and Mass Transfer, 1998, 41, 2025-2035.	2.5	44
178	Constructal tree networks for the time-dependent discharge of a finite-size volume to one point. Journal of Applied Physics, 1998, 84, 3042-3050.	1.1	44
179	Tree-shaped vascular wall designs for localized intense cooling. International Journal of Heat and Mass Transfer, 2009, 52, 4535-4544.	2.5	44
180	Why the bigger live longer and travel farther: animals, vehicles, rivers and the winds. Scientific Reports, 2012, 2, 594.	1.6	44

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181	Mass Transfer to Natural Convection Boundary Layer Flow Driven by Heat Transfer. Journal of Heat Transfer, 1985, 107, 979-981.	1.2	43
182	Constructal Optimization of Internal Flow Geometry in Convection. Journal of Heat Transfer, 1998, 120, 357-364.	1.2	43
183	Constructal theory of particle agglomeration and design of air-cleaning devices. Journal Physics D: Applied Physics, 2006, 39, 2311-2318.	1.3	43
184	Steam generator structure: Continuous model and constructal design. International Journal of Energy Research, 2011, 35, 336-345.	2.2	43
185	The physics of spreading ideas. International Journal of Heat and Mass Transfer, 2012, 55, 802-807.	2.5	43
186	Three-dimensional tree constructs of â€œconstantâ€• thermal resistance. Journal of Applied Physics, 1999, 86, 7107-7115.	1.1	42
187	Minimum power requirement for environmental control of aircraft. Energy, 2003, 28, 1183-1202.	4.5	42
188	Designed porous media: Optimally nonuniform flow structures connecting one point with more points. International Journal of Thermal Sciences, 2003, 42, 857-870.	2.6	42
189	Thermodynamic optimization of tree-shaped flow geometries with constant channel wall temperature. International Journal of Heat and Mass Transfer, 2006, 49, 4839-4849.	2.5	42
190	Optimal temperature distribution in a 3D triple-layered skin structure embedded with artery and vein vasculature and induced by electromagnetic radiation. International Journal of Heat and Mass Transfer, 2007, 50, 1843-1854.	2.5	42
191	Constructal multi-tube configuration for natural and forced convection in cross-flow. International Journal of Heat and Mass Transfer, 2010, 53, 5121-5128.	2.5	42
192	Heatlines (1983) versus synergy (1998). International Journal of Heat and Mass Transfer, 2015, 81, 654-658.	2.5	42
193	Conservation of available work (exergy) by using promoters of swirl flow in forced convection heat transfer. Energy, 1980, 5, 587-596.	4.5	41
194	Forced convection in banks of inclined cylinders at low Reynolds numbers. International Journal of Heat and Fluid Flow, 1994, 15, 90-99.	1.1	41
195	Optimal Geometric Arrangement of Staggered Vertical Plates in Natural Convection. Journal of Heat Transfer, 1997, 119, 700-708.	1.2	41
196	Thermodynamic optimization of geometric structure in the counterflow heat exchanger for an environmental control system. Energy, 2001, 26, 493-512.	4.5	41
197	Development of tree-shaped flows by adding new users to existing networks of hot water pipes. International Journal of Heat and Mass Transfer, 2002, 45, 723-733.	2.5	41
198	Maximal heat transfer density: Plates with multiple lengths in forced convection. International Journal of Thermal Sciences, 2004, 43, 1181-1186.	2.6	41

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199	The effect of size on efficiency: Power plants and vascular designs. International Journal of Heat and Mass Transfer, 2011, 54, 1475-1481.	2.5	41
200	Experimental study of natural convection in a horizontal cylinder with different end temperatures. International Journal of Heat and Mass Transfer, 1980, 23, 1117-1126.	2.5	40
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