

Nicola Bianco

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

137
papers

3,552
citations

34
h-index

55
g-index

141
ext. papers

4,297
ext. citations

4.5
avg, IF

6.03
L-index

#	Paper	IF	Citations
137	Are transparent double-skin facades effective for energy retrofit? Answers for an office building - with and without photovoltaic integration. <i>Energy Sources, Part A: Recovery, Utilization and Environmental Effects</i> , 2022 , 44, 257-271	1.6	1
136	Functionally-graded foams for volumetric solar receivers. <i>Journal of Physics: Conference Series</i> , 2022 , 2177, 012030	0.3	
135	Metal foam/PCM melting evolution analysis: Orientation and morphology effects. <i>Applied Thermal Engineering</i> , 2021 , 187, 116572	5.8	40
134	Building heating demand vs climate: Deep insights to achieve a novel heating stress index and climatic stress curves. <i>Journal of Cleaner Production</i> , 2021 , 296, 126616	10.3	1
133	The effects of variable porosity and cell size on the thermal performance of functionally-graded foams. <i>International Journal of Thermal Sciences</i> , 2021 , 160, 106696	4.1	20
132	Multi-objective optimization of finned metal foam heat sinks: Tradeoff between heat transfer and pressure drop. <i>Applied Thermal Engineering</i> , 2021 , 182, 116058	5.8	30
131	Knowledge and energy retrofitting of neighborhoods and districts. A comprehensive approach coupling geographical information systems, building simulations and optimization engines. <i>Energy Conversion and Management</i> , 2021 , 230, 113786	10.6	10
130	The evolution of building energy retrofit via double-skin and responsive facades: A review. <i>Solar Energy</i> , 2021 , 224, 703-717	6.8	23
129	Comprehensive analysis to drive the energy retrofit of a neighborhood by optimizing the solar energy exploitation - An Italian case study. <i>Journal of Cleaner Production</i> , 2021 , 314, 127998	10.3	5
128	Effects of global warming on energy retrofit planning of neighborhoods under stochastic human behavior. <i>Energy and Buildings</i> , 2021 , 250, 111306	7	4
127	Conceptualization, development and validation of EMAR: A user-friendly tool for accurate energy simulations of residential buildings via few numerical inputs. <i>Journal of Building Engineering</i> , 2021 , 44, 102647	5.2	5
126	Simulations of paraffine melting inside metal foams at different gravity levels with preliminary experimental validation. <i>Journal of Physics: Conference Series</i> , 2020 , 1599, 012008	0.3	11
125	Natural convection in a vertical channel with open-cell foams. <i>Journal of Physics: Conference Series</i> , 2020 , 1599, 012013	0.3	3
124	A real industrial building: Modeling, calibration and Pareto optimization of energy retrofit. <i>Journal of Building Engineering</i> , 2020 , 29, 101186	5.2	29
123	Anisotropic convective heat transfer in open-cell metal foams: Assessment and correlations. <i>International Journal of Heat and Mass Transfer</i> , 2020 , 154, 119682	4.9	15
122	Optimization of solar energy exploitation for a neighborhood towards nearly zero energy buildings 2020 ,		3
121	The role of the occupant behavior in affecting the feasibility of energy refurbishment of residential buildings: Typical effective retrofits compromised by typical wrong habits. <i>Energy and Buildings</i> , 2020 , 223, 110217	7	26

120	Is it fundamental to model the inter-building effect for reliable building energy simulations? Interaction with shading systems. <i>Building and Environment</i> , 2020 , 183, 107161	6.5	13
119	Thermo-Fluid-Dynamics of a Ceramic Foam Solar Receiver: A Parametric Analysis. <i>Heat Transfer Engineering</i> , 2020 , 41, 1085-1099	1.7	9
118	MORPHOLOGY OF OPEN-CELL FOAMS: A CRITICAL REVIEW AND GEOMETRIC MODELING. <i>Journal of Porous Media</i> , 2019 , 22, 869-887	2.9	1
117	Villas on Islands: cost-effective energy refurbishment in Mediterranean coastline houses. <i>Energy Procedia</i> , 2019 , 159, 192-200	2.3	9
116	Retrofit of villas on Mediterranean coastlines: Pareto optimization with a view to energy-efficiency and cost-effectiveness. <i>Applied Energy</i> , 2019 , 254, 113705	10.7	35
115	Analysis of a phase change material-based unit and of an aluminum foam/phase change material composite-based unit for cold thermal energy storage by numerical simulation. <i>Applied Energy</i> , 2019 , 256, 113921	10.7	30
114	Thermal comfort prediction in a building category: Artificial neural network generation from calibrated models for a social housing stock in southern Europe. <i>Applied Thermal Engineering</i> , 2019 , 150, 492-505	5.8	36
113	Modeling heat conduction in open-cell metal foams by means of the Three-Dimensional Thermal Fin theory. <i>Journal of Physics: Conference Series</i> , 2019 , 1224, 012009	0.3	0
112	Predicting the Impact of Climate Change on Thermal Comfort in A Building Category: The Case of Linear-type Social Housing Stock in Southern Spain. <i>Energies</i> , 2019 , 12, 2238	3.1	18
111	A new comprehensive framework for the multi-objective optimization of building energy design: Harlequin. <i>Applied Energy</i> , 2019 , 241, 331-361	10.7	51
110	Building envelope design: Multi-objective optimization to minimize energy consumption, global cost and thermal discomfort. Application to different Italian climatic zones. <i>Energy</i> , 2019 , 174, 359-374	7.9	89
109	Weather-data-based control of space heating operation via multi-objective optimization: Application to Italian residential buildings. <i>Applied Thermal Engineering</i> , 2019 , 163, 114384	5.8	20
108	Phase Change Materials for Reducing Cooling Energy Demand and Improving Indoor Comfort: A Step-by-Step Retrofit of a Mediterranean Educational Building. <i>Energies</i> , 2019 , 12, 3661	3.1	21
107	The porous media theory applied to radiofrequency catheter ablation. <i>International Journal of Numerical Methods for Heat and Fluid Flow</i> , 2019 , 30, 2669-2681	4.5	12
106	Development of an analytical model to investigate the effects of the extraflux versus the sky and the ground and optimization of the radiative characteristics of a thermochromic paint for a typical Italian location 2019 ,		1
105	Thermal conduction in open-cell metal foams: Anisotropy and Representative Volume Element. <i>International Journal of Thermal Sciences</i> , 2019 , 137, 399-409	4.1	29
104	Improved Monte Carlo methods for computational modelling of thermal radiation applied to porous cellular materials. <i>International Journal of Thermal Sciences</i> , 2019 , 137, 161-179	4.1	12
103	A Multi-Criteria Approach to Achieve Constrained Cost-Optimal Energy Retrofits of Buildings by Mitigating Climate Change and Urban Overheating. <i>Climate</i> , 2018 , 6, 37	3.1	22

102	5.21 Energy Management in Hospitals 2018 , 827-854		0
101	Boundary layer considerations in a multi-layer model for LDL accumulation. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2018 , 21, 803-811	2.1	9
100	Artificial Neural Networks for Predicting the Energy Behavior of a Building Category: A Powerful Tool for Cost-Optimal Analysis 2017 , 305-340		0
99	Multi-objective design optimization of distributed energy systems through cost and exergy assessments. <i>Applied Energy</i> , 2017 , 204, 1299-1316	10.7	87
98	CASA, cost-optimal analysis by multi-objective optimisation and artificial neural networks: A new framework for the robust assessment of cost-optimal energy retrofit, feasible for any building. <i>Energy and Buildings</i> , 2017 , 146, 200-219	7	64
97	Radiative properties of irregular open cell solid foams. <i>International Journal of Thermal Sciences</i> , 2017 , 117, 77-89	4.1	39
96	Energy retrofit of educational buildings: Transient energy simulations, model calibration and multi-objective optimization towards nearly zero-energy performance. <i>Energy and Buildings</i> , 2017 , 144, 303-319	7	81
95	A new comprehensive approach for cost-optimal building design integrated with the multi-objective model predictive control of HVAC systems. <i>Sustainable Cities and Society</i> , 2017 , 31, 136-150	10.1	44
94	Analysis of non-Newtonian effects within an aorta-iliac bifurcation region. <i>Journal of Biomechanics</i> , 2017 , 64, 153-163	2.9	23
93	Numerical Analysis of a Paraffin/Metal Foam Composite for Thermal Storage. <i>Journal of Physics: Conference Series</i> , 2017 , 796, 012032	0.3	14
92	Light and Heavy Energy Refurbishments of Mediterranean Offices. Part II: Cost-optimal Energy Renovation of an Institutional Building. <i>Procedia Engineering</i> , 2017 , 180, 1518-1530		7
91	Experimental Validation of a Tool for the Numerical Simulation of a Commercial Hot Water Storage Tank. <i>Energy Procedia</i> , 2017 , 105, 4266-4273	2.3	4
90	Light and Heavy Energy Refurbishments of Mediterranean Offices. Part I: Energy Audit of an Institutional Building on the Naples Coast. <i>Procedia Engineering</i> , 2017 , 180, 1506-1517		2
89	Resilience of robust cost-optimal energy retrofit of buildings to global warming: A multi-stage, multi-objective approach. <i>Energy and Buildings</i> , 2017 , 153, 150-167	7	54
88	Design optimization of a distributed energy system through cost and exergy assessments. <i>Energy Procedia</i> , 2017 , 105, 2451-2459	2.3	14
87	Artificial neural networks to predict energy performance and retrofit scenarios for any member of a building category: A novel approach. <i>Energy</i> , 2017 , 118, 999-1017	7.9	131
86	Developing thermal flow in open-cell foams. <i>International Journal of Thermal Sciences</i> , 2017 , 111, 129-137	4.1	40
85	Anisotropy effects on convective heat transfer and pressure drop in Kelvin open-cell foams. <i>Journal of Physics: Conference Series</i> , 2017 , 923, 012035	0.3	2

84	Experimental test of a hot water storage system including a macro-encapsulated phase change material (PCM). <i>Journal of Physics: Conference Series</i> , 2017 , 796, 012030	0.3	1
83	Experimental validation of CFD model of thermal fluxes through a multilayer wall. <i>Journal of Physics: Conference Series</i> , 2017 , 796, 012022	0.3	
82	Design and performance analysis of a zero-energy settlement in Greece. <i>International Journal of Low-Carbon Technologies</i> , 2017 , 12, 141-161	2.8	14
81	Cost-Effective Refurbishment of Italian Historic Buildings 2017 , 553-600		3
80	Addressing Large-Scale Energy Retrofit of a Building Stock via Representative Building Samples: Public and Private Perspectives. <i>Sustainability</i> , 2017 , 9, 940	3.6	14
79	A Multi-Step Approach to Assess the Lifecycle Economic Impact of Seismic Risk on Optimal Energy Retrofit. <i>Sustainability</i> , 2017 , 9, 989	3.6	17
78	Energy Audit of Health Care Facilities: Dynamic Simulation of Energy Performances and Energy-Oriented Refurbishment of System and Equipment for Microclimatic Control. <i>American Journal of Engineering and Applied Sciences</i> , 2016 , 9, 814-834	0.4	3
77	Net zero-energy buildings in Germany: Design, model calibration and lessons learned from a case-study in Berlin. <i>Energy and Buildings</i> , 2016 , 133, 688-710	7	48
76	Effects of ligaments shape on radiative heat transfer in metal foams. <i>International Journal of Numerical Methods for Heat and Fluid Flow</i> , 2016 , 26, 477-488	4.5	12
75	Multi-objective optimization of the renewable energy mix for a building. <i>Applied Thermal Engineering</i> , 2016 , 101, 612-621	5.8	54
74	Lord Kelvin and Weaire-Phelan Foam Models: Heat Transfer and Pressure Drop. <i>Journal of Heat Transfer</i> , 2016 , 138,	1.8	32
73	Economic optimization of a residential micro-CHP system considering different operation strategies. <i>Applied Thermal Engineering</i> , 2016 , 101, 592-600	5.8	45
72	Low-density lipoprotein transport through an arterial wall under hyperthermia and hypertension conditions--An analytical solution. <i>Journal of Biomechanics</i> , 2016 , 49, 193-204	2.9	37
71	Radiative properties modeling of open cell solid foam: Review and new analytical law. <i>International Journal of Thermal Sciences</i> , 2016 , 104, 122-134	4.1	44
70	Multi-objective operation optimization of a Distributed Energy System for a large-scale utility customer. <i>Applied Thermal Engineering</i> , 2016 , 101, 752-761	5.8	52
69	Simulation-based model predictive control by the multi-objective optimization of building energy performance and thermal comfort. <i>Energy and Buildings</i> , 2016 , 111, 131-144	7	134
68	Concept, Design and Energy Performance of a Net Zero-Energy Building in Mediterranean Climate. <i>Procedia Engineering</i> , 2016 , 169, 26-37		14
67	Analysis of non-Newtonian effects on Low-Density Lipoprotein accumulation in an artery. <i>Journal of Biomechanics</i> , 2016 , 49, 1437-1446	2.9	32

66	The effect of open-cell metal foams strut shape on convection heat transfer and pressure drop. <i>Applied Thermal Engineering</i> , 2016 , 103, 333-343	5.8	54
65	Multi-stage and multi-objective optimization for energy retrofitting a developed hospital reference building: A new approach to assess cost-optimality. <i>Applied Energy</i> , 2016 , 174, 37-68	10.7	114
64	Exergy-based operation optimization of a distributed energy system through the energy-supply chain. <i>Applied Thermal Engineering</i> , 2016 , 101, 741-751	5.8	19
63	Operation optimization of a distributed energy system considering energy costs and exergy efficiency. <i>Energy Conversion and Management</i> , 2015 , 103, 739-751	10.6	130
62	Dynamic insulation of the building envelope: Numerical modeling under transient conditions and coupling with nocturnal free cooling. <i>Applied Thermal Engineering</i> , 2015 , 84, 1-14	5.8	29
61	Technical and economic analysis of green roofs to reduce building cooling needs 2015 , 349-378		3
60	A new methodology for investigating the cost-optimality of energy retrofitting a building category. <i>Energy and Buildings</i> , 2015 , 107, 456-478	7	130
59	Effects of External and Internal Hyperthermia on LDL Transport and Accumulation Within an Arterial Wall in the Presence of a Stenosis. <i>Annals of Biomedical Engineering</i> , 2015 , 43, 1585-99	4.7	39
58	A new methodology for cost-optimal analysis by means of the multi-objective optimization of building energy performance. <i>Energy and Buildings</i> , 2015 , 88, 78-90	7	116
57	Numerical characterization of a highly concentrated solar radiation sensor based on an inverse method. <i>Solar Energy</i> , 2015 , 111, 407-417	6.8	5
56	Monte Carlo determination of radiative properties of metal foams: Comparison between idealized and real cell structures. <i>International Journal of Thermal Sciences</i> , 2015 , 87, 94-102	4.1	57
55	Building Envelope, HVAC Systems and RESs for the Energy Retrofit of a Conference Hall on Naples Promenade. <i>Energy Procedia</i> , 2015 , 75, 1261-1268	2.3	3
54	Mitigating the cooling need and improvement of indoor conditions in Mediterranean educational buildings, by means of green roofs. Results of a case study. <i>Journal of Physics: Conference Series</i> , 2015 , 655, 012027	0.3	5
53	Prescriptive- and Performance-based Approaches of the Present and Previous German DIN 4108-2. Hourly Energy Simulation for Comparing the Effectiveness of the Methods. <i>Energy Procedia</i> , 2015 , 75, 1315-1324	2.3	4
52	Scaled models in the analysis of fire-structure interaction. <i>Journal of Physics: Conference Series</i> , 2015 , 655, 012053	0.3	2
51	Design of the Building Envelope: A Novel Multi-Objective Approach for the Optimization of Energy Performance and Thermal Comfort. <i>Sustainability</i> , 2015 , 7, 10809-10836	3.6	79
50	Energy retrofit of an educational building in the ancient center of Benevento. Feasibility study of energy savings and respect of the historical value. <i>Energy and Buildings</i> , 2015 , 95, 172-183	7	109
49	Influence of energy quality management on CO2 emissions in operation optimization of a distributed energy system 2015 ,		1

48	Assessment of pollutants emission of two residential micro-CHP systems 2015 ,		1
47	Thermal Dynamic Insulation: Numerical Modeling in a Transient Regime and Application to Alternative Aviary Houses. <i>Energy Procedia</i> , 2015 , 75, 1711-1721	2.3	2
46	Energy refurbishment of existing buildings through the use of phase change materials: Energy savings and indoor comfort in the cooling season. <i>Applied Energy</i> , 2014 , 113, 990-1007	10.7	211
45	Optimal operation of residential micro-CHP systems with thermal storage losses modelling 2014 ,		2
44	Experimental validation of a numerical code by thin film heat flux sensors for the resolution of thermal bridges in dynamic conditions. <i>Applied Energy</i> , 2014 , 124, 213-222	10.7	31
43	Prediction of radiative heat transfer in metallic foams. <i>International Journal of Thermal Sciences</i> , 2014 , 76, 147-154	4.1	18
42	The prediction of radiation heat transfer in open cell metal foams by a model based on the Lord Kelvin representation. <i>International Journal of Heat and Mass Transfer</i> , 2014 , 76, 499-508	4.9	27
41	Numerical Simulation of a Solar Domestic Hot Water System. <i>Journal of Physics: Conference Series</i> , 2014 , 547, 012015	0.3	5
40	A simplified analytical model of radiative heat transfer in open cell foams. <i>Journal of Physics: Conference Series</i> , 2014 , 547, 012045	0.3	
39	Numerical Analysis of Heat Transfer and Pressure Drop in Metal Foams for Different Morphological Models. <i>Journal of Heat Transfer</i> , 2014 , 136,	1.8	41
38	Optimal Operation of Micro-CHP Systems for a Single-Family House in Italy. <i>Applied Mechanics and Materials</i> , 2014 , 492, 467-472	0.3	3
37	Exergy-efficient management of energy districts 2014 ,		3
36	Adiabatic surface temperature as thermal/structural parameter in fire modeling: Thermal analysis for different wall conductivities. <i>Applied Thermal Engineering</i> , 2014 , 65, 422-432	5.8	8
35	Three-dimensional CFD Evaluation of the Characterizing Parameters in the Fire/Structure Interaction. <i>Energy Procedia</i> , 2014 , 45, 385-394	2.3	1
34	Simplified state space representation for evaluating thermal bridges in building: Modelling, application and validation of a methodology. <i>Applied Thermal Engineering</i> , 2013 , 61, 344-354	5.8	34
33	Turbulent mixed convection in a uniformly heated vertical channel with an assisting moving surface. <i>International Journal of Thermal Sciences</i> , 2013 , 71, 20-31	4.1	8
32	Green roofs in European climates. Are effective solutions for the energy savings in air-conditioning?. <i>Applied Energy</i> , 2013 , 104, 845-859	10.7	180
31	Influence of wall emissivity and convective heat transfer coefficient on the adiabatic surface temperature as thermal/structural parameter in fire modeling. <i>Applied Thermal Engineering</i> , 2013 , 51, 573-585	5.8	6

30	Rehabilitation of the building envelope of hospitals: Achievable energy savings and microclimatic control on varying the HVAC systems in Mediterranean climates. <i>Energy and Buildings</i> , 2013 , 60, 125-138	7	50
29	Analysis of Heat Transfer and Pressure Drop Through Idealized Open Cell Ceramic Foams: Comparison Between Kelvin and Weaire-Phelan Cell Structures 2013 ,		1
28	Different methods for the modelling of thermal bridges into energy simulation programs: Comparisons of accuracy for flat heterogeneous roofs in Italian climates. <i>Applied Energy</i> , 2012 , 97, 405-418	10.7	38
27	Numerical analysis of radiation effects in a metallic foam by means of the radiative conductivity model. <i>Applied Thermal Engineering</i> , 2012 , 49, 14-21	5.8	9
26	Transient heat transfer through walls and thermal bridges. Numerical modelling: Methodology and validation 2012 ,		4
25	Radiative Effects on Mixed Convection in a Uniformly Heated Vertical Convergent Channel with an Unheated Moving Plate. <i>Advances in Applied Mathematics and Mechanics</i> , 2011 , 3, 280-296	2.1	
24	Effect of Impinging Jet on Heat Conduction in Workpieces Irradiated by a Moving Heat Source. <i>Defect and Diffusion Forum</i> , 2011 , 312-315, 924-928	0.7	1
23	Numerical Investigation on Transient Conjugate Optical-Thermal Fields in Thin Films Irradiated by Moving Sources for Front Treatments. <i>Defect and Diffusion Forum</i> , 2010 , 297-301, 1439-1444	0.7	
22	Effect of Solid Thickness on Transient Heat Conduction in Workpieces Irradiated by a Moving Heat Source. <i>Defect and Diffusion Forum</i> , 2010 , 297-301, 1445-1450	0.7	5
21	Radiative effects on natural convection in vertical convergent channels. <i>International Journal of Heat and Mass Transfer</i> , 2010 , 53, 3513-3524	4.9	21
20	Numerical Model for Multilayer Thin Films Irradiated by a Moving Laser Source. <i>Defect and Diffusion Forum</i> , 2009 , 283-286, 352-357	0.7	1
19	Transient Heat Conduction in Solids Irradiated by a Moving Heat Source. <i>Defect and Diffusion Forum</i> , 2009 , 283-286, 358-363	0.7	7
18	Numerical investigation of sensible thermal energy storage in high temperature solar systems 2009 ,		2
17	Effect of a moving plate on heat transfer in a uniform heat flux vertical channel. <i>International Journal of Heat and Mass Transfer</i> , 2008 , 51, 3906-3912	4.9	6
16	Experimental investigation on natural convection in a convergent channel with uniformly heated plates. <i>International Journal of Heat and Mass Transfer</i> , 2007 , 50, 2772-2786	4.9	8
15	Numerical Analysis of Radiative Effects on Natural Convection in Vertical Convergent and Symmetrically Heated Channels. <i>Numerical Heat Transfer; Part A: Applications</i> , 2006 , 49, 369-391	2.3	20
14	Thermal design and optimization of vertical convergent channels in natural convection. <i>Applied Thermal Engineering</i> , 2006 , 26, 170-177	5.8	9
13	Mixed Convection in Air in an Open Ended Cavity With a Moving Plate Parallel to the Cavity Open Surface 2005 , 603		0

12	Numerical analysis of natural convection in air in a vertical convergent channel with uniformly heated conductive walls. <i>International Communications in Heat and Mass Transfer</i> , 2005 , 32, 758-769	5.8	16
11	Numerical Analysis of Opposing Mixed Convection in Air in a Vertical Channel With a Moving Plate 2005 ,		1
10	Two Dimensional Transient Analysis of Temperature Distribution in a Solid Irradiated by a Gaussian Laser Source 2004 , 217		8
9	Theoretical comparison of two-dimensional transient analysis between back and front laser treatment of thin multilayer films. <i>International Journal of Thermal Sciences</i> , 2004 , 43, 611-621	4.1	4
8	Quasi-Steady State Numerical Model for a Multilayer Thin Film Irradiated by a Moving Laser Source at High Peclet Numbers 2003 , 177		1
7	An Experimental Study of Radiative Effects on Natural Convection in Air in Convergent Channels 2003 , 189		2
6	Numerical Analysis of Heat Conduction in Cooling of Aluminum Extrusion 2002 , 137		
5	Transient conductive-radiative numerical analysis of multilayer thin films heated by different laser pulses. <i>International Journal of Thermal Sciences</i> , 2001 , 40, 959-968	4.1	5
4	Two-Dimensional Transient Analysis of Absorbing Thin Films in Laser Treatments. <i>Journal of Heat Transfer</i> , 2000 , 122, 113-117	1.8	12
3	Combined thermal and optical analysis of laser back-scribing for amorphous-silicon photovoltaic cells processing. <i>International Journal of Heat and Mass Transfer</i> , 1999 , 42, 645-656	4.9	15
2	Instationary conjugate optical-thermal fields in thin films due to pulsed laser heating: A comparison between back and front treatment. <i>Heat and Mass Transfer</i> , 1998 , 34, 255-261	2.2	6
1	Thermal transient analysis of thin film multilayers heated by pulsed laser. <i>International Journal of Heat and Mass Transfer</i> , 1997 , 40, 4487-4491	4.9	12