

Niccolò² Aste

List of Publications by Year in descending order

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97
papers

3,007
citations

147566

31
h-index

168136

53
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97
all docs

97
docs citations

97
times ranked

2752
citing authors

#	ARTICLE	IF	CITATIONS
1	The influence of the external walls thermal inertia on the energy performance of well insulated buildings. <i>Energy and Buildings</i> , 2009, 41, 1181-1187.	3.1	246
2	Calibration and uncertainty analysis for computer models – A meta-model based approach for integrated building energy simulation. <i>Applied Energy</i> , 2013, 103, 627-641.	5.1	181
3	Smart buildings features and key performance indicators: A review. <i>Sustainable Cities and Society</i> , 2020, 61, 102328.	5.1	171
4	Water flat plate PV–thermal collectors: A review. <i>Solar Energy</i> , 2014, 102, 98-115.	2.9	157
5	Design, modeling and performance monitoring of a photovoltaic–thermal (PVT) water collector. <i>Solar Energy</i> , 2015, 112, 85-99.	2.9	143
6	Design, development and performance monitoring of a photovoltaic-thermal (PVT) air collector. <i>Renewable Energy</i> , 2008, 33, 914-927.	4.3	131
7	Building Automation and Control Systems and performance optimization: A framework for analysis. <i>Renewable and Sustainable Energy Reviews</i> , 2017, 75, 313-330.	8.2	118
8	Performance monitoring and modeling of an uncovered photovoltaic-thermal (PVT) water collector. <i>Solar Energy</i> , 2016, 135, 551-568.	2.9	97
9	Dynamic thermal and hygrometric simulation of historical buildings: Critical factors and possible solutions. <i>Renewable and Sustainable Energy Reviews</i> , 2020, 118, 109509.	8.2	95
10	Thermal inertia and energy efficiency – Parametric simulation assessment on a calibrated case study. <i>Applied Energy</i> , 2015, 145, 111-123.	5.1	84
11	Performance analysis of a large-area luminescent solar concentrator module. <i>Renewable Energy</i> , 2015, 76, 330-337.	4.3	63
12	A renewable energy scenario for a new low carbon settlement in northern Italy: Biomass district heating coupled with heat pump and solar photovoltaic system. <i>Energy</i> , 2020, 206, 118091.	4.5	62
13	Validation of dynamic hygrothermal simulation models for historical buildings: State of the art, research challenges and recommendations. <i>Building and Environment</i> , 2020, 180, 107081.	3.0	61
14	PV technologies performance comparison in temperate climates. <i>Solar Energy</i> , 2014, 109, 1-10.	2.9	59
15	Cost optimal analysis of heat pump technology adoption in residential reference buildings. <i>Renewable Energy</i> , 2013, 60, 615-624.	4.3	56
16	Water PVT Collectors Performance Comparison. <i>Energy Procedia</i> , 2017, 105, 961-966.	1.8	51
17	Life Cycle Sustainability Assessment in Building Energy Retrofitting; A Review. <i>Sustainable Cities and Society</i> , 2020, 60, 102248.	5.1	50
18	Thermal-electrical Optimization of the Configuration a Liquid PVT Collector. <i>Energy Procedia</i> , 2012, 30, 1-7.	1.8	49

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19	Microclimatic monitoring of the Duomo (Milan Cathedral): Risks-based analysis for the conservation of its cultural heritage. <i>Building and Environment</i> , 2019, 148, 240-257.	3.0	49
20	A simplified model for the estimation of energy production of PV systems. <i>Energy</i> , 2013, 59, 503-512.	4.5	47
21	Integration of a luminescent solar concentrator: Effects on daylight, correlated color temperature, illuminance level and color rendering index. <i>Solar Energy</i> , 2015, 114, 174-182.	2.9	43
22	Energy storage key performance indicators for building application. <i>Sustainable Cities and Society</i> , 2018, 40, 54-65.	5.1	43
23	Photovoltaic-thermal solar-assisted heat pump systems for building applications: Integration and design methods. <i>Energy and Built Environment</i> , 2023, 4, 39-56.	2.9	40
24	The first Italian BIPV project: Case study and long-term performance analysis. <i>Solar Energy</i> , 2016, 134, 340-352.	2.9	39
25	Energy Savings through Variable Speed Compressor Heat Pump Systems. <i>Energy Procedia</i> , 2012, 14, 1337-1342.	1.8	36
26	Color rendering performance of smart glazings for building applications. <i>Solar Energy</i> , 2018, 176, 51-61.	2.9	36
27	Beyond the EPBD: The low energy residential settlement Borgo Solare. <i>Applied Energy</i> , 2010, 87, 629-642.	5.1	35
28	Energy retrofit of commercial buildings: case study and applied methodology. <i>Energy Efficiency</i> , 2013, 6, 407-423.	1.3	35
29	Sustainable church heating: The Basilica di Collemaggio case-study. <i>Energy and Buildings</i> , 2016, 116, 218-231.	3.1	35
30	Energy efficiency in buildings: What drives the investments? The case of Lombardy Region. <i>Sustainable Cities and Society</i> , 2016, 20, 27-37.	5.1	33
31	Active refrigeration technologies for food preservation in humanitarian context "A review. <i>Sustainable Energy Technologies and Assessments</i> , 2017, 22, 150-160.	1.7	33
32	Technical and economic performance analysis of large-scale ground-mounted PV plants in Italian context. <i>Progress in Photovoltaics: Research and Applications</i> , 2010, 18, 371-384.	4.4	32
33	Net Zero Energy Buildings: Expense or Investment?. <i>Energy Procedia</i> , 2012, 14, 1331-1336.	1.8	30
34	Optimization of Solar Thermal Fraction in PVT Systems. <i>Energy Procedia</i> , 2012, 30, 8-18.	1.8	30
35	Multi-commodity network flow models for dynamic energy management " Smart Grid applications. <i>Energy Procedia</i> , 2012, 14, 1374-1379.	1.8	28
36	Comparative energy and economic performance analysis of an electrochromic window and automated external venetian blind. <i>Energy Procedia</i> , 2012, 30, 404-413.	1.8	26

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37	Glazing's techno-economic performance: A comparison of window features in office buildings in different climates. <i>Energy and Buildings</i> , 2018, 159, 123-135.	3.1	26
38	Local energy efficiency programs: A monitoring methodology for heating systems. <i>Sustainable Cities and Society</i> , 2014, 13, 69-77.	5.1	23
39	Optimization concepts in district energy design and management – A case study. <i>Energy Procedia</i> , 2012, 14, 1386-1391.	1.8	22
40	Effects of Climate Change on the Future of Heritage Buildings: Case Study and Applied Methodology. <i>Climate</i> , 2021, 9, 132.	1.2	21
41	Design and performance monitoring of a novel photovoltaic-thermal solar-assisted heat pump system for residential applications. <i>Applied Thermal Engineering</i> , 2022, 210, 118304.	3.0	21
42	Energy and environmental impact of domestic heating in Italy: Evaluation of national NOx emissions. <i>Energy Policy</i> , 2013, 53, 353-360.	4.2	20
43	Visual Performance of Yellow, Orange and Red LSCs Integrated in a Smart Window. <i>Energy Procedia</i> , 2017, 105, 967-972.	1.8	20
44	Triggering a large scale luminescent solar concentrators market: The smart window project. <i>Journal of Cleaner Production</i> , 2019, 219, 35-45.	4.6	19
45	Effectiveness and weaknesses of supporting policies for solar thermal systems – A case-study. <i>Sustainable Cities and Society</i> , 2015, 14, 146-153.	5.1	17
46	ENERGY RETROFIT OF HISTORICAL BUILDINGS: AN ITALIAN CASE STUDY. <i>Journal of Green Building</i> , 2012, 7, 144-165.	0.4	17
47	District heating in Lombardy Region (Italy): Effects of supporting mechanisms. <i>Sustainable Cities and Society</i> , 2015, 14, 43-55.	5.1	16
48	Regional policies toward energy efficiency and renewable energy sources integration: Results of a wide monitoring campaign. <i>Sustainable Cities and Society</i> , 2018, 36, 215-224.	5.1	15
49	Photovoltaic technology for renewable electricity production: Towards net zero energy buildings. , 2011, , .		14
50	Multi-functional Integrated System for Energy Retrofit of Existing Buildings: A Solution Towards nZEB Standards. <i>Energy Procedia</i> , 2017, 105, 2811-2817.	1.8	14
51	Phase-Change Materials in Hydronic Heating and Cooling Systems: A Literature Review. <i>Materials</i> , 2020, 13, 2971.	1.3	13
52	Evaluation of energy policies for promotion and dissemination of photovoltaic technology in Italy. <i>Progress in Photovoltaics: Research and Applications</i> , 2007, 15, 449-460.	4.4	12
53	Parametric energy performance analysis and monitoring of buildings – HEART project platform case study. <i>Sustainable Cities and Society</i> , 2020, 61, 102296.	5.1	12
54	A novel LCSA-Machine learning based optimization model for sustainable building design-A case study of energy storage systems. <i>Building and Environment</i> , 2022, 209, 108656.	3.0	12

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55	Nomograph for rapid technical and economic assessment of solar thermal systems for DHW production. <i>Solar Energy</i> , 2012, 86, 2472-2485.	2.9	11
56	Impact of domestic and tertiary buildings heating by natural gas in the Italian context. <i>Energy Policy</i> , 2012, 47, 164-171.	4.2	11
57	nZEB: bridging the gap between design forecast and actual performance data. <i>Energy and Built Environment</i> , 2022, 3, 16-29.	2.9	11
58	An Algorithm for Designing Dynamic Solar Shading System. <i>Energy Procedia</i> , 2012, 30, 1079-1089.	1.8	10
59	Innovative energy solutions for improving food preservation in humanitarian contexts: A case study from informal refugees settlements in Lebanon. <i>Sustainable Energy Technologies and Assessments</i> , 2017, 22, 177-187.	1.7	10
60	CFD Comfort Analysis of a Sustainable Solution for Church Heating. <i>Energy Procedia</i> , 2017, 105, 2797-2802.	1.8	10
61	The effect of rain on photovoltaic systems. <i>Renewable Energy</i> , 2021, 179, 1803-1814.	4.3	10
62	The first installation under the Italian PV Rooftop Programme: a performance analysis referred to five years of operation. , 2007, , .		9
63	Performance monitoring and building integration assessment of innovative LSC components. , 2015, , .		7
64	Solar Integrated Roof: Electrical and Thermal Production for a Building Renovation. <i>Energy Procedia</i> , 2012, 30, 1042-1051.	1.8	6
65	Energy consumption trends of residential buildings in Uganda: Case study and evaluation of energy savings potential. , 2015, , .		6
66	Optimal Balance between Heating, Cooling and Environmental Impacts: A Method for Appropriate Assessment of Building Envelope's U-Value. <i>Energies</i> , 2022, 15, 3570.	1.6	5
67	Solar Hybrid Photovoltaic-Thermal (PVT) Façade for Heating, Cooling and Electricity Generation. , 2007, , .		4
68	Performance analysis of ground-mounted PV plants. , 2009, , .		4
69	Simulation and model validation of uncovered PVT solar system. , 2013, , .		4
70	The first installation under the Italian PV Rooftop Programme: A performance analysis referred to 11 years of operation. , 2013, , .		4
71	Energy assessment and monitoring of a novel photovoltaic-thermal collector designed for solar-assisted heat pump systems. <i>IET Renewable Power Generation</i> , 2020, 14, 2323-2330.	1.7	4
72	Development and testing of a multi-fuel micro-CHP conversion kit. <i>Sustainable Cities and Society</i> , 2015, 14, 200-208.	5.1	3

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73	Sustainable Building Design in Kenya. Energy Procedia, 2017, 105, 2803-2810.	1.8	3
74	Wet Curtain Wall: A Novel Passive Radiant System for Hot and Dry Climates. Energy Procedia, 2017, 105, 953-960.	1.8	3
75	Load matching in residential buildings through the use of thermal energy storages. , 2019, , .		3
76	Electrical characterization and comparison of a novel covered PVT collector. , 2019, , .		3
77	Modelling Of An Integrated Multi-Energy System For A Nearly Zero Energy Smart District. , 2019, , .		3
78	Implementing Life Cycle Sustainability Assessment in Building and Energy Retrofit Design” An Investigation into Challenges and Opportunities. Environmental Footprints and Eco-design of Products and Processes, 2021, , 103-136.	0.7	3
79	Sustainable Building Design for Tropical Climates. Research for Development, 2020, , 37-46.	0.2	3
80	Estimation of NO _x emissions associated with the natural gas consumption for residential heating in Italy. , 2009, , .		2
81	Energy and economic assessment of a hybrid Solar Assisted Heat Pump system. , 2015, , .		2
82	Energy retrofit of residential buildings: A multifunctional toolkit. , 2017, , .		2
83	Energy and economic assessment of HVAC solutions for the armoury hall at the Palazzo Ducale in Mantua:. Procedia Structural Integrity, 2020, 29, 118-125.	0.3	2
84	Photovoltaic powered distributed generation development in the italian context. , 2011, , .		1
85	District Heating: Results of a Monitoring Campaign in Lombardy Region. Energy Procedia, 2012, 30, 829-838.	1.8	1
86	Urban-scale distributed power generation — Forecast methods for the estimation of electricity exchange profiles for grid-connected solar photovoltaic (PV) systems. , 2013, , .		1
87	Design and performance monitoring of a LSC smart window. , 2017, , .		1
88	Church heating: Comparison of different strategies. , 2017, , .		1
89	Smart-grid and smart-districts: Case-study and techno-economic analysis. , 2017, , .		1
90	Techno-economical Analysis of Rooftop Grid-connected PV Dairy Farms; Case Study of Urmia University Dairy Farm. IOP Conference Series: Earth and Environmental Science, 2017, 83, 012004.	0.2	1

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91	A novel stochastic energy analysis of a solar air heater: case study in solar radiation uncertainty. Energy Systems, 2019, 10, 141-161.	1.8	1
92	DESIGNING REMOTE PLACES IN THE POST-WAR AND PANDEMIC SCENARIOS. SMART SURVEYING OF THE GAHAYR CAMPUS IN MOGADISHU. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives, 0, XLVI-M-1-2021, 1-8.	0.2	1
93	Impact of moisture buffering effect in the calibration of historical buildings energy models: a case study. Journal of Sustainable Development of Energy, Water and Environment Systems, 2020, N/A, 0-0.	0.9	1
94	Development of an Interactive Building Energy Design Software Tool. Research for Development, 2020, , 47-57.	0.2	1
95	Thermal and electrical performance of a solar multifunctional roof. , 2007, , .		0
96	Investigating on electric consumptions for residential buildings ventilation in different Italian climates. , 2015, , .		0
97	Comprehensive Feasibility Study for the Construction of an Integrated Sustainable Waste Management Facility in Kajiado County, Kenya. Research for Development, 2020, , 85-95.	0.2	0