

Niccolò Aste

List of Publications by Year in descending order

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97
papers

3,007
citations

147801

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168389

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97
all docs

97
docs citations

97
times ranked

2752
citing authors

#	ARTICLE	IF	CITATIONS
1	Photovoltaic-thermal solar-assisted heat pump systems for building applications: Integration and design methods. Energy and Built Environment, 2023, 4, 39-56.	5.9	40
2	nZEB: bridging the gap between design forecast and actual performance data. Energy and Built Environment, 2022, 3, 16-29.	5.9	11
3	A novel LCSA-Machine learning based optimization model for sustainable building design-A case study of energy storage systems. Building and Environment, 2022, 209, 108656.	6.9	12
4	Design and performance monitoring of a novel photovoltaic-thermal solar-assisted heat pump system for residential applications. Applied Thermal Engineering, 2022, 210, 118304.	6.0	21
5	Optimal Balance between Heating, Cooling and Environmental Impacts: A Method for Appropriate Assessment of Building Envelope's U-Value. Energies, 2022, 15, 3570.	3.1	5
6	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.	1.1	3
7	Effects of Climate Change on the Future of Heritage Buildings: Case Study and Applied Methodology. Climate, 2021, 9, 132.	2.8	21
8	The effect of rain on photovoltaic systems. Renewable Energy, 2021, 179, 1803-1814.	8.9	10
9	Dynamic thermal and hygrometric simulation of historical buildings: Critical factors and possible solutions. Renewable and Sustainable Energy Reviews, 2020, 118, 109509.	16.4	95
10	Energy assessment and monitoring of a novel photovoltaic-thermal collector designed for solar-assisted heat pump systems. IET Renewable Power Generation, 2020, 14, 2323-2330.	3.1	4
11	Validation of dynamic hygrothermal simulation models for historical buildings: State of the art, research challenges and recommendations. Building and Environment, 2020, 180, 107081.	6.9	61
12	Parametric energy performance analysis and monitoring of buildings" HEART project platform case study. Sustainable Cities and Society, 2020, 61, 102296.	10.4	12
13	Phase-Change Materials in Hydronic Heating and Cooling Systems: A Literature Review. Materials, 2020, 13, 2971.	2.9	13
14	Smart buildings features and key performance indicators: A review. Sustainable Cities and Society, 2020, 61, 102328.	10.4	171
15	A renewable energy scenario for a new low carbon settlement in northern Italy: Biomass district heating coupled with heat pump and solar photovoltaic system. Energy, 2020, 206, 118091.	8.8	62
16	Energy and economic assessment of HVAC solutions for the armoury hall at the Palazzo Ducale in Mantua:. Procedia Structural Integrity, 2020, 29, 118-125.	0.8	2
17	Life Cycle Sustainability Assessment in Building Energy Retrofitting; A Review. Sustainable Cities and Society, 2020, 60, 102248.	10.4	50
18	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.	1.9	1

#	ARTICLE	IF	CITATIONS
19	Development of an Interactive Building Energy Design Software Tool. Research for Development, 2020, , 47-57.	0.4	1
20	Comprehensive Feasibility Study for the Construction of an Integrated Sustainable Waste Management Facility in Kajiado County, Kenya. Research for Development, 2020, , 85-95.	0.4	0
21	Sustainable Building Design for Tropical Climates. Research for Development, 2020, , 37-46.	0.4	3
22	Triggering a large scale luminescent solar concentrators market: The smart window project. Journal of Cleaner Production, 2019, 219, 35-45.	9.3	19
23	Load matching in residential buildings through the use of thermal energy storages. , 2019, , .		3
24	Electrical characterization and comparison of a novel covered PVT collector. , 2019, , .		3
25	Modelling Of An Integrated Multi-Energy System For A Nearly Zero Energy Smart District. , 2019, , .		3
26	Microclimatic monitoring of the Duomo (Milan Cathedral): Risks-based analysis for the conservation of its cultural heritage. Building and Environment, 2019, 148, 240-257.	6.9	49
27	A novel stochastic energy analysis of a solar air heater: case study in solar radiation uncertainty. Energy Systems, 2019, 10, 141-161.	3.0	1
28	Energy storage key performance indicators for building application. Sustainable Cities and Society, 2018, 40, 54-65.	10.4	43
29	Glazing's techno-economic performance: A comparison of window features in office buildings in different climates. Energy and Buildings, 2018, 159, 123-135.	6.7	26
30	Regional policies toward energy efficiency and renewable energy sources integration: Results of a wide monitoring campaign. Sustainable Cities and Society, 2018, 36, 215-224.	10.4	15
31	Color rendering performance of smart glazings for building applications. Solar Energy, 2018, 176, 51-61.	6.1	36
32	Innovative energy solutions for improving food preservation in humanitarian contexts: A case study from informal refugees settlements in Lebanon. Sustainable Energy Technologies and Assessments, 2017, 22, 177-187.	2.7	10
33	Active refrigeration technologies for food preservation in humanitarian context " A review. Sustainable Energy Technologies and Assessments, 2017, 22, 150-160.	2.7	33
34	CFD Comfort Analysis of a Sustainable Solution for Church Heating. Energy Procedia, 2017, 105, 2797-2802.	1.8	10
35	Sustainable Building Design in Kenya. Energy Procedia, 2017, 105, 2803-2810.	1.8	3
36	Visual Performance of Yellow, Orange and Red LSCs Integrated in a Smart Window. Energy Procedia, 2017, 105, 967-972.	1.8	20

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37	Multi-functional Integrated System for Energy Retrofit of Existing Buildings: A Solution Towards nZEB Standards. Energy Procedia, 2017, 105, 2811-2817.	1.8	14
38	Wet Curtain Wall: A Novel Passive Radiant System for Hot and Dry Climates. Energy Procedia, 2017, 105, 953-960.	1.8	3
39	Building Automation and Control Systems and performance optimization: A framework for analysis. Renewable and Sustainable Energy Reviews, 2017, 75, 313-330.	16.4	118
40	Design and performance monitoring of a LSC smart window. , 2017, , .		1
41	Energy retrofit of residential buildings: A multifunctional toolkit. , 2017, , .		2
42	Church heating: Comparison of different strategies. , 2017, , .		1
43	Smart-grid and smart-districts: Case-study and techno-economic analysis. , 2017, , .		1
44	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.	0.3	1
45	Water PVT Collectors Performance Comparison. Energy Procedia, 2017, 105, 961-966.	1.8	51
46	The first Italian BIPV project: Case study and long-term performance analysis. Solar Energy, 2016, 134, 340-352.	6.1	39
47	Performance monitoring and modeling of an uncovered photovoltaic-thermal (PVT) water collector. Solar Energy, 2016, 135, 551-568.	6.1	97
48	Sustainable church heating: The Basilica di Collemaggio case-study. Energy and Buildings, 2016, 116, 218-231.	6.7	35
49	Energy efficiency in buildings: What drives the investments? The case of Lombardy Region. Sustainable Cities and Society, 2016, 20, 27-37.	10.4	33
50	Energy consumption trends of residential buildings in Uganda: Case study and evaluation of energy savings potential. , 2015, , .		6
51	Investigating on electric consumptions for residential buildings ventilation in different Italian climates. , 2015, , .		0
52	Thermal inertia and energy efficiency “ Parametric simulation assessment on a calibrated case study. Applied Energy, 2015, 145, 111-123.	10.1	84
53	Integration of a luminescent solar concentrator: Effects on daylight, correlated color temperature, illuminance level and color rendering index. Solar Energy, 2015, 114, 174-182.	6.1	43
54	Energy and economic assessment of a hybrid Solar Assisted Heat Pump system. , 2015, , .		2

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55	Performance monitoring and building integration assessment of innovative LSC components. , 2015, , .		7
56	Design, modeling and performance monitoring of a photovoltaic-thermal (PVT) water collector. Solar Energy, 2015, 112, 85-99.	6.1	143
57	Performance analysis of a large-area luminescent solar concentrator module. Renewable Energy, 2015, 76, 330-337.	8.9	63
58	District heating in Lombardy Region (Italy): Effects of supporting mechanisms. Sustainable Cities and Society, 2015, 14, 43-55.	10.4	16
59	Effectiveness and weaknesses of supporting policies for solar thermal systems- A case-study. Sustainable Cities and Society, 2015, 14, 146-153.	10.4	17
60	Development and testing of a multi-fuel micro-CHP conversion kit. Sustainable Cities and Society, 2015, 14, 200-208.	10.4	3
61	Local energy efficiency programs: A monitoring methodology for heating systems. Sustainable Cities and Society, 2014, 13, 69-77.	10.4	23
62	Water flat plate PV-thermal collectors: A review. Solar Energy, 2014, 102, 98-115.	6.1	157
63	PV technologies performance comparison in temperate climates. Solar Energy, 2014, 109, 1-10.	6.1	59
64	Energy retrofit of commercial buildings: case study and applied methodology. Energy Efficiency, 2013, 6, 407-423.	2.8	35
65	Simulation and model validation of uncovered PVT solar system. , 2013, , .		4
66	A simplified model for the estimation of energy production of PV systems. Energy, 2013, 59, 503-512.	8.8	47
67	The first installation under the Italian PV Rooftop Programme: A performance analysis referred to 11 years of operation. , 2013, , .		4
68	Cost optimal analysis of heat pump technology adoption in residential reference buildings. Renewable Energy, 2013, 60, 615-624.	8.9	56
69	Energy and environmental impact of domestic heating in Italy: Evaluation of national NOx emissions. Energy Policy, 2013, 53, 353-360.	8.8	20
70	Calibration and uncertainty analysis for computer models - A meta-model based approach for integrated building energy simulation. Applied Energy, 2013, 103, 627-641.	10.1	181
71	Urban-scale distributed power generation — Forecast methods for the estimation of electricity exchange profiles for grid-connected solar photovoltaic (PV) systems. , 2013, , .		1
72	Nomograph for rapid technical and economic assessment of solar thermal systems for DHW production. Solar Energy, 2012, 86, 2472-2485.	6.1	11

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73	Net Zero Energy Buildings: Expense or Investment?. Energy Procedia, 2012, 14, 1331-1336.	1.8	30
74	Energy Savings through Variable Speed Compressor Heat Pump Systems. Energy Procedia, 2012, 14, 1337-1342.	1.8	36
75	Multi-commodity network flow models for dynamic energy management “ Smart Grid applications. Energy Procedia, 2012, 14, 1374-1379.	1.8	28
76	Optimization concepts in district energy design and management “ A case study. Energy Procedia, 2012, 14, 1386-1391.	1.8	22
77	Impact of domestic and tertiary buildings heating by natural gas in the Italian context. Energy Policy, 2012, 47, 164-171.	8.8	11
78	Thermal-electrical Optimization of the Configuration a Liquid PVT Collector. Energy Procedia, 2012, 30, 1-7.	1.8	49
79	Optimization of Solar Thermal Fraction in PVT Systems. Energy Procedia, 2012, 30, 8-18.	1.8	30
80	Comparative energy and economic performance analysis of an electrochromic window and automated external venetian blind. Energy Procedia, 2012, 30, 404-413.	1.8	26
81	District Heating: Results of a Monitoring Campaign in Lombardy Region. Energy Procedia, 2012, 30, 829-838.	1.8	1
82	Solar Integrated Roof: Electrical and Thermal Production for a Building Renovation. Energy Procedia, 2012, 30, 1042-1051.	1.8	6
83	An Algorithm for Designing Dynamic Solar Shading System. Energy Procedia, 2012, 30, 1079-1089.	1.8	10
84	ENERGY RETROFIT OF HISTORICAL BUILDINGS: AN ITALIAN CASE STUDY. Journal of Green Building, 2012, 7, 144-165.	0.8	17
85	Photovoltaic powered distributed generation development in the italian context. , 2011, , .		1
86	Photovoltaic technology for renewable electricity production: Towards net zero energy buildings. , 2011, , .		14
87	Beyond the EPBD: The low energy residential settlement Borgo Solare. Applied Energy, 2010, 87, 629-642.	10.1	35
88	Technical and economic performance analysis of large-scale ground-mounted PV plants in Italian context. Progress in Photovoltaics: Research and Applications, 2010, 18, 371-384.	8.1	32
89	Estimation of NO _x emissions associated with the natural gas consumption for residential heating in Italy. , 2009, , .		2
90	The influence of the external walls thermal inertia on the energy performance of well insulated buildings. Energy and Buildings, 2009, 41, 1181-1187.	6.7	246

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91	Performance analysis of ground-mounted PV plants. , 2009, , .		4
92	Design, development and performance monitoring of a photovoltaic-thermal (PVT) air collector. Renewable Energy, 2008, 33, 914-927.	8.9	131
93	The first installation under the Italian PV Rooftop Programme: a performance analysis referred to five years of operation. , 2007, , .		9
94	Solar Hybrid Photovoltaic-Thermal (PVT) Fa�e for Heating, Cooling and Electricity Generation. , 2007, , .		4
95	Thermal and electrical performance of a solar multifunctional roof. , 2007, , .		0
96	Evaluation of energy policies for promotion and dissemination of photovoltaic technology in Italy. Progress in Photovoltaics: Research and Applications, 2007, 15, 449-460.	8.1	12
97	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