Umberto Berardi

List of Publications by Citations

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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.

157 papers	7,187 citations	38 h-index	82 g-index
187 ext. papers	8,785 ext. citations	5.2 avg, IF	7.45 L-index

#	Paper	IF	Citations
157	Smart Cities: Definitions, Dimensions, Performance, and Initiatives. *Journal of Urban Technology*, **2015**, 22, 3-21	5.9	1444
156	State-of-the-art analysis of the environmental benefits of green roofs. *Applied Energy*, **2014**, 115, 411-428	10.7	413
155	Acoustic characterization of natural fibers for sound absorption applications. *Building and Environment*, **2015**, 94, 840-852	6.5	302
154	A cross-country comparison of the building energy consumptions and their trends. *Resources, Conservation and Recycling*, **2017**, 123, 230-241	11.9	269
153	Comparing the effects of urban heat island mitigation strategies for Toronto, Canada. *Energy and Buildings*, **2016**, 114, 2-19	7	243
152	Sustainable energy performances of green buildings: A review of current theories, implementations and challenges. *Renewable and Sustainable Energy Reviews*, **2013**, 25, 1-17	16.2	232
151	Sustainability Assessment in the Construction Sector: Rating Systems and Rated Buildings. *Sustainable Development*, **2012**, 20, 411-424	6.7	217
150	Clarifying the new interpretations of the concept of sustainable building. *Sustainable Cities and Society*, **2013**, 8, 72-78	10.1	184
149	The outdoor microclimate benefits and energy saving resulting from green roofs retrofits. *Energy and Buildings*, **2016**, 121, 217-229	7	159
148	Thermal performance characteristics of unshaded courtyards in hot and humid climates. *Building and Environment*, **2015**, 87, 154-168	6.5	147
147	Sustainability assessment of urban communities through rating systems. *Environment, Development and Sustainability*, **2013**, 15, 1573-1591	4.5	137
146	Predicting the sound absorption of natural materials: Best-fit inverse laws for the acoustic impedance and the propagation constant. *Applied Acoustics*, **2017**, 115, 131-138	3.1	131
145	Comfort and energy savings with active green roofs. *Energy and Buildings*, **2014**, 82, 492-504	7	109
144	The development of a monolithic aerogel glazed window for an energy retrofitting project. *Applied Energy*, **2015**, 154, 603-615	10.7	107
143	Exploring the advantages and challenges of double-skin façades (DSFs). *Renewable and Sustainable Energy Reviews*, **2016**, 60, 1052-1065	16.2	102
142	Stakeholders' influence on the adoption of energy-saving technologies in Italian homes. *Energy Policy*, **2013**, 60, 520-530	7.2	95
141	The impact of the temperature dependent thermal conductivity of insulating materials on the effective building envelope performance. *Energy and Buildings*, **2017**, 144, 262-275	7	92

140	A comparison between environmental sustainability rating systems LEED and ITACA for residential buildings. *Building and Environment*, **2015**, 86, 98-108	6.5	84
139	The effect of pavement characteristics on pedestrians' thermal comfort in Toronto. *Urban Climate*, **2018**, 24, 449-459	6.8	79
138	Assessing the impact of climate change on building heating and cooling energy demand in Canada. *Renewable and Sustainable Energy Reviews*, **2020**, 121, 109681	16.2	77
137	The essence of future smart houses: From embedding ICT to adapting to sustainability principles. *Renewable and Sustainable Energy Reviews*, **2013**, 24, 593-607	16.2	74
136	Hygrothermal characteristics of aerogel-enhanced insulating materials under different humidity and temperature conditions. *Energy and Buildings*, **2018**, 158, 698-711	7	70
135	Biochar from residual biomass as a concrete filler for improved thermal and acoustic properties. *Biomass and Bioenergy*, **2019**, 120, 77-83	5.3	70
134	Experimental investigation of latent heat thermal energy storage using PCMs with different melting temperatures for building retrofit. *Energy and Buildings*, **2019**, 185, 180-195	7	69
133	Long-term thermal conductivity of aerogel-enhanced insulating materials under different laboratory aging conditions. *Energy*, **2018**, 147, 1188-1202	7.9	68
132	Properties of concretes enhanced with phase change materials for building applications. *Energy and Buildings*, **2019**, 199, 402-414	7	67
131	Building Energy Consumption in US, EU, and BRIC Countries. *Procedia Engineering*, **2015**, 118, 128-136		66
130	Aerogel-enhanced systems for building energy retrofits: Insights from a case study. *Energy and Buildings*, **2018**, 159, 370-381	7	62
129	What is an intelligent building? Analysis of recent interpretations from an international perspective. *Architectural Science Review*, **2016**, 59, 338-357	2.6	58
128	Green Buildings and Organizational Changes in Italian Case Studies. *Business Strategy and the Environment*, **2012**, 21, 387-400	8.6	54
127	Beyond Sustainability Assessment Systems: Upgrading Topics by Enlarging The Scale of Assessment. *International Journal of Sustainable Building Technology and Urban Development*, **2011**, 2, 276-282		52
126	The Acoustic Characterization of Broom Fibers. *Journal of Natural Fibers*, **2017**, 14, 858-863	1.8	51
125	Beneath the smart city: dichotomy between sustainability and competitiveness. *International Journal of Sustainable Building Technology and Urban Development*, **2015**, 6, 140-156		51
124	Parametric design to minimize the embodied GHG emissions in a ZEB. *Energy and Buildings*, **2018**, 167, 106-123	7	51
123	On the Effects of Variation of Thermal Conductivity in Buildings in the Italian Construction Sector. *Energies*, **2018**, 11, 872	3.1	47

122	Daylighting in an atrium-type high performance house. *Building and Environment*, **2014**, 76, 92-104	6.5	46
121	Analyzing the thermal comfort conditions of outdoor spaces in a university campus in Kuala Lumpur, Malaysia. *Science of the Total Environment*, **2019**, 666, 1327-1345	10.2	43
120	The impact of aging and environmental conditions on the effective thermal conductivity of several foam materials. *Energy*, **2019**, 182, 777-794	7.9	39
119	The Effect of a Denser City over the Urban Microclimate: The Case of Toronto. *Sustainability*, **2016**, 8, 822	3.6	37
118	Simulation of acoustical parameters in rectangular churches. *Journal of Building Performance Simulation*, **2014**, 7, 1-16	2.8	36
117	The adoption of green roofs for the retrofitting of existing buildings in the Mediterranean climate. *International Journal of Sustainable Building Technology and Urban Development*, **2016**, 7, 116-129		33
116	Hygrothermal performance of hempcrete for Ontario (Canada) buildings. *Journal of Cleaner Production*, **2017**, 142, 3655-3664	10.3	32
115	What can we learn from Malay vernacular houses?. *Sustainable Cities and Society*, **2014**, 13, 157-170	10.1	32
114	Thermal and Fire Characteristics of FRP Composites for Architectural Applications. *Polymers*, **2015**, 7, 2276-2289	4.5	32
113	A post occupancy evaluation framework for LEED certified U.S. higher education residence halls. *Procedia Engineering*, **2015**, 118, 19-27		32
112	Measurement, modeling, and optimization of sound absorption performance of Kenaf fibers for building applications. *Building and Environment*, **2020**, 180, 107087	6.5	31
111	Water-to-air-heat exchanger and indirect evaporative cooling in buildings with green roofs. *Energy and Buildings*, **2017**, 151, 406-417	7	31
110	Analysis of the cooling effects of higher albedo surfaces during heat waves coupling the Weather Research and Forecasting model with building energy models. *Energy and Buildings*, **2020**, 207, 109627	7	31
109	Acoustic Intervention in a Cultural Heritage: The Chapel of the Royal Palace in Caserta, Italy. *Buildings*, **2016**, 6, 1	3.2	31
108	Modelling and testing of a dielectic electro-active polymer (DEAP) actuator for active vibration control. *Journal of Mechanical Science and Technology*, **2013**, 27, 1-7	1.6	30
107	Analysis of the Impacts of Light Shelves on the Useful Daylight Illuminance in Office Buildings in Toronto. *Energy Procedia*, **2015**, 78, 1793-1798	2.3	30
106	The Urban Heat Island Effect in the City of Toronto. *Procedia Engineering*, **2015**, 118, 137-144		29
105	Effects of greenery enhancements for the resilience to heat waves: A comparison of analysis performed through mesoscale (WRF) and microscale (Envi-met) modeling. *Science of the Total Environment*, **2020**, 747, 141300	10.2	28

104	Virtual reconstruction of the historical acoustics of the Odeon of Pompeii. *Journal of Cultural Heritage*, **2016**, 19, 555-566	2.9	27
103	A data-driven approach for building energy benchmarking using the Lorenz curve. *Energy and Buildings*, **2018**, 169, 319-331	7	26
102	Benefits of latent thermal energy storage in the retrofit of Canadian high-rise residential buildings. *Building Simulation*, **2018**, 11, 709-723	3.9	26
101	A comparative analysis of acoustic energy models for churches. *Journal of the Acoustical Society of America*, **2009**, 126, 1838-49	2.2	26
100	Microstructural analysis and blowing agent concentration in aged polyurethane and polyisocyanurate foams. *Applied Thermal Engineering*, **2020**, 164, 114440	5.8	26
99	Characterization of commercial aerogel-enhanced blankets obtained with supercritical drying and of a new ambient pressure drying blanket. *Energy and Buildings*, **2019**, 198, 542-552	7	25
98	Comparing urban canopy models for microclimate simulations in Weather Research and Forecasting Models. *Sustainable Cities and Society*, **2020**, 55, 102025	10.1	25
97	The benefits of light shelves over the daylight illuminance in office buildings in Toronto. *Indoor and Built Environment*, **2018**, 27, 244-262	1.8	25
96	Circular reutilization of coffee waste for sound absorbing panels: A perspective on material recycling. *Environmental Research*, **2020**, 184, 109281	7.9	24
95	Intelligent or smart cities and buildings: a critical exposition and a way forward. *Intelligent Buildings International*, **2018**, 10, 122-129	1.7	24
94	Thermal bridges of metal fasteners for aerogel-enhanced blankets. *Energy and Buildings*, **2019**, 185, 307-315	7	23
93	A Double Synthetic Index to Evaluate the Acoustics of Churches. *Archives of Acoustics*, **2012**, 37, 521-528		23
92	Day-ahead prediction of hourly electric demand in non-stationary operated commercial buildings: A clustering-based hybrid approach. *Energy and Buildings*, **2017**, 148, 228-237	7	22
91	Preparation and assessment of the potential energy savings of thermochromic and cool coatings considering inter-building effects. *Solar Energy*, **2020**, 209, 493-504	6.8	21
90	Assessing the effect of night ventilation on PCM performance in high-rise residential buildings. *Journal of Building Physics*, **2019**, 43, 229-249	2.6	20
89	Sustainability assessments of buildings, communities, and cities **2015**, 497-545		20
88	Potential use of coconut fibre modified mortars to enhance thermal comfort in low-income housing. *Journal of Environmental Management*, **2021**, 277, 111503	7.9	20
87	A simulation-based model for courtyard housing design based on adaptive thermal comfort. *Journal of Building Engineering*, **2020**, 31, 101335	5.2	19

86	Characterization of sheep wool panels for room acoustic applications **2016**,		19
85	Effects of aging on retro-reflective materials for building applications. *Energy and Buildings*, **2018**, 179, 121-132	7	19
84	The Energy Saving and Indoor Comfort Improvements with Latent Thermal Energy Storage in Building Retrofits in Canada. *Energy Procedia*, **2017**, 111, 462-471	2.3	18
83	Design and Application of Concrete Tiles Enhanced with Microencapsulated Phase-Change Material. *Journal of Architectural Engineering*, **2016**, 22, 05015003	1.5	17
82	Long-term performance of aerogel-enhanced materials. *Energy Procedia*, **2017**, 132, 303-308	2.3	17
81	Development of Glazing Systems with Silica Aerogel. *Energy Procedia*, **2015**, 78, 394-399	2.3	17
80	Phase change materials stabilized by porous metal supramolecular gels: Gelation effect on loading capacity and thermal performance. *Chemical Engineering Journal*, **2020**, 394, 124806	14.7	17
79	The benefits of using aerogel-enhanced systems in building retrofits. *Energy Procedia*, **2017**, 134, 626-635	2.3	16
78	From high-energy demands to nZEB: the retrofit of a school in Catalonia, Spain. *Energy Procedia*, **2017**, 140, 141-150	2.3	16
77	Current and future coating technologies for architectural glazing applications. *Energy and Buildings*, **2021**, 244, 111022	7	16
76	An overview of and introduction to current researches on super insulating materials for high-performance buildings. *Energy and Buildings*, **2020**, 214, 109890	7	15
75	Energy retrofit of PCM-applied apartment buildings considering building orientation and height. *Energy*, **2021**, 222, 119877	7.9	15
74	Thermal characterization of different graphite polystyrene. *International Review of Applied Sciences and Engineering*, **2018**, 9, 163-168	0.3	15
73	The impact of temperature dependency of the building insulation thermal conductivity in the Canadian climate. *Energy Procedia*, **2017**, 132, 237-242	2.3	14
72	Development and thermal-optical characterization of a cementitious plaster with phase change materials and thermochromic paint. *Solar Energy*, **2020**, 205, 282-291	6.8	14
71	Microstructure and thermal characterization of aerogel-graphite polyurethane spray-foam composite for high efficiency thermal energy utilization. *Journal of Hazardous Materials*, **2020**, 397, 122656	12.8	14
70	Optimizing the thermal performance of window frames through aerogel-enhancements. *Applied Energy*, **2020**, 266, 114776	10.7	13
69	Novel Simulation Algorithm for Modeling the Hysteresis of Phase Change Materials. *Energies*, **2020**, 13, 1200	3.1	13

68	Fire Performance Assessment of a Fiber Reinforced Polymer Wall Panel Used in a Single Family Dwelling. *Fire Technology*, **2014**, 50, 1607-1617	3	13
67	Use of date palm waste fibers as sound absorption material. *Journal of Building Engineering*, **2021**, 41, 102752	5.2	13
66	A Smart Hybrid Energy System Grid for Energy Efficiency in Remote Areas for the Army. *Energies*, **2020**, 13, 2279	3.1	11
65	Evaluating highly insulated walls to withstand biodeterioration: A probabilistic-based methodology. *Energy and Buildings*, **2018**, 177, 112-124	7	11
64	Assessment of recycled ceramic-based inorganic insulation for improving energy efficiency and flame retardancy of buildings. *Environment International*, **2019**, 130, 104900	12.9	11
63	Day-ahead prediction of hourly subentry energy consumption in the building sector using pattern recognition algorithms. *Energy*, **2020**, 211, 118530	7.9	11
62	Effects of climate changes on building energy demand and thermal comfort in Canadian office buildings adopting different temperature setpoints. *Journal of Building Engineering*, **2021**, 42, 102725	5.2	11
61	Natural fibro-granular composite as a novel sustainable sound-absorbing material. *Applied Acoustics* , **2021**, 181, 108157	3.1	11
60	Acoustic Enhancement of a Modern Church. *Buildings*, **2019**, 9, 83	3.2	10
59	Power consumption and energy efficiency of VRF system based on large scale monitoring virtual sensors. *Building Simulation*, **2020**, 13, 1145-1156	3.9	10
58	How can cities lead the way towards a sustainable, competitive and smart future? **2014**,		10
57	The acoustic of Roman theatres in Southern Italy and some reflections for their modern uses. *Applied Acoustics*, **2020**, 170, 107530	3.1	10
56	Experimental verification of the theoretical aging of vacuum insulated panels. *Journal of Industrial and Engineering Chemistry*, **2020**, 90, 300-304	6.3	10
55	Interference effects in field measurements of airborne sound insulation of building facades. *Noise Control Engineering Journal*, **2011**, 59, 165	0.6	9
54	Investigation of the impacts of microclimate on PV energy efficiency and outdoor thermal comfort. *Sustainable Cities and Society*, **2020**, 62, 102402	10.1	9
53	Experimental investigation of latent thermal energy storage in high-rise residential buildings in Toronto. *Energy Procedia*, **2017**, 132, 249-254	2.3	8
52	Moisture control strategies of habitable basements in cold climates. *Building and Environment*, **2020**, 169, 106572	6.5	8
51	Development of a performance-based design framework for multifunctional climate-responsive fa□des. *Energy and Buildings*, **2021**, 231, 110589	7	8

50	Microclimate Analysis as a Design Driver of Architecture. *Climate*, **2020**, 8, 72	3.1	7
49	Application of probabilistic approaches to the performance evaluation of building envelopes to withstand mould growth. *Journal of Building Physics*, **2019**, 43, 187-207	2.6	7
48	Is atrium an ideal form for daylight in buildings?. *Architectural Science Review*, **2020**, 63, 47-62	2.6	7
47	Enhancing the cooling potential of a solar-assisted desiccant cooling system by ground source free cooling. *Building Simulation*, **2020**, 13, 1125-1144	3.9	7
46	The acoustics of ancient catacombs in Southern Italy. *Building Acoustics*, **2020**, 1351010X2096757	1	7
45	The Acoustics of the Double Elliptical Vault of the Royal Palace of Caserta (Italy). *Buildings*, **2017**, 7, 18	3.2	6
44	Light transmittance characterization and energy-saving analysis of a new selective coating for in situ window retrofit. *Science and Technology for the Built Environment*, **2019**, 25, 1152-1163	1.8	6
43	Influence of Natural Ventilation on the Thermal Behavior of a Massive Building. *Energy Procedia*, **2015**, 78, 1287-1292	2.3	6
42	The position of the intruments for the sound insulation measurement of building facades: From ISO 140-5 to ISO 16283-3. *Noise Control Engineering Journal*, **2013**, 61, 70-80	0.6	6
41	Potential utility of HKUST-1-graphite nanocomposite to endow alkane with high thermal properties and low electrical resistivity. *Journal of Hazardous Materials*, **2021**, 402, 123695	12.8	6
40	Experimental and modeling investigation of the acoustic behavior of sustainable kenaf/yucca composites. *Applied Acoustics*, **2021**, 183, 108332	3.1	6
39	Moving to Sustainable Buildings: **2013**,		5
38	Experimental and numerical investigation of the thermal transmittance of PVC window frames with silica aerogel. *Journal of Building Engineering*, **2020**, 32, 101665	5.2	5
37	Modeling of an Aerogel-Based Thermal Break for Super-Insulated Window Frames. *Buildings*, **2020**, 10, 60	3.2	4
36	Performance investigation of ground source heat exchanger with desiccant-based hybrid cooling system in humid climate. *IOP Conference Series: Materials Science and Engineering*, **2019**, 609, 052002	0.4	4
35	Acoustic virtual reconstruction of the Roman theater of Posillipo, Naples **2017**,		4
34	Optimization and Modeling of Sound-Absorption Properties of Natural Fibers for Acoustical Application. *Journal of Natural Fibers*,1-17	1.8	4
33	Numerical investigation of indoor thermal comfort and air quality for a multi-purpose hall with various shading and glazing ratios. *Thermal Science and Engineering Progress*, **2021**, 22, 100812	3.6	4

32	Design and modelling techniques of permanent magnet fault current limiter. *Energy Procedia*, **2017**, 134, 616-625	2.3	3
31	Permanent magnet fault current limiter for the power grid. *Energy Procedia*, **2017**, 134, 768-775	2.3	3
30	A multi-integrated renewable energy system in a commercial building in Beijing: lessons learnt from an operating analysis. *International Journal of Low-Carbon Technologies*, **2012**, 7, 192-198	2.8	3
29	A Comparison of Measurement Standard Methods for the Sound Insulation of Building Fa□des. *Building Acoustics*, **2012**, 19, 267-282	1	3
28	Development of microclimate modeling for enhancing neighborhood thermal performance through urban greenery cover. *Energy and Buildings*, **2021**, 252, 111428	7	3
27	Design and control of radiant ceiling panels incorporating phase change materials for cooling applications. *Applied Energy*, **2021**, 304, 117736	10.7	3
26	The Acoustic of Cumaean Sibyl **2017**,		2
25	Target-oriented Benchmarking of Regional Building Energy Consumption Based on the Lorenz Curve. *Procedia Engineering*, **2017**, 205, 879-886		2
24	Additive manufacturing for minimizing vibration damages in the water-stop tray of washing machines. *Journal of Low Frequency Noise Vibration and Active Control*, **2017**, 36, 193-199	1.5	2
23	A Revised Sound Energy Theory Based on a New Formula for the Reverberation Radius in Rooms with Non-Diffuse Sound Field. *Archives of Acoustics*, **2015**, 40, 33-40		2
22	The dependence of thermophysical and hygroscopic properties of macro-porous geopolymers on Si/Al. *Journal of Non-Crystalline Solids*, **2022**, 582, 121432	3.9	2
21	Assessments of multiple operation strategies in a passive office Building in Cold Region of China. *Energy and Buildings*, **2022**, 254, 111561	7	2
20	The influence of moisture on the energy performance of retrofitted walls. *MATEC Web of Conferences*, **2020**, 322, 01035	0.3	2
19	Impact of Stationary and Dynamic Conditions on the U-Value Measurements of Heavy-Multi Leaf Walls by Quantitative IRT. *Energies*, **2020**, 13, 6611	3.1	2
18	Impacts of Ground Slope on Main Performance Figures of Solar Chimney Power Plants: A Comprehensive CFD Research with Experimental Validation. *International Journal of Photoenergy*, **2021**, 2021, 1-11	2.1	2
17	Analysis of the energy and thermal performance of a radiant cooling panel system with integrated phase change materials in very hot and humid conditions. *IOP Conference Series: Materials Science and Engineering*, **2019**, 609, 052025	0.4	2
16	Assessment of the noise produced by wind farms with the acoustically analogous techniques without stopping the noise source. *Wind Engineering*, **2019**, 43, 201-209	1.2	1
15	Acoustics and Lighting Education in Architectural Engineering: Experience of WPI. *Journal of Architectural Engineering*, **2014**, 20, 05013003	1.5	1

14	Salient parameters affecting the performance of foamed geopolymers as sustainable insulating materials. *Construction and Building Materials*, **2021**, 313, 125400	6.7	1
13	The effect of activator ratio on the thermal and hygric properties of aerated geopolymers. *Journal of Building Engineering*, **2022**, 45, 103414	5.2	1
12	Performance of VRF systems based on large scale monitoring. *IOP Conference Series: Materials Science and Engineering*, **2019**, 609, 052012	0.4	1
11	Design and Modelling of Permanent Magnet Fault Current Limiter For Electrical Power Applications **2018**,		1
10	External shading form-finding: simulating daylighting and dynamic view access assessment. *Journal of Building Performance Simulation*, **2022**, 15, 398-409	2.8	1
9	The efficiency of hybrid ventilation on cooling energy savings in NZEBs. *Journal of Building Engineering*, **2022**, 104401	5.2	1
8	Single and Multi-phase Change Materials Used in Cooling Systems. *International Journal of Thermophysics*, **2022**, 43, 1	2.1	0
7	The efficiency and GHG emissions of air source heat pumps under future climate scenarios across Canada. *Energy and Buildings*, **2022**, 262, 112000	7	0
6	Experimental evaluation of the cooling performance of radiant ceiling panels with thermal energy storage. *Energy and Buildings*, **2022**, 262, 112021	7	0
5	Experimental Assessment of the Thermal Conductivity of Basalt Fibres at High Temperatures. *Energies*, **2022**, 15, 2784	3.1	0
4	Thermal enhancement of windows performance by means of innovative technologies. *E3S Web of Conferences*, **2021**, 312, 02015	0.5	
3	The Coupling of the Weather Research and Forecasting Model with the Urban Canopy Models for Climate Simulations **2021**, 223-240		
2	Evaluation of mixed mode ventilation cooling energy saving potential in nZEB: A case study in Southern Italy. *E3S Web of Conferences*, **2022**, 343, 01004	0.5	
1	Air quality and heat-related health impacts of increasing urban greenery cover **2022**, 269-300		