Life cycle assessment in buildings: State-of-the-art and simplified LCA methodology as a complement for building certification

DOI: 10.1016/j.buildenv.2009.05.001
Building and Environment, 2009, 44, 2510-2520.

#	Paper	IF	Citations
492	Application of Life Cycle Assessment (LCA) and extenics theory for building energy conservation assessment. **2009**, 34, 1870-1879		48
491	Energy-saving policies and low-energy residential buildings: an LCA case study to support decision makers in Piedmont (Italy). *International Journal of Life Cycle Assessment*, **2010**, 15, 652-665	4.6	92
490	Life Cycle Assessment of the inclusion of phase change materials (PCM) in experimental buildings. **2010**, 42, 1517-1523		101
489	Sustainability of Urban Infrastructures. *Sustainability*, **2010**, 2, 2950-2964	3.6	24
488	Construal-level theory of psychological distance. **2010**, 117, 440-63		2951
487	Applying LCA and fuzzy AHP to evaluate building energy conservation. **2011**, 28, 123-141		22
486	Eco-efficient Construction and Building Materials. **2011**,		40
485	Sustainable Buildings: An Ever Evolving Target. *Sustainability*, **2011**, 3, 443-464	3.6	47
484	Exergy analysis combined with LCA for building envelope energy efficiency retrofit. **2011**, 8, 379		4
483	Basic actions to improve energy efficiency in commercial buildings in operation. **2011**, 43, 3106-3111		42
482	In search of better energy performance in the Portuguese buildings□The case of the Portuguese regulation. **2011**, 39, 7666-7683		40
481	Economic and environmental analysis of standard, high efficiency, rainwater flushed, and composting toilets. **2011**, 92, 419-28		48
480	Life cycle assessment in buildings: The ENSLIC simplified method and guidelines. **2011**, 36, 1900-1907		110
479	Toward a European Eco-label brand for residential buildings: Holistic or by-components approaches?. **2011**, 36, 1884-1892		45
478	Life cycle assessment of building materials: Comparative analysis of energy and environmental impacts and evaluation of the eco-efficiency improvement potential. *Building and Environment*, **2011**, 46, 1133-1140	6.5	702
477	A life cycle approach to Green Public Procurement of building materials and elements: A case study on windows. **2011**, 36, 2473-2482		94
476	New indices to assess building energy efficiency at the use stage. **2011**, 43, 476-484		33

475	Development of a methodology for life cycle building energy ratings. **2011**, 39, 3779-3788		50
474	The development of environmental load evaluation system of a standard Korean apartment house. **2011**, 15, 1239-1249		30
473	The development of apartment house life cycle CO2 simple assessment system using standard apartment houses of South Korea. **2011**, 15, 1454-1467		68
472	Improving Uncertainty Estimate of Embodied-Energy of Construction Materials Using Analytical Hierarchical Process in Weighted DQI Method. **2012**,		
471	Optimization of construction solutions for green building. **2012**, 7, 33-44		5
470	Multi-objective building envelope optimization for life-cycle cost and global warming potential. **2012**, 193-200		7
469	Assessment of the environmental performance of buildings: A critical evaluation of the influence of technical building equipment on residential buildings. *International Journal of Life Cycle Assessment*, **2012**, 17, 1116-1130	4.6	100
468	A conceptual framework for future-proofing the energy performance of buildings. **2012**, 47, 145-155		42
467	Life cycle assessment approach for the optimization of sustainable building envelopes: An application on solar wall systems. *Building and Environment*, **2012**, 58, 278-288	6.5	82
466	Stabilized rammed earth incorporating PCM: Optimization and improvement of thermal properties and Life Cycle Assessment. **2012**, 30, 461-470		21
465	Complexity Question in Urban Systems Design. **2012**, 01,		
464	Estudio del flujo energ□tico en el ciclo de vida de una vivienda y su implicancia en las emisiones de gases de efecto invernadero, durante la fase de construcci□ Caso Estudio: Vivienda Tipolog□ Social. Regi□ del Biob□, Chile. **2012**, 11, 125-145		14
463	Energy Costs of Energy Savings in Buildings: A Review. *Sustainability*, **2012**, 4, 1711-1732	3.6	8
462	An AHP-weighted aggregated data quality indicator (AWADQI) approach for estimating embodied energy of building materials. *International Journal of Life Cycle Assessment*, **2012**, 17, 764-773	4.6	23
461	Evaluation of whole life cycle assessment for heritage buildings in Australia. *Building and Environment*, **2012**, 47, 138-149	6.5	69
460	The life-cycle assessment of a single-storey retail building in Canada. *Building and Environment*, **2012**, 49, 212-226	6.5	70
459	Life-cycle assessment of residential buildings in three different European locations, basic tool. *Building and Environment*, **2012**, 51, 395-401	6.5	105
458	Energy and environmental assessment of two high energy performance residential buildings. *Building and Environment*, **2012**, 51, 276-284	6.5	69

457	Environmental impacts of the UK residential sector: Life cycle assessment of houses. *Building and Environment*, **2012**, 54, 86-99	6.5	180
456	Evaluation of the environmental impact of experimental cubicles using Life Cycle Assessment: A highlight on the manufacturing phase. **2012**, 92, 534-544		54
455	Methodology of CO2 emission evaluation in the life cycle of office building fa□des. **2012**, 33, 41-47		39
454	Life-cycle assessment of a house with alternative exterior walls: Comparison of three impact assessment methods. **2012**, 47, 572-583		152
453	Climate change influence on building lifecycle greenhouse gas emissions: Case study of a UK mixed-use development. **2012**, 48, 112-126		30
452	Comparative life cycle assessment of thermal energy storage systems for solar power plants. **2012**, 44, 166-173		112
451	LCA application in the optimum design of high rise steel structures. **2012**, 16, 3146-3153		27
450	Policy measures to overcome barriers to energy renovation of existing buildings. **2012**, 16, 3939-3947		65
449	High thermal performance composite PCMs loading xGnP for application to building using radiant floor heating system. **2012**, 101, 51-56		73
448	An audit of life cycle energy analyses of buildings. **2013**, 39, 43-54		35
447	Application of life-cycle assessment to early stage building design for reduced embodied environmental impacts. *Building and Environment*, **2013**, 60, 81-92	6.5	328
446	Evaluation of the environmental impact of experimental buildings with different constructive systems using Material Flow Analysis and Life Cycle Assessment. **2013**, 109, 544-552		58
445	Optimization of three new compositions of stabilized rammed earth incorporating PCM: Thermal properties characterization and LCA. **2013**, 47, 872-878		29
444	Life cycle assessment in the construction sector: A review. **2013**, 26, 379-388		279
443	Life Cycle Assessment of experimental cubicles including PCM manufactured from natural resources (esters): A theoretical study. **2013**, 51, 398-403		49
442	Life Cycle Assessment of alveolar brick construction system incorporating phase change materials (PCMs). **2013**, 101, 600-608		58
441	Application of PCM thermal energy storage system to reduce building energy consumption. **2013**, 111, 279-288		117
440	LCA case study. Part 1: cradle-to-grave environmental footprint analysis of composites and stainless steel I-beams. *International Journal of Life Cycle Assessment*, **2013**, 18, 208-217	4.6	21

439	A hybrid Data Quality Indicator and statistical method for improving uncertainty analysis in LCA of complex system – application to the whole-building embodied energy analysis. *Journal of Cleaner Production*, **2013**, 43, 166-173	10.3	77
438	Life cycle carbon dioxide assessment tool for buildings in the schematic design phase. **2013**, 61, 275-287		58
437	Refurbishment decision support tools: A review from a Portuguese user's perspective. **2013**, 49, 425-447		21
436	From the new European Standards to an environmental, energy and economic assessment of building assemblies from cradle-to-cradle (3E-C2C). **2013**, 64, 199-208		52
435	Life cycle analysis in the construction sector: Guiding the optimization of conventional Italian buildings. **2013**, 64, 73-89		208
434	Life Cycle Assessment of a passive house in a seismic temperate zone. **2013**, 64, 463-472		67
433	Decision support model for one-way floor slab design: A sustainable approach. *Automation in Construction*, **2013**, 35, 460-470	9.6	19
432	Energy certification of existing office buildings: Analysis of two case studies and qualitative reflection. *Sustainable Cities and Society*, **2013**, 9, 81-95	10.1	10
431	Life Cycle Assessment of a Building Integrated Concentrated Photovoltaic scheme. **2013**, 111, 505-514		82
430	Proposal of a multi-objective optimisation of product life cycle costs and environmental impacts. **2013**, 6, 381		5
429	Use of LCA as a Tool for Building Ecodesign. A Case Study of a Low Energy Building in Spain. **2013**, 6, 3901-3921		40
428	Life Cycle Assessment: A Comparison of Ceramic Brick Inventories to Subsidize the Development of Databases in Brazil. **2013**, 431, 370-377		7
427	Life Cycle Assessment of Green Buildings: A Case Study in China. **2013**,		
426	Retrofit versus new-build house using life-cycle assessment. **2013**, 166, 122-137		10
425	The relationship between material service life and the life cycle energy of contemporary residential buildings in Australia. **2013**, 56, 252-261		19
424	Future-proofed energy design for dwellings: Case studies from England and application to the Code for Sustainable Homes. **2013**, 34, 9-22		3
423	Life cycle assessment (LCA) aspects of concrete. **2013**, 45-80		10
422	In-situ test for RC frame structure lightly destroyed by the 5.12 great earthquake. **2013**, 79-86		2

421	Multicriteria Decision Analysis of Material Selection of High Energy Performance Residential Building. **2013**, 8, 103-114		2
420	Sustainable Development and Green Buildings. **2013**, 64, 45-53		37
419	Building Energy Consumption in Malaysia: An Overview. **2014**, 70,		26
418	Carbon footprint and embodied energy consumption assessment of building construction works in Western Australia. **2014**, 3, 179-186		76
417	Exergy Analysis of Concentrated Solar CHP System for Building Scale Utilization. **2014**, 1008-1009, 35-39		3
416	Post-occupancy life cycle energy assessment of a residential building in Australia. **2014**, 57, 114-124		29
415	A real-time recording model of key indicators for energy consumption and carbon emissions of sustainable buildings. **2014**, 14, 8465-84		4
414	Smart-ECO Buildings towards 2020/2030. *SpringerBriefs in Applied Sciences and Technology*, **2014**,	0.4	
413	Land use impact assessment in the construction sector: an analysis of LCIA models and case study application. *International Journal of Life Cycle Assessment*, **2014**, 19, 1799-1809	4.6	22
412	The Measurement Model and its Application of the Green Building Life-Cycle Carbon Emissions. **2014**, 641-642, 987-993		
411	Life-cycle impact □radle to cradle□ of building assemblies. **2014**, 167, 53-63		10
410	Life cycle assessment (LCA) and life cycle energy analysis (LCEA) of buildings and the building sector: A review. **2014**, 29, 394-416		739
409	Life cycle cost analysis of the UK housing stock. *International Journal of Life Cycle Assessment*, **2014**, 19, 174-193	4.6	19
408	The past, present and future of carbon labelling for construction materials □A review. *Building and Environment*, **2014**, 77, 160-168	6.5	52
407	Thermodynamic investigation of building integrated energy efficiency for building retrofit. **2014**, 77, 139-148		13
406	Development of building materials embodied greenhouse gases assessment criteria and system (BEGAS) in the newly revised Korea Green Building Certification System (G-SEED). **2014**, 35, 410-421		33
405	The convergence of life cycle assessment and nearly zero-energy buildings: The case of Germany. **2014**, 76, 551-557		68
404	A decision-making LCA for energy refurbishment of buildings: Conditions of comfort. **2014**, 70, 333-342		46

403	Neighborhood sustainability assessment in action: Cross-evaluation of three assessment systems and their cases from the US, the UK, and Japan. *Building and Environment*, **2014**, 72, 243-258	6.5	110
402	Life cycle assessment (LCA) of sustainable building materials: an overview. **2014**, 38-62		23
401	Visualization of the Modeled Degradation of Building Flooring Systems in Building Maintenance. **2014**, 29, 18-30		11
400	Development of a scale of building construction systems according to CO 2 emissions in the use stage of their life cycle. *Building and Environment*, **2014**, 82, 618-627	6.5	16
399	Life cycle assessment (LCA) of the building sector: strengths and weaknesses. **2014**, 63-83		8
398	Integrated life-cycle assessment and thermal dynamic simulation of alternative scenarios for the roof retrofit of a house. *Building and Environment*, **2014**, 81, 204-215	6.5	53
397	On the development of multi-linear regression analysis to assess energy consumption in the early stages of building design. **2014**, 85, 246-255		137
396	Comparative environmental life cycle assessment of thermal insulation materials of buildings. **2014** , 82, 466-481		150
395	Influence of simplification of life cycle inventories on the accuracy of impact assessment: application to construction products. *Journal of Cleaner Production*, **2014**, 79, 142-151	10.3	26
394	Lifecycle assessment of living walls: air purification and energy performance. *Journal of Cleaner Production*, **2014**, 69, 91-99	10.3	77
393	A semi-quantitative framework of building lifecycle analysis: Demonstrated through a case study of a typical office building block in Mexico in warm and humid climate. *Sustainable Cities and Society*, **2014**, 12, 16-24	10.1	4
392	Embodied greenhouse gas emissions from refurbishment of residential building stock to achieve a 50% operational energy reduction. *Building and Environment*, **2014**, 79, 46-56	6.5	37
391	Design of a multipurpose Zero energy consumption building according to European Directive 2010/31/EU: Life cycle assessment. **2014**, 80, 585-597		23
390	Future-Proofed Energy Design Approaches for Achieving Low-Energy Homes: Enhancing the Code for Sustainable Homes. *Buildings*, **2014**, 4, 488-519	3.2	8
389	A 6D CAD Model for the Automatic Assessment of Building Sustainability. **2014**, 11, 131		19
388	Life-Cycle Assessment of Construction in a Developing Country. **2015**, 24, 11-21		7
387	Analysis of lifecycle CO2 reduction performance for long-life apartment house. **2015**, 34, 555-566		17
386	LCA of fibre-reinforced composites. **2015**, 301-323		6

385	Integrating Simplified and Full Life Cycle Approaches in Decision Making for Building Energy Refurbishment: Benefits and Barriers. *Buildings*, **2015**, 5, 354-380	3.2	41
384	Renewable Substitutability Index: Maximizing Renewable Resource Use in Buildings. *Buildings*, **2015**, 5, 581-596	3.2	3
383	Integrating Life Cycle Energy into the Design of Façade Refurbishment for a Post-War Residential Building in The Netherlands. *Buildings*, **2015**, 5, 622-649	3.2	7
382	Assessment of the energy and carbon embodied in straw and clay masonry blocks. **2015**, 461-480		3
381	Case Study of Carbon Emissions from a Building's Life Cycle Based on BIM and Ecotect. **2015**, 2015, 1-15		16
380	BIM Application to Select Appropriate Design Alternative with Consideration of LCA and LCCA. **2015**, 2015, 1-14		29
379	A program-level management system for the life cycle environmental and economic assessment of complex building projects. **2015**, 54, 9-21		26
378	Embodied energy of conventional load-bearing walls versus natural stabilized earth blocks. **2015**, 97, 146-154		20
377	Measuring office fit-out changes to determine recurring embodied energy in building life cycle assessment. **2015**, 33, 262-274		10
376	A review on Life Cycle Assessment, Life Cycle Energy Assessment and Life Cycle Carbon Emissions Assessment on buildings. **2015**, 143, 395-413		403
375	A review of life cycle assessment method for building industry. **2015**, 45, 244-248		175
374	LCA implementation in the selection of thermal enhanced mortars for energetic rehabilitation of school buildings. **2015**, 92, 1-9		28
373	Effects of structural system on the life cycle carbon footprint of buildings. **2015**, 102, 337-346		88
372	CO2 emissions of China's commercial and residential buildings: Evidence and reduction policy. *Building and Environment*, **2015**, 92, 418-431	6.5	77
371	An Analytic Network Process approach for the environmental aspect selection problem – A case study for a hand blender. **2015**, 54, 101-109		16
370	Methodological challenges and developments in LCA of low energy buildings: Application to biogenic carbon and global warming assessment. *Building and Environment*, **2015**, 90, 51-59	6.5	105
369	Methodology to assess the environmental sustainability of timber structures. **2015**, 86, 149-158		27
368	Between full LCA and energy certification methodology – comparison of six methodological variants of buildings environmental assessment. *International Journal of Life Cycle Assessment*, **2015**, 20, 9-22	4.6	27

367	Life cycle assessment of exterior window shadings in residential buildings in different climate zones. *Building and Environment*, **2015**, 90, 168-177	6.5	49
366	Embodied and Construction Phase Greenhouse Gas Emissions of a Low-energy Residential building. **2015**, 21, 355-365		14
365	China's energy consumption in the building sector: A life cycle approach. **2015**, 94, 240-251		127
364	A comparative review of environmental concern prioritization: LEED vs other major certification systems. **2015**, 154, 266-83		72
363	Energy Resilient Urban Form: A Design Perspective. **2015**, 75, 2922-2927		6
362	An Integrated BIM-Based Framework for the Energy Assessment of Building Upstream Flow. **2015**,		1
361	An assessment of the relationship between embodied and thermal energy demands in dwellings in a Mediterranean climate. **2015**, 109, 230-244		23
360	New Life of the Building Materials- Recycle, Reuse and Recovery. **2015**, 75, 2884-2891		30
359	Carbon footprint assessment of a typical low rise office building in Malaysia using building information modelling (BIM). **2015**, 6, 157-172		33
358	Saving potential for embodied energy and CO2 emissions from building elements: A case study. **2015**, 39, 261-284		8
357	Greenhouse gas emissions during the construction phase of a building: a case study in China. *Journal of Cleaner Production*, **2015**, 103, 249-259	10.3	185
356	Life cycle assessment and data envelopment analysis approach for the selection of building components according to their environmental impact efficiency: a case study for external walls. *Journal of Cleaner Production*, **2015**, 87, 707-716	10.3	43
355	Reducing the operational energy demand in buildings using building information modeling tools and sustainability approaches. *Ain Shams Engineering Journal*, **2015**, 6, 41-55	4.4	64
354	Impact of progressive sustainable target value assessment on building design decisions. *Building and Environment*, **2015**, 85, 52-60	6.5	34
353	Carbon emission analysis of a residential building in China through life cycle assessment. **2016**, 10, 150-158		15
352	Obstacles and motivations for earthbag social housing in Chile: energy, environment, economic and codes implications. **2016**, 15, 17-26		12
351	Life Cycle Assessment in Building: A Case Study on the Energy and Emissions Impact Related to the Choice of Housing Typologies and Construction Process in Spain. *Sustainability*, **2016**, 8, 287	3.6	20
350	Case Study: LCA Methodology Applied to Materials Management in a Brazilian Residential Construction Site. **2016**, 2016, 1-9		12

349	Estimating the Additional Greenhouse Gas Emissions in Korea: Focused on Demolition of Asbestos Containing Materials in Building. *International Journal of Environmental Research and Public Health*, **2016**, 13,	4.6	3
348	Building Simplified Life Cycle CO2 Emissions Assessment Tool (B-SCAT) to Support Low-Carbon Building Design in South Korea. *Sustainability*, **2016**, 8, 567	3.6	16
347	A Study on Life Cycle CO2 Emissions of Low-Carbon Building in South Korea. *Sustainability*, **2016**, 8, 579	3.6	46
346	Quantification of Improvement in Environmental Quality for Old Residential Buildings Using Life Cycle Assessment. *Sustainability*, **2016**, 8, 1303	3.6	7
345	Heat transfer performance of paraffin wax based phase change materials applicable in building industry. **2016**, 107, 1313-1323		38
344	Embodied energy of mud concrete block (MCB) versus brick and cement blocks. **2016**, 126, 28-35		17
343	Environmental footprint assessment of building structures: A comparative study. *Building and Environment*, **2016**, 104, 162-171	6.5	48
342	Simplification in life cycle assessment of single-family houses: A review of recent developments. *Building and Environment*, **2016**, 103, 215-227	6.5	89
341	Life cycle assessment (LCA) applied to the manufacturing of common and ecological concrete: A review. **2016**, 124, 656-666		100
340	An Investigation into GHG and non-GHG Impacts of Double Skin Fa□des in Office Refurbishments. **2016**, 20, 234-248		18
339	An integrated BIM-based framework for minimizing embodied energy during building design. **2016**, 128, 592-604		116
338	Comparative study of the various methods of preparation of silicate solution and its effect on the geopolymerization reaction. **2016**, 6, 280-287		8
337	Green roofs may cast shadows. **2016**, 62, 15-22		5
336	Principles of sustainability and life-cycle analysis. **2016**, 13-31		5
335	Risk-based assessment of wood residential construction subjected to hurricane events considering indirect and environmental loss. **2016**, 1, 46-62		8
334	Life-cycle energy and cost analyses of window shading used to improve the thermal performance of houses. *Journal of Cleaner Production*, **2016**, 133, 1371-1383	10.3	21
333	LCA databases focused on construction materials: A review. **2016**, 58, 565-573		147
332	Environmental assessment of fa□de-building systems and thermal insulation materials for different climatic conditions. *Journal of Cleaner Production*, **2016**, 113, 102-113	10.3	70

331	A model for the sustainable selection of building envelope assemblies. **2016**, 57, 63-77		18
330	Environmental implications of the use of agglomerated cork as thermal insulation in buildings. *Journal of Cleaner Production*, **2016**, 126, 97-107	10.3	35
329	Lifecycle Environmental Performance of Natural-Hazard Mitigation for Buildings. **2016**, 30, 04015042		23
328	LCA in architectural design□ parametric approach. *International Journal of Life Cycle Assessment*, **2016**, 21, 943-960	4.6	109
327	Lifecycle environmental and economic performance of nearly zero energy buildings (NZEB) in Ireland. **2016**, 116, 622-637		53
326	Evaluation of the environmental performance of the chilled ceiling system using life cycle assessment (LCA): A case study in Singapore. *Building and Environment*, **2016**, 102, 207-216	6.5	18
325	Development of a building life cycle carbon emissions assessment program (BEGAS 2.0) for Korea?s green building index certification system. **2016**, 53, 954-965		36
324	Assessment of residential building performances for the different climate zones of Turkey in terms of life cycle energy and cost efficiency. **2016**, 110, 362-376		28
323	Pre-use phase LCA of a multi-story residential building: Can greenhouse gas emissions be used as a more general environmental performance indicator?. *Building and Environment*, **2016**, 95, 116-125	6.5	53
322	Calculation of a building's life cycle carbon emissions based on Ecotect and building information modeling. *Journal of Cleaner Production*, **2016**, 112, 453-465	10.3	159
321	A predictive product attribute driven eco-design process using depth-first search. *Journal of Cleaner Production*, **2016**, 112, 3201-3210	10.3	26
320	Tool for life cycle analysis of facade-systems for industrial buildings. *Journal of Cleaner Production*, **2016**, 130, 260-272	10.3	36
319	Cradle to site Life Cycle Assessment (LCA) of adobe bricks. *Journal of Cleaner Production*, **2016**, 112, 443-452	10.3	55
318	Multi-criteria decision-making method for assessing the sustainability of post-disaster temporary housing units technologies: A case study in Bam, 2003. *Sustainable Cities and Society*, **2016**, 20, 38-51	10.1	74
317	Eco-efficiency analysis of the life cycle of interior partition walls: a comparison of alternative solutions. *Journal of Cleaner Production*, **2016**, 112, 649-665	10.3	23
316	Comparative life-cycle assessment of ordinary and water-saving taps. *Journal of Cleaner Production*, **2016**, 112, 4585-4593	10.3	15
315	Professionals□knowledge and use of environmental assessment in an architectural competition. **2017**, 45, 426-442		5
314	Optimization of CO2 emissions in the design phases of urban planning, based on geometric characteristics: a case study of a low-density urban area in Spain. **2017**, 12, 65-85		6

313	Super-insulate or use renewable technology? Life cycle cost, energy and global warming potential analysis of nearly zero energy buildings (NZEB) in a temperate oceanic climate. **2017**, 139, 590-607		73
312	An integrated assessment system for managing life cycle CO2 emissions of a building. **2017**, 73, 265-275		33
311	Evaluating the embodied environmental impacts of major building tasks and materials of apartment buildings in Korea. **2017**, 73, 135-144		32
310	A multi-regional based hybrid method for assessing life cycle energy use of buildings: A case study. *Journal of Cleaner Production*, **2017**, 148, 760-772	10.3	29
309	The absolute environmental performance of buildings. *Building and Environment*, **2017**, 119, 87-98	6.5	41
308	Greenhouse gases (GHG) performance of refurbishment projects Lessons from UK higher education student accommodation case studies. *Journal of Cleaner Production*, **2017**, 154, 309-317	10.3	6
307	Towards guidance values for the environmental performance of buildings: application to the statistical analysis of 40 low-energy single family houses LCA in France. *International Journal of Life Cycle Assessment*, **2017**, 22, 657-674	4.6	25
306	Can life-cycle assessment produce reliable policy guidelines in the building sector?. **2017**, 12, 013001		72
305	Evaluation of buildings in real conditions of use: Current situation. *Journal of Building Engineering*, **2017**, 12, 26-36	5.2	17
304	Life cycle cost of different Walling material used for affordable housing in tropics. **2017**, 7, 15-29		16
303	A mathematical model for predicting the carbon sequestration potential of ordinary portland cement (OPC) concrete. **2017**, 147, 417-427		24
302	Retrospective analysis of the energy consumption of single-family dwellings in central Argentina. Retrofitting and adaptation to the climate change. **2017**, 101, 1226-1241		18
301	Environmental assessment of a nano-technological aerogel-based panel for building insulation. *Journal of Cleaner Production*, **2017**, 161, 1404-1415	10.3	32
300	A dynamic life cycle carbon emission assessment on green and non-green buildings in China. **2017**, 149, 272-281		48
299	Life cycle embodied energy analysis of residential buildings: A review of literature to investigate embodied energy parameters. **2017**, 79, 390-413		133
298	Thermal insulators with multiple air gaps: Performance, cost and embodied impacts. *Journal of Building Engineering*, **2017**, 12, 188-195	5.2	6
297	Integrated building life-cycle assessment model to support South Korea's green building certification system (G-SEED). **2017**, 76, 43-50		25
296	Critical review of bim-based LCA method to buildings. **2017**, 136, 110-120		199

295	Towards to sustainable energy-efficient city: A case study of Macau. **2017**, 75, 504-514		30
294	Super-insulated wooden envelopes in Mediterranean climate: Summer overheating, thermal comfort optimization, environmental impact on an Italian case study. **2017**, 138, 716-732		30
293	Development of an electricity system model allowing dynamic and marginal approaches in LCA—Tested in the French context of space heating in buildings. *International Journal of Life Cycle Assessment*, **2017**, 22, 1177-1190	4.6	26
292	Analysis of life-cycle boundaries for environmental and economic assessment of building energy refurbishment projects. **2017**, 136, 12-25		47
291	Comparative life cycle assessment and life cycle costing of lodging in the Himalaya. *International Journal of Life Cycle Assessment*, **2017**, 22, 1851-1863	4.6	10
290	Activity-based life cycle analysis of a curtain wall supply for reducing its environmental impact. **2017**, 138, 69-79		3
289	Integration of BIM and LCA: Evaluating the environmental impacts of building materials at an early stage of designing a typical office building. *Journal of Building Engineering*, **2017**, 14, 115-126	5.2	110
288	Sustainable design rating system comparison using a life-cycle methodology. *Building and Environment*, **2017**, 126, 410-421	6.5	8
287	Effectiveness of mortars composition on the embodied carbon long-term impact. **2017**, 154, 523-528		8
286	Municipal solid waste system analysis through energy consumption and return approach. **2017**, 203, 973-987		17
285	The Environmental Performance of Prefabricated Building and Construction: A Critical Review. **2017**,		4
284	Analysis of the sensitivity of the ecological effects for the investment based on the thermal insulation of the building: A Polish case study. *Journal of Cleaner Production*, **2017**, 162, 856-864	10.3	9
283	Accounting for the Carbon Sequestration Potential of Reinforced Concrete in a Whole-Building Life-Cycle Assessment. **2017**,		
282	Life cycle assessment of the end-of-life phase of a residential building. **2017**, 60, 311-321		79
281	Environmental assessment of domestic boilers: A comparison of condensing and traditional technology using life cycle assessment methodology. *Journal of Cleaner Production*, **2017**, 142, 2493-2508	10.3	30
280	Life cycle assessment (LCA) of building refurbishment: A literature review. **2017**, 135, 286-301		195
279	Green building evaluation from a life-cycle perspective in Australia: A critical review. **2017**, 70, 358-368		134
278	Optimal sustainable life cycle maintenance strategies for port infrastructures. *Journal of Cleaner Production*, **2017**, 142, 1693-1709	10.3	52

277	Embodied carbon minimisation of retrofit solutions for walls. **2017**, 170, 141-156		6
276	Recent developments, future challenges and new research directions in LCA of buildings: A critical review. **2017**, 67, 408-416		251
275	High Thermal Resistance Versus High Thermal Capacity. **2017**, 1-18		2
274	Understanding the Sustainability of Eco-Labeled Products When Compared to Conventional Alternatives. **2017**,		1
273	Environmental assessment of bio-based building materials. **2017**, 547-591		6
272	Taking the Time Characteristic into Account of Life Cycle Assessment: Method and Application for Buildings. *Sustainability*, **2017**, 9, 922	3.6	10
271	Precision of a Streamlined Life Cycle Assessment Approach Used in Eco-Rating of Mobile Phones. **2017**, 8, 21		11
270	Analysis of the potential of Spanish supermarkets to contribute to the mitigation of climate change. **2018**, 14, 122-128		8
269	Environmental assessment at the urban level combining LCA-GIS methodologies: A case study of energy retrofits in the Barcelona metropolitan area. *Building and Environment*, **2018**, 134, 191-204	6.5	36
268	Building-information-modeling enabled life cycle assessment, a case study on carbon footprint accounting for a residential building in China. *Journal of Cleaner Production*, **2018**, 183, 729-743	10.3	79
267	Assessing embodied GHG emission reduction potential of cost-effective technologies for construction of residential buildings of Economically Weaker Section in India. **2018**, 19, 139-156		12
266	Embodied Carbon in Buildings. **2018**,		13
265	Nearly zero energy building renovation: From energy efficiency to environmental efficiency, a pilot case study. **2018**, 166, 271-283		50
264	How green building rating systems affect designing green. *Building and Environment*, **2018**, 133, 19-31	6.5	58
263	Requirements for applying LCA-based environmental impact assessment tools in the early stages of building design. *Building and Environment*, **2018**, 133, 228-236	6.5	90
262	Life-Cycle Assessment of Construction Materials: Analysis of Environmental Impacts and Recommendations of Eco-Efficient Management Practices. **2018**, 1-37		
261	Life cycle efficiency ratio: A new performance indicator for a life cycle driven approach to evaluate the potential of ventilative cooling and thermal inertia. **2018**, 163, 22-33		7
260	Greenhouse gas emissions during timber and concrete building construction A scenario based comparative case study. *Sustainable Cities and Society*, **2018**, 38, 91-97	10.1	52

259	Analysing methodological choices in calculations of embodied energy and GHG emissions from buildings. **2018**, 158, 1487-1498		42
258	Intraregional reuse of emergency temporary housing in Japan. *Sustainable Cities and Society*, **2018**, 42, 650-662	10.1	9
257	Improvement of energy performance metrics for the retrofit of the built environment. Adaptation to climate change and mitigation of energy poverty. **2018**, 165, 399-415		17
256	A sustainable business model to fight food waste. *Journal of Cleaner Production*, **2018**, 177, 262-275	10.3	39
255	The exploration of the life-cycle energy saving potential for using prefabrication in residential buildings in China. **2018**, 166, 561-570		39
254	Selecting Building Designs with Consideration of Sustainability and Resiliency. **2018**, 24, 04018001		2
253	Life cycle cost analysis of structural concrete using seawater, recycled concrete aggregate, and GFRP reinforcement. **2018**, 175, 152-160		53
252	A hybrid life cycle assessment of embodied energy and carbon emissions from conventional and industrialised building systems in Malaysia. **2018**, 167, 253-268		28
251	Environmental performance analysis of residential buildings in Brazil using life cycle assessment (LCA). **2018**, 169, 748-761		40
250	Teardown Index: Impact of property values on carbon dioxide emissions of single family housing in Vancouver. **2018**, 170, 95-106		5
249	Aesthetic perception of photovoltaic integration within new proposals for ecological architecture. *Sustainable Cities and Society*, **2018**, 39, 203-214	10.1	31
248	Sustainable alternative of structural concrete retaining tanks. **2018**, 171, 133-150		0
247	Analysis of the influence of different variables on the impacts related with the envelope of buildings for residential use, with estimation of the interaction of the user. **2018**, 12, 289-313		3
246	Life cycle assessment and life cycle cost of university dormitories in the southeast China: Case study of the university town of Fuzhou. *Journal of Cleaner Production*, **2018**, 173, 151-159	10.3	26
245	The life cycle carbon footprint of refurbished and new buildings □A systematic review of case studies. **2018**, 81, 231-241		47
244	An ontology-based approach supporting holistic structural design with the consideration of safety, environmental impact and cost. **2018**, 115, 26-39		11
243	An attributional life cycle assessment for an Italian residential multifamily building. **2018**, 39, 3033-3045		6
242	Predicting the cradle-to-gate environmental impact of chemicals from molecular descriptors and thermodynamic properties via mixed-integer programming. **2018**, 108, 179-193		18

241	Overview of Whole Building Life-Cycle Assessment for Green Building Certification and Ecodesign through Industry Surveys and Interviews. **2018**, 69, 178-183		32
240	Interlinked Sustainability Aspects of Low-Rise Residential Family House Development in Slovakia. *Sustainability*, **2018**, 10, 3966	3.6	5
239	Urbanization Challenges in Emerging Economies. **2018**,		
238	Life Cycle Assessment of Buildings with Supplementary Materials. **2018**,		
237	Material and decision flows in non-domestic building fit-outs. *Journal of Cleaner Production*, **2018**, 204, 916-925	10.3	5
236	Life cycle assessment and historic buildings: energy-efficiency refurbishment versus new construction in Norway. **2018**, 24, 152-167		25
235	Use of Steel and Polyolefin Fibres in the La Canda Tunnels: Applying MIVES for Assessing Sustainability Evaluation. *Sustainability*, **2018**, 10, 4765	3.6	12
234	Pathways toward zero-carbon electricity required for climate stabilization. **2018**, 225, 884-901		36
233	Embodied life cycle assessment comparison of single family residential houses considering the 1970s transition in construction industry: Atlanta case study. *Building and Environment*, **2018**, 140, 55-67	6.5	9
232	Sustainable Water Management in Buildings. **2018**, 307-321		
231	Redefining the impact assessment of buildings: an uncertainty-based approach to rating codes. **2018**, 36, 348-357		2
230	References. **2018**, 503-587		
229	Cradle-to-grave life-cycle assessment within the built environment: Comparison between the refurbishment and the complete reconstruction of an office building in Belgium. **2018**, 224, 396-405		30
228	Assessing the Climate Change Impacts of Biogenic Carbon in Buildings: A Critical Review of Two Main Dynamic Approaches. *Sustainability*, **2018**, 10, 2020	3.6	45
227	The carbon footprint of buildings: A review of methodologies and applications. **2018**, 94, 1142-1152		73
226	LCA and BIM: Visualization of environmental potentials in building construction at early design stages. *Building and Environment*, **2018**, 140, 153-161	6.5	125
225	Simplified structural design and LCA of reinforced concrete beams strengthening techniques. **2018**, 174, 418-432		9
224	Introductory Chapter: Overview of a Competent Sustainable Building. **2018**,		0

223	Quota-based carbon tracing model for construction processes in China. *Journal of Cleaner Production*, **2018**, 200, 657-666	10.3	7
222	BIM-embedded life cycle carbon assessment of RC buildings using optimised structural design alternatives. **2018**, 173, 587-600		35
221	Energy consumption in the life cycle of plumbing fixtures. **2019**, 19, 70-78		
220	Comparison between two genetic algorithms minimizing carbon footprint of energy and materials in a residential building. **2019**, 12, 224-242		7
219	A methodology to analyze the net environmental impacts and buildings cost performance of an adaptive reuse project: a case study of the Waterloo County Courthouse renovations. **2019**, 39, 419-438		13
218	Impediments affecting a comprehensive emission assessment at the construction stage of a building. **2019**, 1-11		3
217	A Systematic Approach to Embodied Carbon Reduction in Buildings. *IOP Conference Series: Earth and Environmental Science*, **2019**, 220, 012055	0.3	0
216	Environmental Challenges in the Residential Sector: Life Cycle Assessment of Mexican Social Housing. **2019**, 12, 2837		5
215	Environmental comparison of indoor floor coverings. **2019**, 693, 133519		9
214	Influence of the orientation on the optimal glazing size for passive houses in different European climates (for non-cardinal directions). **2019**, 189, 15-25		17
213	Construction, deconstruction, reuse of the structural elements: the circular economy to reach zero carbon. *IOP Conference Series: Earth and Environmental Science*, **2019**, 323, 012020	0.3	1
212	Towards a Life Cycle Sustainability Assessment method for the quantification and reduction of impacts of buildings life cycle. *IOP Conference Series: Earth and Environmental Science*, **2019**, 323, 012107	0.3	4
211	Payload for Contact Inspection Tasks with UAV Systems. **2019**, 19,		7
210	Current Management Approach. **2019**, 29-92		1
209	BIM-Enabled Sustainable Housing Refurbishment LCA Case Study. **2019**, 349-394		3
208	Environmental Impact Profiles for Glazing Systems: Strategies for Early Design Process. **2019**, 25, 04019005		14
207	Analysis of the scientific evolution of sustainable building assessment methods. *Sustainable Cities and Society*, **2019**, 49, 101610	10.1	20
206	Bridging the gap between sustainable FM and sustainable buildings an exploratory study of six public buildings in Norway. **2019**, 37, 639-652		1

205	Procedure to select combined heating and hot water systems: An expeditious cost optimality approach. *Journal of Building Engineering*, **2019**, 25, 100838	5.2	2
204	Dynamic assessment elements and their prospective solutions in dynamic life cycle assessment of buildings. *Building and Environment*, **2019**, 158, 248-259	6.5	13
203	Comparative assessment of insulated concrete wall technologies and wood-frame walls in residential buildings: a multi-criteria analysis of hygrothermal performance, cost, and environmental footprints. **2019**, 1-33		5
202	Evaluation of BIM energy performance and CO2 emissions assessment tools: a case study in warm weather. **2019**, 47, 787-812		17
201	Sustainability assessment of refurbishment vs. new constructions by means of LCA and durability-based estimations of buildings lifespans: A new approach. *Building and Environment*, **2019** , 160, 106203	6.5	28
200	Conducting Life Cycle Assessments (LCAs) to Determine Carbon Payback: A Case Study of a Highly Energy-Efficient House in Rural Alaska. **2019**, 12, 1732		8
199	Influence of an Impregnation Treatment on the Morphology and Mechanical Behaviour of Flax Yarns Embedded in Hydraulic Lime Mortar. **2019**, 7, 30		25
198	. **2019**,		
197	A dynamic weighting system considering temporal variations using the DTT approach in LCA of buildings. *Journal of Cleaner Production*, **2019**, 220, 398-407	10.3	11
196	Assessment of CO2 Emissions by Replacing an Ordinary Reinforced Concrete Slab with the Void Slab System in a High-Rise Commercial Residential Complex Building in South Korea. *Sustainability*, **2019**, 11, 82	3.6	7
195	Building life cycle analysis toward low carbon emission and energy efficiency. *IOP Conference Series: Earth and Environmental Science*, **2019**, 220, 012054	0.3	
194	Challenges in evaluating strategies for reducing a building's environmental impact through Integrated Design. *Building and Environment*, **2019**, 155, 34-46	6.5	17
193	Changing significance of embodied energy: A comparative study of material specifications and building energy sources. *Journal of Building Engineering*, **2019**, 23, 324-333	5.2	21
192	Integrating building information modeling and life cycle assessment in the early and detailed building design stages. *Building and Environment*, **2019**, 153, 158-167	6.5	72
191	A multi-criteria lifecycle assessment framework for evaluating building systems design. *Journal of Building Engineering*, **2019**, 23, 388-402	5.2	10
190	Measures to improve the adoption of life cycle assessment in the South African construction industry. *Journal of Engineering, Design and Technology*, **2019**, 18, 480-494	1.5	4
189	Fibre reinforced polymers in the sports industry Life Cycle Engineering methodology applied to a snowboard using anisotropic layer design. **2019**, 12, 201-211		9
188	Estimating urban residential building-related energy consumption and energy intensity in China based on improved building stock turnover model. **2019**, 650, 427-437		69

187	Integrating COSMO-Based Profiles with Molecular and Thermodynamic Attributes to Predict the Life Cycle Environmental Impact of Chemicals. **2019**, 7, 3575-3583		11
186	Ceramic panels versus aluminium in buildings: Energy consumption and environmental impact assessment with a new methodology. **2019**, 233-234, 959-974		10
185	Integrating exposure to chemicals in building materials during use stage. *International Journal of Life Cycle Assessment*, **2019**, 24, 1009-1026	4.6	12
184	Life-Cycle Assessment of Buildings. **2019**, 207-261		4
183	Embodied energy and greenhouse gas emissions analysis of a prefabricated modular house: The Moby case study. *Journal of Cleaner Production*, **2019**, 212, 1044-1053	10.3	46
182	Life cycle and life cycle cost implications of integrated phase change materials in office buildings. **2019**, 43, 150-166		23
181	Continuous BIM-based assessment of embodied environmental impacts throughout the design process. *Journal of Cleaner Production*, **2019**, 211, 941-952	10.3	71
180	Life cycle assessment applied to recycled aggregate concrete. **2019**, 207-256		4
179	Analyzing the compliance and correlation of LEED and BREEAM by conducting a criteria-based comparative analysis and evaluating dual-certified projects. *Building and Environment*, **2019**, 147, 158-170	6.5	24
178	Structured Under-Specification of Life Cycle Impact Assessment Data for Building Assemblies. **2019**, 23, 319-334		11
177	Life Cycle Assessment in Buildings: An Overview of Methodological Approach. **2020**, 462-475		
176	Sustainable Construction Achieved Through Life Cycle Assessment: Methodology, Limitations and the Way Forward. **2020**, 576-583		5
175	Investigating the effect of using PCM in building materials for energy saving: Case study of Sharif Energy Research Institute. **2020**, 8, 959-972		19
174	Surveying the environmental life-cycle performance assessments: Practice and context at early building design stages. *Sustainable Cities and Society*, **2020**, 52, 101879	10.1	12
173	Evaluation of BIM-based LCA results for building design. *Automation in Construction*, **2020**, 109, 102972	9.6	80
172	An innovative straw bale wall package for sustainable buildings: experimental characterization, energy and environmental performance assessment. **2020**, 208, 109636		20
171	BIM-based environmental impact assessment for infrastructure design projects. *Automation in Construction*, **2020**, 120, 103379	9.6	12
170	Ways to get work done: a review and systematisation of simplification practices in the LCA literature. *International Journal of Life Cycle Assessment*, **2020**, 25, 2154-2168	4.6	6

169	Driving factors of total carbon emissions from the construction industry in Jiangsu Province, China. *Journal of Cleaner Production*, **2020**, 276, 123179	10.3	16
168	Design, Material Selection and Manufacturing for Sustainable Construction: An Analytical Network Process Approach. *IOP Conference Series: Earth and Environmental Science*, **2020**, 476, 012006	0.3	0
167	Comparison of Material-Technical Solution of Masonry Family House by Two Different Calculating LCA Approaches. **2020**, 47, 69-76		
166	A comparative life cycle assessment (LCA) of different insulation materials for buildings in the continental Mediterranean climate. **2020**, 225, 110323		32
165	BIM and LCA Integration: A Systematic Literature Review. *Sustainability*, **2020**, 12, 5534	3.6	37
164	UAV + BIM: Incorporation of Photogrammetric Techniques in Architectural Projects with Building Information Modeling Versus Classical Work Processes. **2020**, 12, 2329		12
163	An Epitome of Building Floor Systems by Means of LCA Criteria. *Sustainability*, **2020**, 12, 5442	3.6	4
162	Implementing Life Cycle Sustainability Assessment during design stages in Building Information Modelling: From systematic literature review to a methodological approach. *Building and Environment*, **2020**, 182, 107164	6.5	37
161	BIM-based LCA and energy analysis for optimised sustainable building design in Ghana. **2020**, 2, 1		4
160	Research on Low-Brightness and High-Reflective Coatings Suitable for Buildings in Tropical Areas. **2020**, 10, 829		2
159	Life-Cycle Assessment of Alternative Envelope Construction for a New House in South-Western Europe: Embodied and Operational Magnitude. **2020**, 13, 4145		3
158	Methodology to Evaluate the Embodied Primary Energy and CO2 Production at Each Stage of the Life Cycle of Prefabricated Structural Systems: The Case of the Solar Decathlon Competition. **2020**, 13, 4311		6
157	Recommendations for Developing a BIM for the Purpose of LCA in Green Building Certifications. *Sustainability*, **2020**, 12, 6151	3.6	12
156	Bridging the gap between assessment and action: recommendations for the effective use of LCA in the building process. *IOP Conference Series: Earth and Environmental Science*, **2020**, 588, 022007	0.3	2
155	The Application of Smart Home Concept into Existing Typical Malaysian Single-storey Terrace Houses: Device Installation. *IOP Conference Series: Earth and Environmental Science*, **2020**, 498, 012081	0.3	
154	Environmental Impacts Associated to Different Stages Spanning from Harvesting to Industrialization of Pineapple through Life Cycle Assessment. **2020**, 10, 7007		1
153	A conceptual tool for environmentally benign design: development and evaluation of a proof of concept **2020**, 34, 30-44		3
152	Visualizing the research of embodied energy and environmental impact research in the building and construction field: A bibliometric analysis. **2020**, 3, 100010		10

151	Exploring environmental benefits of reuse and recycle practices: A circular economy case study of a modular building. *Resources, Conservation and Recycling*, **2020**, 160, 104855	11.9	44
150	Utilizing BIM technology to improve sustainability analyses for Iraqi Construction Projects. **2020**, 21, 1205-1215		3
149	Life cycle assessment of an automotive factory: Identifying challenges for the decarbonization of automotive production A case study. *Journal of Cleaner Production*, **2020**, 270, 122330	10.3	11
148	Comparative BIM-based Life Cycle Assessment of Uruguayan timber and concrete-masonry single-family houses in design stage. *Journal of Cleaner Production*, **2020**, 277, 121958	10.3	13
147	Effect of Decarbonisation Policies and Climate Change on Environmental Impacts due to Heating and Cooling in a Single-Family House. *Sustainability*, **2020**, 12, 3529	3.6	2
146	Bio-Based Phase Change Materials Incorporated in Lignocellulose Matrix for Energy Storage in BuildingsA Review. **2020**, 13, 3065		11
145	Development of a BIM-Based Web Tool as a Material and Component Bank for a Sustainable Construction Industry. *Sustainability*, **2020**, 12, 1766	3.6	19
144	Comparative Life-Cycle Assessment of a High-Rise Mass Timber Building with an Equivalent Reinforced Concrete Alternative Using the Athena Impact Estimator for Buildings. *Sustainability*, **2020**, 12, 4708	3.6	20
143	New solutions to reduce greenhouse gas emissions through energy efficiency of buildings of special importance - Hospitals. **2020**, 718, 137446		27
142	Quantitative approach for evaluating the building design features impact on cooling energy consumption in hot climates. **2020**, 211, 109802		13
141	Life cycle energy minimization of autonomous buildings. *Journal of Building Engineering*, **2020**, 30, 101229	5.2	10
140	Environmental impact of water-use in buildings: Latest developments from a life-cycle assessment perspective. **2020**, 261, 110198		21
139	Explore the application of reinforced learning to support decision making during the design phase in the construction industry. **2020**, 42, 181-187		3
138	A building information modeling-based carbon emission measurement system for prefabricated residential buildings during the materialization phase. *Journal of Cleaner Production*, **2020**, 264, 121728	10.3	16
137	Assessment of the global warming potential associated with the construction process of healthcare centres. **2021**, 44, 309-325		2
136	Mycelium Materials. **2021**, 710-718		4
135	Cross-country analysis of life cycle assessment based greenhouse gas emissions for automotive parts: Evaluation of coefficient of country. **2021**, 138, 110546		3
134	Rheological behavior of fresh latex polymeric mortar by squeeze-flow technique. **2021**, 267, 121175		1

133	Food Conservation into 03 Dimensions Models of Cold Stores Operated by 03 Refrigeration Systems in Biskra Region (Classic, Absorption, Adsorption). 406, 182-191		
132	Introduction. **2021**, 1-15		
131	Buildings Operational Versus Embodied Energy: Needs and Barriers for a More Reliable Environmental Impact Balance. **2021**, 275-290		0
130	Building information modelling application of material, water, and climate footprint analysis. **2021**, 49, 593-612		7
129	How Lack of Knowledge and Tools Hinders the Eco-Design of Buildings A Systematic Review. **2021**, 5, 20		2
128	Customising flood damage functions to estimate the carbon footprint of flood-related home repairs. **2021**, 14, e12708		0
127	Exploring the current challenges and emerging approaches in whole building life cycle assessment.		2
126	Improving the effectiveness and interaction between building information modeling and life cycle assessment. *Architectural Engineering and Design Management*, 1-17	1.2	0
125	Challenges and opportunities for integrating BIM and LCA: Methodological choices and framework development. *Sustainable Cities and Society*, **2021**, 67, 102728	10.1	20
124	Comparison and sensitivity analysis of embodied carbon emissions and costs associated with rural house construction in China to identify sustainable structural forms. *Journal of Cleaner Production*, **2021**, 293, 126190	10.3	3
123	Life Cycle Assessment of Dynamic Water Flow Glazing Envelopes: A Case Study with Real Test Facilities. **2021**, 14, 2195		2
122	An LCA-based model for assessing prevention versus non-prevention of construction waste in buildings. **2021**, 126, 608-622		7
121	Green public procurement model for environmental assessment of constructive systems. 1-11		1
120	Recent progress of scientific research on life cycle assessment. **2021**, 47, 3161-3161		0
119	Analysis and Assessment of the Building Life Cycle. Indicators and Tools for the Early Design Stage. *Sustainability*, **2021**, 13, 6467	3.6	3
118	Construction Cost and Carbon Emission Assessment of a Highway Construction A Case towards Sustainable Transportation. *Sustainability*, **2021**, 13, 7854	3.6	3
117	Decision-Making Processes in Controlling Exposure to Sunlight Supported by Simulation Tools: A Case Study in Warm Weather. **2021**, 14, 4100		
116	Life cycle carbon emission reduction potential of a new steel-bamboo composite frame structure for residential houses. *Journal of Building Engineering*, **2021**, 39, 102295	5.2	4

115	Are low-income mass housing envelops energy efficient and comfortable? A multi-objective evaluation in warm-humid climate. **2021**, 245, 111055		2
114	Environmental Life Cycle Analysis of Residential Building Materials: A Case Study. **2022**, 585-605		
113	Can buildings sector achieve the carbon mitigation ambitious goal: Case study for a low-carbon demonstration city in China?. **2021**, 90, 106633		10
112	Mapping the scientific research of the life cycle assessment in the construction industry: A scientometric analysis. *Building and Environment*, **2021**, 204, 108086	6.5	4
111	A comprehensive analysis towards benchmarking of life cycle assessment of buildings based on systematic review. *Building and Environment*, **2021**, 204, 108162	6.5	7
110	Building life-span prediction for life cycle assessment and life cycle cost using machine learning: A big data approach. *Building and Environment*, **2021**, 205, 108267	6.5	8
109	Recycled versus non-recycled insulation alternatives: LCA analysis for different climatic conditions in Spain. *Resources, Conservation and Recycling*, **2021**, 175, 105838	11.9	7
108	Stakeholder influence on global warming potential of reinforced concrete structure. *Journal of Building Engineering*, **2021**, 44, 102979	5.2	1
107	Closing two loops The importance of energy recovery in the Closing the loop approach. **2022**, 433-455		0
106	Life Cycle Assessment, an Integrated Vision to Energy Efficiency in the Building Industry. **2021**, 313-340		1
105	BIM Integrated LCA for Promoting Circular Economy towards Sustainable Construction: An Analytical Review. *Sustainability*, **2021**, 13, 1310	3.6	11
104	The Uses of Renewable Energy in Buildings. *Impact of Meat Consumption on Health and Environmental Sustainability*, **2021**, 257-274	0.3	
103	Introduction. **2011**, 1-17		1
102	Aquaponics in the Built Environment. **2019**, 523-558		7
101	Outlining a New Collaborative Business Model as a Result of the Green Building Information Modelling Impact in the AEC Supply Chain. **2019**, 405-417		4
100	Life Cycle Assessment of Natural Fiber Polymer Composites. **2015**, 121-141		6
99	A Model of Simplified LCA for Agri-Food SMEs. **2013**, 123-150		2
98	Carbon Emission Modelling for Construction Logistics Process Through Activity-Based Method. **2018**, 413-424		1

97	A comparative method of air emission impact assessment for building construction activities. **2018**, 68, 1-9		31
96	Role of lightweight materials of construction on carbon dioxide emission of a reinforced concrete building. **2020**, 27, 984-990		5
95	LCA and BIM: Integrated Assessment and Visualization of Building Elements Embodied Impacts for Design Guidance in Early Stages. **2018**, 69, 218-223		28
94	Exploring Capabilities of BIM Tools for Housing Refurbishment in the UK. **2016**, 6, 9-17		1
93	Mtodo para quantificao do consumo energtico no ciclo de vida de equipamentos hidrossanitrios. *Ambiente Construdo*, **2012**, 12, 57-73	0.4	3
92	Influence of Steel Slag Type on Concrete Shrinkage. *Sustainability*, **2021**, 13, 214	3.6	2
91	Assessment of alternative solutions of lower structure, taking into account energy and environmental impacts. **2014**,		2
90	Impacto energtico y emisiones de CO2 del edificio con soluciones alternativas de fachada. *Informes De La Construccion*, **2014**, 66, e030	0.4	1
89	Life cycle assessment of regional brick manufacture. *Materiales De Construccion*, **2016**, 66, e085	1.8	3
88	A REVIEW OF LIFE CYCLE RESEARCH OF THE BUILT ENVIRONMENT AT DIFFERENCE SCALES: A CITATION ANALYSIS USING BIG DATA. *Journal of Green Building*, **2019**, 14, 63-80	1.3	3
87	ENERGY CONSUMPTION, ENVIRONMENTAL IMPACTS AND EFFECTIVE MEASURES OF GREEN OFFICE BUILDINGS: A LIFE CYCLE APPROACH. *Journal of Green Building*, **2015**, 10, 161-177	1.3	4
86	Green Marketing as a Tool for Reducing Environmental Footprint of the Construction Industry. *Advances in Marketing, Customer Relationship Management, and E-services Book Series*, **2017**, 1-29	0.3	2
85	The Effects of Tourism Architecture on Island Ecosystems. *Journal of Building Construction and Planning Research*, **2015**, 03, 163-170	0.4	3
84	The Environmental Effects of Tourism Architecture on Island Ecosystem in Cayo Guillermo, Cuba. *Journal of Environmental Protection*, **2015**, 06, 1057-1065	0.6	7
83	Thermal Load Reduction with Green Building Envelope. *Open Journal of Energy Efficiency*, **2017**, 06, 112-127	0.4	2
82	Integrating climate change impact in new building design process: A review of building life cycle carbon emission assessment methodologies. *Cleaner Engineering and Technology*, **2021**, 5, 100286	2.7	6
81	Urban Form Energy Use and Emissions in China: Preliminary Findings and Model Proof of Concept. *SSRN Electronic Journal*,	1	
80	State of the Art Study - How is Environmental Performance Measured for Buildings/Constructions?. **2011**, 141-152		

79	Holistic Design Applying Innovative Technologies. *SpringerBriefs in Applied Sciences and Technology*, **2014**, 13-36	0.4	
78	Comparative life cycle assessment of four insulating boards made with natural and recycled materials. *Economics and Policy of Energy and the Environment*, **2016**, 71-88	0.2	
77	Definition and Frameworks on a Life-Cycle Negative Growth Rate for Energy and Carbon in an Academic Campus. *World Sustainability Series*, **2017**, 325-339	0.6	
76	Embodied Carbon of Wood and Reinforced Concrete Structures Under Chronic and Acute Hazards. **2018**, 77-103		1
75	Performance energ□tica de una vivienda social en Argentina y su rehabilitaci□ basada en simulaci□ t□rmica. *Ambiente Constru□do*, **2018**, 18, 215-235	0.4	0
74	References. 289-308		
73	Green Marketing as a Tool for Reducing Environmental Footprint of the Construction Industry. **2019**, 490-511		1
72	Sustainable Cities and Communities. *Encyclopedia of the UN Sustainable Development Goals*, **2019**, 1-9	0.1	
71	Life-Cycle Assessment of Construction Materials: Analysis of Environmental Impacts and Recommendations of Eco-efficient Management Practices. **2019**, 2337-2372		
70	Water management from the environmental certification perspective: a new proposal of criteria and weight rates for application in Brazilian regions. *Engenharia Sanitaria E Ambiental*, **2019**, 24, 655-666	0.4	
69	Dynamic thermal simulation of advanced natural ventilation in buildings: current and future usage, UK exemplar. *Architectural Engineering and Design Management*, **2020**, 16, 293-309	1.2	
68	Validating the Sustainability of Eco-Labeled Products Using a Triple-Bottom-Line Analysis. *Smart and Sustainable Manufacturing Systems*, **2019**, 3, 20190022	0.8	0
67	An□lisis de ciclo de vida en viviendas: un caso que contrasta muro de alba□ler□a con muro de madera en una vivienda social = Life Cycle Assessment of dwellings: a case of study that contrasts masonry wall with wood-frame wall in a social housing. *Anales De Edificaci□*, **2019**, 5, 76	0.1	1
66	The rehabilitation of buildings. Reflections on construction systems for the environmental sustainability of interventions. *Vitruvio*, **2019**, 4, 47	0.3	0
65	Sustainable Cities and Communities. *Encyclopedia of the UN Sustainable Development Goals*, **2020**, 13-21	0.1	
64	Evaluation of the Feasibility of Recycled Concrete Aggregate for Producing Structural Concrete. *E3S Web of Conferences*, **2020**, 220, 01098	0.5	
63	Experiencing Life Cycle Assessment in Indian Additive Manufacturing Industries: Needs, Challenges and Solutions. *Lecture Notes in Mechanical Engineering*, **2022**, 67-77	0.4	
62	BIM Modeling-Based Full-Lifecycle Carbon Emissions Model Study on Ancillary Building Facilities of Highway. **2020**,		0

61	Teardown Index. *Impact of Meat Consumption on Health and Environmental Sustainability*, **2020**, 64-101	0.3	
60	Making Sustainable Energy Communities a Reality. *Impact of Meat Consumption on Health and Environmental Sustainability*, 30-80	0.3	
59	Making Sustainable Energy Communities a Reality. 324-362		
58	EnviBIM: Environmental data module for BIM library of construction elements. *IOP Conference Series: Earth and Environmental Science*, **2020**, 588, 052019	0.3	0
57	Clusters of key barriers to life cycle assessment adoption in the South African construction industry: perspectives of stakeholders. *Journal of Engineering, Design and Technology*, **2021**, 19, 888-903	1.5	0
56	Analysis of energy saving in a single-family home project. *Journal of Physics: Conference Series*, **2021**, 2102, 012007	0.3	
55	Energy effectiveness of passive cooling design strategies to reduce the impact of long-term heatwaves on occupants□thermal comfort in Europe: Climate change and mitigation. *Journal of Cleaner Production*, **2021**, 129675	10.3	6
54	How Can Collaborative Circular Economy Practices in Modular Construction Help F□□ation Internationale de Football Association World Cup Qatar 2022 to Achieve Its Quest for Sustainable Development and Ecological Systems?. *Frontiers in Sustainability*, **2021**, 2,	2.1	
53	The EPiC database: Hybrid embodied environmental flow coefficients for construction materials. *Resources, Conservation and Recycling*, **2021**, 180, 106058	11.9	2
52	Comparison of the Embodied Carbon Emissions and Direct Construction Costs for Modular and Conventional Residential Buildings in South Korea. *Buildings*, **2022**, 12, 51	3.2	3
51	Stakeholders□perspectives on BIM and LCA for green buildings. *Journal of Building Engineering*, **2022**, 48, 103931	5.2	4
50	Combining circular and LCA indicators for the early design of urban projects. *International Journal of Life Cycle Assessment*, **2022**, 27, 1-19	4.6	1
49	Water Consumption and Environmental Impact of Multifamily Residential Buildings: A Life Cycle Assessment Study. *Buildings*, **2022**, 12, 48	3.2	2
48	Comparative Study on Life-Cycle Assessment and Carbon Footprint of Hybrid, Concrete and Timber Apartment Buildings in Finland.. *International Journal of Environmental Research and Public Health*, **2022**, 19,	4.6	8
47	Carbon footprint assessment of residential buildings, a review and a case study in Turkey. *Journal of Cleaner Production*, **2022**, 340, 130691	10.3	2
46	A Comparison of the Environmental Performance between Construction Materials and Operational Energy of Nearly Zero-Energy Wood-Based Educational Building. *Forests*, **2022**, 13, 220	2.8	1
45	Uncertainties in whole-building life cycle assessment: A systematic review. *Journal of Building Engineering*, **2022**, 50, 104191	5.2	2
44	Imbibing Energy Efficiency in Buildings Through Sustainable Materials□A Review. *Springer Transactions in Civil and Environmental Engineering*, **2022**, 399-414	0.4	

43	Environmental Impacts of Construction in Building Industry: A Review of Knowledge Advances, Gaps and Future Directions. *Knowledge*, **2022**, 2, 139-156		1
42	Comparative Life Cycle Assessment of a Historic and a Modern School Building, Located in the City of Naoussa, Greece. *Sustainability*, **2022**, 14, 4216	3.6	0
41	A Comparison of Traditional and Contemporary Social Houses in Catarmarca (Argentina). Comfort Conditions and Life Cycle Assessment. *Sustainable Cities and Society*, **2022**, 103891	10.1	0
40	A critical review on BIM and LCA integration using the ISO 14040 framework. *Building and Environment*, **2022**, 213, 108865	6.5	2
39	Experimental Study on Axial Compressive Performance of Polyvinyl Alcohol Fibers Reinforced Fly Ash-Slag Geopolymer Composites.. *Polymers*, **2021**, 14,	4.5	0
38	BIM-based LCSA application in early design stages using IFC. *Automation in Construction*, **2022**, 138, 104259	9.6	3
37	Cross-laminated timber for building construction: A life-cycle-assessment overview. *Journal of Building Engineering*, **2022**, 52, 104482	5.2	2
36	Management of Integrated Territorial Development Based on the Ecosystem Approach to the Reproduction of Residential Real Estate. *Lecture Notes in Civil Engineering*, **2022**, 237-247	0.3	
35	BIM-based life cycle assessment for different structural system scenarios of a residential building. *Ain Shams Engineering Journal*, **2022**, 13, 101802	4.4	1
34	An enhanced multi-criteria decision-making approach oriented to sustainability analysis of building facades: A case study of Barcelona. *Journal of Building Engineering*, **2022**, 104630	5.2	1
33	Modelling and quantitation of embodied, operational and mobile energies of buildings: a holistic review from 2012 to 2021. *Engineering, Construction and Architectural Management*, **2022**, ahead-of-print,	3.1	
32	Carbon Emission Calculation of Prefabricated Building in Materialized Stage Based on BIM Technology. *Lecture Notes on Data Engineering and Communications Technologies*, **2022**, 873-879	0.4	
31	Long-Term Experience of Teaching Life Cycle Assessment and Circular Design to Future Architects: A Learning by Doing Approach in a Design Studio Setting. *Sustainability*, **2022**, 14, 7355	3.6	2
30	Thermochemical recovery from the sustainable economy development point of view: LCA-based reasoning for EU legislation changes. *Clean Technologies and Environmental Policy*,	4.3	
29	Comparing flexible and conventional monolithic building design: Life cycle environmental impact and potential for material circulation. *Building and Environment*, **2022**, 109409	6.5	0
28	Structural development of a novel punctually supported timber building system for multi-storey construction. *Journal of Building Engineering*, **2022**, 58, 104972	5.2	1
27	Evaluating the environmental impacts of conventional and modular buildings in absolute measures: A case study across different geographical contexts. **2022**, 109509		0
26	Building Information Modeling Assisted Carbon Emission Impact Assessment of Prefabricated Residential Buildings in the Design Phase: Case Study of a Chinese Building. **2022**, 2022, 1-11		

25	Sustainability Design and Evaluation of High-Performance Concrete Joint Reticulated Shell Structure Based on LCA. **2022**, 588-601	0
24	Advanced Circular Design, a Life Cycle Approach. **2022**, 1870-1878	0
23	How to Facilitate the Integration Between Building Information Modelling and Life Cycle Assessment Tools in Building Sector. **2022**, 26-38	0
22	A whole building life-cycle assessment methodology and its application for carbon footprint analysis of U.S. commercial buildings. 1-19	0
21	Rapid Environmental Assessment of Buildings: Linking Environmental and Cost Estimating Databases. **2022**, 14, 10928	1
20	Carbon Emissions of Passive Building During Production and Operation in Cold Region of China. **2023**, 211-220	0
19	Tracking the spatio-temporal distribution and regional differences of carbon footprint in grid scale of China's construction industry.	0
18	A BIBLIOMETRIC REVIEW OF RESEARCH ON BUILDING INFORMATION MODELING-BASED GREEN BUILDING ASSESSMENT. **2022**, 17, 63-88	0
17	Arrangement of reinforcement in variable density timber slab systems for multi-story construction. 1478077122113502	
16	Environmental and economic optimization and prioritization tool-kit for residential building renovation strategies with life cycle approach. **2022**, 109813	0
15	Comparison of Green Building Rating Systems from LCA Perspective. **2022**, 1101, 062019	0
14	An Empirical Study on Energy Saving and Emissions Reduction of Prefabricated Buildings Based on the Whole Life Cycle. **2022**,	0
13	Sustainability assessment model for mass Housing's interior rehabilitation and its validation to Ekbatan, Iran. **2022**, 105685	0
12	Embodied vs. Operational Energy and Carbon in Retail Building Shells: A Case Study in Portugal. **2023**, 16, 378	1
11	Characterising Embodied Energy in Construction Activities Using Energy Inventory Life Cycle Assessment Method. **2023**, 13, 52	0
10	A Novel Combination Scheme of the Modified TOPSIS and ITARA in Housing Assistance and Building Assessments. **2022**, 18, 1360-1372	0
9	Exploring Building Information Modeling (BIM) and Internet of Things (IoT) Integration for Sustainable Building. **2023**, 13, 288	0
8	Multi-zone building control with thermal comfort constraints under disjunctive uncertainty using data-driven robust model predictive control. **2023**, 9, 100124	0

7	Carbon emission evaluation of prefabricated concrete composite plates during the building materialization stage. **2023**, 232, 110045	0
6	Die Ermittlung der Ressourceneffizienz und der Klimabelastung von Bauwerken. **2023**, 83-118	0
5	Life cycle energy assessments of conventional building: A systematic review. **2023**,	0
4	An environmental management plan for construction waste management. **2023**, 102244	0
3	Assessment of Sustainability and Efficiency Metrics in Modern Methods of Construction: A Case Study Using a Life Cycle Assessment Approach. **2023**, 15, 6267	0
2	LCA of the NZEB El Salvador building, a model to estimate the carbon footprint in a tropical country. **2023**, 408, 137137	0
1	Potential for environmental impact reduction through building LCA(Life Cycle Assessment) of school facilities in material production stage. **2023**, 238, 110329	0