Melissa M Bilec

List of Publications by Year
in descending order

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85 papers	3,559 citations	136950 32 h-index	138484 58 g-index
88 all docs	88 docs citations	88 times ranked	3326 citing authors

#	Article	IF	Citations
1	Environmental Impacts of Surgical Procedures: Life Cycle Assessment of Hysterectomy in the United States. Environmental Science & Technology, 2015, 49, 1779-1786.	10.0	223
2	Example of a Hybrid Life-Cycle Assessment of Construction Processes. Journal of Infrastructure Systems, 2006, 12, 207-215.	1.8	200
3	Dynamic life cycle assessment: framework and application to an institutional building. International Journal of Life Cycle Assessment, 2013, 18, 538-552.	4.7	176
4	The Economic Benefits of Green Buildings: A Comprehensive Case Study. Engineering Economist, 2006, 51, 259-295.	1.1	164
5	Biopolymer production and end of life comparisons using life cycle assessment. Resources, Conservation and Recycling, 2017, 122, 295-306.	10.8	158
6	Impact of lifetime on US residential building LCA results. International Journal of Life Cycle Assessment, 2012, 17, 337-349.	4.7	139
7	Life-Cycle Assessment Modeling of Construction Processes for Buildings. Journal of Infrastructure Systems, 2010, 16, 199-205.	1.8	128
8	Strategies to Reduce Greenhouse Gas Emissions from Laparoscopic Surgery. American Journal of Public Health, 2018, 108, S158-S164.	2.7	128
9	A framework to improve construction processes: Integrating Lean, Green and Six Sigma. International Journal of Construction Management, 2014, 14, 45-55.	3.2	124
10	Sustainable healthcare and environmental life-cycle impacts of disposable supplies: a focus on disposable custom packs. Journal of Cleaner Production, 2015, 94, 46-55.	9.3	123
11	The Green Print: Advancement of Environmental Sustainability in Healthcare. Resources, Conservation and Recycling, 2020, 161, 104882.	10.8	121
12	A network-based framework for assessing infrastructure resilience: a case study of the London metro system. Journal of the Royal Society Interface, 2016, 13, 20160113.	3.4	113
13	Transforming The Medical Device Industry: Road Map To A Circular Economy. Health Affairs, 2020, 39, 2088-2097.	5.2	103
14	Life cycle assessment perspectives on delivering an infant in the US. Science of the Total Environment, 2012, 425, 191-198.	8.0	93
15	A Materials Life Cycle Assessment of a Net-Zero Energy Building. Energies, 2013, 6, 1125-1141.	3.1	83
16	Comparative whole-building life cycle assessment of renovation and new construction. Building and Environment, 2019, 161, 106218.	6.9	80
17	Process Based Life-Cycle Assessment of Natural Gas from the Marcellus Shale. Environmental Science & Technology, 2013, 47, 5459-5466.	10.0	74
18	Foodâ€“Energyâ€“Water Nexus: Quantifying Embodied Energy and GHG Emissions from Irrigation through Virtual Water Transfers in Food Trade. ACS Sustainable Chemistry and Engineering, 2017, 5, 2119-2128.	6.7	74

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19	Toward zero waste: Composting and recycling for sustainable venue based events. Waste Management, 2015, 38, 86-94.	7.4	61
20	The role of design in circular economy solutions for critical materials. One Earth, 2021, 4, 353-362.	6.8	57
21	Minimal Custom Pack Design and Wide-Awake Hand Surgery: Reducing Waste and Spending in the Orthopedic Operating Room. Hand, 2019, 14, 271-276.	1.2	51
22	Green Building Rating Systems and Whole-Building Life Cycle Assessment: Comparative Study of the Existing Assessment Tools. Journal of Architectural Engineering, 2017, 23, .	1.6	49
23	Life-Cycle Thinking and the LEED Rating System: Global Perspective on Building Energy Use and Environmental Impacts. Environmental Science & Technology, 2015, 49, 4048-4056.	10.0	45
24	Creating environmental consciousness in underserved communities: Implementation and outcomes of community-based environmental justice and air pollution research. Sustainable Cities and Society, 2019, 47, 101473.	10.4	44
25	Review of approaches for integrating loss estimation and life cycle assessment to assess impacts of seismic building damage and repair. Engineering Structures, 2018, 175, 123-137.	5.3	40
26	Dynamic Life Cycle Assessments of a Conventional Green Building and a Net Zero Energy Building: Exploration of Static, Dynamic, Attributional, and Consequential Electricity Grid Models. Environmental Science & Technology, 2018, 52, 11429-11438.	10.0	39
27	Analyzing the Practice of Life Cycle Assessment. Journal of Industrial Ecology, 2013, 17, 777-788.	5.5	38
28	Evaluating the Life Cycle Environmental Benefits and Trade-Offs of Water Reuse Systems for Net-Zero Buildings. Environmental Science & Technology, 2017, 51, 1110-1119.	10.0	38
29	Life cycle assessment evaluation of green product labeling systems for residential construction. International Journal of Life Cycle Assessment, 2012, 17, 753-763.	4.7	36
30	Application of Machine Learning for Predicting Building Energy Use at Different Temporal and Spatial Resolution under Climate Change in USA. Buildings, 2020, 10, 139.	3.1	35
31	Probabilistic Assessment of the Life-Cycle Environmental Performance and Functional Life of Buildings due to Seismic Events. Journal of Architectural Engineering, 2018, 24, .	1.6	34
32	Service life prediction of residential interior finishes for life cycle assessment. International Journal of Life Cycle Assessment, 2012, 17, 362-371.	4.7	32
33	Life cycle assessment use in the North American building community: summary of findings from a 2011/2012 survey. International Journal of Life Cycle Assessment, 2015, 20, 318-331.	4.7	32
34	Buildings as material banks using RFID and building information modeling in a circular economy. Procedia CIRP, 2020, 90, 143-147.	1.9	32
35	Shallow geothermal energy integration in district heating system: An example from Serbia. Renewable Energy, 2020, 147, 2791-2800.	8.9	31
36	Whole building life cycle environmental impacts and costs: A sensitivity study of design and service decisions. Building and Environment, 2019, 163, 106316.	6.9	30

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37	Urban building energy model: Database development, validation, and application for commercial building stock. Energy and Buildings, 2021, 248, 111175.	6.7	30
38	Do single-use medical devices containing biopolymers reduce the environmental impacts of surgical procedures compared with their plastic equivalents?. Journal of Health Services Research and Policy, 2017, 22, 218-225.	1.7	29
39	Simulating home cooling load reductions for a novel opaque roof solar chimney configuration. Applied Energy, 2013, 112, 142-151.	10.1	28
40	Regional life cycle assessment of soybean derived biodiesel for transportation fleets. Energy Policy, 2012, 48, 295-303.	8.8	25
41	Design and zonal building energy modeling of a roof integrated solar chimney. Renewable Energy, 2013, 52, 241-250.	8.9	25
42	Evaluating quantifiable metrics for hospital green checklists. Journal of Cleaner Production, 2016, 127, 134-142.	9.3	24
43	Preliminary Comparative Life-Cycle Impacts of Streetlight Technology. Journal of Infrastructure Systems, 2011, 17, 193-199.	1.8	23
44	Modeling Future Life-Cycle Greenhouse Gas Emissions and Environmental Impacts of Electricity Supplies in Brazil. Energies, 2013, 6, 3182-3208.	3.1	23
45	Exergy and economic comparison between kW-scale hybrid and stand-alone solid oxide fuel cell systems. Journal of Power Sources, 2017, 353, 152-166.	7.8	20
46	Alkaline Amendment for the Enhancement of Compost Degradation for Polylactic Acid Biopolymer Products. Compost Science and Utilization, 2016, 24, 159-173.	1.2	18
47	The Regional Energy & Water Supply Scenarios (REWSS) model, Part I: Framework, procedure, and validation. Sustainable Energy Technologies and Assessments, 2014, 7, 227-236.	2.7	17
48	Development of a framework for indoor air quality assessments in energy conservation districts. Sustainable Cities and Society, 2020, 52, 101831.	10.4	17
49	Residential Life Cycle Assessment Modeling: Comparative Case Study of Insulating Concrete Forms and Traditional Building Materials. Journal of Green Building, 2010, 5, 95-106.	0.8	16
50	Sustainable Development and Green Designâ€"Who Is Leading the Green Initiative?. Journal of Professional Issues in Engineering Education and Practice, 2007, 133, 265-269.	0.9	14
51	Just by design: exploring justice as a multidimensional concept in US circular economy discourse. Local Environment, 2022, 27, 1225-1241.	2.4	14
52	Environmental Sustainability in Orthopaedic Surgery. Journal of the American Academy of Orthopaedic Surgeons, The, 2022, 30, 504-511.	2.5	14
53	Materials life cycle assessment of a living building. Procedia CIRP, 2019, 80, 458-463.	1.9	13
54	Whole Building Life Cycle Assessment of a Living Building. Journal of Architectural Engineering, 2020, 26, .	1.6	13

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55	Considering fabrication in sustainable computing. , 2013, , .		11
56	The application of a multi-faceted approach for evaluating and improving the life cycle environmental performance of service industries. Journal of Cleaner Production, 2013, 42, 263-276.	9.3	11
57	A comparative analysis of performance and cost metrics associated with a diesel to biodiesel fleet transition. Energy Policy, 2010, 38, 7451-7456.	8.8	10
58	Understanding Green Building Design and Healthcare Outcomes: Evidence-Based Design Analysis of an Oncology Unit. Journal of Architectural Engineering, 2016, 22, .	1.6	10
59	Preliminary Study of Green Design and Project Delivery Methods in the Public Sector. Journal of Green Building, 2007, 2, 151-160.	0.8	10
60	Gamifying Sustainable Engineering Courses: Student and Instructor Perspectives of Community, Engagement, Learning, and Retention. Journal of Civil Engineering Education, 2021, 147, .	1.4	9
61	On-Site Renewable Energy and Green Buildings: A System-Level Analysis. Environmental Science & Technology, 2016, 50, 4606-4614.	10.0	8
62	Assessment of Studentsâ€™ Mastery of Construction Management and Engineering Concepts through Board Game Design. Journal of Professional Issues in Engineering Education and Practice, 2017, 143, .	0.9	8
63	Developing a framework for urban building life cycle energy map with a focus on rapid visual inspection and image processing. Procedia CIRP, 2019, 80, 464-469.	1.9	8
64	Small business electricity disaggregation: Where can we improve? Towards increased transparency of appliance modal parameters. Energy and Buildings, 2018, 176, 194-202.	6.7	7
65	Greening the service industries: A case study of a United States engineering consulting firm. , 2011, , .		6
66	Life Cycle Assessment as a tool for Improving Service Industry Sustainability. IEEE Potentials, 2012, 31, 10-15.	0.3	6
67	Green computing: A life cycle perspective. , 2013, , .		6
68	Survey of Homeownersâ€™ Motivations for the Adoption of Energy Efficiency Measures: Evaluating a Holistic Energy Assessment Program. Journal of Architectural Engineering, 2018, 24, .	1.6	6
69	Applying Lean, Green, and Six-Sigma Framework to Improve Exterior Construction Process in Saudi Arabia. Journal of Construction Engineering and Project Management, 2014, 4, 12-22.	0.6	6
70	Building material stock analysis is critical for effective circular economy strategies: a comprehensive review. Environmental Research: Infrastructure and Sustainability, 2022, 2, 032001.	2.3	6
71	Towards a commodity solution for the internet of things. Computers and Electrical Engineering, 2016, 52, 138-156.	4.8	5
72	Integrating site-specific dispersion modeling into life cycle assessment, with a focus on inhalation risks in chemical production. Journal of the Air and Waste Management Association, 2018, 68, 1224-1238.	1.9	5

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73	CRITICAL SUCCESS FACTORS TO LIMIT CONSTRUCTABILITY ISSUES ON A NET-ZERO ENERGY HOME. Journal of Green Building, 2012, 7, 100-115.	0.8	5
74	Synergizing disparate component-level energy resources into a single whole building tool to support energy conservation action in small commercial buildings. Energy and Buildings, 2018, 176, 325-332.	6.7	4
75	Quantifying Energy and Greenhouse Gas Emissions Embodied in Global Primary Plastic Trade Network. ACS Sustainable Chemistry and Engineering, 2021, 9, 14927-14936.	6.7	4
76	Ocelot: A wireless sensor network and computing engine with commodity palmtop computers. , 2013, , .		3
77	An indoor air quality evaluation in a residential retrofit project using spray polyurethane foam. Journal of Occupational and Environmental Hygiene, 2018, 15, 363-375.	1.0	3
78	Evaluation of a Holistic Energy Assessment Program. Procedia Engineering, 2016, 145, 468-475.	1.2	2
79	Introducing the Circular Economy to Economists. Annual Review of Resource Economics, 2022, 14, 493-514.	3.7	2
80	Comparative life cycle assessment of insulating concrete forms with traditional residential wall sections. , 2009, , .		1
81	Utilizing measured energy usage to analyze design phase energy models. , 2012, , .		1
82	Influence of the charge double layer on solid oxide fuel cell stack behavior. Journal of Power Sources, 2015, 293, 767-777.	7.8	1
83	Virtual Special Issue on â€œFood-Energy-Water Nexusâ€•Call for Papers. Resources, Conservation and Recycling, 2017, 126, A8-A9.	10.8	1
84	Integrating Indoor environmental quality metrics in a dynamic life cycle assessment framework for buildings. , 2012, , .		0
85	Indoor Air Quality Assessments of Diverse Buildings in an Energy Conservation District from a Life Cycle Assessment Lens. , 2016, , .		0