

# Melissa M Bilec

## List of Publications by Year in descending order

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Version: 2024-02-01

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	Just by design: exploring justice as a multidimensional concept in US circular economy discourse. <i>Local Environment</i> , 2022, 27, 1225-1241.	2.4	14
2	Environmental Sustainability in Orthopaedic Surgery. <i>Journal of the American Academy of Orthopaedic Surgeons</i> , The, 2022, 30, 504-511.	2.5	14
3	Building material stock analysis is critical for effective circular economy strategies: a comprehensive review. <i>Environmental Research: Infrastructure and Sustainability</i> , 2022, 2, 032001.	2.3	6
4	Introducing the Circular Economy to Economists. <i>Annual Review of Resource Economics</i> , 2022, 14, 493-514.	3.7	2
5	The role of design in circular economy solutions for critical materials. <i>One Earth</i> , 2021, 4, 353-362.	6.8	57
6	Urban building energy model: Database development, validation, and application for commercial building stock. <i>Energy and Buildings</i> , 2021, 248, 111175.	6.7	30
7	Gamifying Sustainable Engineering Courses: Student and Instructor Perspectives of Community, Engagement, Learning, and Retention. <i>Journal of Civil Engineering Education</i> , 2021, 147, .	1.4	9
8	Quantifying Energy and Greenhouse Gas Emissions Embodied in Global Primary Plastic Trade Network. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 14927-14936.	6.7	4
9	Shallow geothermal energy integration in district heating system: An example from Serbia. <i>Renewable Energy</i> , 2020, 147, 2791-2800.	8.9	31
10	Development of a framework for indoor air quality assessments in energy conservation districts. <i>Sustainable Cities and Society</i> , 2020, 52, 101831.	10.4	17
11	Buildings as material banks using RFID and building information modeling in a circular economy. <i>Procedia CIRP</i> , 2020, 90, 143-147.	1.9	32
12	Whole Building Life Cycle Assessment of a Living Building. <i>Journal of Architectural Engineering</i> , 2020, 26, .	1.6	13
13	The Green Print: Advancement of Environmental Sustainability in Healthcare. <i>Resources, Conservation and Recycling</i> , 2020, 161, 104882.	10.8	121
14	Application of Machine Learning for Predicting Building Energy Use at Different Temporal and Spatial Resolution under Climate Change in USA. <i>Buildings</i> , 2020, 10, 139.	3.1	35
15	Transforming The Medical Device Industry: Road Map To A Circular Economy. <i>Health Affairs</i> , 2020, 39, 2088-2097.	5.2	103
16	Whole building life cycle environmental impacts and costs: A sensitivity study of design and service decisions. <i>Building and Environment</i> , 2019, 163, 106316.	6.9	30
17	Materials life cycle assessment of a living building. <i>Procedia CIRP</i> , 2019, 80, 458-463.	1.9	13
18	Developing a framework for urban building life cycle energy map with a focus on rapid visual inspection and image processing. <i>Procedia CIRP</i> , 2019, 80, 464-469.	1.9	8

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19	Comparative whole-building life cycle assessment of renovation and new construction. <i>Building and Environment</i> , 2019, 161, 106218.	6.9	80
20	Creating environmental consciousness in underserved communities: Implementation and outcomes of community-based environmental justice and air pollution research. <i>Sustainable Cities and Society</i> , 2019, 47, 101473.	10.4	44
21	Minimal Custom Pack Design and Wide-Awake Hand Surgery: Reducing Waste and Spending in the Orthopedic Operating Room. <i>Hand</i> , 2019, 14, 271-276.	1.2	51
22	An indoor air quality evaluation in a residential retrofit project using spray polyurethane foam. <i>Journal of Occupational and Environmental Hygiene</i> , 2018, 15, 363-375.	1.0	3
23	Strategies to Reduce Greenhouse Gas Emissions from Laparoscopic Surgery. <i>American Journal of Public Health</i> , 2018, 108, S158-S164.	2.7	128
24	Probabilistic Assessment of the Life-Cycle Environmental Performance and Functional Life of Buildings due to Seismic Events. <i>Journal of Architectural Engineering</i> , 2018, 24, .	1.6	34
25	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. <i>Environmental Science &amp; Technology</i> , 2018, 52, 11429-11438.	10.0	39
26	Survey of Homeownersâ€™ Motivations for the Adoption of Energy Efficiency Measures: Evaluating a Holistic Energy Assessment Program. <i>Journal of Architectural Engineering</i> , 2018, 24, .	1.6	6
27	Integrating site-specific dispersion modeling into life cycle assessment, with a focus on inhalation risks in chemical production. <i>Journal of the Air and Waste Management Association</i> , 2018, 68, 1224-1238.	1.9	5
28	Synergizing disparate component-level energy resources into a single whole building tool to support energy conservation action in small commercial buildings. <i>Energy and Buildings</i> , 2018, 176, 325-332.	6.7	4
29	Small business electricity disaggregation: Where can we improve? Towards increased transparency of appliance modal parameters. <i>Energy and Buildings</i> , 2018, 176, 194-202.	6.7	7
30	Review of approaches for integrating loss estimation and life cycle assessment to assess impacts of seismic building damage and repair. <i>Engineering Structures</i> , 2018, 175, 123-137.	5.3	40
31	Foodâ€™Energyâ€™Water Nexus: Quantifying Embodied Energy and GHG Emissions from Irrigation through Virtual Water Transfers in Food Trade. <i>ACS Sustainable Chemistry and Engineering</i> , 2017, 5, 2119-2128.	6.7	74
32	Exergy and economic comparison between kW-scale hybrid and stand-alone solid oxide fuel cell systems. <i>Journal of Power Sources</i> , 2017, 353, 152-166.	7.8	20
33	Biopolymer production and end of life comparisons using life cycle assessment. <i>Resources, Conservation and Recycling</i> , 2017, 122, 295-306.	10.8	158
34	Evaluating the Life Cycle Environmental Benefits and Trade-Offs of Water Reuse Systems for Net-Zero Buildings. <i>Environmental Science &amp; Technology</i> , 2017, 51, 1110-1119.	10.0	38
35	Assessment of Studentsâ€™ Mastery of Construction Management and Engineering Concepts through Board Game Design. <i>Journal of Professional Issues in Engineering Education and Practice</i> , 2017, 143, .	0.9	8
36	Do single-use medical devices containing biopolymers reduce the environmental impacts of surgical procedures compared with their plastic equivalents?. <i>Journal of Health Services Research and Policy</i> , 2017, 22, 218-225.	1.7	29

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37	Virtual Special Issue on "Food-Energy-Water Nexus"-Call for Papers. Resources, Conservation and Recycling, 2017, 126, A8-A9.	10.8	1
38	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
39	Indoor Air Quality Assessments of Diverse Buildings in an Energy Conservation District from a Life Cycle Assessment Lens. , 2016, , .		0
40	Alkaline Amendment for the Enhancement of Compost Degradation for Polylactic Acid Biopolymer Products. Compost Science and Utilization, 2016, 24, 159-173.	1.2	18
41	Towards a commodity solution for the internet of things. Computers and Electrical Engineering, 2016, 52, 138-156.	4.8	5
42	On-Site Renewable Energy and Green Buildings: A System-Level Analysis. Environmental Science & Technology, 2016, 50, 4606-4614.	10.0	8
43	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
44	Understanding Green Building Design and Healthcare Outcomes: Evidence-Based Design Analysis of an Oncology Unit. Journal of Architectural Engineering, 2016, 22, .	1.6	10
45	Evaluation of a Holistic Energy Assessment Program. Procedia Engineering, 2016, 145, 468-475.	1.2	2
46	Evaluating quantifiable metrics for hospital green checklists. Journal of Cleaner Production, 2016, 127, 134-142.	9.3	24
47	Toward zero waste: Composting and recycling for sustainable venue based events. Waste Management, 2015, 38, 86-94.	7.4	61
48	Environmental Impacts of Surgical Procedures: Life Cycle Assessment of Hysterectomy in the United States. Environmental Science & Technology, 2015, 49, 1779-1786.	10.0	223
49	Influence of the charge double layer on solid oxide fuel cell stack behavior. Journal of Power Sources, 2015, 293, 767-777.	7.8	1
50	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
51	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
52	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
53	A framework to improve construction processes: Integrating Lean, Green and Six Sigma. International Journal of Construction Management, 2014, 14, 45-55.	3.2	124
54	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

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55	Applying Lean, Green, and Six-Sigma Framework to Improve Exterior Construction Process in Saudi Arabia. <i>Journal of Construction Engineering and Project Management</i> , 2014, 4, 12-22.	0.6	6
56	Dynamic life cycle assessment: framework and application to an institutional building. <i>International Journal of Life Cycle Assessment</i> , 2013, 18, 538-552.	4.7	176
57	Simulating home cooling load reductions for a novel opaque roof solar chimney configuration. <i>Applied Energy</i> , 2013, 112, 142-151.	10.1	28
58	Ocelot: A wireless sensor network and computing engine with commodity palmtop computers. , 2013, , .		3
59	Considering fabrication in sustainable computing. , 2013, , .		11
60	Green computing: A life cycle perspective. , 2013, , .		6
61	Design and zonal building energy modeling of a roof integrated solar chimney. <i>Renewable Energy</i> , 2013, 52, 241-250.	8.9	25
62	The application of a multi-faceted approach for evaluating and improving the life cycle environmental performance of service industries. <i>Journal of Cleaner Production</i> , 2013, 42, 263-276.	9.3	11
63	Process Based Life-Cycle Assessment of Natural Gas from the Marcellus Shale. <i>Environmental Science &amp; Technology</i> , 2013, 47, 5459-5466.	10.0	74
64	Modeling Future Life-Cycle Greenhouse Gas Emissions and Environmental Impacts of Electricity Supplies in Brazil. <i>Energies</i> , 2013, 6, 3182-3208.	3.1	23
65	A Materials Life Cycle Assessment of a Net-Zero Energy Building. <i>Energies</i> , 2013, 6, 1125-1141.	3.1	83
66	Analyzing the Practice of Life Cycle Assessment. <i>Journal of Industrial Ecology</i> , 2013, 17, 777-788.	5.5	38
67	Integrating Indoor environmental quality metrics in a dynamic life cycle assessment framework for buildings. , 2012, , .		0
68	Utilizing measured energy usage to analyze design phase energy models. , 2012, , .		1
69	Life Cycle Assessment as a tool for Improving Service Industry Sustainability. <i>IEEE Potentials</i> , 2012, 31, 10-15.	0.3	6
70	Regional life cycle assessment of soybean derived biodiesel for transportation fleets. <i>Energy Policy</i> , 2012, 48, 295-303.	8.8	25
71	Life cycle assessment evaluation of green product labeling systems for residential construction. <i>International Journal of Life Cycle Assessment</i> , 2012, 17, 753-763.	4.7	36
72	Life cycle assessment perspectives on delivering an infant in the US. <i>Science of the Total Environment</i> , 2012, 425, 191-198.	8.0	93

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73	Impact of lifetime on US residential building LCA results. International Journal of Life Cycle Assessment, 2012, 17, 337-349.	4.7	139
74	Service life prediction of residential interior finishes for life cycle assessment. International Journal of Life Cycle Assessment, 2012, 17, 362-371.	4.7	32
75	CRITICAL SUCCESS FACTORS TO LIMIT CONSTRUCTABILITY ISSUES ON A NET-ZERO ENERGY HOME. Journal of Green Building, 2012, 7, 100-115.	0.8	5
76	Preliminary Comparative Life-Cycle Impacts of Streetlight Technology. Journal of Infrastructure Systems, 2011, 17, 193-199.	1.8	23
77	Greening the service industries: A case study of a United States engineering consulting firm. , 2011, , .		6
78	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
79	Life-Cycle Assessment Modeling of Construction Processes for Buildings. Journal of Infrastructure Systems, 2010, 16, 199-205.	1.8	128
80	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
81	Comparative life cycle assessment of insulating concrete forms with traditional residential wall sections. , 2009, , .		1
82	Sustainable Development and Green Design—Who Is Leading the Green Initiative?. Journal of Professional Issues in Engineering Education and Practice, 2007, 133, 265-269.	0.9	14
83	Preliminary Study of Green Design and Project Delivery Methods in the Public Sector. Journal of Green Building, 2007, 2, 151-160.	0.8	10
84	Example of a Hybrid Life-Cycle Assessment of Construction Processes. Journal of Infrastructure Systems, 2006, 12, 207-215.	1.8	200
85	The Economic Benefits of Green Buildings: A Comprehensive Case Study. Engineering Economist, 2006, 51, 259-295.	1.1	164