Matthew J Eckelman

List of Publications by Year
in descending order

104 papers	9,567 citations	50170 46 h-index	39575 94 g-index
105 all docs	105 docs citations	105 times ranked	9289 citing authors

#	Article	IF	Citations
1	The 2020 report of The Lancet Countdown on health and climate change: responding to converging crises. Lancet, The, 2021, 397, 129-170.	6.3	1,030
2	The 2019 report of The Lancet Countdown on health and climate change: ensuring that the health of a child born today is not defined by a changing climate. Lancet, The, 2019, 394, 1836-1878.	6.3	905
3	The 2021 report of the Lancet Countdown on health and climate change: code red for a healthy future. Lancet, The, 2021, 398, 1619-1662.	6.3	669
4	Environmental Impacts of the U.S. Health Care System and Effects on Public Health. PLoS ONE, 2016, 11, e0157014.	1.1	502
5	Life Cycle Assessment of Metals: A Scientific Synthesis. PLoS ONE, 2014, 9, e101298.	1.1	425
6	Combinatorial Life Cycle Assessment to Inform Process Design of Industrial Production of Algal Biodiesel. Environmental Science & Technology, 2011, 45, 7060-7067.	4.6	318
7	Health care's response to climate change: a carbon footprint assessment of the NHS in England. Lancet Planetary Health, The, 2021, 5, e84-e92.	5.1	317
8	Life Cycle Greenhouse Gas Emissions of Anesthetic Drugs. Anesthesia and Analgesia, 2012, 114, 1086-1090.	1.1	295
9	Health Care Pollution And Public Health Damage In The United States: An Update. Health Affairs, 2020, 39, 2071-2079.	2.5	261
10	Environmental Impacts of Surgical Procedures: Life Cycle Assessment of Hysterectomy in the United States. Environmental Science & Technology, 2015, 49, 1779-1786.	4.6	223
11	Comparative Life Cycle Assessment of Disposable and Reusable Laryngeal Mask Airways. Anesthesia and Analgesia, 2012, 114, 1067-1072.	1.1	153
12	New Perspectives on Nanomaterial Aquatic Ecotoxicity: Production Impacts Exceed Direct Exposure Impacts for Carbon Nanotoubes. Environmental Science & Technology, 2012, 46, 2902-2910.	4.6	152
13	Predictive modeling for US commercial building energy use: A comparison of existing statistical and machine learning algorithms using CBECS microdata. Energy and Buildings, 2018, 163, 34-43.	3.1	148
14	Toward Green Nano. Journal of Industrial Ecology, 2008, 12, 316-328.	2.8	145
15	Silver Emissions and their Environmental Impacts:â€‰ A Multilevel Assessment. Environmental Science & Technology, 2007, 41, 6283-6289.	4.6	142
16	Life Cycle Assessment and Costing Methods for Device Procurement: Comparing Reusable and Single-Use Disposable Laryngoscopes. Anesthesia and Analgesia, 2018, 127, 434-443.	1.1	142
17	Life cycle environmental emissions and health damages from the Canadian healthcare system: An economic-environmental-epidemiological analysis. PLoS Medicine, 2018, 15, e1002623.	3.9	141
18	Construction Matters: Comparing Environmental Impacts of Building Modular and Conventional Homes in the United States. Journal of Industrial Ecology, 2012, 16, 243-253.	2.8	140

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19	Estimated Global Disease Burden From US Health Care Sector Greenhouse Gas Emissions. American Journal of Public Health, 2018, 108, S120-S122.	1.5	131
20	Green Solvents in Biomass Processing. ACS Sustainable Chemistry and Engineering, 2016, 4, 5821-5837.	3.2	123
21	The Green Print: Advancement of Environmental Sustainability in Healthcare. Resources, Conservation and Recycling, 2020, 161, 104882.	5.3	121
22	Consequential Environmental and Economic Life Cycle Assessment of Green and Gray Stormwater Infrastructures for Combined Sewer Systems. Environmental Science & Technology, 2013, 47, 11189-11198.	4.6	120
23	Preferential technological and life cycle environmental performance of chitosan flocculation for harvesting of the green algae Neochloris oleoabundans. Bioresource Technology, 2012, 121, 445-449.	4.8	103
24	Transforming The Medical Device Industry: Road Map To A Circular Economy. Health Affairs, 2020, 39, 2088-2097.	2.5	103
25	Growing fresh fruits and vegetables in an urban landscape: A geospatial assessment of ground level and rooftop urban agriculture potential in Boston, USA. Landscape and Urban Planning, 2017, 165, 130-141.	3.4	94
26	Environmental Life Cycle Assessment of Nanosilver-Enabled Bandages. Environmental Science & Technology, 2015, 49, 361-368.	4.6	88
27	Cradle-to-Gate Greenhouse Gas Emissions for Twenty Anesthetic Active Pharmaceutical Ingredients Based on Process Scale-Up and Process Design Calculations. ACS Sustainable Chemistry and Engineering, 2019, 7, 6580-6591.	3.2	86
28	Life-Cycle Assessment of Advanced Nutrient Removal Technologies for Wastewater Treatment. Environmental Science & Technology, 2016, 50, 3020-3030.	4.6	85
29	Facility-level energy and greenhouse gas life-cycle assessment of the global nickel industry. Resources, Conservation and Recycling, 2010, 54, 256-266.	5.3	83
30	Evaluating microalgal integrated biorefinery schemes: Empirical controlled growth studies and life cycle assessment. Bioresource Technology, 2014, 151, 19-27.	4.8	81
31	Comparative Evaluation of Chemical Life Cycle Inventory Generation Methods and Implications for Life Cycle Assessment Results. ACS Sustainable Chemistry and Engineering, 2019, 7, 350-367.	3.2	81
32	Effect of window-to-wall ratio on measured energy consumption in US office buildings. Energy and Buildings, 2019, 203, 109434.	3.1	79
33	Life Cycle Assessment and Release Studies for 15 Nanosilver-Enabled Consumer Products: Investigating Hotspots and Patterns of Contribution. Environmental Science & Technology, 2017, 51, 7148-7158.	4.6	75
34	Measuring the Embodied Energy in Drinking Water Supply Systems: A Case Study in The Great Lakes Region. Environmental Science & Technology, 2010, 44, 9516-9521.	4.6	72
35	Comparative life cycle assessment of silver nanoparticle synthesis routes. Environmental Science: Nano, 2015, 2, 361-369.	2.2	68
36	Criticality of the Geological Zinc, Tin, and Lead Family. Journal of Industrial Ecology, 2015, 19, 628-644.	2.8	66

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37	Life cycle energy and environmental benefits of novel design-for-deconstruction structural systems in steel buildings. Building and Environment, 2018, 143, 421-430.	3.0	65
38	Life Cycle Assessment of Catechols from Lignin Depolymerization. ACS Sustainable Chemistry and Engineering, 2016, 4, 708-718.	3.2	62
39	Assessing greenhouse gas emissions from university purchases. International Journal of Sustainability in Higher Education, 2011, 12, 225-235.	1.6	60
40	Life cycle energy and environmental benefits of a US industrial symbiosis. International Journal of Life Cycle Assessment, 2013, 18, 1524-1532.	2.2	59
41	Island Waste Management Systems. Journal of Industrial Ecology, 2014, 18, 306-317.	2.8	57
42	Quantifying Life Cycle Environmental Benefits from the Reuse of Industrial Materials in Pennsylvania. Environmental Science & Technology, 2009, 43, 2550-2556.	4.6	55
43	Comparative Life Cycle Assessment of Advanced Wastewater Treatment Processes for Removal of Chemicals of Emerging Concern. Environmental Science & Technology, 2018, 52, 11346-11358.	4.6	52
44	Markov chain modeling of the global technological lifetime of copper. Ecological Economics, 2008, 67, 265-273.	2.9	51
45	Meta-analysis and Harmonization of Life Cycle Assessment Studies for Algae Biofuels. Environmental Science & Technology, 2017, 51, 9419-9432.	4.6	49
46	Life Cycle Impacts and Benefits of a Carbon Nanotube-Enabled Chemical Gas Sensor. Environmental Science & Technology, 2014, 48, 11360-11368.	4.6	48
47	Long-term trends of electric efficiencies in electricity generation in developing countries. Energy Policy, 2009, 37, 1678-1686.	4.2	47
48	Do resilient and sustainable design strategies conflict in commercial buildings? A critical analysis of existing resilient building frameworks and their sustainability implications. Energy and Buildings, 2017, 146, 295-311.	3.1	47
49	Using Material Flow Analysis to Illuminate Longâ€Term Waste Management Solutions in Oahu, Hawaii. Journal of Industrial Ecology, 2009, 13, 758-774.	2.8	46
50	Life cycle carbon benefits of aerospace alloy recycling. Journal of Cleaner Production, 2014, 80, 38-45.	4.6	46
51	Geospatial assessment of potential bioenergy crop production on urban marginal land. Applied Energy, 2015, 159, 540-547.	5.1	46
52	Historical evolution of anthropogenic aluminum stocks and flows in Italy. Resources, Conservation and Recycling, 2013, 72, 1-8.	5.3	43
53	Exploring the Global Journey of Nickel with Markov Chain Models. Journal of Industrial Ecology, 2012, 16, 334-342.	2.8	42
54	Meta-Analysis of Life Cycle Energy and Greenhouse Gas Emissions for Priority Biobased Chemicals. ACS Sustainable Chemistry and Engineering, 2016, 4, 6443-6454.	3.2	42

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55	Quantification of social equity in life cycle assessment for increased sustainable production of sanitary products in Uganda. Journal of Cleaner Production, 2015, 96, 569-579.	4.6	40
56	Integrating uncertainties to the combined environmental and economic assessment of algal biorefineries: A Monte Carlo approach. Science of the Total Environment, 2018, 626, 762-775.	3.9	40
57	Coordinating modeling and experimental research of engineered nanomaterials to improve life cycle assessment studies. Environmental Science: Nano, 2015, 2, 669-682.	2.2	39
58	Spatial Assessment of Net Mercury Emissions from the Use of Fluorescent Bulbs. Environmental Science & Technology, 2008, 42, 8564-8570.	4.6	38
59	Urban scale mapping of concrete degradation from projected climate change. Urban Climate, 2014, 9, 101-114.	2.4	38
60	Net energy benefits of carbon nanotube applications. Applied Energy, 2016, 173, 624-634.	5.1	38
61	The criticality of four nuclear energy metals. Resources, Conservation and Recycling, 2015, 95, 193-201.	5.3	37
62	Simulating future energy consumption in office buildings using an ensemble of morphed climate data. Applied Energy, 2019, 255, 113821.	5.1	37
63	Environmental Life Cycle Assessment of a Carbon Nanotube-Enabled Semiconductor Device. Environmental Science & Technology, 2013, 47, 8471-8478.	4.6	33
64	Criticality of Seven Specialty Metals. Journal of Industrial Ecology, 2016, 20, 837-853.	2.8	33
65	Life cycle energy benefits of carbon nanotubes for electromagnetic interference (EMI) shielding applications. Journal of Cleaner Production, 2017, 142, 1971-1978.	4.6	33
66	Thematic exploration of sectoral and cross-cutting challenges to circular economy implementation. Clean Technologies and Environmental Policy, 2021, 23, 915-936.	2.1	31
67	Electrocatalysis for Chemical and Fuel Production: Investigating Climate Change Mitigation Potential and Economic Feasibility. Environmental Science & Technology, 2021, 55, 3240-3249.	4.6	30
68	Life cycle inherent toxicity: a novel LCA-based algorithm for evaluating chemical synthesis pathways. Green Chemistry, 2016, 18, 3257-3264.	4.6	29
69	Life cycle assessment of UV-Curable bio-based wood flooring coatings. Journal of Cleaner Production, 2018, 192, 932-939.	4.6	28
70	Environmental and economic comparison of reusable and disposable blood pressure cuffs in multiple clinical settings. Resources, Conservation and Recycling, 2020, 155, 104643.	5.3	28
71	Water flows, energy demand, and market analysis of the informal water sector in Kisumu, Kenya. Ecological Economics, 2013, 87, 137-144.	2.9	26
72	Harmonized algal biofuel life cycle assessment studies enable direct process train comparison. Applied Energy, 2018, 224, 494-509.	5.1	24

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73	Material Flow Analysis of Carbon Nanotube Lithium-Ion Batteries Used in Portable Computers. ACS Sustainable Chemistry and Engineering, 2014, 2, 1642-1648.	3.2	23
74	Historical evolution of greenhouse gas emissions from aluminum production at a country level. Journal of Cleaner Production, 2014, 84, 540-549.	4.6	23
75	Integrating life cycle assessment into managing potential EHS risks of engineered nanomaterials: reviewing progress to date. Journal of Nanoparticle Research, 2015, 17, 1.	0.8	23
76	Simulation-Based Estimates of Life Cycle Inventory Gate-to-Gate Process Energy Use for 151 Organic Chemical Syntheses. ACS Sustainable Chemistry and Engineering, 2020, 8, 8519-8536.	3.2	20
77	Timeâ€dependent life cycle assessment of microalgal biorefinery coâ€products. Biofuels, Bioproducts and Biorefining, 2016, 10, 409-421.	1.9	17
78	Geospatial assessment of regional scale bioenergy production potential on marginal and degraded land. Resources, Conservation and Recycling, 2018, 128, 90-97.	5.3	17
79	Teaching industrial ecology and environmental management in Second Life. Journal of Cleaner Production, 2011, 19, 1273-1278.	4.6	14
80	Transforming The Medical Device Industry: Road Map To A Circular Economy. Health Affairs, 2020, 39, 2088-2097.	1.8	13
81	Health Care Pollution And Public Health Damage In The United States: An Update. Health Affairs, 2020, 39, 2071-2079.	1.8	13
82	Why Was My Paper Rejected without Review?. Environmental Science & Technology, 2020, 54, 11641-11644.	4.6	10
83	Multidimensional Analyses Reveal Unequal Resource, Economic, and Environmental Gains and Losses among the Global Aluminum Trade Leaders. Environmental Science & Technology, 2021, 55, 7102-7112.	4.6	10
84	Life Cycle Assessments of Loans and Exhibitions: Three Case Studies at the Museum Fine Arts, Boston. Journal of the American Institute for Conservation, 2016, 55, 2-11.	0.2	9
85	Spatio-temporal changes among site-to-source conversion factors for building energy modeling. Energy and Buildings, 2020, 213, 109832.	3.1	9
86	Non-hazardous industrial waste in the United States: 100 Million tonnes of recoverable resources. Resources, Conservation and Recycling, 2021, 167, 105369.	5.3	9
87	Measuring the status of stainless steel use in the Japanese socio-economic system. Resources, Conservation and Recycling, 2010, 54, 737-743.	5.3	8
88	Environmental and Economic Life-Cycle Assessment of Municipal Water-Storage Options: Infrastructure Refurbishment versus Replacement. Journal of Infrastructure Systems, 2014, 20, .	1.0	8
89	Engaging stakeholders in nano-EHS risk governance. Environment Systems and Decisions, 2015, 35, 24-28.	1.9	8
90	Socio-metabolic risk and tipping points on islands. Environmental Research Letters, 2022, 17, 065009.	2.2	8

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91	Appending material flows to the National Energy Modeling System (NEMS) for projecting the physical economy of the United States. Journal of Industrial Ecology, 2022, 26, 294-308.	2.8	7
92	Estimating future industrial emissions of hazardous air pollutants in the United States using the National Energy Modeling System (NEMS). Resources, Conservation and Recycling, 2021, 169, 105465.	5.3	5
93	Applying green chemistry to raw material selection and product formulation at The EstÃ©e Lauder Companies. Green Chemistry, 2022, 24, 2397-2408.	4.6	5
94	Pollution inequality 50 years after the Clean Air Act: the need for hyperlocal data and action. Environmental Research Letters, 2021, 16, 071001.	2.2	4
95	Environmental Footprint of Anesthesia: More than Inhaled Anesthetics!. Anesthesiology, 2021, 135, 937-939.	1.3	4
96	Comparison of U.S. Manufacturing Locations for Solar PVs. Procedia CIRP, 2019, 80, 434-439.	1.0	3
97	Incorporating use phase chemical leaching and water quality testing for life cycle toxicity assessment of cross-linked polyethylene (PEX) piping. Science of the Total Environment, 2021, 782, 146374.	3.9	3
98	LCAart: Communicating industrial ecology at a human scale. Journal of Industrial Ecology, 2020, 24, 736-747.	2.8	3
99	Using the US National Air Toxics Assessment to benchmark the USEtox inhalation-mediated carcinogenic impacts of air emissions. International Journal of Life Cycle Assessment, 2021, 26, 1417-1430.	2.2	2
100	Sustainability in Nutrient Removal-Co-cost and Co-benefits Associated with Advanced Nutrient Removal Processes and Technologies Revealed by Comprehensive Life Cycle Assessment. Proceedings of the Water Environment Federation, 2013, 2013, 6525-6539.	0.0	1
101	Environmental Sustainability Assessment of Technologies for Removal of Contaminants of Emerging Concern. Proceedings of the Water Environment Federation, 2014, 2014, 6455-6469.	0.0	1
102	The World's Scavengersby Martin Medina. Journal of Industrial Ecology, 2008, 12, 626-627.	2.8	0
103	Significant global variability in a facility-level greenhouse gas assessment of primary nickel. , 2010, , .		0
104	The health-care sector's role in climate stabilisation â€“ Authors' reply. Lancet, The, 2020, 396, 92-93.	6.3	0