

Matthew J Eckelman

List of Publications by Year in descending order

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Version: 2024-02-01

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	Appending material flows to the National Energy Modeling System (NEMS) for projecting the physical economy of the United States. <i>Journal of Industrial Ecology</i> , 2022, 26, 294-308.	2.8	7
2	Applying green chemistry to raw material selection and product formulation at The Est�e Lauder Companies. <i>Green Chemistry</i> , 2022, 24, 2397-2408.	4.6	5
3	Socio-metabolic risk and tipping points on islands. <i>Environmental Research Letters</i> , 2022, 17, 065009.	2.2	8
4	The 2020 report of The Lancet Countdown on health and climate change: responding to converging crises. <i>Lancet, The</i> , 2021, 397, 129-170.	6.3	1,030
5	Thematic exploration of sectoral and cross-cutting challenges to circular economy implementation. <i>Clean Technologies and Environmental Policy</i> , 2021, 23, 915-936.	2.1	31
6	Electrocatalysis for Chemical and Fuel Production: Investigating Climate Change Mitigation Potential and Economic Feasibility. <i>Environmental Science & Technology</i> , 2021, 55, 3240-3249.	4.6	30
7	Health care's response to climate change: a carbon footprint assessment of the NHS in England. <i>Lancet Planetary Health, The</i> , 2021, 5, e84-e92.	5.1	317
8	Multidimensional Analyses Reveal Unequal Resource, Economic, and Environmental Gains and Losses among the Global Aluminum Trade Leaders. <i>Environmental Science & Technology</i> , 2021, 55, 7102-7112.	4.6	10
9	Non-hazardous industrial waste in the United States: 100 Million tonnes of recoverable resources. <i>Resources, Conservation and Recycling</i> , 2021, 167, 105369.	5.3	9
10	Estimating future industrial emissions of hazardous air pollutants in the United States using the National Energy Modeling System (NEMS). <i>Resources, Conservation and Recycling</i> , 2021, 169, 105465.	5.3	5
11	Pollution inequality 50 years after the Clean Air Act: the need for hyperlocal data and action. <i>Environmental Research Letters</i> , 2021, 16, 071001.	2.2	4
12	Using the US National Air Toxics Assessment to benchmark the USEtox inhalation-mediated carcinogenic impacts of air emissions. <i>International Journal of Life Cycle Assessment</i> , 2021, 26, 1417-1430.	2.2	2
13	Incorporating use phase chemical leaching and water quality testing for life cycle toxicity assessment of cross-linked polyethylene (PEX) piping. <i>Science of the Total Environment</i> , 2021, 782, 146374.	3.9	3
14	The 2021 report of the Lancet Countdown on health and climate change: code red for a healthy future. <i>Lancet, The</i> , 2021, 398, 1619-1662.	6.3	669
15	Environmental Footprint of Anesthesia: More than Inhaled Anesthetics!. <i>Anesthesiology</i> , 2021, 135, 937-939.	1.3	4
16	The Green Print: Advancement of Environmental Sustainability in Healthcare. <i>Resources, Conservation and Recycling</i> , 2020, 161, 104882.	5.3	121
17	Why Was My Paper Rejected without Review?. <i>Environmental Science & Technology</i> , 2020, 54, 11641-11644.	4.6	10
18	Transforming The Medical Device Industry: Road Map To A Circular Economy. <i>Health Affairs</i> , 2020, 39, 2088-2097.	2.5	103

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19	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
20	The health-care sector's role in climate stabilisation – Authors' reply. Lancet, The, 2020, 396, 92-93.	6.3	0
21	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
22	Spatio-temporal changes among site-to-source conversion factors for building energy modeling. Energy and Buildings, 2020, 213, 109832.	3.1	9
23	Health Care Pollution And Public Health Damage In The United States: An Update. Health Affairs, 2020, 39, 2071-2079.	2.5	261
24	LCAart: Communicating industrial ecology at a human scale. Journal of Industrial Ecology, 2020, 24, 736-747.	2.8	3
25	Transforming The Medical Device Industry: Road Map To A Circular Economy. Health Affairs, 2020, 39, 2088-2097.	1.8	13
26	Health Care Pollution And Public Health Damage In The United States: An Update. Health Affairs, 2020, 39, 2071-2079.	1.8	13
27	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
28	Simulating future energy consumption in office buildings using an ensemble of morphed climate data. Applied Energy, 2019, 255, 113821.	5.1	37
29	Comparison of U.S. Manufacturing Locations for Solar PVs. Procedia CIRP, 2019, 80, 434-439.	1.0	3
30	Effect of window-to-wall ratio on measured energy consumption in US office buildings. Energy and Buildings, 2019, 203, 109434.	3.1	79
31	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
32	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
33	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
34	Estimated Global Disease Burden From US Health Care Sector Greenhouse Gas Emissions. American Journal of Public Health, 2018, 108, S120-S122.	1.5	131
35	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
36	Life cycle assessment of UV-Curable bio-based wood flooring coatings. Journal of Cleaner Production, 2018, 192, 932-939.	4.6	28

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37	Life Cycle Assessment and Costing Methods for Device Procurement: Comparing Reusable and Single-Use Disposable Laryngoscopes. <i>Anesthesia and Analgesia</i> , 2018, 127, 434-443.	1.1	142
38	Geospatial assessment of regional scale bioenergy production potential on marginal and degraded land. <i>Resources, Conservation and Recycling</i> , 2018, 128, 90-97.	5.3	17
39	Life cycle environmental emissions and health damages from the Canadian healthcare system: An economic-environmental-epidemiological analysis. <i>PLoS Medicine</i> , 2018, 15, e1002623.	3.9	141
40	Comparative Life Cycle Assessment of Advanced Wastewater Treatment Processes for Removal of Chemicals of Emerging Concern. <i>Environmental Science & Technology</i> , 2018, 52, 11346-11358.	4.6	52
41	Life cycle energy and environmental benefits of novel design-for-deconstruction structural systems in steel buildings. <i>Building and Environment</i> , 2018, 143, 421-430.	3.0	65
42	Harmonized algal biofuel life cycle assessment studies enable direct process train comparison. <i>Applied Energy</i> , 2018, 224, 494-509.	5.1	24
43	Life cycle energy benefits of carbon nanotubes for electromagnetic interference (EMI) shielding applications. <i>Journal of Cleaner Production</i> , 2017, 142, 1971-1978.	4.6	33
44	Do resilient and sustainable design strategies conflict in commercial buildings? A critical analysis of existing resilient building frameworks and their sustainability implications. <i>Energy and Buildings</i> , 2017, 146, 295-311.	3.1	47
45	Life Cycle Assessment and Release Studies for 15 Nanosilver-Enabled Consumer Products: Investigating Hotspots and Patterns of Contribution. <i>Environmental Science & Technology</i> , 2017, 51, 7148-7158.	4.6	75
46	Meta-analysis and Harmonization of Life Cycle Assessment Studies for Algae Biofuels. <i>Environmental Science & Technology</i> , 2017, 51, 9419-9432.	4.6	49
47	Growing fresh fruits and vegetables in an urban landscape: A geospatial assessment of ground level and rooftop urban agriculture potential in Boston, USA. <i>Landscape and Urban Planning</i> , 2017, 165, 130-141.	3.4	94
48	Environmental Impacts of the U.S. Health Care System and Effects on Public Health. <i>PLoS ONE</i> , 2016, 11, e0157014.	1.1	502
49	Time-dependent life cycle assessment of microalgal biorefinery co-products. <i>Biofuels, Bioproducts and Biorefining</i> , 2016, 10, 409-421.	1.9	17
50	Criticality of Seven Specialty Metals. <i>Journal of Industrial Ecology</i> , 2016, 20, 837-853.	2.8	33
51	Life Cycle Assessments of Loans and Exhibitions: Three Case Studies at the Museum Fine Arts, Boston. <i>Journal of the American Institute for Conservation</i> , 2016, 55, 2-11.	0.2	9
52	Net energy benefits of carbon nanotube applications. <i>Applied Energy</i> , 2016, 173, 624-634.	5.1	38
53	Green Solvents in Biomass Processing. <i>ACS Sustainable Chemistry and Engineering</i> , 2016, 4, 5821-5837.	3.2	123
54	Meta-Analysis of Life Cycle Energy and Greenhouse Gas Emissions for Priority Biobased Chemicals. <i>ACS Sustainable Chemistry and Engineering</i> , 2016, 4, 6443-6454.	3.2	42

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55	Life cycle inherent toxicity: a novel LCA-based algorithm for evaluating chemical synthesis pathways. <i>Green Chemistry</i> , 2016, 18, 3257-3264.	4.6	29
56	Life-Cycle Assessment of Advanced Nutrient Removal Technologies for Wastewater Treatment. <i>Environmental Science & Technology</i> , 2016, 50, 3020-3030.	4.6	85
57	Life Cycle Assessment of Catechols from Lignin Depolymerization. <i>ACS Sustainable Chemistry and Engineering</i> , 2016, 4, 708-718.	3.2	62
58	Criticality of the Geological Zinc, Tin, and Lead Family. <i>Journal of Industrial Ecology</i> , 2015, 19, 628-644.	2.8	66
59	Coordinating modeling and experimental research of engineered nanomaterials to improve life cycle assessment studies. <i>Environmental Science: Nano</i> , 2015, 2, 669-682.	2.2	39
60	The criticality of four nuclear energy metals. <i>Resources, Conservation and Recycling</i> , 2015, 95, 193-201.	5.3	37
61	Environmental Impacts of Surgical Procedures: Life Cycle Assessment of Hysterectomy in the United States. <i>Environmental Science & Technology</i> , 2015, 49, 1779-1786.	4.6	223
62	Comparative life cycle assessment of silver nanoparticle synthesis routes. <i>Environmental Science: Nano</i> , 2015, 2, 361-369.	2.2	68
63	Engaging stakeholders in nano-EHS risk governance. <i>Environment Systems and Decisions</i> , 2015, 35, 24-28.	1.9	8
64	Geospatial assessment of potential bioenergy crop production on urban marginal land. <i>Applied Energy</i> , 2015, 159, 540-547.	5.1	46
65	Integrating life cycle assessment into managing potential EHS risks of engineered nanomaterials: reviewing progress to date. <i>Journal of Nanoparticle Research</i> , 2015, 17, 1.	0.8	23
66	Environmental Life Cycle Assessment of Nanosilver-Enabled Bandages. <i>Environmental Science & Technology</i> , 2015, 49, 361-368.	4.6	88
67	Quantification of social equity in life cycle assessment for increased sustainable production of sanitary products in Uganda. <i>Journal of Cleaner Production</i> , 2015, 96, 569-579.	4.6	40
68	Life Cycle Assessment of Metals: A Scientific Synthesis. <i>PLoS ONE</i> , 2014, 9, e101298.	1.1	425
69	Environmental and Economic Life-Cycle Assessment of Municipal Water-Storage Options: Infrastructure Refurbishment versus Replacement. <i>Journal of Infrastructure Systems</i> , 2014, 20, .	1.0	8
70	Environmental Sustainability Assessment of Technologies for Removal of Contaminants of Emerging Concern. <i>Proceedings of the Water Environment Federation</i> , 2014, 2014, 6455-6469.	0.0	1
71	Island Waste Management Systems. <i>Journal of Industrial Ecology</i> , 2014, 18, 306-317.	2.8	57
72	Evaluating microalgal integrated biorefinery schemes: Empirical controlled growth studies and life cycle assessment. <i>Bioresource Technology</i> , 2014, 151, 19-27.	4.8	81

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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	Urban scale mapping of concrete degradation from projected climate change. Urban Climate, 2014, 9, 101-114.	2.4	38
75	Life Cycle Impacts and Benefits of a Carbon Nanotube-Enabled Chemical Gas Sensor. Environmental Science & Technology, 2014, 48, 11360-11368.	4.6	48
76	Life cycle carbon benefits of aerospace alloy recycling. Journal of Cleaner Production, 2014, 80, 38-45.	4.6	46
77	Historical evolution of greenhouse gas emissions from aluminum production at a country level. Journal of Cleaner Production, 2014, 84, 540-549.	4.6	23
78	Environmental Life Cycle Assessment of a Carbon Nanotube-Enabled Semiconductor Device. Environmental Science & Technology, 2013, 47, 8471-8478.	4.6	33
79	Life cycle energy and environmental benefits of a US industrial symbiosis. International Journal of Life Cycle Assessment, 2013, 18, 1524-1532.	2.2	59
80	Water flows, energy demand, and market analysis of the informal water sector in Kisumu, Kenya. Ecological Economics, 2013, 87, 137-144.	2.9	26
81	Historical evolution of anthropogenic aluminum stocks and flows in Italy. Resources, Conservation and Recycling, 2013, 72, 1-8.	5.3	43
82	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
83	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
84	Comparative Life Cycle Assessment of Disposable and Reusable Laryngeal Mask Airways. Anesthesia and Analgesia, 2012, 114, 1067-1072.	1.1	153
85	Life Cycle Greenhouse Gas Emissions of Anesthetic Drugs. Anesthesia and Analgesia, 2012, 114, 1086-1090.	1.1	295
86	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
87	New Perspectives on Nanomaterial Aquatic Ecotoxicity: Production Impacts Exceed Direct Exposure Impacts for Carbon Nanotubes. Environmental Science & Technology, 2012, 46, 2902-2910.	4.6	152
88	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
89	Exploring the Global Journey of Nickel with Markov Chain Models. Journal of Industrial Ecology, 2012, 16, 334-342.	2.8	42
90	Combinatorial Life Cycle Assessment to Inform Process Design of Industrial Production of Algal Biodiesel. Environmental Science & Technology, 2011, 45, 7060-7067.	4.6	318

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91	Teaching industrial ecology and environmental management in Second Life. Journal of Cleaner Production, 2011, 19, 1273-1278.	4.6	14
92	Assessing greenhouse gas emissions from university purchases. International Journal of Sustainability in Higher Education, 2011, 12, 225-235.	1.6	60
93	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
94	Measuring the status of stainless steel use in the Japanese socio-economic system. Resources, Conservation and Recycling, 2010, 54, 737-743.	5.3	8
95	Significant global variability in a facility-level greenhouse gas assessment of primary nickel. , 2010, , .		0
96	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
97	Using Material Flow Analysis to Illuminate Long-term Waste Management Solutions in Oahu, Hawaii. Journal of Industrial Ecology, 2009, 13, 758-774.	2.8	46
98	Long-term trends of electric efficiencies in electricity generation in developing countries. Energy Policy, 2009, 37, 1678-1686.	4.2	47
99	Quantifying Life Cycle Environmental Benefits from the Reuse of Industrial Materials in Pennsylvania. Environmental Science & Technology, 2009, 43, 2550-2556.	4.6	55
100	Toward Green Nano. Journal of Industrial Ecology, 2008, 12, 316-328.	2.8	145
101	The World's Scavengers by Martin Medina. Journal of Industrial Ecology, 2008, 12, 626-627.	2.8	0
102	Markov chain modeling of the global technological lifetime of copper. Ecological Economics, 2008, 67, 265-273.	2.9	51
103	Spatial Assessment of Net Mercury Emissions from the Use of Fluorescent Bulbs. Environmental Science & Technology, 2008, 42, 8564-8570.	4.6	38
104	Silver Emissions and their Environmental Impacts: A Multilevel Assessment. Environmental Science & Technology, 2007, 41, 6283-6289.	4.6	142