Guido W Sonnemann

List of Publications by Year
in descending order

129	5,517	101384	85405
papers	citations	36 h-index	71 g-index

132	132	132	5178
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Sustainability in the construction industry: A review of recent developments based on LCA. Construction and Building Materials, 2009, 23, 28-39.	3.2	956
2	What Do We Know About Metal Recycling Rates?. Journal of Industrial Ecology, 2011, 15, 355-366.	2.8	476
3	Toward Meaningful End Points of Biodiversity in Life Cycle Assessment. Environmental Science & Technology, 2011, 45, 70-79.	4.6	173
4	Uncertainty assessment by a Monte Carlo simulation in a life cycle inventory of electricity produced by a waste incinerator. Journal of Cleaner Production, 2003, 11, 279-292.	4.6	162
5	A UNEP/SETAC approach towards a life cycle sustainability assessmentâ€"our contribution to Rio+20. International Journal of Life Cycle Assessment, 2013, 18, 1673-1685.	2.2	157
6	Critical review of life cycle assessment (LCA) for the built environment at the neighborhood scale. Building and Environment, 2015, 93, 165-178.	3.0	156
7	Nexus between nature-based solutions, ecosystem services and urban challenges. Land Use Policy, 2021, 100, 104898.	2.5	150
8	A review of methods and data to determine raw material criticality. Resources, Conservation and Recycling, 2020, 155, 104617.	5.3	137
9	Framework for scenario development in LCA. International Journal of Life Cycle Assessment, 2000, 5, 21.	2.2	117
10	Developing a systematic framework for consistent allocation in LCA. International Journal of Life Cycle Assessment, 2016, 21, 976-993.	2.2	114
11	Life cycle assessment of two dwellings: One in Spain, a developed country, and one in Colombia, a country under development. Science of the Total Environment, 2010, 408, 2435-2443.	3.9	103
12	Anticipating in-use stocks of carbon fiber reinforced polymers and related waste flows generated by the commercial aeronautical sector until 2050. Resources, Conservation and Recycling, 2017, 125, 264-272.	5.3	101
13	Mineral resources in life cycle impact assessmentâ€"part I: a critical review of existing methods. International Journal of Life Cycle Assessment, 2020, 25, 784-797.	2.2	95
14	Environmental Feasibility of the Recycling of Carbon Fibers from CFRPs by Solvolysis Using Supercritical Water. ACS Sustainable Chemistry and Engineering, 2014, 2, 1498-1502.	3.2	90
15	From a critical review to a conceptual framework for integrating the criticality of resources into Life Cycle Sustainability Assessment. Journal of Cleaner Production, 2015, 94, 20-34.	4.6	89
16	Anticipating in-use stocks of carbon fibre reinforced polymers and related waste generated by the wind power sector until 2050. Resources, Conservation and Recycling, 2019, 141, 30-39.	5.3	89
17	Importâ€based Indicator for the Geopolitical Supply Risk of Raw Materials in Life Cycle Sustainability Assessments. Journal of Industrial Ecology, 2016, 20, 154-165.	2.8	85
18	Mineral resources in life cycle impact assessment: part II â€“ recommendations on application-dependent use of existing methods and on future method development needs. International Journal of Life Cycle Assessment, 2020, 25, 798-813.	2.2	84

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19	Is gravel becoming scarce? Evaluating the local criticality of construction aggregates. Resources, Conservation and Recycling, 2017, 126, 25-33.	5.3	83
20	Assessing habitat loss, fragmentation and ecological connectivity in Luxembourg to support spatial planning. Landscape and Urban Planning, 2019, 189, 335-351.	3.4	71
21	Critical review of guidelines against a systematic framework with regard to consistency on allocation procedures for recycling in LCA. International Journal of Life Cycle Assessment, 2016, 21, 994-1008.	2.2	69
22	Life-cycle assessment of cradle-to-grave opportunities and environmental impacts of organic photovoltaic solar panels compared to conventional technologies. Solar Energy Materials and Solar Cells, 2016, 156, 37-48.	3.0	65
23	Global guidance on environmental life cycle impact assessment indicators: findings of the scoping phase. International Journal of Life Cycle Assessment, 2014, 19, 962-967.	2.2	62
24	Extension of geopolitical supply risk methodology: Characterization model applied to conventional and electric vehicles. Journal of Cleaner Production, 2017, 162, 754-763.	4.6	59
25	Life cycle assessment of fish and seafood processed products â€“ A review of methodologies and new challenges. Science of the Total Environment, 2021, 761, 144094.	3.9	58
26	Extending the geopolitical supply risk indicator: Application of life cycle sustainability assessment to the petrochemical supply chain of polyacrylonitrile-based carbon fibers. Journal of Cleaner Production, 2016, 137, 1170-1178.	4.6	57
27	Life cycle inventory analysis of hydrogen production by the steam-reforming process: comparison between vegetable oils and fossil fuels as feedstock. Green Chemistry, 2002, 4, 414-423.	4.6	53
28	Principles for the application of life cycle sustainability assessment. International Journal of Life Cycle Assessment, 2021, 26, 1900-1905.	2.2	53
29	Geopolitical-related supply risk assessment as a complement to environmental impact assessment: the case of electric vehicles. International Journal of Life Cycle Assessment, 2017, 22, 31-39.	2.2	52
30	Raw material criticality assessment as a complement to environmental life cycle assessment: Examining methods for productâ€level supply risk assessment. Journal of Industrial Ecology, 2019, 23, 1226-1236.	2.8	50
31	Positioning supercritical solvolysis among innovative recycling and current waste management scenarios for carbon fiber reinforced plastics thanks to comparative life cycle assessment. Journal of Supercritical Fluids, 2019, 154, 104607.	1.6	47
32	Evaluating nanotechnology opportunities and risks through integration of life-cycle and risk assessment. Nature Nanotechnology, 2017, 12, 734-739.	15.6	46
33	Addressing challenges and opportunities of the European seafood sector under a circular economy framework. Current Opinion in Environmental Science and Health, 2020, 13, 101-106.	2.1	45
34	Medellin Declaration on Marine Litter in Life Cycle Assessment and Management. International Journal of Life Cycle Assessment, 2017, 22, 1637-1639.	2.2	42
35	An analysis to understand how the shape of a concrete residential building influences its embodied energy and embodied carbon. Energy and Buildings, 2017, 154, 1-11.	3.1	38
36	Operational energy in the life cycle of residential dwellings: The experience of Spain and Colombia. Applied Energy, 2010, 87, 673-680.	5.1	37

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37	Archetypes of Goal and Scope Definitions for Consistent Allocation in LCA. Sustainability, 2020, 12, 5587.	1.6	37
38	How recycling mitigates supply risks of critical raw materials: Extension of the geopolitical supply risk methodology applied to information and communication technologies in the European Union. Resources, Conservation and Recycling, 2021, 164, 105108.	5.3	37
39	Losses and lifetimes of metals in the economy. Nature Sustainability, 2022, 5, 717-726.	11.5	36
40	A comparative human health, ecotoxicity, and product environmental assessment on the production of organic and silicon solar cells. Progress in Photovoltaics: Research and Applications, 2016, 24, 645-655.	4.4	34
41	Managing sustainability performance through the valueâ€chain. Corporate Governance (Bingley), 2010, 10, 46-58.	3.2	33
42	Anticipatory life-cycle assessment of supercritical fluid synthesis of barium strontium titanate nanoparticles. Green Chemistry, 2016, 18, 4924-4933.	4.6	31
43	Abiotic Raw-Materials in Life Cycle Impact Assessments: An Emerging Consensus across Disciplines. Resources, 2016, 5, 12.	1.6	30
44	Preparation of hierarchical porous carbonaceous foams from Kraft black liquor. Materials Today Communications, 2016, 7, 108-116.	0.9	30
45	Geographical and technological differences in life cycle inventories shown by the use of process models for waste incinerators part I. technological and geographical differences. International Journal of Life Cycle Assessment, 2002, 7, 295-300.	2.2	29
46	Supercritical Fluid Flow Synthesis to Support Sustainable Production of Engineered Nanomaterials: Case Study of Titanium Dioxide. ACS Sustainable Chemistry and Engineering, 2018, 6, 5142-5151.	3.2	28
47	Development of Eco-Efficient Smart Electronics for Anticounterfeiting and Shock Detection Based on Printable Inks. ACS Sustainable Chemistry and Engineering, 2021, 9, 11691-11704.	3.2	27
48	Introducing a multi-criteria indicator to better evaluate impacts of rare earth materials production and consumption in life cycle assessment. Journal of Rare Earths, 2014, 32, 288-292.	2.5	26
49	To what extent can agent-based modelling enhance a life cycle assessment? Answers based on a literature review. Journal of Cleaner Production, 2019, 239, 118123.	4.6	26
50	LCA (Life Cycle Assessment) of EVP â€“ engineering veneer product: plywood glued using a vacuum moulding technology from green veneers. Journal of Cleaner Production, 2016, 124, 383-394.	4.6	25
51	Do we have enough natural sand for lowâ€carbon infrastructure?. Journal of Industrial Ecology, 2020, 24, 1004-1015.	2.8	24
52	Environmental Trade-Offs of Downcycling in Circular Economy: Combining Life Cycle Assessment and Material Circularity Indicator to Inform Circularity Strategies for Alkaline Batteries. Sustainability, 2021, 13, 1040.	1.6	24
53	Process on â€œglobal guidance for LCA databasesâ€• International Journal of Life Cycle Assessment, 2011, 16, 95-97.	2.2	23
54	A detailed quantitative comparison of the life cycle assessment of bottled wines using an original harmonization procedure. Journal of Cleaner Production, 2020, 250, 119472.	4.6	23

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55	Potential for industrial ecology to support healthcare sustainability: Scoping review of a fragmented literature and conceptual framework for future research. Journal of Industrial Ecology, 2019, 23, 1344-1352.	2.8	22
56	Supply risk evolution of raw materials for batteries and fossil fuels for selected OECD countries (2000â€“2018). Resources Policy, 2022, 75, 102465.	4.2	22
57	Life Cycle Impact Assessmentâ€"where we are, trends, and next steps: a late report from a UNEP/SETAC Life Cycle Initiative workshop and a few updates from recent developments. International Journal of Life Cycle Assessment, 2013, 18, 1413-1420.	2.2	21
58	Comparative environmental life cycle assessment of materials in wooden boat ecodesign. International Journal of Life Cycle Assessment, 2016, 21, 265-275.	2.2	20
59	Identification of Key Sustainability Performance Indicators and related assessment methods for the carbon fiber recycling sector. Ecological Indicators, 2017, 72, 833-847.	2.6	20
60	Application of environmental life cycle assessment (LCA) within the space sector: A state of the art. Acta Astronautica, 2020, 170, 122-135.	1.7	20
61	Greater circularity leads to lower criticality, and other links between criticality and the circular economy. Resources, Conservation and Recycling, 2020, 159, 104718.	5.3	19
62	Probabilistic risk assessment of emerging materials: case study of titanium dioxide nanoparticles. Nanotoxicology, 2017, 11, 558-568.	1.6	18
63	ILCD Handbook Public Consultation Workshop. International Journal of Life Cycle Assessment, 2010, 15, 231-237.	2.2	17
64	Global guidance principles for life cycle assessment databases: development of training material and other implementation activities on the publication. International Journal of Life Cycle Assessment, 2013, 18, 1169-1172.	2.2	17
65	Assessing the impact of space debris on orbital resource in life cycle assessment: A proposed method and case study. Science of the Total Environment, 2019, 667, 780-791.	3.9	17
66	Life cycle impact assessment methods for estimating the impacts of dissipative flows of metals. Journal of Industrial Ecology, 2021, 25, 1177-1193.	2.8	17
67	Life Cycle Management: Implementing Sustainability in Business Practice. LCA Compendium, 2015, , 7-21.	0.8	17
68	Life Cycle Management in Developing Countries: State of the Art and Outlook. International Journal of Life Cycle Assessment, 2006, 11, 123-126.	2.2	16
69	Design of an endpoint indicator for mineral resource supply risks in life cycle sustainability assessment: The case of Liâ€ion batteries. Journal of Industrial Ecology, 2021, 25, 1051-1062.	2.8	16
70	Teaching life cycle assessment in higher education. International Journal of Life Cycle Assessment, 2021, 26, 511-527.	2.2	16
71	Life cycle management: UNEP-workshop. International Journal of Life Cycle Assessment, 2001, 6, 325-333.	2.2	15
72	Life cycle assessment of producing emulsion-templated porous materials from Kraft black liquor â€" comparison of a vegetable oil and a petrochemical solvent. Journal of Cleaner Production, 2015, 91, 180-186.	4.6	15

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73	The potential of Kraft black liquor to produce bio-based emulsion-templated porous materials. Reactive and Functional Polymers, 2015, 90, 15-20.	2.0	14
74	Social life cycle assessment framework for evaluation of potential job creation with an application in the French carbon fiber aeronautical recycling sector. International Journal of Life Cycle Assessment, 2019, 24, 1729-1742.	2.2	14
75	The future in and of criticality assessments. Journal of Industrial Ecology, 2019, 23, 751-766.	2.8	14
76	Framework for the uncertainty assessment in the Impact Pathway Analysis with an application on a local scale in Spain. Environment International, 2002, 28, 9-18.	4.8	13
77	Life cycle inventory of plastics losses from seafood supply chains: Methodology and application to French fish products. Science of the Total Environment, 2022, 804, 150117.	3.9	13
78	Life cycle assessment of the production of surface-active alkyl polyglycosides from acid-assisted ball-milled wheat straw compared to the conventional production based on corn-starch. Green Chemistry, 2018, 20, 2135-2141.	4.6	12
79	Achieving Sustainability of the Seafood Sector in the European Atlantic Area by Addressing Eco-Social Challenges: The NEPTUNUS Project. Sustainability, 2022, 14, 3054.	1.6	12
80	Strengthening capacity building through regional networks. International Journal of Life Cycle Assessment, 2004, 9, 334-334.	2.2	11
81	Modeling human health characterization factors for indoor nanomaterial emissions in life cycle assessment: a case-study of titanium dioxide. Environmental Science: Nano, 2017, 4, 1705-1721.	2.2	11
82	Packaging environmental impact on seafood supply chains: A review of life cycle assessment studies. Journal of Industrial Ecology, 2022, 26, 1961-1978.	2.8	11
83	Evaluating the environmental impacts of analytical chemistry methods: From a critical review towards a proposal using a life cycle approach. TrAC - Trends in Analytical Chemistry, 2022, 147, 116525.	5.8	11
84	Life cycle assessment of emerging Niâ€“Co hydroxide charge storage electrodes: impact of graphene oxide and synthesis route. RSC Advances, 2019, 9, 18853-18862.	1.7	10
85	Life cycle assessment of organic photovoltaic charger use in Europe: the role of product use intensity and irradiation. Journal of Cleaner Production, 2019, 233, 1088-1096.	4.6	10
86	The ABCâ€ŁCA method for the integration of activityâ€bbased costing and life cycle assessment. Business Strategy and the Environment, 2021, 30, 1735-1750.	8.5	10
87	Linkage of impact pathways to cultural perspectives to account for multiple aspects of mineral resource use in life cycle assessment. Resources, Conservation and Recycling, 2022, 176, 105912.	5.3	10
88	Implementing Artificial Intelligence Techniques to Predict Environmental Impacts: Case of Construction Products. Sustainability, 2022, 14, 3699.	1.6	10
89	Circular economy, resource efficiency, life cycle innovation: same objectives, same impacts?. International Journal of Life Cycle Assessment, 2017, 22, 1327-1328.	2.2	9
90	Towards the integration of orbital space use in Life Cycle Impact Assessment. Science of the Total Environment, 2017, 595, 642-650.	3.9	9

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91	A necessary step forward for proper non-energetic abiotic resource use consideration in life cycle assessment: The functional dissipation approach using dynamic material flow analysis data. Resources, Conservation and Recycling, 2019, 151, 104449.	5.3	9
92	Evaluating the risks in the construction wood product system through a criticality assessment framework. Resources, Conservation and Recycling, 2019, 146, 68-76.	5.3	9
93	An improved resource midpoint characterization method for supply risk of resources: integrated assessment of Li-ion batteries. International Journal of Life Cycle Assessment, 2022, 27, 457-468.	2.2	9
94	Geographical and technological differences in Life Cycle Inventories shown by the use of process models for waste incinerators. International Journal of Life Cycle Assessment, 2002, 7, 363.	2.2	8
95	LCA mainstreaming conditions in Latin Americaâ€"based on learnings from 2005 to 2014. International Journal of Life Cycle Assessment, 2017, 22, 485-491.	2.2	8
96	How to account for plastic emissions in life cycle inventory analysis?. Resources, Conservation and Recycling, 2021, 168, 105331.	5.3	8
97	A Review on the Use of Life Cycle Methodologies and Tools in Sustainable Regional Development. Sustainability, 2021, 13, 10881.	1.6	8
98	Framework for the environmental damage assessment of an industrial process chain. Journal of Hazardous Materials, 2000, 77, 91-106.	6.5	7
99	An axiomatic method for goal-dependent allocation in life cycle assessment. International Journal of Life Cycle Assessment, 2021, 26, 1223-1235.	2.2	7
100	The carbon footprint of water treatment as well as sewer and sanitation utilities of Pamplona in Colombia. Environment, Development and Sustainability, 2022, 24, 3982-3999.	2.7	5
101	The UNEP/SETAC Life Cycle Initiative. LCA Compendium, 2014, , 107-144.	0.8	5
102	Greening Pathways for Synthetic Talc Production Based on the Supercritical Hydrothermal Flow Process. ACS Sustainable Chemistry and Engineering, 2021, 9, 16597-16605.	3.2	5
103	Crosscutting issues to be explored by the UNEP/SETAC Life Cycle Initiative in 2004. International Journal of Life Cycle Assessment, 2004, 9, 67-67.	2.2	4
104	Corner: UNEP/SETAC life cycle initiative. International Journal of Life Cycle Assessment, 2007, 12, 544-545.	2.2	4
105	Review of LCA datasets in three emerging economies: a summary of learnings. International Journal of Life Cycle Assessment, 2017, 22, 1658-1665.	2.2	4
106	Mainstreaming Life Cycle Sustainability Management in Rapidly Growing and Emerging Economies Through Capacity-Building. LCA Compendium, 2015, , 263-277.	0.8	4
107	Life cycle assessment of sample preparation in analytical chemistry: a case study on SBSE and SPE techniques. Advances in Sample Preparation, 2022, 1, 100009.	1.1	4
108	Start of the next phase: Task forces and potential future crosscutting activities. International Journal of Life Cycle Assessment, 2003, 8, 323-323.	2.2	3

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109	Key Observations Arising from Papers on Sustainable Production, Use and Recycling of Natural Resources. International Journal of Life Cycle Assessment, 2006, 11, 75-76.	2.2	3
110	Preface: Recognizing management in LCM. International Journal of Life Cycle Assessment, 2018, 23, 1351-1356.	2.2	3
111	Material Flow Analysis to Evaluate Supply Chain Evolution and Management: An Example Focused on Maritime Pine in the Landes de Gascogne Forest, France. Sustainability, 2021, 13, 4378.	1.6	3
112	Communication and Collaboration as Essential Elements for Mainstreaming Life Cycle Management. LCA Compendium, 2015, , 279-291.	0.8	3
113	How to Implement Life Cycle Management in Business?. LCA Compendium, 2015, , 35-50.	0.8	3
114	International Life Cycle Panel: Decisions for 2003. International Journal of Life Cycle Assessment, 2003, 8, 61-61.	2.2	2
115	UNEP governing council calls for strengthening the UNEP/SETAC partnership. International Journal of Life Cycle Assessment, 2003, 8, 118-118.	2.2	2
116	Int J LCA and the Initiative collaborate to enhance global capacity of LCA and LCM. International Journal of Life Cycle Assessment, 2003, 8, 306-306.	2.2	2
117	Environmental damage estimations in industrial process chains. International Journal of Life Cycle Assessment, 2004, 9, 207-207.	2.2	2
118	International Conference on Life Cycle Assessment 2005 (ICLCA 2005), 25Â–28 April 2005, San Jose, Costa Rica Guido Sonnemann (on behalf of the International Organising Committee: Ana Quiros, Sergio) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 163-163.	2.2	2
119	Space debris through the prism of the environmental performance of space systems: the case of Sentinel-3 redesigned mission. Journal of Space Safety Engineering, 2020, 7, 198-205.	0.5	2
120	â€œAllocation at the point of substitutionâ€•applied to recycled rare earth elements: what can we learn?. International Journal of Life Cycle Assessment, 2021, 26, 1403-1416.	2.2	2
121	Life Cycle Management Responsibilities and Procedures in the Value Chain. LCA Compendium, 2015, , 195-212.	0.8	2
122	Updating and Roadâ€testing Life Cycle Inventory Data Review Criteria: Toward Global Consensus and Guidance On Data Quality Assessment. Integrated Environmental Assessment and Management, 2020, 16, 517-524.	1.6	1
123	The influence of market factors on the potential environmental benefits of the recycling of rare earth elements. Clean Technologies and Recycling, 2022, 2, 64-79.	1.3	1
124	Significant leap forward for the Life Cycle Initiative at UN Sustainable Consumption and Production Expert Meeting in Marrakech and at SETAC Hamburg. International Journal of Life Cycle Assessment, 2003, 8, 241-241.	2.2	0
125	Activities ahead for 2004. International Journal of Life Cycle Assessment, 2004, 9, 74-74.	2.2	0
126	Meetings in prague from 15 â€” 23 April 2003: a new momentum. International Journal of Life Cycle Assessment, 2004, 9, 152-152.	2.2	0

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127	New Features Under Preparation. International Journal of Life Cycle Assessment, 2005, 10, 374-374.	2.2	0
128	New activities launched in Warsaw and consultations on emerging ideas. International Journal of Life Cycle Assessment, 2008, 13, 371-373.	2.2	0
129	Corner: UNEP/SETAC Life Cycle Initiative. International Journal of Life Cycle Assessment, 2007, 12, 544-545.	2.2	0