Roland Hischier

List of Publications by Year
in descending order

80 papers	4,983 citations	147801 31 h-index	91884 69 g-index
81 all docs	81 docs citations	81 times ranked	5486 citing authors

#	ARTICLE	IF	CITATIONS
1	The ecoinvent Database: Overview and Methodological Framework (7 pp). International Journal of Life Cycle Assessment, 2005, 10, 3-9.	4.7	832
2	Safety Assessment of Graphene-Based Materials: Focus on Human Health and the Environment. ACS Nano, 2018, 12, 10582-10620.	14.6	438
3	From laboratory to industrial scale: a scale-up framework for chemical processes in life cycle assessment studies. Journal of Cleaner Production, 2016, 135, 1085-1097.	9.3	325
4	CurauÃ¡ fibers in the automobile industry â€“ a sustainability assessment. Journal of Cleaner Production, 2007, 15, 1032-1040.	9.3	304
5	Does WEEE recycling make sense from an environmental perspective?. Environmental Impact Assessment Review, 2005, 25, 525-539.	9.2	242
6	Life cycle assessment of engineered nanomaterials: State of the art and strategies to overcome existing gaps. Science of the Total Environment, 2012, 425, 271-282.	8.0	191
7	Environmental impacts of the Swiss collection and recovery systems for Waste Electrical and Electronic Equipment (WEEE): A follow-up. Science of the Total Environment, 2011, 409, 1746-1756.	8.0	178
8	Towards a framework for life cycle thinking in the assessment of nanotechnology. Journal of Cleaner Production, 2008, 16, 910-926.	9.3	142
9	Predicting the environmental impact of a future nanocellulose production at industrial scale: Application of the life cycle assessment scale-up framework. Journal of Cleaner Production, 2018, 174, 283-295.	9.3	132
10	Life cycle assessment of manufactured nanomaterials: Where are we?. NanoImpact, 2018, 10, 108-120.	4.5	129
11	Establishing Life Cycle Inventories of Chemicals Based on Differing Data Availability (9 pp). International Journal of Life Cycle Assessment, 2005, 10, 59-67.	4.7	111
12	Life cycle assessment of post-consumer plastics production from waste electrical and electronic equipment (WEEE) treatment residues in a Central European plastics recycling plant. Science of the Total Environment, 2015, 529, 158-167.	8.0	111
13	A circular economy within the planetary boundaries: Towards a resource-based, systemic approach. Resources, Conservation and Recycling, 2020, 155, 104673.	10.8	103
14	Life cycle assessment study of a Chinese desktop personal computer. Science of the Total Environment, 2009, 407, 1755-1764.	8.0	100
15	Environmental impacts of lighting technologies â€" Life cycle assessment and sensitivity analysis. Environmental Impact Assessment Review, 2011, 31, 334-343.	9.2	81
16	Charging sustainable batteries. Nature Sustainability, 2022, 5, 176-178.	23.7	70
17	Life Cycle Assessment of a New Technology To Extract, Functionalize and Orient Cellulose Nanofibers from Food Waste. ACS Sustainable Chemistry and Engineering, 2015, 3, 1047-1055.	6.7	69
18	LCA study of a plasma television device. International Journal of Life Cycle Assessment, 2010, 15, 428-438.	4.7	68

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19	Life cycle assessment of faÃ§ade coating systems containing manufactured nanomaterials. Journal of Nanoparticle Research, 2015, 17, 1.	1.9	66
20	Environmental impacts of an international conference. Environmental Impact Assessment Review, 2002, 22, 543-557.	9.2	61
21	Waste Treatment and Assessment of Long-Term Emissions (8pp). International Journal of Life Cycle Assessment, 2005, 10, 77-84.	4.7	56
22	LICARA nanoSCAN - A tool for the self-assessment of benefits and risks of nanoproducts. Environment International, 2016, 91, 150-160.	10.0	53
23	Towards more flexibility and transparency in life cycle inventories for Lithium-ion batteries. Resources, Conservation and Recycling, 2021, 170, 105619.	10.8	46
24	Isolation and Purification of Medium Chain Length Poly(3-hydroxyalkanoates) (mcl-PHA) for Medical Applications Using Nonchlorinated Solvents. Biomacromolecules, 2010, 11, 2716-2723.	5.4	45
25	Selected modelling principles applied in the ecoinvent database. Journal of Life Cycle Assessment Japan, 2005, 1, 112-122.	0.0	44
26	An integrated pathway based on in vitro data for the human hazard assessment of nanomaterials. Environment International, 2020, 137, 105505.	10.0	43
27	Multifunctional electronic media-traditional media. International Journal of Life Cycle Assessment, 2003, 8, 201-208.	4.7	42
28	Developments in Wood and Packaging Materials Life Cycle Inventories in ecoinvent (9 pp). International Journal of Life Cycle Assessment, 2005, 10, 50-58.	4.7	33
29	The applicability of non-local LCI data for LCA. Environmental Impact Assessment Review, 2010, 30, 192-199.	9.2	33
30	Human health characterization factors of nano-TiO2 for indoor and outdoor environments. International Journal of Life Cycle Assessment, 2016, 21, 1452-1462.	4.7	32
31	Powering a Sustainable and Circular Economyâ€"An Engineering Approach to Estimating Renewable Energy Potentials within Earth System Boundaries. Energies, 2019, 12, 4723.	3.1	32
32	Digital transformationâ€"life cycle assessment of digital services, multifunctional devices and cloud computing. International Journal of Life Cycle Assessment, 2020, 25, 2093-2098.	4.7	32
33	Cotton and Surgical Masksâ€"What Ecological Factors Are Relevant for Their Sustainability?. Sustainability, 2020, 12, 10245.	3.2	32
34	Environmental impacts of household appliances in Europe and scenarios for their impact reduction. Journal of Cleaner Production, 2020, 267, 121952.	9.3	32
35	Resource pressure â€" A circular design method. Resources, Conservation and Recycling, 2021, 164, 105179.	10.8	32
36	The Material Basis of ICT. Advances in Intelligent Systems and Computing, 2015, , 209-221.	0.6	29

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37	Car vs. Packagingâ€"A First, Simple (Environmental) Sustainability Assessment of Our Changing Shopping Behaviour. Sustainability, 2018, 10, 3061.	3.2	28
38	Integrative approach in a safe by design context combining risk, life cycle and socio-economic assessment for safer and sustainable nanomaterials. NanoImpact, 2021, 23, 100335.	4.5	27
39	Life cycle assessment study of a field emission display television device. International Journal of Life Cycle Assessment, 2015, 20, 61-73.	4.7	25
40	Most important factors of variability and uncertainty in an LCA study of nanomaterials â€" Findings from a case study with nano titanium dioxide. NanoImpact, 2017, 7, 17-26.	4.5	25
41	Using non-local databases for the environmental assessment of industrial activities: The case of Latin America. Environmental Impact Assessment Review, 2010, 30, 145-157.	9.2	24
42	Evaluating the sustainability of electronic media: Strategies for life cycle inventory data collection and their implications for LCA results. Environmental Modelling and Software, 2014, 56, 27-36.	4.5	24
43	Multi-perspective application selection: a method to identify sustainable applications for new materials using the example of cellulose nanofiber reinforced composites. Journal of Cleaner Production, 2016, 112, 1199-1210.	9.3	24
44	Framework for LCI modelling of releases of manufactured nanomaterials along their life cycle. International Journal of Life Cycle Assessment, 2014, 19, 838-849.	4.7	23
45	Grey Energy and Environmental Impacts of ICT Hardware. Advances in Intelligent Systems and Computing, 2015, , 171-189.	0.6	23
46	Safe(r) by design implementation in the nanotechnology industry. NanoImpact, 2020, 20, 100267.	4.5	22
47	Material flow, economic and environmental life cycle performances of informal electronic waste recycling in a Thai community. Resources, Conservation and Recycling, 2022, 180, 106129.	10.8	22
48	Fate modelling of nanoparticle releases in LCA: An integrative approach towards â€œUSEtox4Nanoâ€. Journal of Cleaner Production, 2019, 206, 701-712.	9.3	21
49	Towards Urban Miningâ€"Estimating the Potential Environmental Benefits by Applying an Alternative Construction Practice. A Case Study from Switzerland. Sustainability, 2020, 12, 5041.	3.2	21
50	Towards a more environmentally sustainable production of graphene-based materials. International Journal of Life Cycle Assessment, 2021, 26, 327-343.	4.7	21
51	Combining environmental and economic factors to evaluate the reuse of electrical and electronic equipment â€" a Swiss case study. Resources, Conservation and Recycling, 2021, 166, 105307.	10.8	21
52	Guidelines for consistent reporting of exchanges/to nature within life cycle inventories (LCI). International Journal of Life Cycle Assessment, 2001, 6, 192.	4.7	19
53	Nanoparticles in facade coatings: a survey of industrial experts on functional and environmental benefits and challenges. Journal of Nanoparticle Research, 2015, 17, 1.	1.9	18
54	Derivation of health effect factors for nanoparticles to be used in LCIA. NanoImpact, 2017, 7, 41-53.	4.5	18

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55	Environmental Consequences of Closing the Textile Loopâ€"Life Cycle Assessment of a Circular Polyester Jacket. Applied Sciences (Switzerland), 2021, 11, 2964.	2.5	17
56	Safe(r) by design guidelines for the nanotechnology industry. NanoImpact, 2022, 25, 100385.	4.5	15
57	Ecological resource availability: a method to estimate resource budgets for a sustainable economy. Global Sustainability, 2020, 3, .	3.3	14
58	Relative potency factor approach enables the use of <i>inÂvitro</i> information for estimation of human effect factors for nanoparticle toxicity in life-cycle impact assessment. Nanotoxicology, 2020, 14, 275-286.	3.0	13
59	Factors Allowing Users to Influence the Environmental Performance of Their T-Shirt. Sustainability, 2021, 13, 2498.	3.2	13
60	Bio-Based Polyester Fiber Substitutes: From GWP to a More Comprehensive Environmental Analysis. Applied Sciences (Switzerland), 2021, 11, 2993.	2.5	13
61	The Transition from Desktop Computers to Tablets: A Model for Increasing Resource Efficiency?. Advances in Intelligent Systems and Computing, 2015, , 243-256.	0.6	13
62	Eco-Efficient Process Improvement at the Early Development Stage: Identifying Environmental and Economic Process Hotspots for Synergetic Improvement Potential. Environmental Science & Technology, 2018, 52, 5959-5967.	10.0	11
63	Earlyâ€Stage Sustainability Evaluation of Nanoscale Cathode Materials for Lithium Ion Batteries. ChemSusChem, 2018, 11, 2068-2076.	6.8	10
64	How Relevant Are Direct Emissions of Microplastics into Freshwater from an LCA Perspective?. Sustainability, 2021, 13, 9922.	3.2	10
65	Benefit of GEOSS Interoperability in Assessment of Environmental Impacts Illustrated by the Case of Photovoltaic Systems. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2012, 5, 1722-1728.	4.9	9
66	Life cycle assessment of manufactured nanomaterials: inventory modelling rules and application example. International Journal of Life Cycle Assessment, 2014, 19, 941-943.	4.7	9
67	How suitable is LCA for nanotechnology assessment? Overview of current methodological pitfalls and potential solutions: 65th LCA Discussion Forum, Swiss Federal Institute of Technology, ZÃ¼rich, May 24, 2017. International Journal of Life Cycle Assessment, 2018, 23, 191-196.	4.7	9
68	Environmental assessment of the Urban Mining and Recycling (UMAR) unit by applying the LCA framework. IOP Conference Series: Earth and Environmental Science, 2019, 225, 012043.	0.3	8
69	Comparing the environmental performance of industrial recycling routes for lithium nickel-cobalt-manganese oxide 111 vehicle batteries. Procedia CIRP, 2021, 98, 97-102.	1.9	7
70	Progress in modern life cycle assessment: practice and research. International Journal of Life Cycle Assessment, 2004, 9, 143-151.	4.7	5
71	The Availability of Suitable Datasets for the LCA Analysis of Chemical Substances. , 2020, , 3-32.		5
72	Application and adaptation of a scale-up framework for life cycle assessment to resource recovery from waste systems. Journal of Cleaner Production, 2022, 355, 131720.	9.3	5

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73	<i>In vitro</i>-based human toxicity effect factors: challenges and opportunities for nanomaterial impact assessment. Environmental Science: Nano, 2022, 9, 1913-1925.	4.3	5
74	ecoinvent â€“ Consistent, Transparent and Qualityâ€Ensured Background Database for Life Cycle Assessment & Co. Chemie-Ingenieur-Technik, 2011, 83, 1590-1596.	0.8	4
75	Key physicochemical properties of nanomaterials in view of their toxicity: an exploratory systematic investigation for the example of carbon-based nanomaterial. Journal of Nanoparticle Research, 2017, 19, 1.	1.9	4
76	Life cycle assessment of engineered nanomaterials. , 2021, , 443-458.		4
77	Ecological resource potential. MethodsX, 2020, 7, 101151.	1.6	2
78	Resource Pressure of Carpets: Guiding Their Circular Design. Sustainability, 2022, 14, 2530.	3.2	1
79	Safe(r) by design in the nanotechnology sector. NanoImpact, 2022, 26, 100394.	4.5	1
80	Approach toward <i>In Vitro</i>-Based Human Toxicity Effect Factors for the Life Cycle Impact Assessment of Inhaled Low-Solubility Particles. Environmental Science & Technology, 0, , .	10.0	0