

CURRICULUM VITAE (BRIEF, JULY 2024)

ALEXIS LAURENT

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Current academic positions:

2024 – present *Professor*, Section for Quantitative Sustainability Assessment (QSA), Department of Environmental and Resource Engineering (DTU Sustain), Technical University of Denmark (DTU), 2800 Kgs. Lyngby, DK.

2024 – present *Head of Section*, QSA Section, DTU Sustain, DTU

Previous academic positions: *Associate Professor*, QSA Section, DTU (2016 – 2024); *Assistant Professor*, QSA Division, DTU (2013 – 2016); *Research Assistant*, QSA Section, DTU (2009 – 2013).

Academic degrees: *PhD in Life Cycle Assessment* (DTU, 24 March 2014), *Diplome d'ingénieur Ecole Centrale Lille* (Ecole Centrale de Lille, 30 Sept. 2009; equivalent MSc.), *M.Sc. Environmental Engineering* (DTU, 2 July 2009).

Scientific focus areas: ● Environmental sustainability assessment of large-scale systems (e.g. nations, sectors, cities, organisations) with an absolute sustainability perspective. ● Development and application of prospective LCA to assess and foresee environmental impacts of e.g. emerging technologies when deployed on the market or future societal transitions. ● Development of methods and indicators for performance assessment of various entities (projects, organisations, sectors, countries) with regard to UN Sustainable Development Goals (SDGs). ● Development and application of life cycle impact assessment (LCIA) methods, focusing on characterisation modelling and normalization aspects. ● Application of LCA and footprinting to various technology domains, including energy sector, transport systems (aeronautics, road, maritime), food systems, waste management, nanotech, etc.

Summary of scientific output:

- *H-index*: 35 (Web of Science, WoS), 39 (Scopus), 45 (Google Scholar)
- *Number of ISI publications*: 87 (first & last author: 12/87 & 33/87)
- *Total number of citations*: 4494 (WoS), 5338 (Scopus), 8453 (Google Scholar)
- 27 papers cited more than 50 times (WoS); 3 papers in journal of impact factor > 30
- *Other publications*: 14 book chapters, 7 peer-reviewed conference papers, 5 technical reports (two published by [EU Commission](#) and [UN Environment](#)), 1 [policy brief](#), 75+ conference proceedings.

Awards:

- 2024 Listed among the “Best Environmental Sciences Scientists in Denmark”, defined by Research.com and based on discipline-specific H-index.
- 2023 *DTU Award for Developing Teaching and Learning 2023*, acknowledging the development of the course *Life Cycle Assessment of Products and Systems* (team award)

Project management and contributions (selection): ● *DTU Project manager and co-I* of SMR ACAP - Small and Medium Range Aircraft Architecture and Technology Project (Clean Aviation programme; 2023-2026; total QSA fund: 315 k€). ● *Co-Investigator (Co-I)* of H2020 Project SolarX focusing on dispatchable concentrated Solar-to-X energy solution for high penetration of renewable energy (2023-2025; total QSA fund: 143 k€). ● *Principal investigator (PI)* for EU Directorate-General – Defence Industry and Space, “Green Deal ambitions applied to EU space activities” (invited expert support contract; 2022-2023; total fund: 10 k€) ● *Overall project coordinator* of EU H2020 project GENESIS on “Gauging the ENvironmental Sustainability of electric aircraft Systems” (2021-2023; total QSA fund: 418 k€, total project grant: 1.6 M€). ● *DTU project manager and PI / co-I* for 4 EU Commission’s Joint Research Centre projects related to building territorial national inventories for resource efficiency life-cycle-based indicators for EU Member States (2013-2018; total fund: 45.5 k€).

Editing and reviewing activities: ● Associate Editor of [Journal of Industrial Ecology](#) (2014 – current; 160 papers handled). ● *Managing Editor* for the proceedings of the 25th CIRP Life Cycle Engineering conference (Copenhagen, DK, 2018; 250 participants). Proceedings of 170 papers in [Procedia CIRP 69, pp. 1-992 \(Eds.: Laurent A., et al.\)](#). ● *Editor of 3 Special Issues* in ISI-ranked scientific journals [Sustainability](#), [International Journal of Life Cycle Assessment](#) and [Energies](#). ● *Reviewer for scientific journals (selection)*: Nature, Energy & Environmental Science, Environmental Science & Technology, Environment International, Environmental Science: Nano, Journal of Industrial Ecology, Int. Journal of Life Cycle Assessment.

Main teaching activities: ● *Course responsible, coordinator & lecturer* of “[Sustainability Evaluation and Communication](#)” (2019 – present; DTU, PhD level, 2.5 ECTS, running 4 times a year, ca. 100-110 students per course edition). ● *Course leader, organiser & main lecturer* of “[Life Cycle Assessment of Products and Systems](#)” (2014 – 2020; DTU, MSc level, 10 ECTS, ca. 80-160 students; led a scientific publication highlighting the successful learning-by-doing course design in [Cosme et al., 2018](#)).

Supervisions: ● *Supervisor* of 4 Postdoc researchers (2018-present); ● *Main supervisor or co-supervisor* of 11 graduated and 3 ongoing PhD students (2014-present), mainly focusing on environmental sustainability assessment of large systems (incl. nations and sectors footprinting), SDG performance/progress assessments, and life cycle impact assessment method development; ● *Main supervisor or co-supervisor* of 33 MSc students (2014-present); ● *Supervisor* of 4 research assistants and 1 internee (2016-present).

Examination of PhD students: ● *Chairman or Member of Assessment Committees* for 8 PhD theses: Felix Pouillet (DTU, DK, 03/2024), Mia Heide (DTU, DK, 09/2023), Thomas Planès (ISAE/SUPAERO, FR, 12/2022), Nicolo Aurisano (DTU, DK, 04/2022), Thibaut Maury (University of Bordeaux, FR, 04/2019), Helena Dahlbo (Aalto University, FI, 11/2016 & 03/2018), Aris Pagoropoulos (DTU, DK, 09/2017), Nuno Cosme (DTU, DK, 08/2016).

International relations & memberships (selection): ● *Co-chair and active member of the international Task Force (TF) for cross-cutting issues in life cycle impact assessment (LCIA)* under the UNEP Life Cycle Initiative flagship project “[Global Guidance on LCIA Indicators and Methods](#)” (3rd phase, 2020-2023). TF includes ca. 120 members and 4 subtasks with different working groups. ● *Member of Working Group* for preparing/reviewing forthcoming “ISO/TS 14074 - Environmental management -- Life cycle assessment -- Principles, requirements and guidelines for normalization, weighting and interpretation”. ● *Member of Scientific Committees* for the 29th CIRP Life Cycle Engineering (LCE) conference (Leuven, BE 04/2022), 25th CIRP LCE conference (Copenhagen, DK, 05/2018; also acting chairman at the conference) and the 22nd SETAC Europe LCA Case Study Symposium (Montpellier, FR, 09/2016). ● *Member of Organisation Committees* in 4 international conferences: CIRP LCE 2018 conference (Copenhagen, DK; 2018; ca. 250 part.), 5th NorLCA Symposium (Reykjavik, IS; 2014; 100 part.), SETAC Europe 19th LCA Case Study Symposium (Rome, IT; 2013; 200+ part.), SETAC Europe 18th LCA Case Study Symposium (Copenhagen, DK; 2012; 300+ part.).

Invited talks (selection): ● Invited talk and participation in Clean Sky 2 Workshop on “LCA methodology Agreement focusing on Life Cycle Impact Assessment” for use by aviation industry in the context of Clean Sky 2 programme; Toulouse, FR (+ remote attendance), Sept. 2022 ● Data Center Summit Denmark 2021 (Keynote title: “*Environmental sustainability of data centres: A need for a multi-impact and life cycle approach*”; Copenhagen, DK, May 2021). ● International Academy for Production Engineering (CIRP) Winter Meetings (Title: “*Prospective LCA of road transport systems: Methodology and application to passenger cars in Copenhagen*”; Paris, FR, Feb. 2020) ● Seminar on “Sustainable Consumption and Production in Europe, SDG 12 and related indicators” at the European Environment Agency (Title: “Which indicators for SDG 12 performance assessment at national level?”; Copenhagen, DK, Oct. 2019) ● *Seminar* “LCA & Space sector” (Title: “*Current status and use of LCIA in global damage assessment*”; University of Bordeaux, FR, Apr. 2019). ● Multi-stakeholder meeting on microplastics in the environment (Title: “*Microplastics to the environment: Modelling of releases and impacts in a global perspective*”; Aarhus, DK, Sept. 2018) ● EU Clean Sky Programme’s ecoDESIGN Symposium (Title: “*LCA and LCIA: where it is today and perhaps tomorrow*”, Leeuwarden, NL, July 2018) ● SETAC Europe 28th Annual Meeting High-level Special Session on UN Sustainable Development Goals (SDGs) (Title: “*The Sustainable Development Goals (SDGs) from a research perspective*”, Rome, IT, May 2018).

LIST OF PUBLICATIONS (JULY 2024)

* Corresponding authors are underlined.

Peer-reviewed ISI-ranked articles

- 87 Thammaraksa C., Gebara C.H., Hauschild M.Z., Pontoppidan C.A., **Laurent A.**, 2024. Business Reporting of Sustainable Development Goals: Global trends and implications. *Business Strategy and the Environment* (In Press), 1–18. DOI: 10.1002/bse.3760.
- 86 Berthet E., Lavalley J., Anquetil-Deck C., Fernanda Ballesteros F., Stadler K., Soyta U., Hauschild M.Z., **Laurent A.**, 2024. Assessing the social and environmental impacts of critical mineral supply chains for the energy transition in Europe. *Global Environmental Change* 86, 102841, 1–18.
- 85 Jovet Y., **Laurent A.**, Lefevre F., Clausse M., 2024. Assessing the potential for electrification of the food industry and its implications for environmental sustainability. *Energies* 17, 2602, 1–21.
- 84 Marciello V., Cusati V., Nicolosi F., Saavedra-Rubio K., Pierrat E., Thonemann N., **Laurent A.**, 2024. Evaluating the economic landscape of hybrid-electric regional aircraft: A cost analysis across three time horizons. *Energy Conversion and Management* 312, 118517, 1–16.
- 83 Berthet E., Anquetil-Deck C., Stadler K., **Laurent A.**, 2024. Towards reliable national social footprints: Refining work-related injury and fatality metrics. *Discover Sustainability* 5, 47, 1–6.
- 82 Jovet Y., Lefevre F., **Laurent A.**, Clausse M., 2024. Assessing the relevance of energy indicators as sustainability screening metrics for the decarbonisation of industrial heat through electrification. *Energy* 292, 130440, 1–12.
- 81 Thonemann N., Saavedra-Rubio K., Pierrat E., Dudka K., Scharling Tromer Dragsdahl A. L., **Laurent A.**, 2024. Towards sustainable regional aviation: Environmental potential of hybrid-electric aircraft and alternative fuels. *Sustainable Production and Consumption* 45, 371–385.
- 80 Ohms P.K., Horup L.H., Gummidi S.R.B., Ryberg M., **Laurent A.**, Liu G., 2024. Temporally dynamic environmental impact assessment of a building stock: Coupling MFA and LCA. *Resources, Conservation & Recycling* 202, 107340, 1–12.
- 79 Thonemann N., Saavedra-Rubio K., Pierrat E., Dudka K., Bangoura M., Baumann N., Bentheimer C., Caliandro P., De Breuker R., de Ruiter C., Di Stasio M., Elleby J., Lemoine B., Maerz M., Marciello V., Meindl M., Nicolosi F., Ruocco M., Sala B., Scharling Tromer Dragsdahl A. L., Vezzini A., Wang Z., Wannemacher T., Zettelmeier J., Laurent A., 2024. Prospective life cycle inventory datasets for conventional and hybrid-electric aircraft technologies. *Journal of Cleaner Production* 434, 140314, 1–12.
- 78 Gebara C.H., Thammaraksa C., Hauschild M.Z., **Laurent A.**, 2024. Selecting Indicators for SDG Performance Assessment. *Sustainable Production and Consumption* 44, 151-165.
- 77 Leclerc A., Berthet E., Stadler K., Wood R., **Laurent A.**, 2023. Towards Global and National Toxicity Footprints. *Journal of Industrial Ecology* 27, 1521–1537.
- 76 Rupcic L., Pierrat E., Saavedra Rubio K., Thonemann N., Ogugua C., **Laurent A.**, 2023. Environmental impacts in the civil aviation sector: Current state and guidance. *Transportation Research Part D* 119, 103717, 1–24.
- 75 Meindl M., de Ruiter C., Marciello V., Di Stasio M., Hilpert F., Ruocco M., Nicolosi F., Thonemann N., Saavedra Rubio K., Locqueville L., **Laurent A.**, Maerz M., 2023. Decarbonised future regional airport infrastructure. *Aerospace* 10, 283, 1–22.
- 74 Oosterhoff H.C., Golsteijn L., **Laurent A.**, Ryberg M.W., 2023. A new consistent framework for assignment of safe operating space to B2C and B2B industries for use in Absolute Environmental Sustainability Assessments. *Journal of Cleaner Production* XXX, 136574, 1–xx (In Press, 02/2023).
- 73 Pierrat E., Dorber M., de Graaf I., **Laurent A.**, Hauschild M.Z., Rygaard M., Barbarossa V., 2023. Multi-compartment depletion factors for water consumption on a global scale. *Environmental Science and Technology* (In Press, 02/2023).
- 72 Pierrat E., **Laurent A.**, Dorber M., Rygaard M., Verones F., Hauschild M.Z., 2023. Advancing water footprint assessments: Combining the impacts of water pollution and scarcity. *Science of the Total Environment* 870, 161910, 1–14.
- 71 Gebara C.H., **Laurent A.**, 2022. National SDG-7 performance assessment to support achieving sustainable energy for all within planetary limits. *Renewable and Sustainable Energy Reviews* 173, 112934, 1–16.

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- 70 Ohms P., **Laurent A.**, Hauschild M.Z., Ryberg M.W., 2022. Consumption-based screening of climate change footprints for cities worldwide. *Journal of Cleaner Production* 377, 134197, 1–12.
- 69 Yadav V., Sherly M.A., Ranjan P., Prasad V., O Tinoco R., **Laurent A.**, 2022. Risk of plastics losses to the environment from landfills. *Resources, Conservation and Recycling* 187, 106610, 1–8.
- 68 Saavedra Rubio K., Thonemann N., Crenna E., Lemoine B., Caliandro P., **Laurent A.**, 2022. Stepwise guidance for data collection in the life cycle inventory (LCI) phase: Building technology-related LCI blocks. *Journal of Cleaner Production* 366, 132903, 1–14.
- 67 Rupcic L., Pierrat E., Fricke K., Moll T., Hauschild M.Z., **Laurent A.**, 2022. Improving environmental performances of integrated bladed rotors for aircraft. *Annals of CIRP* 71, 13–16.
- 66 Jovet Y., Lefevre F., **Laurent A.**, Clause M., 2022. Combined energetic, economic and climate change assessment of heat pumps for industrial waste heat recovery. *Applied Energy* 313, 118854, 1–12.
- 65 Bohnes F.A., Hauschild M.Z., Schlundt J., Nielsen M., **Laurent A.**, 2022. Environmental sustainability of future aquaculture production: analysis of Singaporean and Norwegian policies. *Aquaculture* 549, 737717, 1–16.
- 64 Beauson J., **Laurent A.**, Rudolph D.P., Jensen J.P., 2022. The complex end of life of wind turbine blades: A review of the European context. *Renewable and Sustainable Energy Reviews* 155, 111847, 1–16.
- 63 Owsianiak M., van Oers L., Drielsma J., **Laurent A.**, Hauschild M.Z., 2022. Identification of dissipative emissions for improved assessment of metal resource use in LCA. *Journal of Industrial Ecology* 26, 406–420.
- 62 Serrano T., Aparcana S., Bakhtiari F., **Laurent A.**, 2021. Contribution of circular economy strategies to climate change mitigation: Generic assessment methodology with focus on developing countries. *Journal of Industrial Ecology* 25, 1382–1397.
- 61 Pierrat E., Rupcic L., Hauschild M.Z., **Laurent A.**, 2021. Global environmental screening of aeronautics manufacturing sector. *Journal of Cleaner Production* 297, 126603, 1–13.
- 60 Viere A., Amor B., Berger N., Dolfing Fanous R., Horta Arduin R., Keller R., **Laurent A.**, Loubet P., Strothmann P., Weyand S., Wright L., Sonnemann G., 2021. Teaching Life Cycle Assessment in higher education. *International Journal of Life Cycle Assessment* 26, 511–527.
- 59 Gade A.L., Hauschild M.Z., **Laurent A.**, 2021. Globally differentiated effect factors for characterising terrestrial acidification in Life Cycle Impact Assessment. *Science of the Total Environment* 761, 143280, 1–11.
- 58 Bohnes F.A., **Laurent A.**, 2021. Reducing environmental impacts of existing and future aquaculture production: Comparison of technologies and feed options in Singapore. *Aquaculture* 532, 736001, 1-17.
- 57 Hjalsted A.W., **Laurent A.**, Andersen M.M., Olsen K.H., Ryberg M., Hauschild M.Z., 2021. Sharing the safe operating space – Exploring ethical allocation principles to operationalize the planetary boundaries and assess absolute sustainability at individual and industrial sector levels. *Journal of Industrial Ecology* 25, 6–19.
- 56 Sala S., **Laurent A.**, Vieira M., Van Hoof G., 2020. Implications of LCA and LCIA choices on interpretation of results and on decision support. *International Journal of Life Cycle Assessment* 25, 2311–2314.
- 55 Liu X., Bakshi B., Rugani B., Maia de Souza D., Bare J., Johnston J.M., **Laurent A.**, Verones F., 2020. Quantification and valuation of ecosystem services in life cycle assessment: Application of the cascade framework to rice farming systems. *Science of the Total Environment* 747, 141278, 1–10.
- 54 Yadav V., Sherly M.A., Ranjan P., Tinoco R.O., Boldrin A., Damgaard A., **Laurent A.**, 2020. Framework for quantifying environmental losses of plastics from landfills. *Resources, Conservation and Recycling* 161, 104914, 1-9.
- 53 **Laurent A.**, Weidema B., Bare J., Liao X., Maia de Souza D., Pizzol M., Sala S., Schreiber H., Thonemann N., Verones F., 2020. Methodological review and detailed guidance for the life cycle interpretation phase. *Journal of Industrial Ecology* 24, 986–1003.
- 52 Verones F., Hellweg S., Antón A., Azevedo L.B., Chaudhary A., Cosme N., Cucurachi S., de Baan L., Dong Y., Fantke P., Golsteijn L., Hauschild M.Z., Heijungs R., Jolliet O., Juraske R., Larsen H.F., **Laurent A.**, Mutel C.L., Margni M., Núñez M., Owsianiak M., Pfister S., Ponsioen T., Preiss P., Rosenbaum R.K., Roy P.-O., Sala S., Steinmann Z., van Zelm R., Van Dingenen R., Vieira M., Huijbregts M.A.J. 2020. LC-IMPACT: a regionalized life cycle damage assessment method. *Journal of Industrial Ecology* 24, 1201–1219.
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- 51 Bohnes F.A., Rodriguez U.-P., Nielsen M., **Laurent A.**, 2020. Are aquaculture growth policies in high-income countries due diligence or illusionary dreams? Foreseeing policy implications on seafood production in Singapore. *Food Policy* 93, 101885, 1-12.
- 50 Blanco H., Codina V., **Laurent A.**, Nijs W., Maréchal F., Faaij A., 2020. Life Cycle Assessment integration into Energy System Models: An application for Power-to-Methane in the EU. *Applied Energy* 259, 114160, 1–21.
- 49 Leclerc A., Hauschild M.Z., Wood R., **Laurent A.**, 2020. Building national emission inventories for the energy sector: Current limitations and outlook. *Science of Total Environment* 708, 135119, 1–12.
- 48 Chatzisisideris M.D., Ohms P.K., Espinosa N., Krebs F.C., **Laurent A.**, 2019. Economic and environmental performances of organic photovoltaics with battery storage for residential self-consumption. *Applied Energy* 256, 113977, 1–13.
- 47 Ryberg M., Hauschild M.Z., Wang F., Averous-Monnery S., **Laurent A.**, 2019. Global environmental losses of plastics across their value chains. *Recycling, Conservation and Resources* 151, 104459, 1–10.
- 46 Ögmundarson O., Sukumara S., **Laurent A.**, Fantke P., 2019. Environmental hotspots of different lactic acid production systems. *GCB Bioenergy* 12, 19–38.
- 45 Bulle C., Margni M., Kashef-Haghighi S., Boulay A.-M., Bourgault G., de Bruille V., Cao V., Fantke P., Hauschild M.Z., Henderson A., Humbert S., Anna Kounina A., **Laurent A.**, Levasseur A., Liard G., Patouillard L., Rosenbaum R.K., Roy P.-O., Shaked S., Jolliet O., 2019. IMPACT World+: A globally regionalized life cycle impact assessment method. *International Journal of Life Cycle Assessment* 24, 1653–1674.
- 44 Rugani B., Maia de Souza D., Liu X., Bakshi B., Weidema B., Bare J., Grann B., Raymundo Pavan A.L., Johnston J.M., **Laurent A.**, Verones F., 2019. Towards integrating the ecosystem services cascade framework within the Life Cycle Assessment (LCA) cause-effect methodology. *Science of Total Environment* 690, 1284–1298.
- 43 **Laurent A.**, Molin C., Owsianiak M., Fantke P., Dewulf W., Herrmann C., Kara S., Hauschild M.Z., 2019. The role of Life Cycle Engineering (LCE) in meeting the Sustainable Development Goals – Report from a consultation of LCE experts. *Journal of Cleaner Production* 230, 378–382.
- 42 Leclerc A., Sala S., Secchi M., **Laurent A.**, 2019. Building national emission inventories of toxic pollutants in Europe. *Environment International* 130, 104785, 1–12.
- 41 De Laurentiis V., Secchi M., Bos U., Horn R., **Laurent A.**, Sala S., 2019. Soil quality index for land use impact assessment in LCA. *Journal of Cleaner Production*. 215, 63–74.
- 40 Faragó M., Benini L., Sala S., Secchi M., **Laurent A.**, 2019. National inventories of land occupation and transformation flows in the world for land use impact assessment. *International Journal of Life Cycle Assessment*. 24, 1333–1347.
- 39 Mendes N.C., **Laurent A.**, Hauschild M.Z., 2019. Effect factors of terrestrial acidification in Brazil for use in Life Cycle Impact Assessment. *International Journal of Life Cycle Assessment* 24, 1105–1117.
- 38 Mendes N.C., **Laurent A.**, Bruun H.H., Hauschild M.Z., 2019. Relationships of terrestrial plant species richness with soil pH at the level of biome and ecoregion in Brazil. *Ecological Indicators* 98, 266–275.
- 37 Mutel C., Liao X., Patouillard L., Bare J., Fantke P., Frischknecht R., Hauschild M., Jolliet O., Maia de Souza D., **Laurent A.**, Pfister S., Verones F., 2019. Overview and recommendations for regionalized life cycle impact assessment. *International Journal of Life Cycle Assessment* 24, 856–865.
- 36 Bohnes F., **Laurent A.**, 2019. LCA of aquaculture systems: Methodological issues and potential improvements. *International Journal of Life Cycle Assessment* 24, 324–337.
- 35 Bohnes F., Hauschild M.Z., Schlundt J., **Laurent A.**, 2019. Life cycle assessments of aquaculture systems: a critical review of reported findings with recommendations for policy and system development. *Reviews in Aquaculture* 11, 1061–1079.
- 34 Cosme N., Hauschild M.Z., Molin C., Rosenbaum R.K., **Laurent A.**, 2018. Learning-by-doing: Experience from 20 years of teaching LCA to future engineers. *International Journal of Life Cycle Assessment*, 1-13 (In press). DOI. 10.1007/s11367-018-1457-5.

- 33 Sydow M., Chrzanowski L., Leclerc A., **Laurent A.**, Owsianiak M., 2018. Terrestrial ecotoxic impacts stemming from emissions of Cd, Cu, Ni, Pb and Zn from manure: A spatially-differentiated assessment in Europe. *Sustainability* 10, 4094.
- 32 Stewart R., Fantke P., Bjørn A., Owsianiak M., Molin C., Hauschild M.Z., **Laurent A.**, 2018. Life cycle assessment in corporate sustainability reporting: Global, regional, sectoral and company-level trends. *Business Strategies and Environment* 27, 1751–1764.
- 31 Owsianiak M., Brooks J., Renz M., **Laurent A.**, 2018. Evaluating climate change mitigation potential of hydrochars: Compounding insights from three different indicators. *GCB Bioenergy* 10, 230–245.
- 30 Niero M., Olsen S.I., **Laurent A.**, 2018. Renewable energy and carbon management in the Cradle-to-Cradle certification: Limitations and opportunities. *Journal of Industrial Ecology* 22, 760–772.
- 29 Bohnes F., Gregg J. S., **Laurent A.**, 2017. Environmental impacts of future urban deployment of electric vehicles: a case study of Copenhagen for 2016-2030. *Environmental Science and Technology* 51, 13995–14005.
- 28 Chatzisideris M.D., **Laurent A.**, Krebs F.C., 2017. Cost-competitiveness of photovoltaics for electricity self-consumption at residential buildings: A comparative study of Denmark and Greece. *Applied Energy* 208, 471–479.
- 27 Verones F., Bare J., Bulle C., Frischknecht R., Hauschild M.Z., Hellweg S., Henderson A., Jolliet O., **Laurent A.**, Liao X., Lindner J. P., de Souza D. M., Michelsen O., Patouillard L., Pfister S., Posthuma L., Prado V., Ridoutt B., Rosenbaum R. K., Sala S., Ugaya C., Vieira M., Fantke P., 2017. LCIA framework and cross-cutting issues guidance within the UNEP-SETAC Life Cycle Initiative. *Journal of Cleaner Production* 161, 957–967.
- 26 Chatzisideris M.D., **Laurent A.**, Hauschild M.Z., Krebs F.C., 2017. Environmental impacts of electricity self-consumption from organic photovoltaic battery systems at industrial facilities in Denmark. *Annals of CIRP* 66, 45–48.
- 25 **Laurent A.**, Owsianiak M., 2017. Potentials and limitations of footprints for gauging environmental sustainability. *Current Opinion in Environmental Sustainability* 25, 20–27.
- 24 Ettrup K., Kounina A., Hansen S.F., Meesters J.A.J., Veia E.B., **Laurent A.**, 2017. Development of comparative toxicity potentials of TiO₂ nanoparticles for use in life cycle assessment. *Environmental Science and Technology* 51, 4027–4037.
- 23 **Laurent A.**, Harkema J., Andersen E.W., Owsianiak M., Veia E.B., Jolliet O., 2017. Human health no-effect levels of TiO₂ nanoparticles as a function of their primary size. *Journal of Nanoparticle Research* 19, 130.
- 22 Leclerc A., **Laurent A.**, 2017. Framework for estimating toxic releases from application of manure on agricultural soil: National release inventories for heavy metals in 2000-2014. *Science of Total Environment* 590-591, 452–460.
- 21 Pizzol M., **Laurent A.**, Sala S., Weidema B., Verones F., Koffler C., 2017. Normalisation and weighting in life cycle assessment: Quo Vadis? *International Journal of Life Cycle Assessment* 22, 853–866.
- 20 Bonou A., **Laurent A.**, Olsen S.I., 2016. Life cycle assessment of onshore and offshore wind energy: Environmental management throughout the value chain. Life cycle assessment of onshore and offshore wind energy – From theory to application. *Applied Energy* 180, 327–337.
- 19 Chatzisideris M.D., Espinosa N., **Laurent A.**, Krebs F.C., 2016. Ecodesign perspectives of thin-film photovoltaic technologies: A review of life cycle assessment studies. *Solar Energy Materials and Solar Cells* 156, 2–10.
- 18 Goldstein B., Hansen S.F., Gjerris M., **Laurent A.**, Birkved M., 2016. Ethical aspects of life cycle assessments of diets. *Food Policy* 59, 139–151.
- 17 Pivato A., Vanin S., Raga R., Lavagnolo M.C., Barausse A., Rieple A., **Laurent A.**, Cossu R., 2016. Use of digestate from a decentralized on-farm biogas plant as fertilizer in soils: An ecotoxicological study for future indicators in risk and life cycle assessment. *Waste Management* 49, 378–389.

- 16 Espinosa N., **Laurent A.**, dos Reis Benatto G.A., Hösel M., Krebs F.C., 2016. Which electrode materials to select for more environmentally-friendly organic photovoltaics? *Advanced Engineering Materials* 18, 490-495.
- 15 Espinosa N., **Laurent A.**, Krebs F.C., 2015. Ecodesign of organic photovoltaic modules from Danish and Chinese perspectives. *Energy and Environmental Science* 8, 2537–2550.
- 14 Ryberg M., Owsianiak M., **Laurent A.**, Hauschild M.Z., 2015. Power generation from chemically cleaned coals: do environmental benefits of firing cleaner coal outweigh environmental burden of cleaning? *Energy and Environmental Science* 8, 2435–2447.
- 13 **Laurent A.**, Espinosa N., 2015. Environmental impacts of electricity generation at global, regional and national scales in 1980-2011: What can we learn for future energy planning? *Energy and Environmental Science* 8, 689–701.
- 12 Cucurachi S., Sala S., **Laurent A.**, Heijungs R., 2014. Building and characterizing regional and global emission inventories of toxic pollutants. *Environmental Science and Technology* 48, 5674–5682.
- 11 **Laurent A.**, Hauschild M.Z., 2014. Impacts of NMVOC emissions on human health in European countries for 2000-2010: Use of sector-specific substance profiles. *Atmospheric Environment* 85, 247–255.
- 10 Owsianiak M., **Laurent A.**, Bjørn A., Hauschild M.Z., 2014. IMPACT 2002+, ReCiPe 2008, and ILCD's recommended practice for characterization modelling in life cycle impact assessment: A case study-based comparison. *International Journal of Life Cycle Assessment* 19, 1007–1021.
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