11th Society And Materials International Conference SAM 11

15-16 May 2017, Trondheim

NTNU SINTEF

metal production IRT m2p

ESTEP ArcelorMittal

Day 1 – 15 May

9.00	**Welcome address - Leiv Kolbeinsen, NTNU**
	Session 1: Circular Economy
9.20	**Keynote Lecture - Daniel Müller, NTNU - Circular Economy: Why? How? When?**
10.00	*In support of the circular economy: an exercise in stakeholder mapping*, S. Bajaj, FICCI, India
10.20	*Society, materiality and resilience/sustainability: global inquiries from the fields of industrial waste management, urban climate science and housing studies*, F. MacKillop, Heriot-Watt University, United Kingdom
10.40	*The glass recycling industry: a concrete example of circular economy*, M. Vermette, Eco Entreprises Québec, Canada
11.00	**Coffee break & Poster session**
11.30	*Recycling potential of secondary phosphorus resources as assessed by integrating substance flow analysis and plant-availability*, H. A. Hamilton, NTNU, Norway
11.50	*Shredding End-of-Life Vehicles to evaluate material recycling rates*, G. Fick, IRT M2P, France
12.10	*To transport waste or transport recycling plant: insights from life-cycle analysis,* G. Grimaud, MTB Recycling - Arts & Métiers ParisTech, France
12.30	**Lunch**
	Session 2: New Developments in LCA Methodology
14.00	**Keynote Lecture - Philippe Destatte, Institut Destrée - The New Industrial Paradigm, a Foresight View**
14.40	*Improving the modelling of avoided products in waste-management-oriented LCA,* L. Rigamonti, Politecnico di Milano, Italy
15.00	*Allocations and End of Life Management in LCA: How to decide?,* M. Pelote, IRT M2P, France
15.20	*Respecting material and energy balance in attributional LCA: reducing the influence of allocation*, G. Majeau-Bettez, CIRAIG, Polytechnique Montréal, Canada
15.40	*Assessing resource depletion impacts of lithium-ion batteries - What about the price?*, J. F. Peters, Helmholtz-Institute Ulm, Germany
16.00	*Combining LCA and prospective techno-economic models to assess the environmental and economic sustainability of emerging materials and energy pathways,* A. Levasseur, CIRAIG, Polytechnique Montréal, Canada
16.20	**Coffee break & Poster session**

Session 3A: Social and Economics

16.50	*Integrated LCA & LCC analysis to stimulate high quality recycling of construction & demolition waste,* A. Di Maria, KU Leuven, Belgium
17.10	*What are we missing? Value chain greenhouse gas emissions accounting in the metals and minerals industry*, S. Greene, MIT, USA
17.30	*The impact of electric vehicles on lithium recycling - a critical analysis of material demand for a more sustainable mobility,* S. Ziemann, Karlsruhe Institute of Technology, Germany
17.50	*Local green economy indicators - case: rural villages in Lapland*, K. Timonen, Natural Resources Institute Finland (Luke), Finland
18.10	**Jean-Sébastien THOMAS Award ceremony, Anne-Laure Hettinger, ArcelorMittal**

18.40 End of sessions day 1

Free Time around the Restaurant – City Centre

20.30 Gala Diner

Day 2 – 16 May

Session 3B: Social and Economics

9.00	**Keynote Lecture**
9.40	*Turning sustainability into a catalyst for innovation*, A.-L. Hettinger, ArcelorMittal, France
10.00	*Introduction of symbiotic Human-Robot-Cooperation in the steel sector: an example of social innovation*, V. Colla, Scuola Superiore Sant'Anna, TeCIP Institute, ICT-COISP Center, Italy
10.20	*Society and materials: a gender perspective*, M. Cacace, Knowledge & Innovation, Italy
10.40	*Taller, fatter, older and hungrier: a study of world population, human mass and caloric intake over the past 40 years,* F. Vásquez, NTNU, Norway
11.00	**Coffee break & Poster session**

Session 4A: MFA and Methodology beyond LCA

11.30	**Keynote Lecture - Laurent Levacher, EDF - The smart factory of the future, revisited in 2017**
12.10	*Early attempts at developing an MFA for steel,* J.-P. Birat, IF Steelman, France
12.30	*Possibility of sustainable recycling of steel despite impurity contamination,* I. Daigo, University of Tokyo, Japan
12.50	**Lunch**

Session 4B: MFA and Methodology beyond LCA

14.20	*Mapping the spatial-temporal dynamics of global cement, steel, and aluminum in-use stocks,* G. Liu, University of Southern Denmark, Denmark
14.40	*Reconsideration of prioritization of automotive materials recycling in terms of total material requirement,* E. Yamasue, Ritsumeikan University, Japan

Session 5: Sustainability and Eco-design of Processes, Products and Services

15.00	**Keynote Lecture - Leiv Kolbeinsen, NTNU - The Importance of Silicon to Society**
15.40	*Steel and biodiversity: a promising alliance*, K. Peters, ESTEP, Belgium
16.00	*Building ecodesign & the role of steel in modern construction*, R. Turconi, ArcelorMittal, France
16.20	**Coffee break & Poster session**
16.50	*Environmental assessment of innovations for car light-weighting*, J. Garcia, Groupe PSA, France
17.10	*Environmental assessment of PSS, feedback on 2 years of experimentation*, R. Allais, PACTE CNRS UMR 5194, France
17.30	*Materials and energy flow in the life cycle of leather: a case study of Bangladesh,* C. Zia Uddin Md., Khulna University of Engineering & Technology, Bangladesh
17.50	**SAM 10 Conclusions - Jean-Pierre Birat, IF Steelman**

Posters

Environmental performance of Li-ion batteries for direct marketing of wind power, M. Baumann, Karlsruhe Institute of Technology - Universidade Nova de Lisboa, Germany & Portugal

Life Cycle Assessment of DurabRoads Materials by D. Deepankar, BSRIA Ltd, United Kingdom

Education of students and citizens for new materials, A. Delebarre, Mines ParisTech - PSL Research University - Centre Thermodynamique des Procédés, France

Development of a Life Cycle Cost model for vanadium RedOx flow batteries, J. Fulton, Institute for Technology Assessment and Systems Analysis (ITAS), Germany

Use of bio-based binder in the building sector, S. Gerbinet, University of Liège, Belgium

Life Cycle Assessment of aluminium recycling: case of electric cables, G. Grimaud, MTB Recycling - Arts & Métiers ParisTech, France

Ecodesign of a "vapour and air barrier membrane - insulator" system, following a cradle to cradle approach - ATISOLC2C, S. Groslambert, University of Liège, Belgium

Life Cycle Assessment (LCA) of solar thermal tower power plants, E. Knüpffer, LBP Universität Stuttgart, Germany

LCA in space - Current status and future development, N. Ko, University of Stuttgart, Germany

Life Cycle Assessment of freight transport in Belgium, A. L. Merchan and S. Groslambert, University of Liège, Belgium

Global distribution of material stocks: iron, copper, and nickel, K. Nakajima, National Institute for Environmental Studies, Japan

Data Envelopment analysis for steel products considering mining activities in terms of total material requirement, A. Oyaizu, Ritsumeikan University, Japan

Indicators for local green economy-criteria and selection, A. Reinikainen, Natural Resources Institute Finland (Luke), Finland

Environmental and Economic Sustainability Assessment of LED light bulb recycling in France, R. S. M. Mizanur, UTT, France

Organizing Committee

T. C. Eikevik, L. Kolbeinsen, M. Lenes, D. Müller (**NTNU**)
A. Declich, F. Feudo (**K&I**)
G. Fick, M. Pelote, S. Remy (**IRT-M2P**)
M. Chiappini (**ArcelorMittal**)
JP. Birat (**IF Steelman**)

Venue

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