

Mikolaj Owsianiak - DTU Orbit (11/08/2016)

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Quantitative Sustainability Assessment

Publications:

Advances in assessing terrestrial toxicity of metal emissions for improved sustainability characterization of technologies
Owsianiak, M. & Hauschild, M. Z. 2015 *Book of Abstracts. DTU's Sustain Conference 2015*. Technical University of Denmark, 1 p. A-13

Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2015

Assessing comparative terrestrial ecotoxicity of Cd, Co, Cu, Ni, Pb, and Zn: The influence of aging and emission source
Owsianiak, M., Holm, P. E., Fantke, P., Christiansen, K. S., Borggaard, O. K. & Hauschild, M. Z. 2015 In : *Environmental Pollution*. 206, p. 400-410

Publication: Research - peer-review › Journal article – Annual report year: 2015

Opportunities and challenges for including Planetary Boundaries in Life- Cycle Assessment

Ryberg, M. W., Bjørn, A., Owsianiak, M. & Hauschild, M. Z. 2015 *Book of Abstracts. DTU's Sustain Conference 2015*. Technical University of Denmark, 1 p. A-2

Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2015

Persistence of selected ammonium- and phosphonium-based ionic liquids in urban park soil microcosms

Sydow, M., Szczepaniak, Z., Framski, G., Staninska, J., Owsianiak, M., Szulc, A., Piotrowska-Cyplik, A., Zgoła-Grzeškowiak, A., Wyrwas, B. & Chrzanowski, L. 2015 In : *International Biodeterioration and Biodegradation*. 103, p. 91-96
6 p.

Publication: Research - peer-review › Journal article – Annual report year: 2015

Power generation from chemically cleaned coals: do environmental benefits of firing cleaner coal outweigh environmental burden of cleaning?

Ryberg, M. W., Owsianiak, M., Laurent, A. & Hauschild, M. Z. 2015 In : *Energy & Environmental Science*. 8, p. 2435-2447
13 p.

Publication: Research - peer-review › Journal article – Annual report year: 2015

Strengthening the Link between Life Cycle Assessment and Indicators for Absolute Sustainability To Support Development within Planetary Boundaries

Bjørn, A., Diamond, M. L., Owsianiak, M., Verzat, B. & Hauschild, M. Z. 2015 In : *Environmental Science & Technology (Washington)*. 49, p. 6370-6371

Publication: Research - peer-review › Journal article – Annual report year: 2015

Assessing the environmental impacts of using demineralized coal for electricity generation

Ryberg, M., Owsianiak, M. & Laurent, A. 2014 *Abstract Book - DTU Sustain Conference 2014*. Kgs. Lyngby: Technical University of Denmark, 1 p.

Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2014

Biodegradation of diesel/biodiesel blends in saturated sand microcosms

Lisiecki, P., Chrzanowski, Ł., Szulc, A., Ławniczak, Ł., Białas, W., Dziadas, M., Owsianiak, M., Staniewski, J., Cyplik, P., Marecik, R., Jelen, H. & Heipieper, H. J. 2014 In : *Fuel*. 116, p. 321-327

Publication: Research - peer-review › Journal article – Annual report year: 2014

Elucidating differences in metal absorption efficiencies between terrestrial soft-bodied and aquatic species

Owsianiak, M., Veltman, K., Hauschild, M. Z., Hendriks, A. J., Steinmann, Z. J. N. & Huijbregts, M. A. J. 2014 In : *Chemosphere*. 112, p. 487-495

Publication: Research - peer-review › Journal article – Annual report year: 2014

How does the choice of ILCD recommended practice for characterization modelling change the assessment of environmental impacts in LCA of products

Owsianiak, M., Laurent, A., Bjørn, A. & Hauschild, M. Z. 2014 *Proceedings of SETAC Europe: 24th Annual Meeting – Science across bridges, borders and boundaries*. SETAC Europe

Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2014

How does the choice of ILCD's recommended methods change the assessment of environmental impacts in LCA of products?

Owsianiak, M., Laurent, A., Bjørn, A. & Hauschild, M. Z. 2014 *Abstract Book - DTU Sustain Conference 2014*. Kgs. Lyngby: Technical University of Denmark, 1 p.

Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2014

IMPACT 2002+, ReCiPe 2008 and ILCD's recommended practice for characterization modelling in life cycle impact assessment: a case study-based comparison

Owsianiak, M., Laurent, A., Bjørn, A. & Hauschild, M. Z. 2014 In : *International Journal of Life Cycle Assessment*. 19, 5, p. 1007-1021

Publication: Research - peer-review › Journal article – Annual report year: 2014

Addressing Geographic Variability in the Comparative Toxicity Potential of Copper and Nickel in Soils

Owsianiak, M., Rosenbaum, R. K., Huijbregts, M. A. J. & Hauschild, M. Z. 2013 In : *Environmental Science & Technology (Washington)*. 47, 7, p. 3241-3250

Publication: Research - peer-review › Journal article – Annual report year: 2013

Aquatic toxicity testing of silver nanoparticles – a matter of timing

Sørensen, S. N., Owsianiak, M., Engelbrekt, C. & Baun, A. 2013

Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2013

Assessing Environmental Sustainability of Remediation Technologies in a Life Cycle Perspective is Not So Easy

Owsianiak, M., Lemming, G., Hauschild, M. Z. & Bjerg, P. L. 2013 In : *Environmental Science & Technology (Washington)*. 47, 3, p. 1182-1183

Publication: Research - peer-review › Journal article – Annual report year: 2013

Mapping and characterization of LCA networks

Bjørn, A., Owsianiak, M., Laurent, A., Molin, C., Westh, T. B. & Hauschild, M. Z. 2013 In : *International Journal of Life Cycle Assessment*. 18, p. 812-827

Publication: Research - peer-review › Journal article – Annual report year: 2013

Defining and mapping LCA networks: Initial results

Bjørn, A., Owsianiak, M., Laurent, A., Molin, C., Westh, T. B. & Hauschild, M. Z. 2012 *Proceedings*. p. 137-141

Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

Evaluation of spatial variability of metal bioavailability in soils using geostatistics

Owsianiak, M., Hauschild, M. Z. & Rosenbaum, R. K. 2012 *Abstract book*. SETAC Europe, p. 42-42

Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2012

Mapping and characterization of LCA networks

Bjørn, A., Owsianiak, M., Laurent, A., Molin, C., Westh, T. B. & Hauschild, M. Z. 2012 *Book of abstracts - SETAC 18th LCA Case Study Symposium and 4th NorLCA Symposium: Sustainability Assessment in the 21st century - Tools, Trends and Applications*. p. 157-157 1 p.

Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2012

The misuse of LCA-based methods to claim environmental sustainability of remediation technologies

Lemming, G. & Owsianiak, M. 2012 *Book of abstracts - SETAC 18th LCA Case Study Symposium and 4th NorLCA Symposium: Sustainability Assessment in the 21st century - Tools, Trends and Applications*. p. 71 1 p.

Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2012

A Methodology for Inclusion of Terrestrial Ecotoxic Impacts of Metals in Life Cycle Impact Assessment

Owsianiak, M., Rosenbaum, R. K. & Hauschild, M. Z. 2011 *Abstract Book: North America 32nd Annual Meeting*. p. 773-437 p.

Publication: Research › Conference abstract in proceedings – Annual report year: 2011

Are Free Ion Activity Models Sufficient Alternatives to Biotic Ligand Models in Evaluating Metal Toxic Impacts in Terrestrial Environments?

Owsianiak, M., Rosenbaum, R. K., Larsen, H. F. & Hauschild, M. Z. 2011

Publication: Research › Poster – Annual report year: 2011

Can freshwater toxicity models (FIAM and BLM) be applicable to marine ecosystem?

Dong, Y., Owsianiak, M., Christiansen, K. S. & Hauschild, M. Z. 2011

Publication: Research › Poster – Annual report year: 2011

Comparison of metal toxic impacts between aquatic and terrestrial organisms: is the free ion concentration a sufficient descriptor?

Owsianiak, M., Rosenbaum, R. K., Larsen, H. F. & Hauschild, M. Z. 2011 *SETAC Europe 21st Annual Meeting Abstract Book*. 67 p.

Publication: Research › Conference abstract in proceedings – Annual report year: 2011

Interactions between rhamnolipid biosurfactants and toxic chlorinated phenols enhance biodegradation of a model hydrocarbon-rich effluent

Chrzanowski, L., Owsianiak, M., Szulc, A., Marecik, R., Piotrowska-Cyplik, A., Olejnik-Schmidt, A. K., Staniewski, J., Lisiecki, P., Ciesielczyk, F., Jesionowski, T. & Heipieper, H. J. 2011 In : *International Biodeterioration and Biodegradation*. 65, p. 605-611

Publication: Research - peer-review › Journal article – Annual report year: 2011

LC-IMPACT Deliverable 2.1. Terrestrial ecotoxicity

Owsianiak, M., Rosenbaum, R. K. & Hauschild, M. Z. 2011 28 p. (EU FP7 project, deliverable).

Publication: Research - peer-review › Report – Annual report year: 2011

LC-IMPACT Deliverable 5.3. First policy brief

Owsianiak, M. & Rosenbaum, R. K. 2011 1 p. (EU FP7 project, deliverable).

Publication: Research - peer-review › Report – Annual report year: 2011

Relative quantitative PCR to assess bacterial community dynamics during biodegradation of diesel and biodiesel fuels under various aeration conditions

Cyplik, P., Schmidt, M., Szulc, A., Marecik, R., Lisiecki, P., Heipieper, H. J., Owsianiak, M., Vainshtein, M. & Chrzanowski, Ł. 2011 In : *Bioresource Technology*. 102, p. 4347-4352

Publication: Research - peer-review › Journal article – Annual report year: 2011

Rola ramnolipidów w środowisku naturalnym

Lawniczak, L., Czaczyk, K., Owsianiak, M. & Chrzanowski, L. 2011 In : *Postepy Mikrobiologii*. 50, p. 17-30

Publication: Research - peer-review › Journal article – Annual report year: 2011

Biodegradation in a Partially Saturated Sand Matrix: Compounding Effects of Water Content, Bacterial Spatial Distribution, and Motility

Dechesne, A., Owsianiak, M., Bazire, A., Grundmann, G. L., Binning, P. J. & Smets, B. F. 2010 In : *Environmental Science & Technology (Washington)*. 44, p. 2386-2392

Publication: Research - peer-review › Journal article – Annual report year: 2010

Evaluation of Bioaugmentation with Entrapped Degrading Cells as a Soil Remediation Technology

Owsianiak, M., Dechesne, A., Binning, P. J., Chambon, J. C. C., Sørensen, S. R. & Smets, B. F. 2010 In : *Environmental Science & Technology (Washington)*. 44, 19, p. 7622-7627

Publication: Research - peer-review › Journal article – Annual report year: 2010

Modelling bioaugmentation in unsaturated porous media: The linuron herbicide example

Owsianiak, M., Dechesne, A., Binning, P. J. & Smets, B. F. 2010 *GQ10: CD-ROM*. IAHS Press, Vol. Keynote S6
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2010

Towards successful bioaugmentation with entrapped cells as a soil remediation technology: Effects of the water content and cell dispersal.

Owsianiak, M., Dechesne, A., Binning, P. J. & Smets, B. F. 2010 *GQ10*. IAHS Press, Vol. CD-ROM, p. TU-18
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2010

Adsorption of Sodium Dodecylbenzenesulphonate (SDBS) on *Candida maltosa* EH 15 Strain: Influence on Cell Surface Hydrophobicity and *n*-alkanes Biodegradation

Chrzanowski, Ł., Owsianiak, M., Wyrwas, B., Aurich, A., Szulc, A. & Olszanowski, A. 2009 In : *Water, Air and Soil Pollution*. 196, p. 345–353
Publication: Research - peer-review › Journal article – Annual report year: 2009

Biodegradation and surfactant-mediated biodegradation of diesel fuel by 218 microbial consortia are not correlated to cell surface hydrophobicity

Owsianiak, M., Szulc, A., Chrzanowski, Ł., Cyplik, P., Bogacki, M., Olejnik-Schmidt, A. K. & Heipieper, H. J. 2009 In : *Applied Microbiology and Biotechnology*. 84, p. 545–553
Publication: Research - peer-review › Journal article – Annual report year: 2009

Biodegradation of diesel/biodiesel blends by a consortium of hydrocarbon degraders: Effect of the type of blend and the addition of biosurfactants

Owsianiak, M., Chrzanowski, L., Szulc, A., Staniewski, J., Olszanowski, A., Olejnik-Schmidt, A. K. & Heipieper, H. J. 2009 In : *Bioresource Technology*. 100, 3, p. 1497-1500 4 p.
Publication: Research - peer-review › Journal article – Annual report year: 2009

Biodegradation of diesel fuel by a microbial consortium in the presence of 1-alkoxymethyl-2-methyl-5-hydroxypyridinium chloride homologues

Chrzanowski, L., Stasiewicz, M., Owsianiak, M., Szulc, A., Piotrowska-Cyplik, A., Olejnik-Schmidt, A. K. & Wyrwas, B. 2009 In : *Biodegradation*. 20, 5, p. 661-671
Publication: Research - peer-review › Journal article – Annual report year: 2009

Phenol and *n*-alkanes (C₁₂ and C₁₆) utilization: influence on yeast cell surface hydrophobicity

Chrzanowski, Ł., Bielicka-Daszkiewicz, K., Owsianiak, M., Aurich, A., Kaczorek, E. & Olszanowski, A. 2008 In : *World Journal of Microbiology and Biotechnology*. 24, p. 1943–1949
Publication: Research - peer-review › Journal article – Annual report year: 2008

Projects:

Integration of boundaries for selected planetary threads into life cycle assessment

Ryberg, M., Hauschild, M. Z. & Owsianiak, M.
15/12/2014 → 14/12/2017
Project: PhD

Development of a methodology for inclusion of terrestrial ecotoxic impacts of metals in life cycle impact assessment

Owsianiak, M., Hauschild, M. Z., Rosenbaum, R. K., Olsen, S. I., Diamond, M. L. & Lützhøft, H. H.
01/04/2010 → 12/12/2013
Project: PhD

LC-IMPACT: Development and application of environmental Life Cycle Impact assessment Methods for imProved sustAinability Characterisation of Technologies

Hauschild, M. Z., Rosenbaum, R. K., Larsen, H. F., Fantke, P., Owsianiak, M. & Cosme, N. M. D.
01/12/2009 → 31/05/2013
Project

Activities:

LC-IMPACT Workshop on Spatial Differentiation in LCA: Terrestrial ecotoxicity with a specific focus on metals

Mikolaj Owsianiak (Speaker), 25 Jan 2011

Activity: Lecture and oral contribution

Are free ion activity models (FIAM) sufficient alternatives to biotic ligand models (BLM) for metal toxic impact assessment in terrestrial ecosystems?: Student day in Danish Society of Soil Sciences (DFJ)

Mikolaj Owsianiak (Speaker), 9 Sep 2011

Activity: Lecture and oral contribution