



## **Bio-based monomers and polymers – A sensible sustainability strategy?**

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Across the globe, novel bio-based chemicals and bio-based plastics are receiving increased attention. This is the case also for Europe, where large-scale programmes on basic and applied R&D are in place, next to commercialization activities in companies. This talk provides insight into selected projects the presenter has been involved in, into the EU policy context and the importance that is being paid to environmental assessments by means of Life Cycle Assessment (LCA). While there are still important gaps to be closed in LCA methodology, remarkable progress is being made in this area. Moreover, there is increased interest in broad sustainability assessments, covering also the economic and social dimension.

In this talk concrete examples of results from recent LCA studies on bio-based plastics are presented and the progress made in reducing the environmental footprint is discussed. This includes examples from the “BREW project” (full title: Medium and Long-term Opportunities and Risks of the Biotechnological Production of Bulk Chemicals from Renewable Resources) and the “CatchBio project” (full title: Catalysis for Sustainable Chemicals from Biomass). In the latter project an early-stage sustainability assessment method was developed and tested which is applicable using information available from lab research.

To summarize, the presentation shows that substantial technical progress is being made in parallel with progress in quantifying the value and the pitfalls of these new materials for society.

Conférence présentée le

**LUNDI 7 AVRIL 2014 à 17h30**

Université de Genève – Bâtiment Sciences II

Auditoire A. Pictet – A100

30, quai Ernest-Ansermet, Genève

**La conférence est publique**

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