

Life Cycle Assessment for polymer scientists

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Life cycle assessment (LCA) is the main methodology to assess the impact of products or processes on environment. Life cycle assessments were completed in accordance with the ISO 14040-14043.

LCA has 4 stages namely:

- 1) goal and scope definition
- 2) lifecycle inventory collection
- 3) impact assessment
- 4) lifecycle interpretation

For polymers, above all the synthesis and end of life treatment options are usually studied. During this lecture, basics of LCA will be discussed followed by applications in polymer science. Finally, we discuss how LCA could be practiced in the context of the project Rebond.

The aim of this lecture is to train the scientists to have a lifecycle mindset and to bridge the knowledge gap in industrial and academic practices in the circularity of polymeric materials.