Title: **Substitution of $ZnCl_2$ for an alternative catalyst and waste water reduction in the synthesis of a perfumery ingredient.**

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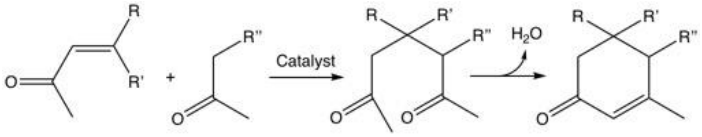
The manufacturing process of a Givaudan perfume ingredient, as it is currently carried out, presents some problems in the first stage. This consists in a Robinson annulation catalyzed by Zinc chloride.



Scheme 1. Robinson annulation reaction

The required catalyst concentration (20 mol%) and the high toxicity of zinc leads to a large amount of waste water. On top this water needs external treatment, with a high associated cost.

This project will study the substitution of $ZnCl_2$ for an alternative catalyst, optimizing the parameters of the reaction and exploring its impact in the reduction of waste water, toxicity and yield of the reaction studied.

Keywords: Catalysis, Waste water, Toxicity, Robinson Annulation, Fragrance Ingredients

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