

## **Homogeneous Catalytic Hydrogenation Reactions towards Fragrance and Flavor Industrial Applications**

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The use of metal hydrides as historical reducing agents for selective carbonyl group is really often still a highly convenient solution for lab scale reaction due to the lack of requirement for specific equipment. Nevertheless, based on safety, environmental but also obviously economical industrial constraints, such metal hydrides were generally replaced by silanes and finally hydrogen which, among other advantages, represents the greenest solution for such chemical transformation on industrial scale. If heterogeneous catalysts have been initially employed in hydrogenation reactions, the most recent developments towards synthesis of highly active and efficient homogeneous catalysts had become an indisputable solution for selective hydrogenation of both ketones and aldehydes for various fragrance and flavor industrial applications.