

When the catalyst reacts not only with your substrate

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The homogeneous asymmetric hydrogenation of a *N*-acyl-hydrazone showed to be particularly challenging: what at the beginning seemed to be only a catalyst handling issue, eventually turned out to be a true interaction between the homogeneous iridium catalyst and the material of construction of the autoclave.¹ This result was truly unexpected and reiterates the concept that the material of construction of the scale-up reactors and equipment should always been taken into consideration since the early phases of the laboratory research and development. If not performed correctly, this evaluation could lead to huge economic impacts, especially considering the costs of some precious metal catalyst and complex substrates.

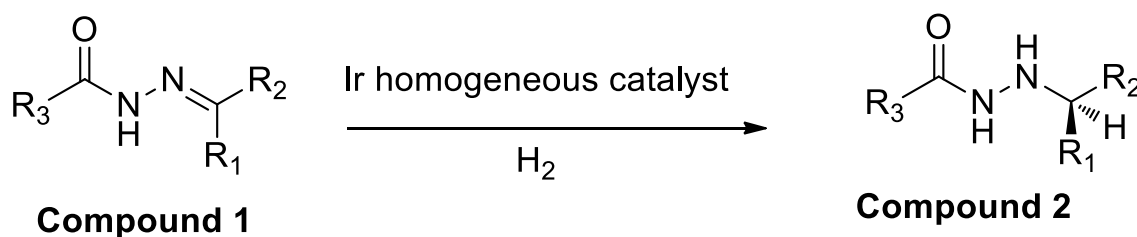


Figure 1. hydrogenation reaction

References

[1] *Unpublished results.*