

# **Gamma-Valerolactone (GVL) Synthesis using Non-Noble Metal Catalysts**

**Sophia S. Bakili**

**The Nelson Mandela African Institution of Science and Technology:  
School of Material, Energy, Water and Environmental Sciences and  
Engineering (MEWES)**

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**A Review**

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## **Abstract**

The use of non-noble metal catalysts in the synthesis of gamma Valerolactone (GVL) have been the area of interest among the GVL researchers in recent years. This is because they are more economical as compared to noble metal catalysts. GVL is used as food additive, fuel additive, precursor for other chemicals as well as green solvent in the preparation of chemicals. Due to its pleasant herbaceous odor, GVL has been used in perfumes as a fragrance. However, GVL is still an expensive commodity because of its high production cost resulting from the use of expensive noble metal catalyst. This hinders the rapid growth of GVL economy. The present review explores the non-noble metal catalyst used in the synthesis of GVL. We focused on the advantages and challenges of using non-noble metal catalyst in the production of GVL. Finally, we have recommended the way forward for the sustainability of the GVL economy.

**Keywords:** catalyst, gamma valerolactone, non-noble, metal