

# N°277 / OC TOPIC(s) : Biomass conversion / Clean reactions

NaOtBu-Promoted Aerobic Oxidative Degradtion of Lignin Model Compounds to High-Value Aromatics

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## PURPOSE OF THE ABSTRACT

In recent years, mankind has become increasingly interested in biomass as natural energy resource, especially in view of the depletion of fossil fuels caused by injudicious use and related environmental impact.[1] Lignocellulosic biomass among the biomass materials is composed mostly of an aromatic polymer and has been known as a potential supply of aromatics or carbon source from the nature.[2] Although considerable effort has been devoted to chemical depolymerization of lignin, highly cross-linked structure remains effective degradation a challenging goal.[3]

In my presentation, I will introduce an efficient and straightforward reaction protocol for the conversion of lignin model compounds, based on a simple system consisting of a base, oxygen, and green solvent under mild conditions in the absence of metals. Our green protocol was successfully applied to the cleavage of both ?beta-O-4' dimeric and trimeric lignin model compounds, and a controlled selective degradation was achieved depending on the bond type. [4]

# **FIGURES**





FIGURE 1 Biomass lignocellulosic

# FIGURE 2

Scheme Our Green Protocol

#### **KEYWORDS**

Biomass Conversion | Transition-Metal-Free | Green Protocol | Lignin model compound

## **BIBLIOGRAPHY**

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