

Heterogeneously efficient oxidative transformation of alcohols to aldehydes over supported ruthenium catalyst

김요한, 김정원^{1,*}, 안소담, 이윤식
서울대학교; ¹강원대학교
(jwemye@kangwon.ac.kr*)

The oxidations of alcohols to aldehydes are of great importance because their oxidized products have widely been used as various chemical intermediates. Although many methods for the oxidation of alcohols have been developed, environmentally-unacceptable oxidants such as dichromate and permanganate to produce enormous amounts of heavy metal salts as wastes are still widely used. Here, we report that the supported ruthenium catalyst shows the high catalytic activities for the oxidations of activated, non-activated, heterocyclic alcohols with only 1 atm of molecular oxygen as a green oxidant. The observed catalysis of Ru/ZrO₂ was truly heterogeneous in nature and the catalyst recovered after reaction could be reused without an appreciable loss of its catalytic performance.