

Room Temperature Heterogeneously Catalyzed Efficient Aerobic Oxidation of Alcohols by a Supported Hydrated Ruthenium Catalyst

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A hydrated ruthenium catalyst ($\text{Ru}(\text{OH})_x/\text{MnO}_2$) was developed by simple impregnation method and applied to various alcohols substrates oxidation at room temperature under the air atmosphere. This catalyst not only catalyzed the aromatic alcohols but also oxidized the hetero-atomic and allylic alcohols efficiently. Moreover, this catalyst was tolerated by the non-activated alicyclic, primary and secondary aliphatic alcohols to give excellent yields and selectivity. This catalyst could be characterized by the easy isolation from reaction mixtures and reusability for several times.