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研究论文

Formylation of Alcohol with Formic Acid under Solvent-Free and Neutral Conditions Catalyzed by Free I_2 or I_2 Generated in Situ from $Fe(NO_3)_3 \cdot 9H_2O$/NaI

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摘要 Different alcohols were formylated by formic acid under solvent-free conditions in the presence of iodine as the catalyst with good-to-high yields at room temperature. I_2 generated in situ from $Fe(NO_3)_3 \cdot 9H_2O$/NaI also catalyzed the formylation of the alcohols under solvent-free conditions. This gives a green and efficient reaction at room temperature, in which the use of toxic and corrosive molecular I_2 is avoided.

关键词： alcohol formic acid formylation iodine in situ iodine solvent-free

Abstract： Different alcohols were formylated by formic acid under solvent-free conditions in the presence of iodine as the catalyst with good-to-high yields at room temperature. I_2 generated in situ from $Fe(NO_3)_3 \cdot 9H_2O$/NaI also catalyzed the formylation of the alcohols under solvent-free conditions. This gives a green and efficient reaction at room temperature, in which the use of toxic and corrosive molecular I_2 is avoided.

Keywords： alcohol, formic acid, formylation, iodine, in situ iodine, solvent-free

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