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Low temperature activation of benzylic C–H bonds with heterogeneous Fe/MgO catalyst under atmospheric molecular oxygen

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Abstract

The room temperature benzylic oxidation was performed with Fe/MgO catalyst. This Fe/MgO catalyst was prepared by the dissolution-precipitation method. This heterogeneous catalyst, Fe/MgO, activated the C–H bond with atmospheric molecular oxygen even at 10 °C; its catalytic activity was greatly enhanced by the addition of *N*-hydroxyphthalimide (NHPI) and/or acetaldehyde.

Keywords: C–H activation; Oxidation; Catalysis; Fe/MgO