

# New



# Collectable and Recyclable Iodine-type Oxidation Catalyst supported on Magnetite

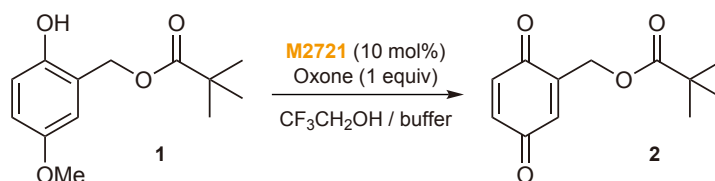


## Advantages

- Easily magnetically collectable and recyclable aided by immobilization on magnetite nanoparticle
- Applicable to hypervalent-iodine-catalyzed oxidation with co-oxidant

## Application

### Oxidation of 4-Alkoxyphenol



cycle	time (h)	2 yield (%)	recovery of catalyst (%)
1	4	80	98
2	4	81	97
3	5.5	80	98
4	7.5	82	96
5	8	82	96

#### Procedure:

**M2721** (121 mg, 0.04 mmol, 10 mol%) is added to a solution of **1** (95 mg, 0.40 mmol) and oxone (246 mg, 0.40 mmol) in  $\text{CF}_3\text{CH}_2\text{OH}$ -0.1 M phosphate buffer (2.0 mL, 1:2). The reaction mixture is stirred at rt using mechanical stirrer for 4 h. **M2721** is collected at the bottom of the flask using an external magnet, and the supernatant is decanted. **M2721** is washed three times with EtOAc, three times with  $\text{H}_2\text{O}$ , three times with acetone, two times with  $\text{Et}_2\text{O}$ , and dried in vacuo. Then, the recovered **M2721** is reused in the next reaction cycle. The combined organic layer (eluant EtOAc and decanted mixture) is washed with water and brine, dried over  $\text{Na}_2\text{SO}_4$ , and concentrated in vacuo. The residue is purified by column chromatography to provide **2** (71 mg, 80%) as a yellow crystals.

H. Nambu, I. Shimokawa, T. Fujiwara, T. Yakura, *Asian J. Org. Chem.* **2016**, 5, 486.

## Iodobenzene Catalyst Supported on Magnetic Iron Oxide Nanoparticle (0.6-0.8mmol/g)

100 mg [M2721]

This product was produced by collaboration with Prof. Takayuki Yakura, University of Toyama.

### Related Product Oxone

25g / 500g [O0310]

For further information please refer to our website at [www.TCIchemicals.com](http://www.TCIchemicals.com).

oxidation catalysts

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