

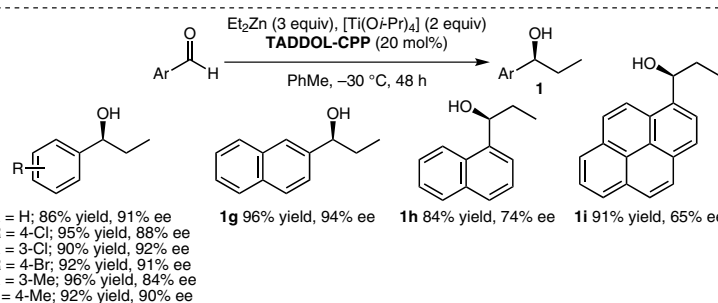
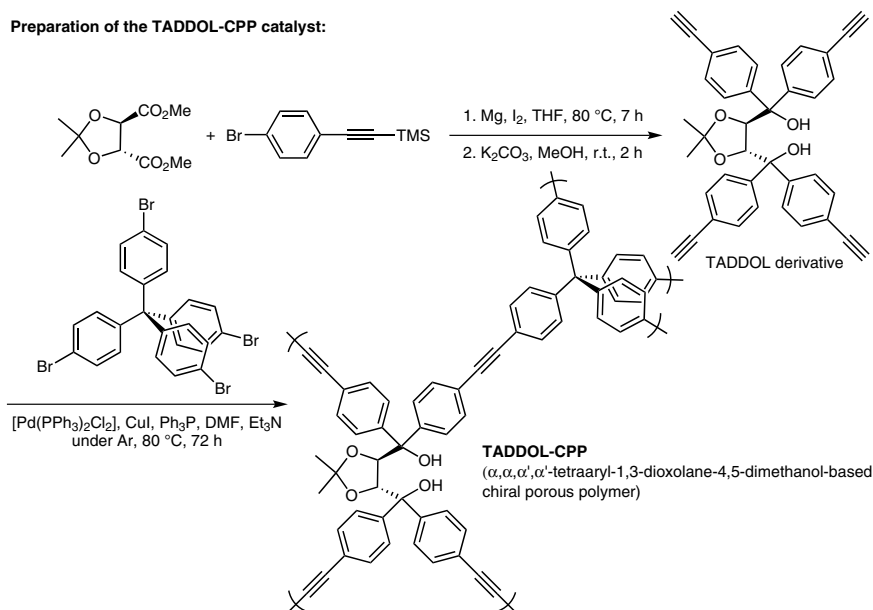
W.-K. AN, M.-Y. HAN, C.-A. WANG, S.-M. YU, Y. ZHANG, S. BAI, W. WANG* (LANZHOU UNIVERSITY AND COLLABORATIVE INNOVATION CENTER OF CHEMICAL SCIENCE AND ENGINEERING, TIANJIN, P. R. OF CHINA)

Insights into the Asymmetric Heterogeneous Catalysis in Porous Organic Polymers: Constructing a TADDOL-Embedded Chiral Catalyst for Studying the Structure–Activity Relationship

Chem. Eur. J. **2014**, *20*, 11019–11028.

An Organo Porous Polymer Catalyst for Asymmetric Alkylation with Et_2Zn

Preparation of the TADDOL-CPP catalyst:



Significance: A chiral $\alpha, \alpha, \alpha', \alpha'$ -tetraaryl-1,3-dioxolane-4,5-dimethanol-based chiral porous polymer (TADDOL-CPP) was prepared and applied to the asymmetric alkylation of aromatic aldehydes with Et_2Zn in the presence of $[\text{Ti}(\text{O}i\text{-Pr})_4]$ to give the corresponding products **1a–i** in up to 96% yield with up to 94% ee.

Comment: The TADDOL-CPP as well as the TADDOL-CPP/Ti catalysts were characterized by ^{13}C CP/MAS NMR spectroscopy, TGA, BET, XRD, TEM and ICP analyses. TADDOL-CPP was recovered by centrifugation and reused ten times to give **1a** with slight loss of the catalytic activity (91% ee to 75% ee).

SYNFACTS Contributors: Yasuhiro Uozumi, Yoichi M. A. Yamada, Heeyoel Baek

Synfacts 2014, 10(11), 1219 Published online: 20.10.2014

DOI: 10.1055/s-0034-1379382; Reg-No.: Y12214SF

2014 © THIEME STUTTGART • NEW YORK

Category

Polymer-Supported
Synthesis

Key words

porous organic
polymers

aldehydes

heterogeneous
catalysis

SYNFACTS
of the month

This document was downloaded for personal use only. Unauthorized distribution is strictly prohibited.

1219