An Organo Porous Polymer Catalyst for Asymmetric Alkylation with Et₂Zn

Preparation of the TADDOL-CPP catalyst:

**Significance:** A chiral α,α,α’,α’-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 Et₂Zn in the presence of [Ti(O₂-i-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 ¹³C 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).

**Category:** Polymer-Supported Synthesis

**Key words**
- porous organic polymers
- aldehydes
- heterogeneous catalysis