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Synthesis of Chiral Polymers Containing Thioetherified Cinchonidinium Repeating Units and Their Application to Asymmetric Catalysis

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Asymmetric α -Benzylation with Cinchonidium Salt Based Polymers

Significance: Chiral polymers **3** and **5** were prepared from cinchonidine dimers **1** (eqs. 1 and 2). All polymers showed high catalytic performance in the asymmetric α -benzylation of N-diphenylmethylene glycine *tert*-butyl ester with benzyl bromide (eq. 3, 77–95% yield, 81–92% ee).

Comment: The polymer catalysts were recovered by filtration and reused without loss of catalytic performance. The reaction also took place at –40 °C to give the product with improved ee (with **3bc**: 24 h, 83% yield, 95% ee). The catalytic activity and the stereoselectivity observed with the polymeric catalysts **3** and **5** were comparable to those obtained with the homogeneous catalysts

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Category

Polymer-Supported Synthesis

Key words

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chiral polymers

 $\begin{array}{l} \text{asymmetric} \\ \alpha\text{-benzylation} \end{array}$

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