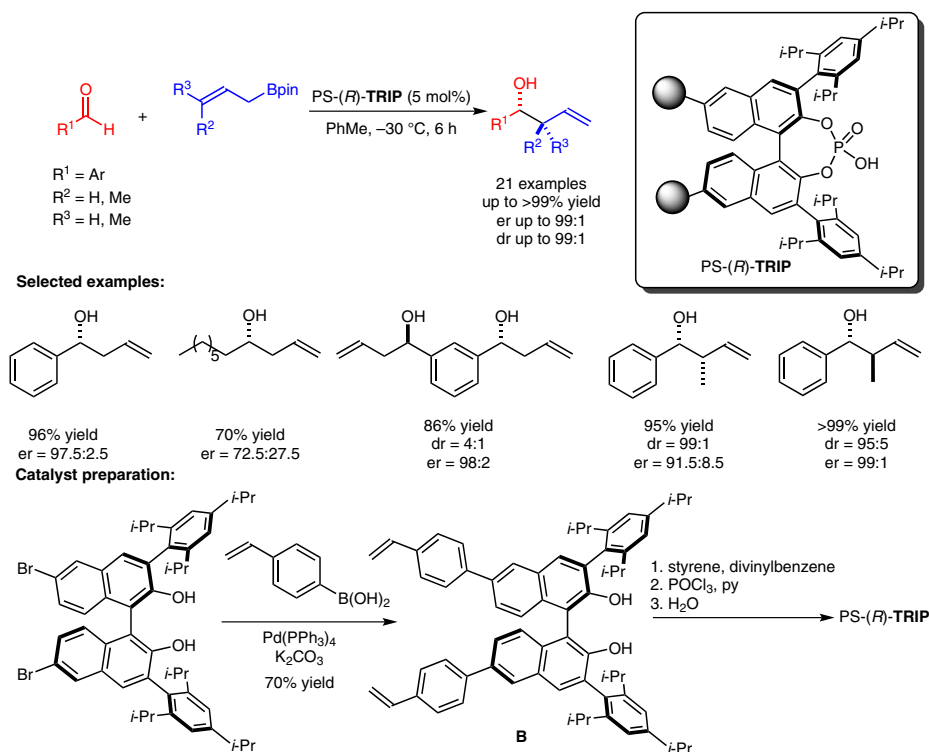


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Polystyrene-Supported TRIP: A Highly Recyclable Catalyst for Batch and Flow Enantioselective Allylation of Aldehydes

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# Allylboration of Aldehydes by Immobilized TRIP



**Significance:** The Pericàs and Rodríguez-Esrich groups report an enantioselective allylboration of aldehydes catalyzed by polystyrene-immobilized TRIP phosphoric acid. The catalyst was prepared by copolymerization of the BINOL derivative **B** with styrene and divinylbenzene, resulting in a functionalization level of 0.20–0.23 mmol/g. The desired homoallylic alcohols were obtained in generally good yields ( $\leq 99\%$ ), enantioselectivities ( $er \leq 99:1$ ), and diastereoselectivities ( $dr \leq 99:1$ ). Interestingly, the scope was explored by using a single sample of the catalyst regenerated by simply washing the resin with a solution of HCl in EtOAc.

**Comment:** Heterogeneous catalysts offer the advantages of easy recyclability and simplified work-up procedures. Although methods for the immobilization of chiral phosphoric acids have been described, immobilization of the most successful acid (**TRIP**) had not previously been achieved. The authors applied their system to the continuous-flow catalytic enantioselective allylation of benzaldehyde, giving the corresponding product in 92% yield and an enantiomeric ratio of 95.5:4.5 with a turnover number of 282 and a productivity of 2.22 mmol/(h·g<sub>resin</sub>).

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