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# Novel Polystyrene-Immobilized Chiral Amino Alcohols as Heterogeneous Ligands for the Enantioselective Arylation of Aldehydes in Batch and Continuous Flow Regime

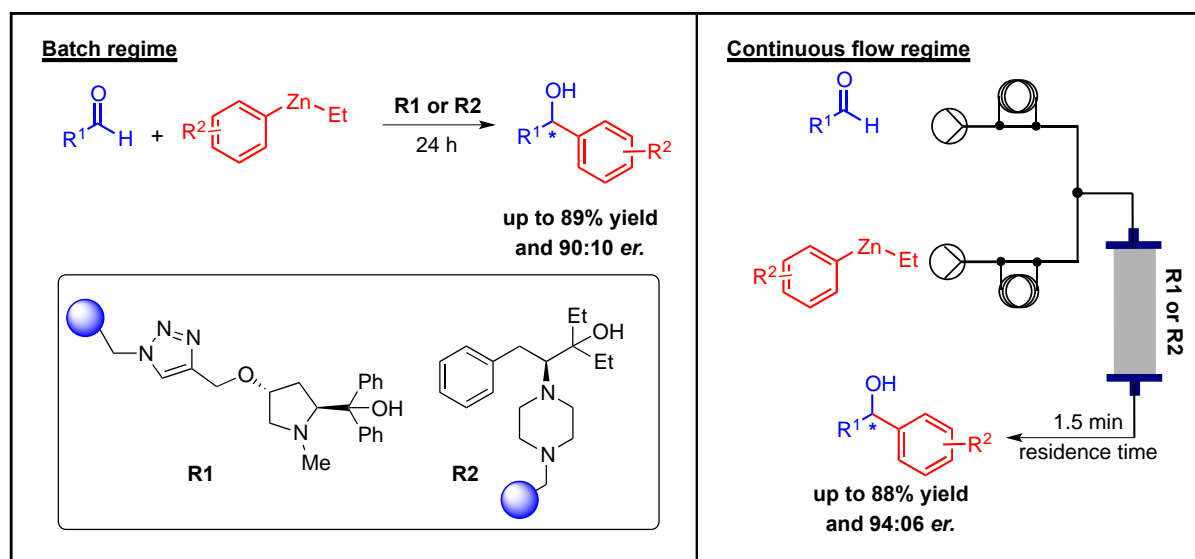
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## GRAPHICAL ABSTRACT



Novel supported chiral amino alcohols afforded enantioselectivities comparable to its homogeneous counterpart when evaluated in continuous flow regime, in only 1.5 minutes of residence time.

**HIGHLIGHTS** Heterogeneous ligands are applied for the enantioselective arylation of aldehydes.

- Amino acids derived ligands are immobilized onto the Merrifield resin.
- Continuous flow conditions improve the performance of the heterogeneous ligands.
- Supported ligands can be recycled under continuous flow conditions.

## ABSTRACT

Six different ligands derived from (*S*)-proline, (*2S,4R*)-4-hydroxyproline, (*S*)-tyrosine and (*S*)-phenylalanine were synthesized and screened in homogeneous phase for the enantioselective arylation of aldehydes using mixed organozinc reagents. The best ligands were immobilized on the Merrifield resin and evaluated in batch and continuous flow regimes. In batch, up to 89% yield

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