Efficient Asymmetric \(\alpha\)-Oxyamination of Aldehydes by Resin-Supported Peptide Catalyst in Aqueous Media

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**Supported Peptide for Asymmetric \(\alpha\)-Oxyamination of Aldehydes**

Significance: A polystyrene-poly(ethylene glycol) resin supported peptide catalyst bearing terminal five-residue Pro-D-Pro-Aib-Trp-Trp combined with polyoleucine was prepared. The polymeric peptide was successfully applied to the asymmetric \(\alpha\)-oxygenation of aldehydes with TEMPO in the presence of a catalytic amount of \(\text{FeCl}_2\) and NaNO\(_2\) to give the corresponding products under aqueous aerobic conditions with up to 87% yield and 93% ee (5 examples).