Supported Peptide for Asymmetric α-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 α-oxyamination of aldehydes with TEMPO in the presence of a catalytic amount of FeCl₂ and NaNO₂ to give the corresponding products under aqueous aerobic conditions with up to 87% yield and 93% ee (5 examples).


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