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 polyleucine 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 NaN₃0₂ to give the corresponding products under aqueous aerobic conditions with up to 87% yield and 93% ee (5 examples).