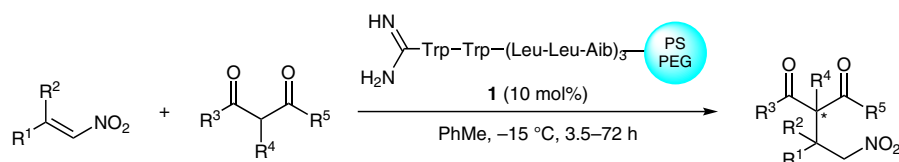


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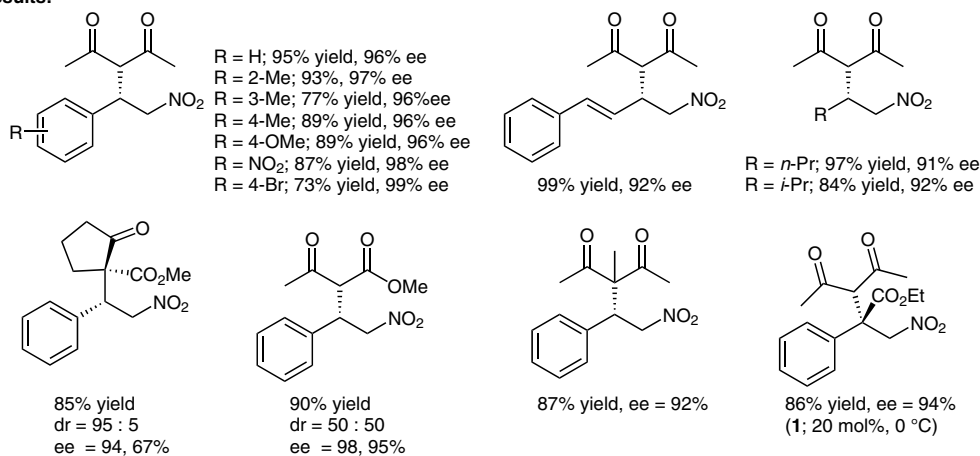
Enantioselective Nitro-Michael Addition Catalyzed by N-Terminal Guanidinylated Helical Peptide

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Polymer-Supported Helical Peptide Catalyst for Enantioselective Nitro-Michael Addition



Results:



Significance: An N-terminal guanidinylated helical peptide supported on PS-PEG resin catalyzed the enantioselective nitro-Michael addition of acetylacetones or β -keto esters to nitroalkenes to afford the corresponding nitro-Michael adducts in up to 99% yield and 99% ee.

Comment: In the enantioselective nitro-Michael addition of acetylacetone to β -nitrostyrene, the catalyst was recovered and reused four times without loss of its catalytic performance. The authors have previously reported the synthesis of PS-PEG-supported peptide catalysts and their application in a cyanosilylation of aldehydes (*Tetrahedron Lett.* **2012**, *53*, 5981) and an enantioselective Michael addition (*J. Org. Chem.* **2016**, *81*, 6343).