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Catalytic Asymmetric *exo'*-Selective [3+2] Cycloaddition of Iminoesters with Nitroalkenes

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Stereoselective [3+2] Cycloaddition of Imino Esters with Nitroalkenes

Selected examples:

Proposed reaction mechanism:

Significance: A library of solid-phase imidazo-line-aminophenol/metal catalysts was prepared and a high-throughput screening method employing analysis by circular dichroism spectroscopy was used to find the most selective catalyst. This is the first method to generate *exo'* products in high diastereoselectivity and with excellent ee values.

Comment: The *exo'* stereochemistry suggests that the mechanism is not a concerted [3+2] cycloaddition. The authors propose a stepwise mechanism that involves 1,4-addition followed by a Mannich-type reaction as shown above.

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