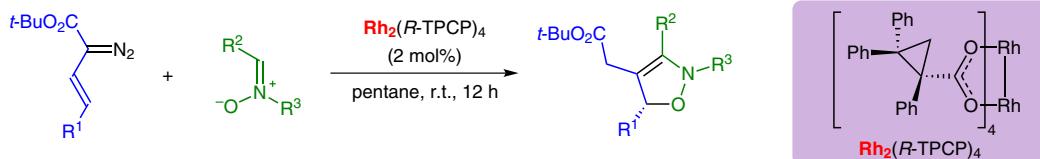
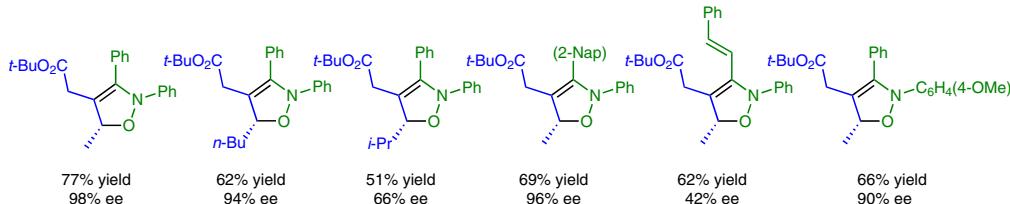


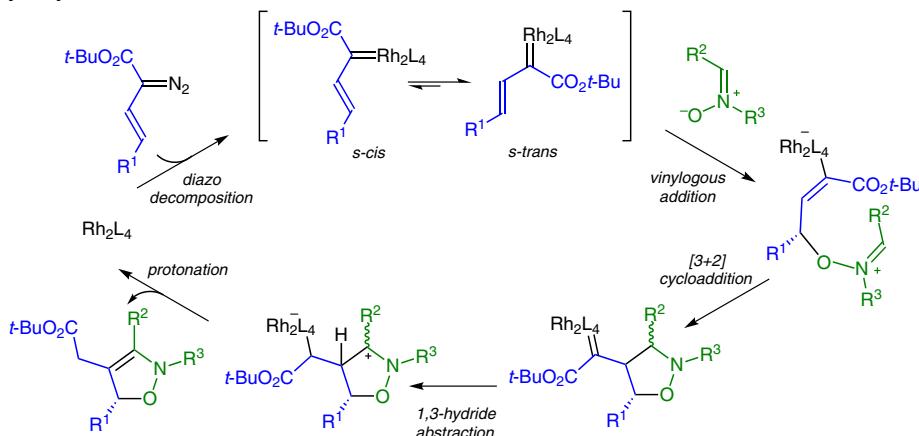
# $\text{Rh}_2(R\text{-TPCP})_4$ -Catalyzed Enantioselective Syntheses of 2,5-Dihydroisoxazoles



## Selected examples:



## Proposed catalytic cycle:



**Significance:** Exploring the vinylogous reactivity of vinyl rhodium carbenoids, the authors report the  $\text{Rh}_2(R\text{-TPCP})_4$ -catalyzed enantioselective formal [3+2] cycloaddition between nitrones and vinyldiazoacetates. With only 2 mol% of the bulky rhodium catalyst, the 2,5-dihydroisoxazoles were obtained in good yields and moderate to excellent enantioselectivities.

**Comment:** Doyle and colleagues previously reported a dirhodium complex catalyzed synthesis of 3,6-dihydro-1,2-oxazines via an asymmetric formal [3+3] cycloaddition between nitrones and vinyldiazo compounds (*J. Am. Chem. Soc.* **2011**, *133*, 16402). The highlight of this work is the product divergence from [3+3] to [3+2] cycloaddition leading to 2,5-dihydroisoxazoles with clinical choice of substrate and catalyst.