Development of Bifunctional Cyclooctene Catalysts

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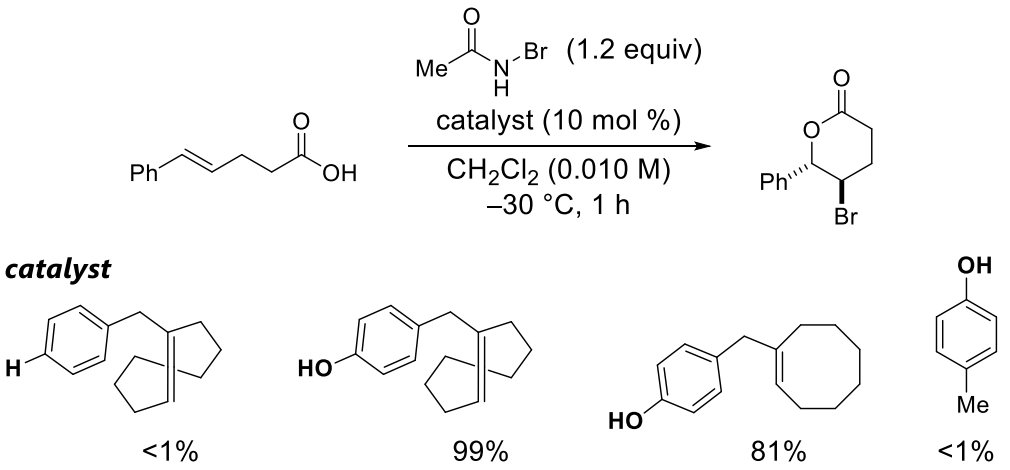
Cyclooctenes have strained olefins, which serve as Lewis base catalysts.[1,2] We previously reported the *trans*-cyclooctene bearing a benzyl group has high catalytic activity in halolactonization reactions.[1] Currently, we are further trying to improve the catalytic performance of cyclooctene derivatives. In this study, we revealed remarkable substituent effects on the catalytic activity of benzyl group-substituted cyclooctenes, and bifunctional cyclooctene catalysts were developed. In particular, cyclooctenes bearing a phenol moiety exhibited high catalytic activity. It is also notable that the bifunctionality made not only *trans*-olefins but also *cis*-olefins catalytically active.



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2) T. Nagano, S. Einaru, K. Shitamichi, K. Asano, S. Matsubara, *Eur. J. Org. Chem.* **2020**, 7131.