

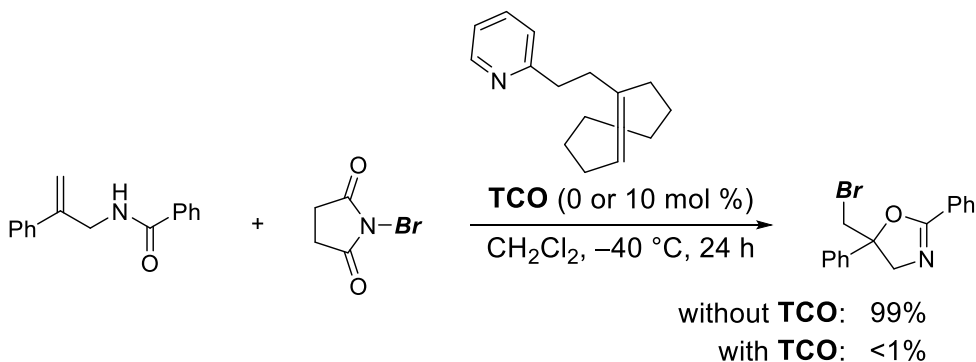
Deceleration of Halogenation with *trans*-Cyclooctene Derivatives

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Halogenation is one of the most important synthetic transformations providing functional molecules and synthetic feedstocks. Thus, catalytic selective halogenation methods are desirable to further increase their synthetic efficiency. However, some halogenation reactions involve rapid non-catalytic pathways, which disturb catalyst-controlled selectivities. Thus, it is of significance to develop principles for inhibiting such non-catalytic pathways.

We developed organocatalysts utilizing high Lewis basicity of strained olefins of *trans*-cyclooctenes,^{1,2} which are catalytically active in halolactonizations.¹ In this study, we also revealed they exhibited inhibition effects in some bromination reactions. It is notable that catalytic amounts of *trans*-cyclooctene derivatives decelerated non-catalytic bromocyclization reactions, which proceeded quantitatively in the absence of any catalyst. We present the inhibition effects of *trans*-cyclooctene derivatives in bromocyclization of allylic amides, the mechanism, and the effects on catalytic asymmetric reactions.



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