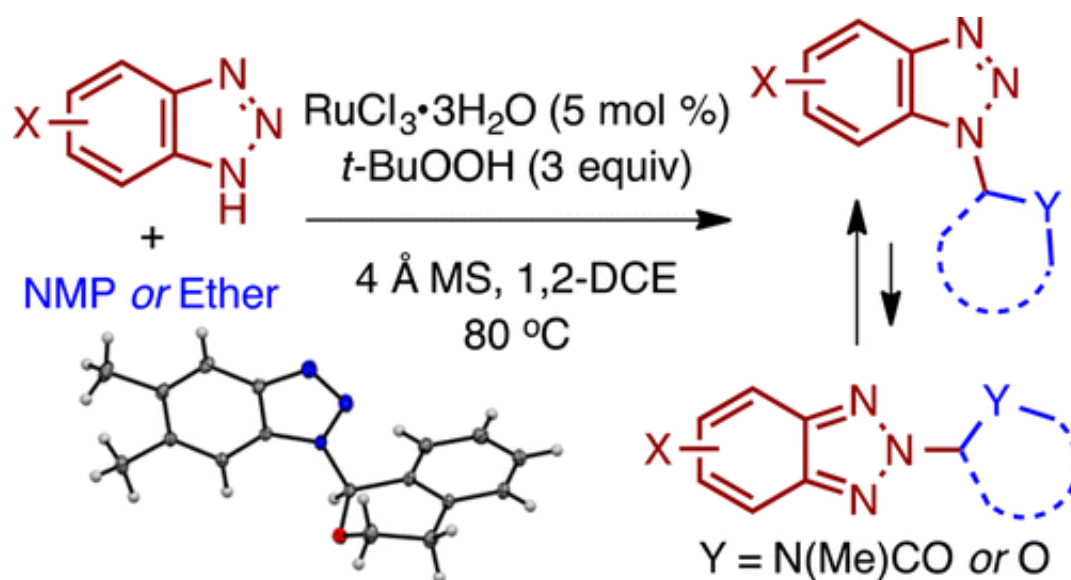


# CCNY research team in molecular breakthrough

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Reducing a barrier that generally hinders the easy generation of new molecules, a team led by City College of New York chemist Mahesh K. Lakshman has devised a method to cleave generally inert bonds to allow the formation of new ones. The study is the cover story in the journal *ACS Catalysis* published by the American Chemical Society.

"Saturated carbon-hydrogen bonds in organic compounds are considered relatively inert and generally difficult to break in order to make other bonds, leading to new [molecules](#)," explained Lakshman, professor of

chemistry in City College's Division of Science.

However, Lakshman and his colleagues demonstrated a method for accomplishing cleavage of carbon-hydrogen bonds and subsequent formation of carbon-nitrogen bonds.

Many of the ensuing new molecules bear structural similarities to the class of dideoxynucleosides, which are used as [antiviral drugs](#). "Thus, this research can provide more direct access to novel pharmaceutical entities," said Lakshman, whose research thrust is organic synthesis at the chemistry-biology interface.

**More information:** Manish K. Singh et al. Ruthenium-Catalyzed C–H Bond Activation Approach to Azolyl Aminals and Hemiaminal Ethers, Mechanistic Evaluations, and Isomer Interconversion, *ACS Catalysis* (2016). [DOI: 10.1021/acscatal.5b02603](https://doi.org/10.1021/acscatal.5b02603)

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