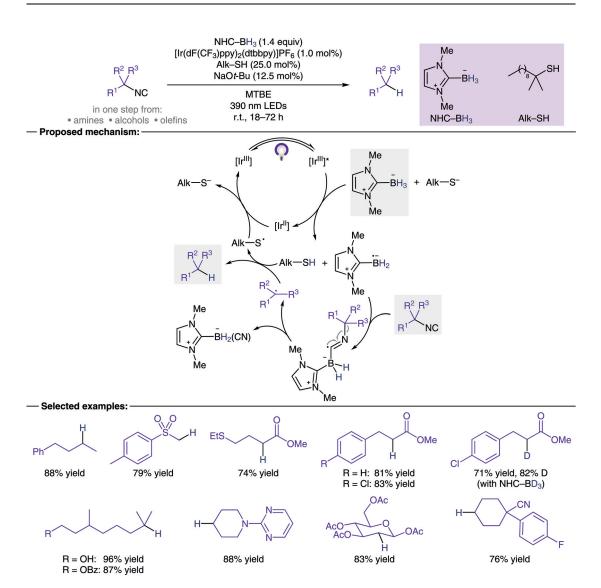
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Unified Approach to Deamination and Deoxygenation Through Isonitrile Hydrodecyanation: A Combined Experimental and Computational Investigation

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## Iridium-Photocatalyzed Hydrodecyanation of Alkyl Isonitriles with NHC-Borane



Significance: Isonitriles, which are readily available from amines, alcohols, or alkenes, undergo a hydrodecyanation reaction under iridium photocatalysis. This protocol provides an alternative and facile way to defunctionalize alcohols and amines in two steps under mild reaction conditions.

Comment: This method is chemoselective for isonitriles in the presence of a nitrile group. However, if a heteroatom polarizes the C-CN bond, the protocol can be extended to nitriles (not shown). Density functional theory calculations support the observed reactivity pattern between the two functional groups.

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Metals in Synthesis

## Key words

defunctionalization hydrodecyanation

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**NHC** boranes

