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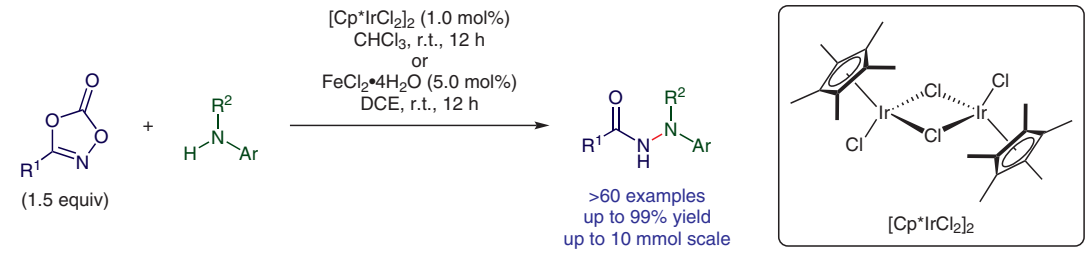
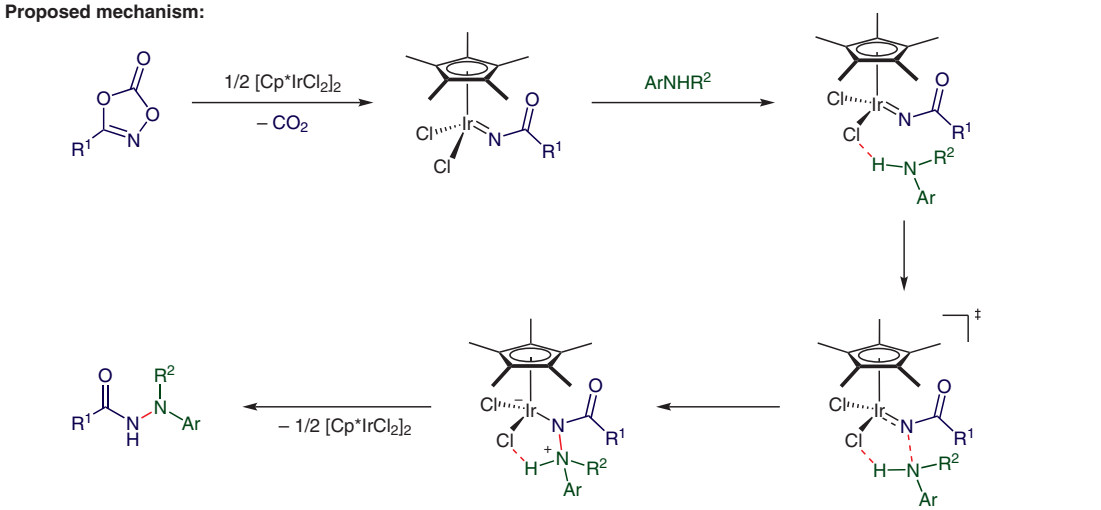
Nitrene-Mediated Intermolecular N–N Coupling for Efficient Synthesis of Hydrazides
Nat. Chem. **2021**, *13*, 378–385, DOI: 10.1038/s41557-021-00650-0.

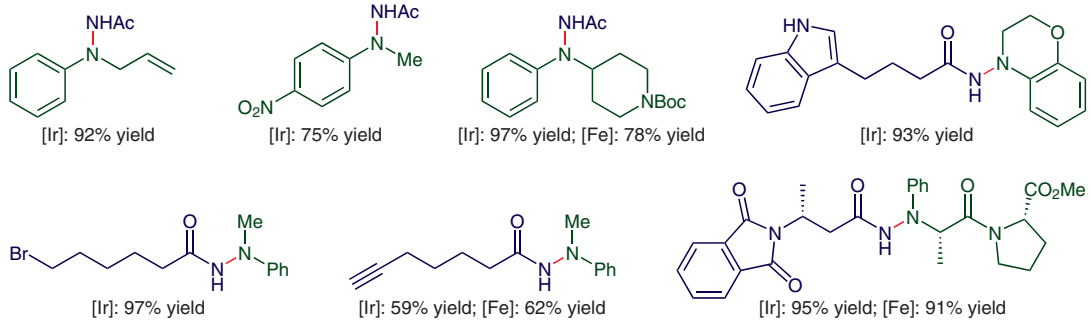
Synthesis of Hydrazides by N–N Coupling



Proposed mechanism:



Selected examples:



Significance: Chang, Chen, and co-workers report a synthesis of hydrazides from arylalkylamines and dioxazolones, which serve as nitrene precursors. Iridium complexes as well as simple iron halides were found to efficiently catalyze the transformation.

Comment: The reaction proceeds under mild conditions with excellent functional group tolerance, including pseudopeptides. Mechanistic studies indicate that the attack of the electrophilic iridium-nitrenoid intermediate by the amine is assisted by Cl···HN bonding.

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