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Tetrahedron Young Investigator Award 2009
Recent Advances in Catalysis and Green Chemistry
Michael J. Krische

Guest editor: Stephen F. Martin

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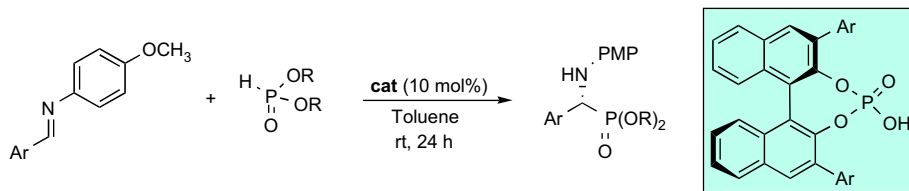
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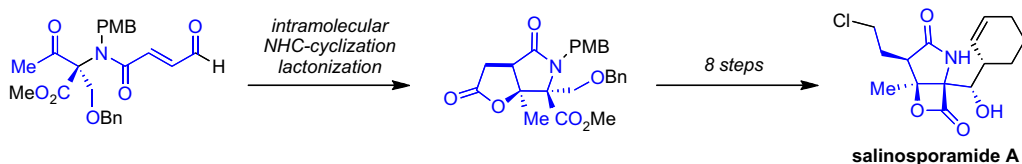
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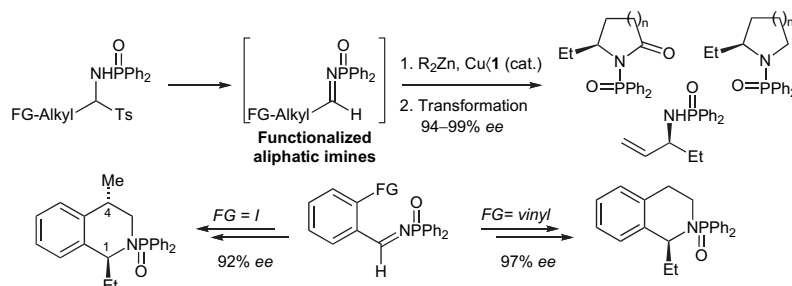
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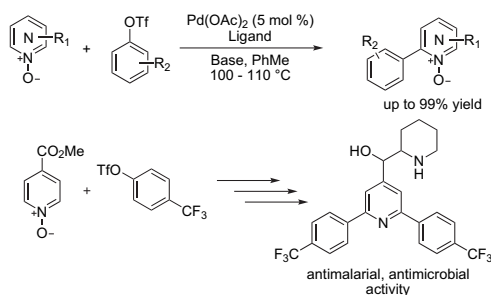
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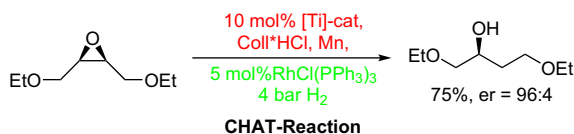
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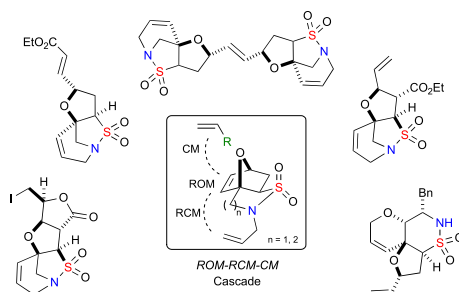
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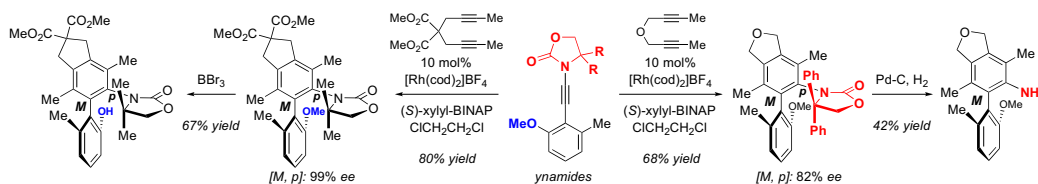
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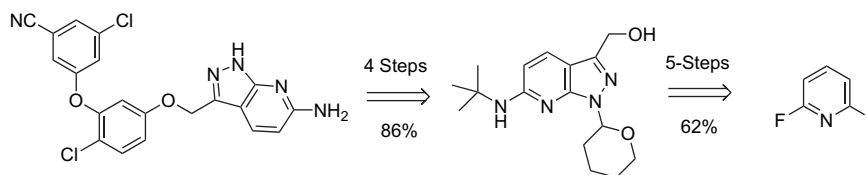
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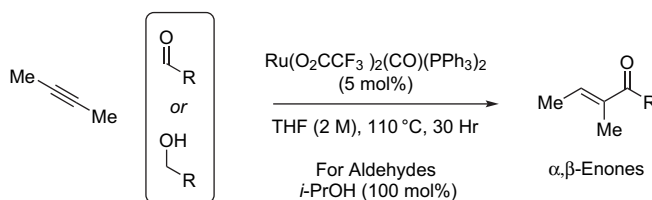
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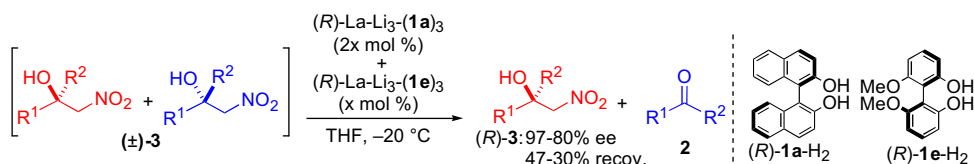
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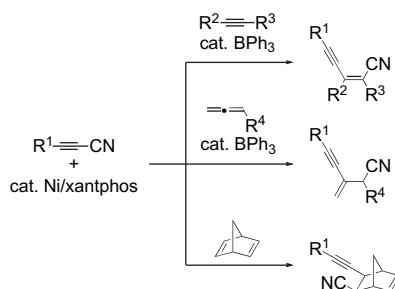
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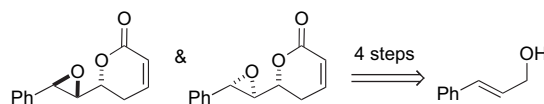
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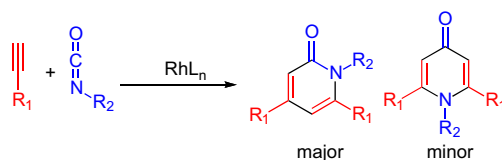
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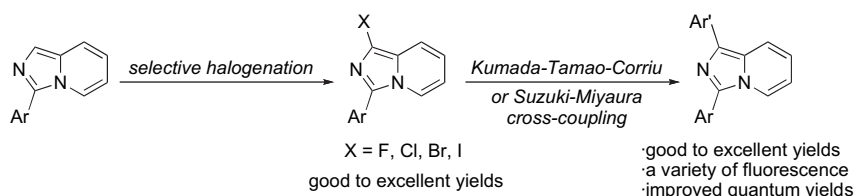
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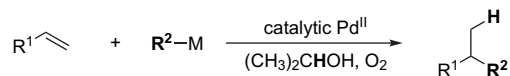
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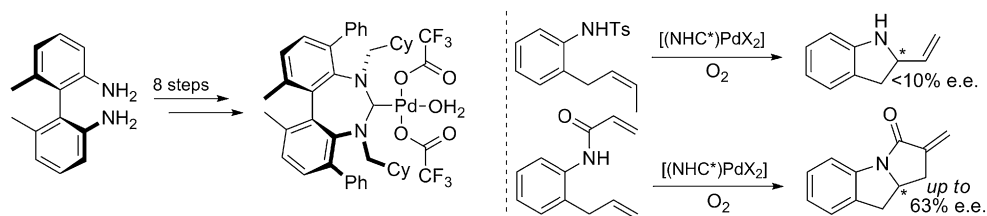
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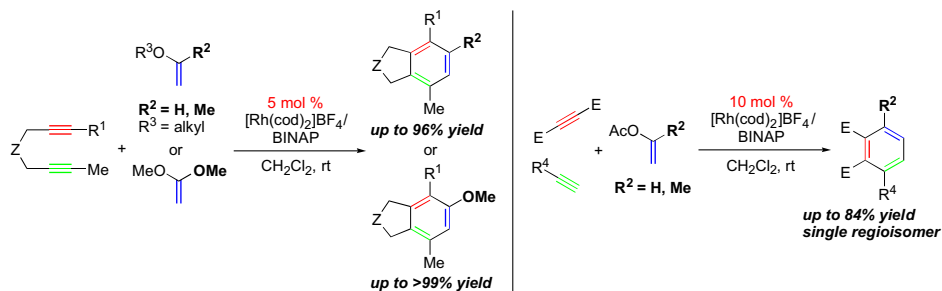
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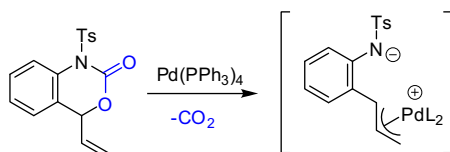
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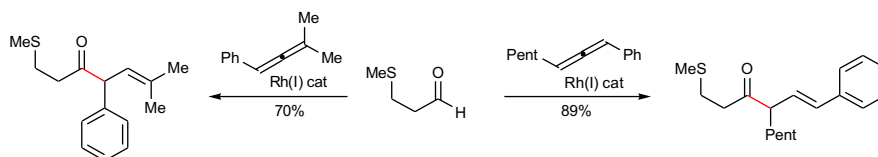
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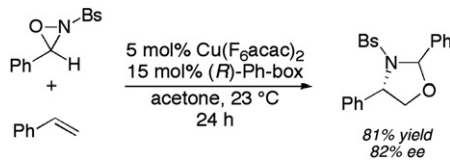
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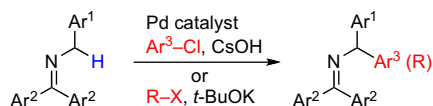
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Takashi Niwa, Takafumi Suehiro, Hideki Yorimitsu*, Koichiro Oshima*



*Corresponding author

 Supplementary data available via ScienceDirect

COVER

By combining the fields of hydrogenation and carbonyl addition, a broad new family of C-C bond forming hydrogenations and transfer hydrogenations is evoked, and the chemistry of carbonyl addition evolves beyond the use of stoichiometric organometallic reagents. Under hydrogenation conditions, unsaturates serve as synthetic equivalents to non-stabilized carbanions, enabling byproduct-free carbonyl addition. Under transfer hydrogenation conditions, alcoholic reactants serve as both hydrogen donors and aldehyde precursors, enabling byproduct-free carbonyl addition directly from the alcohol oxidation level.

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