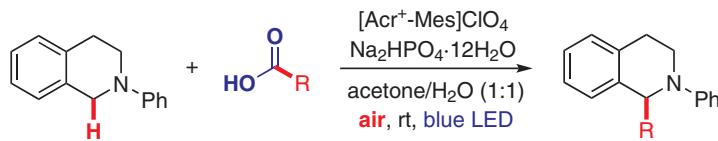


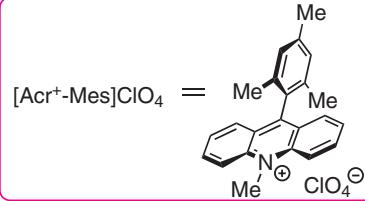
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Accounts and Rapid Communications in Chemical Synthesis

June 16, 2021 • Vol. 32, 947–1048



- ✓ transition-metal-free
- ✓ O_2 in air as oxidant
- ✓ available alkylation reagents
- ✓ mild conditions



Visible-Light Photoredox-Catalyzed Decarboxylative α -tert-Butylation of $\text{C}(\text{sp}^3)\text{-H}$ Bonds of *N*-Aryltetrahydroisoquinolines with Pivalic Acid under Transition-Metal-Free Conditions

L. Sun, Y. Zhang, J. Liu, P. Li

10



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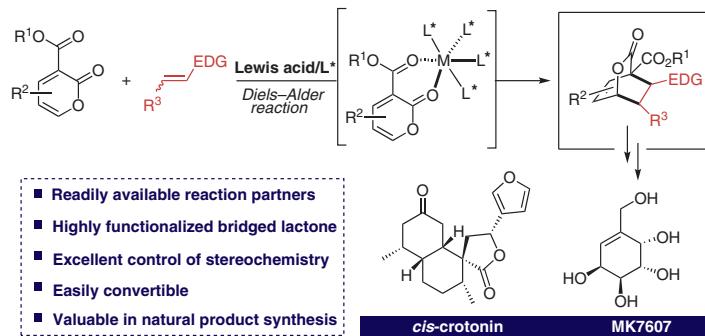
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Asymmetric Inverse-Electron-Demand Diels–Alder Reactions of 2-Pyrones by Lewis Acid Catalysis

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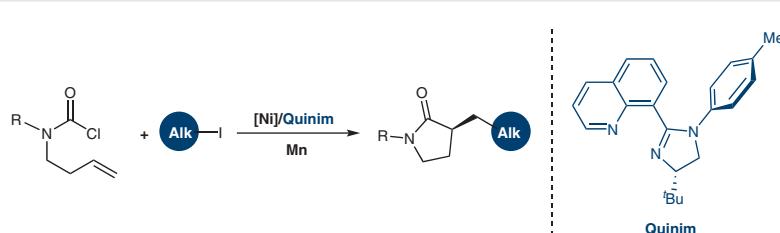
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Asymmetric Synthesis of α -Alkylated γ -Lactam via Nickel/8-Quinim-Catalyzed Reductive Alkyl-Carbamoylation of Unactivated Alkene

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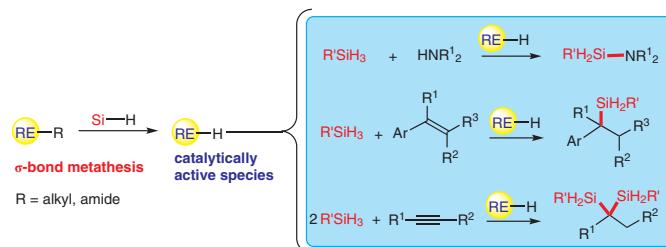


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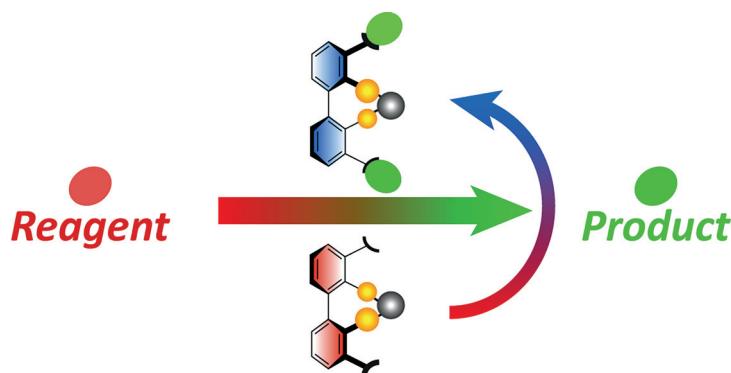
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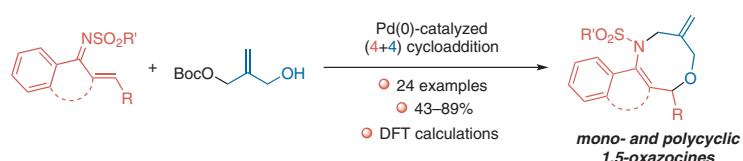
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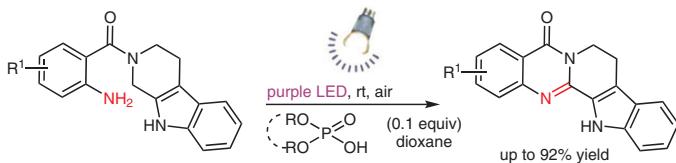
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- mild reaction conditions (rt, air)
- metal- and photocatalyst-free

- wide substrate scope (21 examples)
- H_2O and H_2O_2 release

Synlett 2021, 32, 993–998
DOI: 10.1055/a-1458-5785

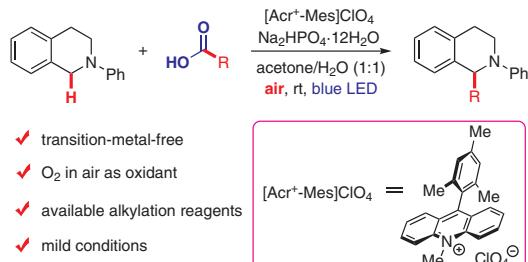
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- ✓ transition-metal-free
- ✓ O_2 in air as oxidant
- ✓ available alkylation reagents
- ✓ mild conditions

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DOI: 10.1055/a-1467-5585

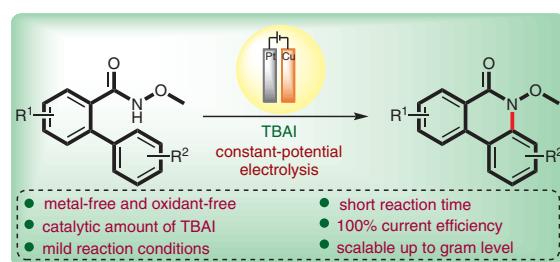
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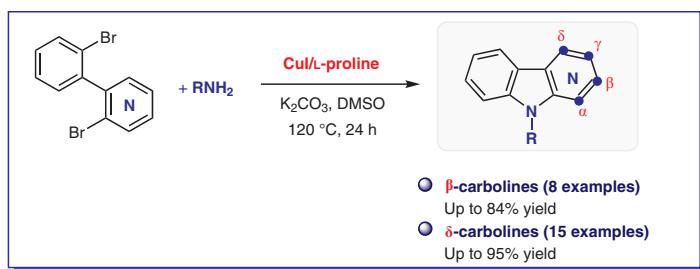
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- metal-free and oxidant-free
- catalytic amount of TBAI
- mild reaction conditions
- short reaction time
- 100% current efficiency
- scalable up to gram level

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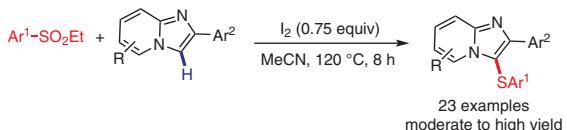
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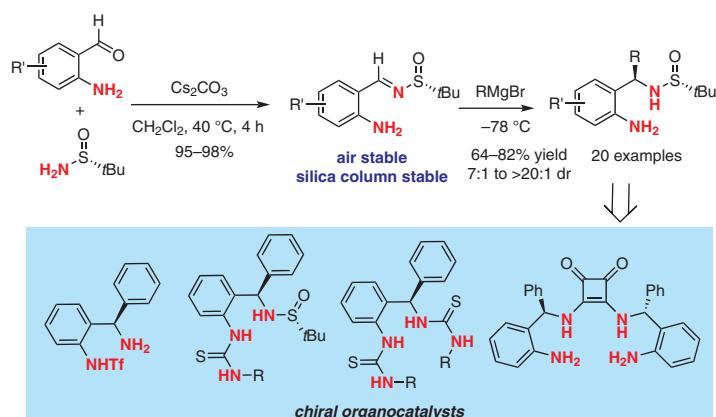


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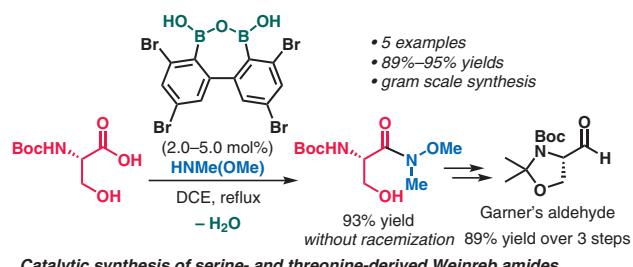
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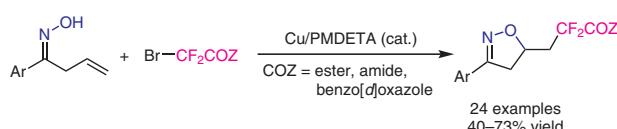
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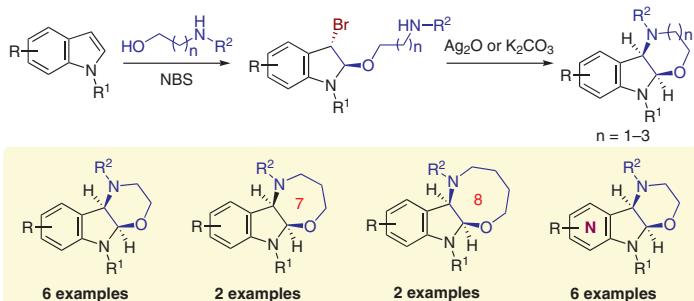
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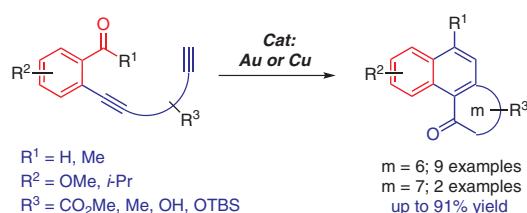
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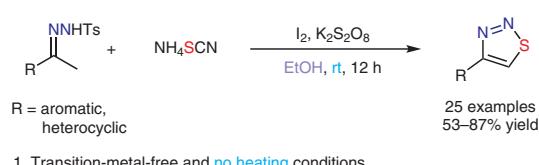
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1. Transition-metal-free and no heating conditions.
2. Ethanol as eco-friendly solvent.
3. Up to gram-scale.
4. Applications in two palladium-catalyzed coupling reactions.