

Total Syntheses of Aflavazole and 14-Hydroxyaflavinine

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JACS 2016, 138, 15555-15558

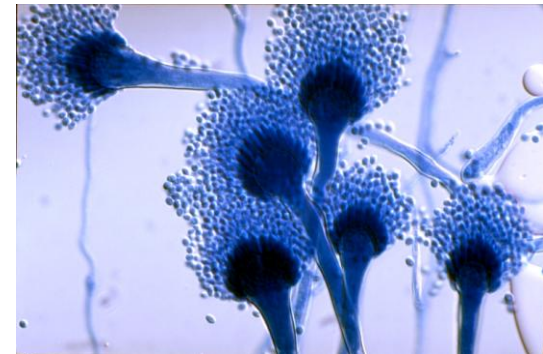
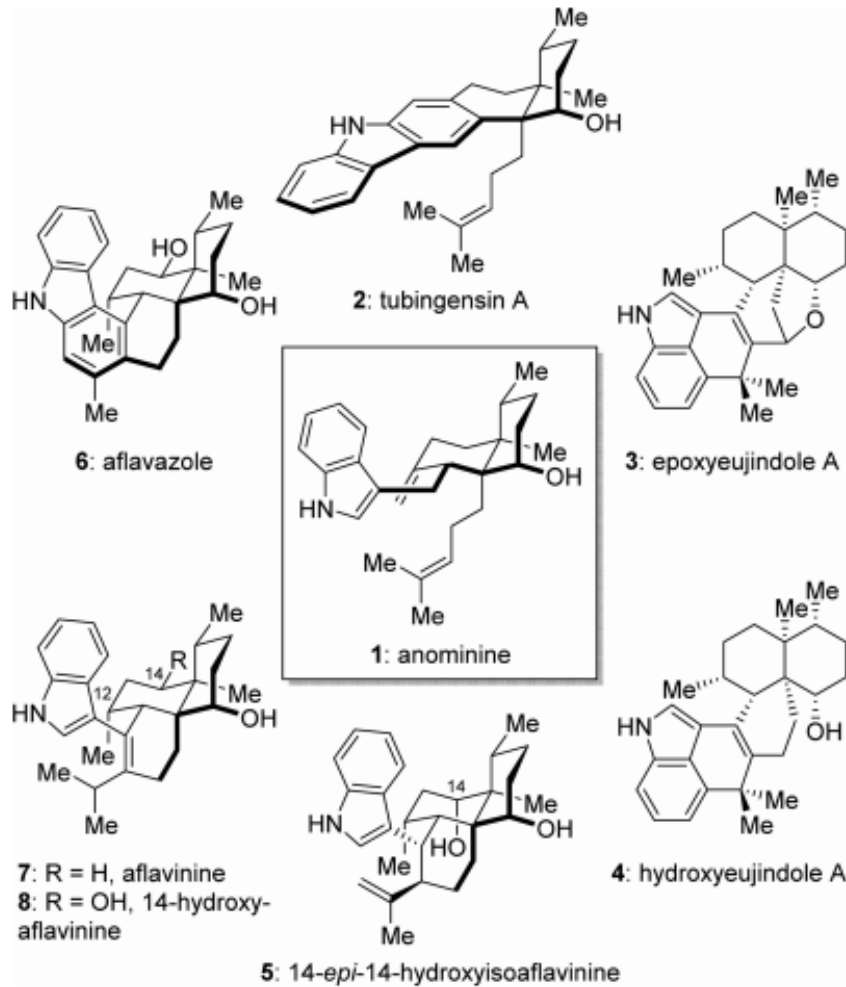
DOI: 10.1021/jacs.6b10880

Current literature

Andrey Kuzovlev

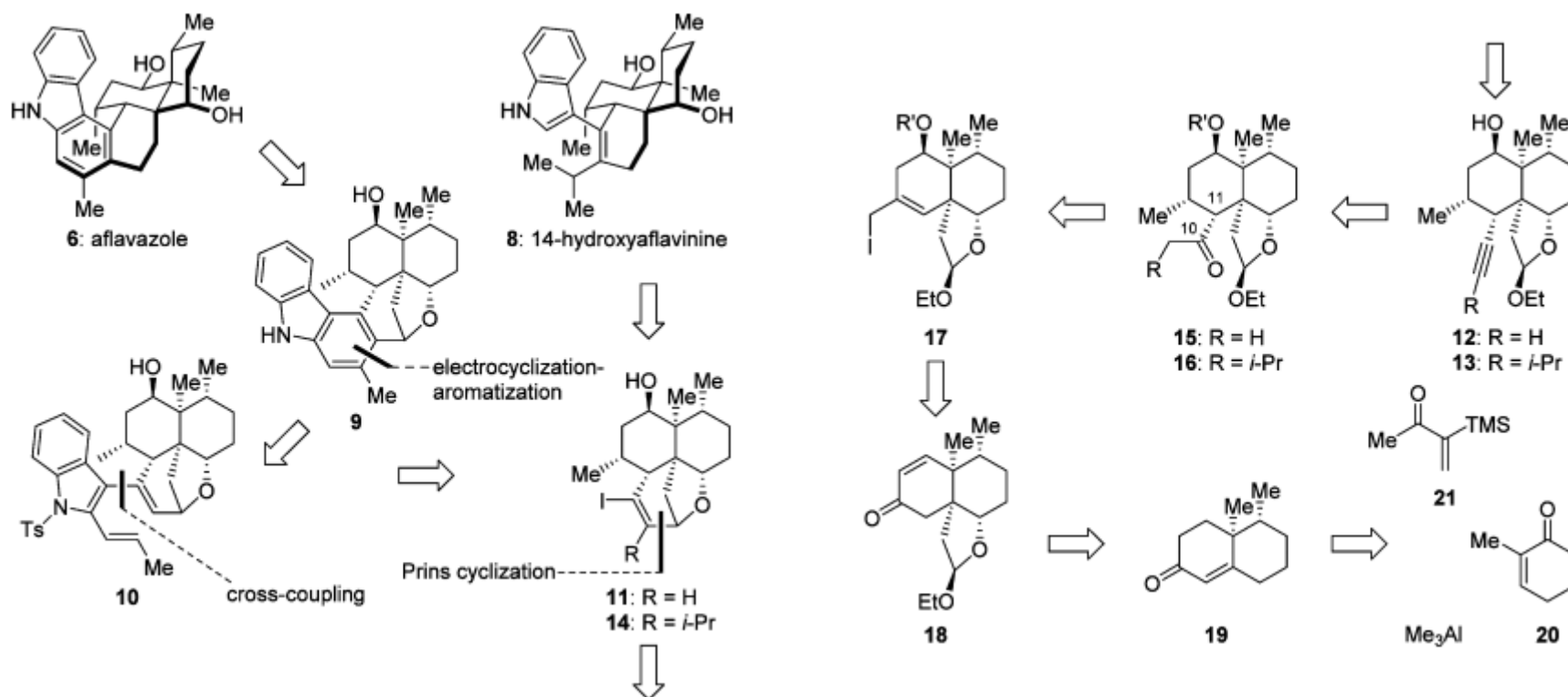
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Introduction

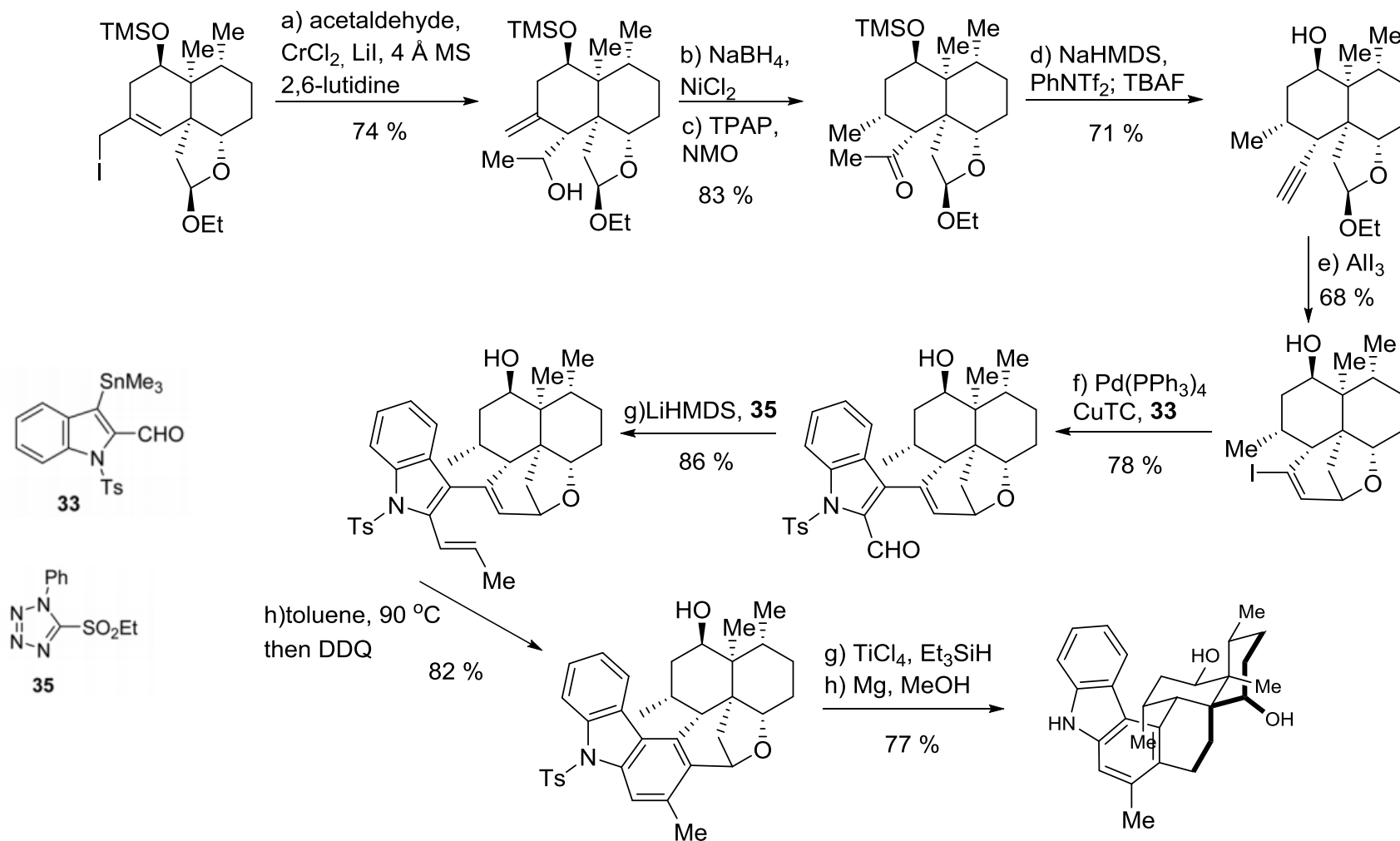


Aspergillus

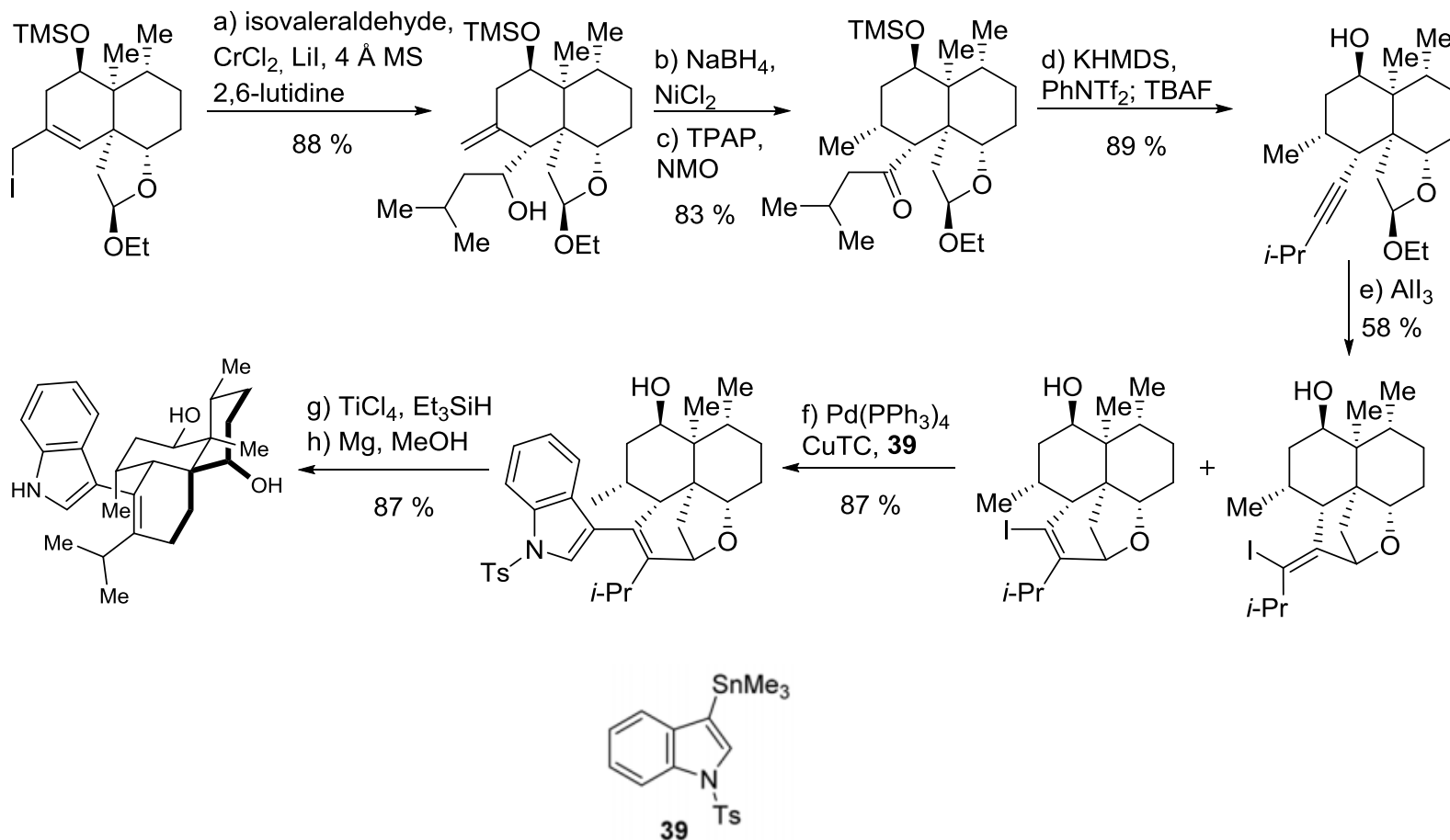
Retrosynthetic analysis of 14-hydroxyaflavinine and aflavazole



Synthesis of aflavazole



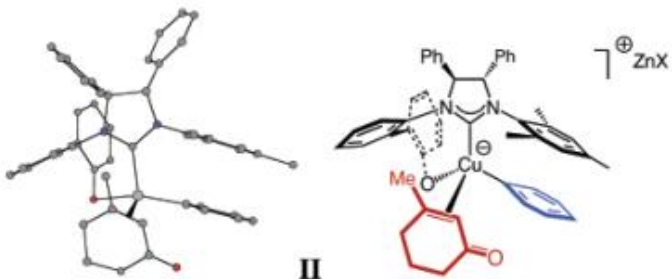
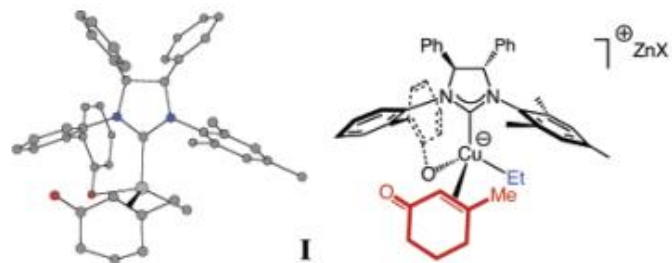
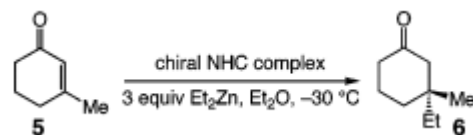
Synthesis of 14-hydroxyaflavinine



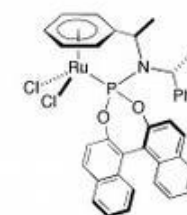
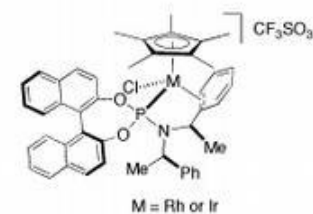
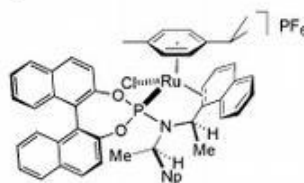
Conclusion

- > First and asymmetric total synthesis of aflavazole and 14-hydroxyaflavinine.
- > AlI_3 -promoted alkyne Prins cyclization was applied to construct the key structural motifs.
- > Electrocyclization-aromatization assembled the pentasubstituted arene.
- > Benzylic and allylic C-O bond reductive cleavage at the late stage.

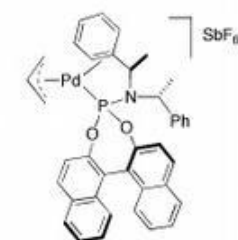
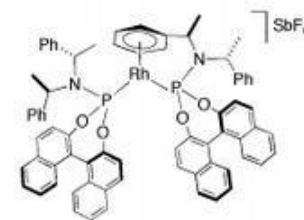
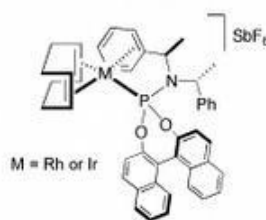
Thank you for your attention!



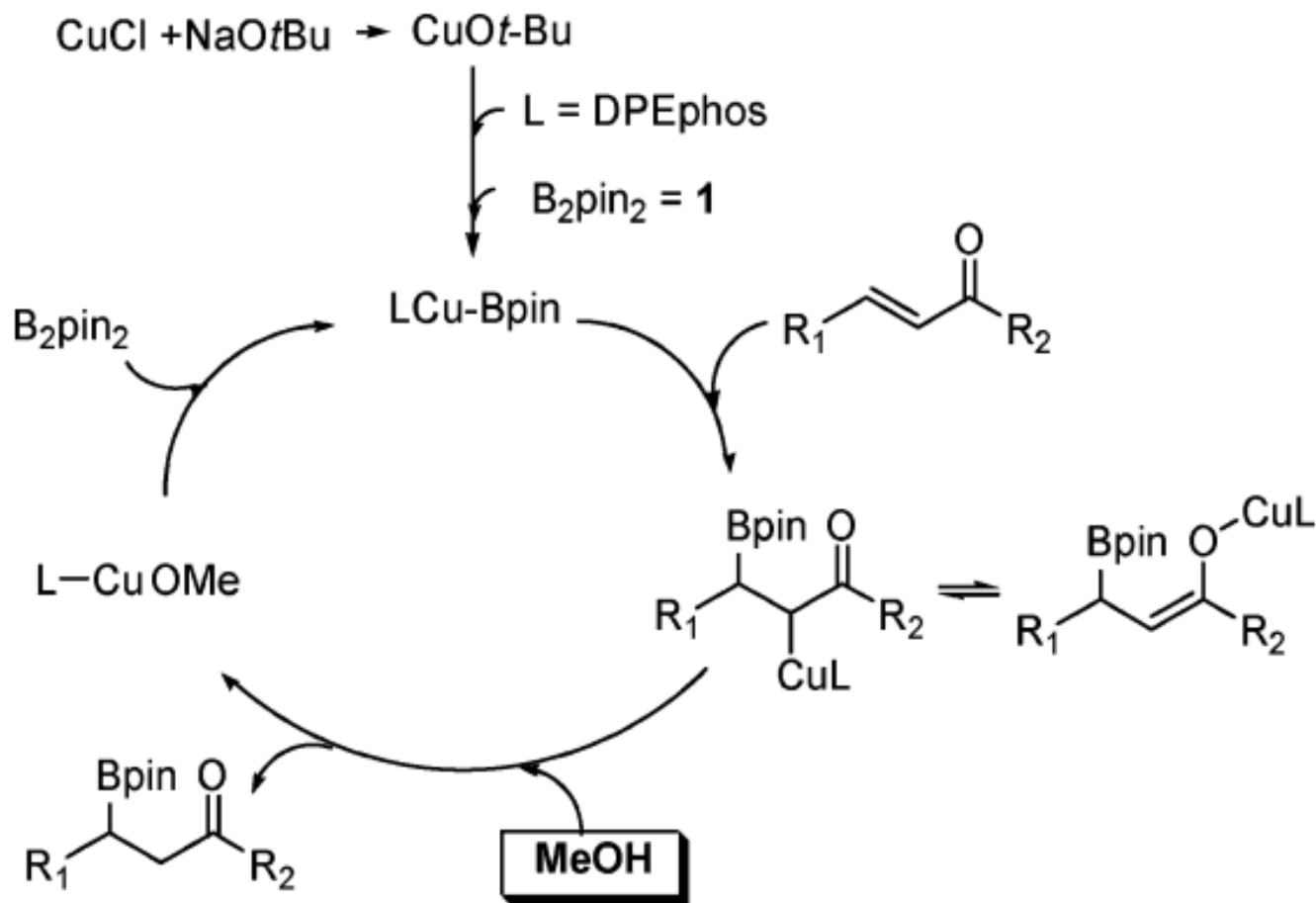
Complexes of d⁶ ions



Complexes of d⁸ ions



Borylation of Michael acceptors



Nozaki – Hiyama reaction

