

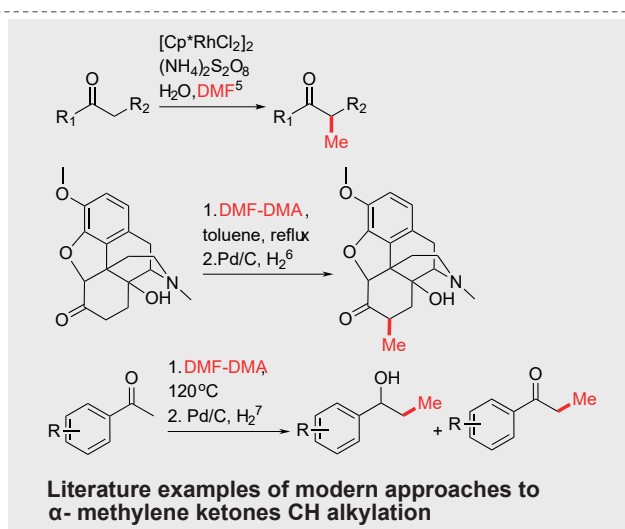
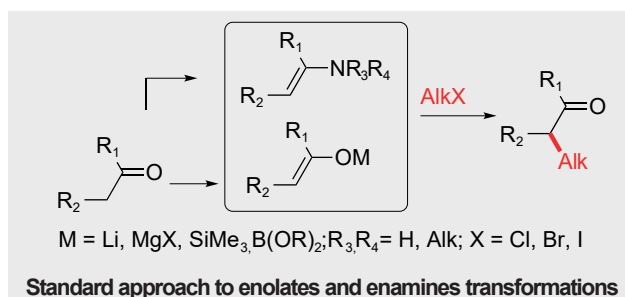
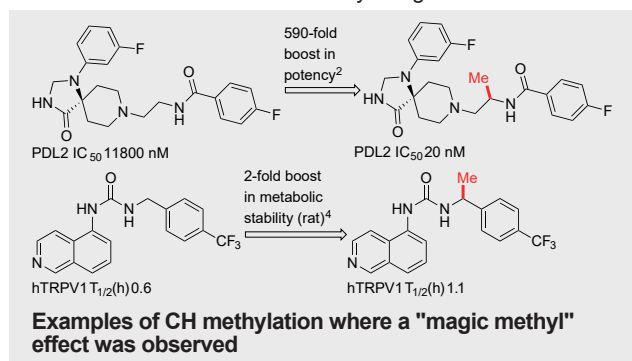
Selective Methylation of α -Methylene Ketones

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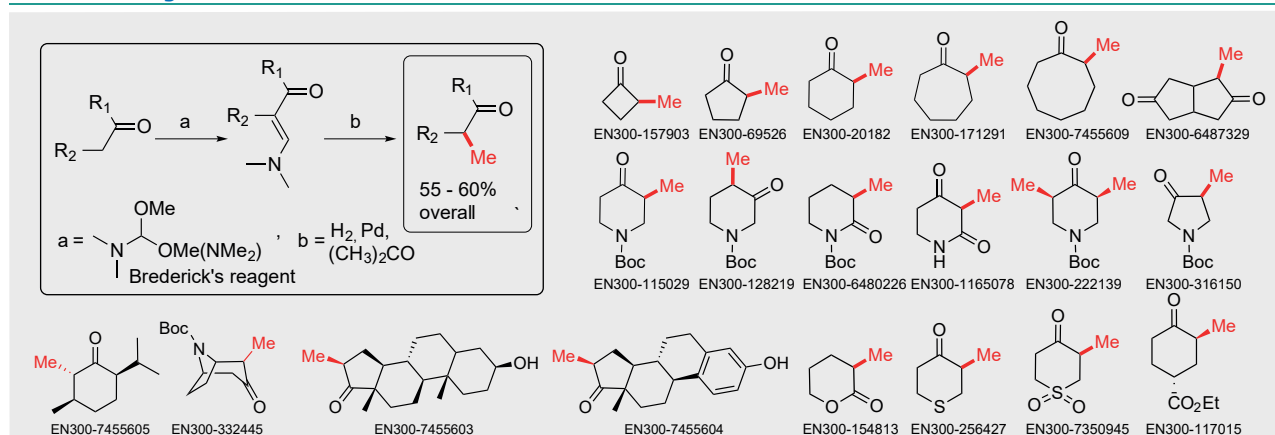
Introduction and Aim

Introduction of small alkyl substituents into biologically active molecules in many cases lead to significant changes in their activity. Numerous examples showcasing this phenomena were given in the literature.¹ Being both the most popular and the most impactful for bioactive molecules derivatization, the smallest methyl substituent is also known as "magic methyl".² There are two fundamentally different approaches to preparation of alkylated biomolecules. The first approach, the "late stage functionalization",³ implies alkylation as a final step of the synthetic sequence; the other approach is based on the concept of introducing alkyl substituents into building blocks in the early stages of synthesis.

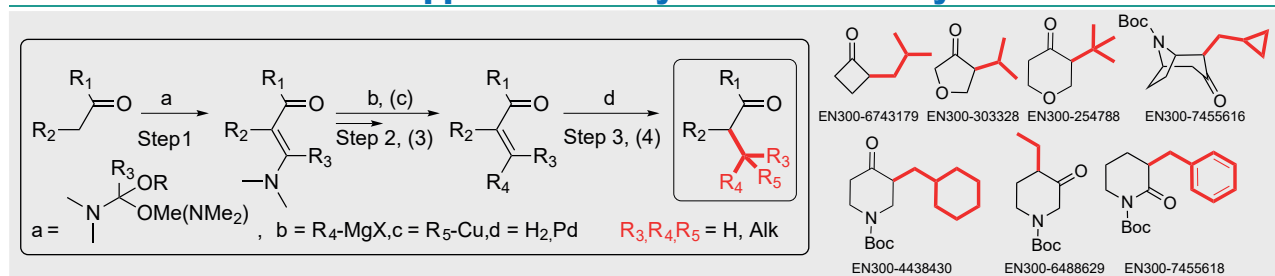
Herein, we report the convenient preparative approach for 2 steps selective methylation. Our synthetic protocol allows both early building block methylation and "late stage functionalization". The scope and limitation of the methodology are determined. Also the outlook on possible application of this method for introduction of other alkyls is given.



General synthetic scheme and results



Outlook: novel versatile approach to alkylation of α -methylene ketones



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