Designing of templates to reach the distal C–H bond

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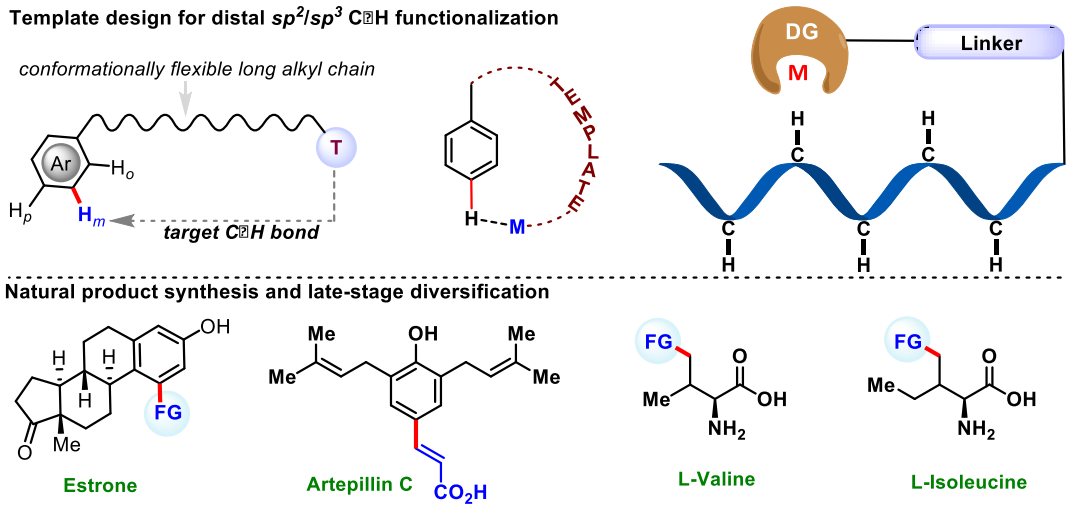
Mimicking the nature has always been a coveted target for scientific communinities. A precise understanding has emerged as to how enzymes accomplish the chemical transformations. Enzymes catalyze inert C-H bond functionalization in a regio- and stereoselective manner using metal-active site. Inspired by the nature, we have developed catalytic methods to functionalize carbon–hydrogen (C–H) bonds which provides significant economic and environmental benefits over traditional synthetic methods. Applicability of our strategies towards synthesis of various complex molecules will be discussed.



References

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Brief-Bio: Prof. Debabrata Maiti received his PhD from Johns Hopkins University (USA) in 2008 under the supervision of Prof. Kenneth D. Karlin. After postdoctoral studies at Massachusetts Institute of Technology (MIT) with Prof. Stephen L. Buchwald (2008–2010), he joined the Department of Chemistry at IIT Bombay in 2011 wherein currently he is an Associate Professor. His research interests are focused on the development of new and sustainable synthetic and catalytic methodologies. Currently he is an Associate-Editor of Journal of Organic Chemistry.