

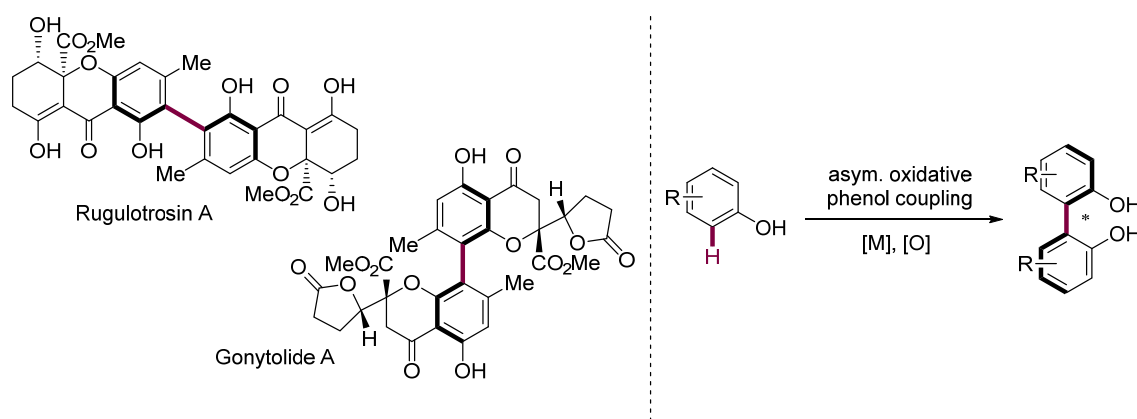
OXIDATIVE PHENOL COUPLING IN NATURAL PRODUCT SYNTHESIS

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Among the broad variety of bioactive natural products – from which medicinal chemists draw their inspiration^[1] – biaryl natural products like the dimeric polyketides Rugulotrosin A and Gonytolide A exhibit remarkable bioactivities as well as an intriguing chemistry and structures.^[2,3] Even though increasing progress has been made towards the total synthesis of these structures over the last decades and in more recent years^[4,5], broadly applicable and facile methods for the reliable and selective construction of the highly crowded, chiral biaryl axis remain scarce and represent a major challenge for the synthetic community.



Arguably, the most step-economic and elegant method for the construction of these bonds is represented by – mimicking nature – a direct and atroposelective oxidative phenol coupling. Here, we will present our recent studies and findings in the application of this methodology in a total synthesis setting, discussing challenges, obstacles and opportunities.

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