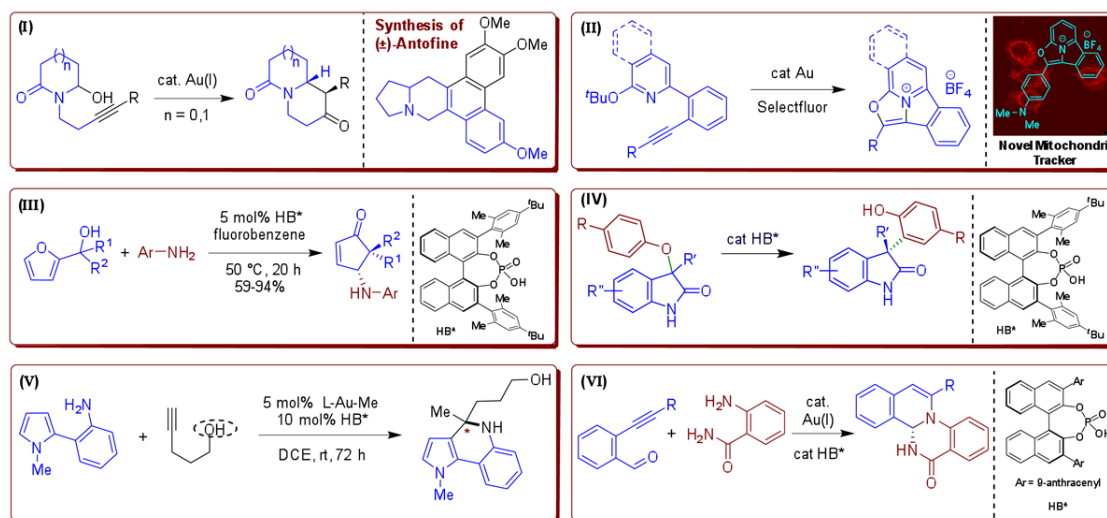


New reactivities through gold and chiral Brønsted acid catalysis

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Research in our laboratory is focused on the development of new reactions employing gold and chiral Brønsted acid catalysis. We are also interested in the development of “Merged Organo/Gold Catalysis” — a technique supposed to be very important for Au^(I) catalysis given the difficulties of transferring chiral information from a ligand disposed 180° from the substrate. Our endeavours in these directions have led to (i) Gold^(I)-catalyzed hydroaminaloxylation and Patis-Ferrier rearrangement cascade,^[1] (ii) Oxidative intramolecular 1,2-amino-oxygenation of alkynes,^[2] (iii) Catalytic enantioselective aza-Piancatelli rearrangement,^[3] (iv) Catalytic enantioselective 1,3-alkyl shift in alkyl aryl ethers,^[4] (v) Enantioselective hydroamination–hydroarylation of alkynes,^[5] and (vi) Addition/cycloisomerization/ transfer hydrogenation cascade to access tetrahydroquinolines.^[6] This talk will highlight our efforts to address the gaps in the literature and successful realization of the aforementioned reactions.



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