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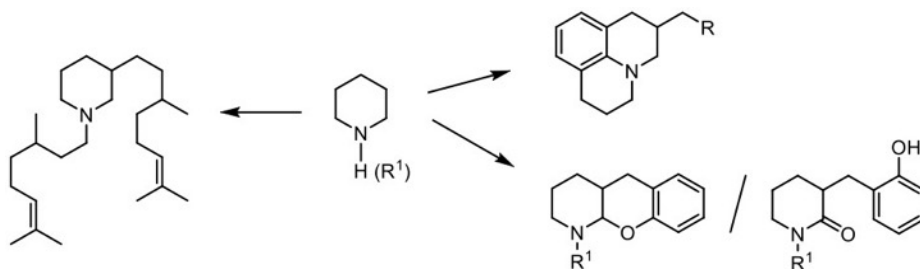
IL01 – Regioselective Functionalization of Saturated Cyclic Amines Involving sp^3C-H Bond Activation and Hydrogen Transfers

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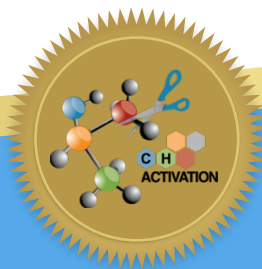
New ruthenium and iridium complexes featuring a functional bidentate phosphinesulfonate ligand have shown high efficiency in catalytic transformations of saturated amines. Taking advantage of this reactivity, catalytic tandem processes to regioselectively functionalize the $sp^3C(3)-H$ bond of cyclic amines in order to gain access to various C(3)-alkylated amines have been developed. Reactions of cyclic saturated amines with alcohols or aldehydes selectively lead to C(3)-substituted cyclic amines with formation of water as the sole byproduct.^{1,2} Tandem catalytic transformations initiated by C–N and C–C bond formation involving H–transfer processes followed by cyclization reactions lead to a variety of polycyclic amine derivatives of interest as illustrated in Scheme 1.^{3,4}



Scheme 1. Regioselective functionalization of cyclic amines

References

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