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Tandem One-Pot Synthesis of Polysubstituted NH-Pyrroles Involving the Palladium-Catalyzed Intramolecular Oxidative Amination of the Zinc Bromide Complex of β -Enamino Esters

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Category

Metal-Mediated
Synthesis

Key words

amination

zinc

pyrroles

Oxidative Amination of the Zinc Bromide Complex of β -Enamino Esters

R^1 = Alk, Ar, HetAr, Bn
 R^2 = Alk, Ar, CH_2CH_2Ph

Selected examples:

Significance: Lee and co-workers report a tandem palladium-catalyzed intramolecular oxidative olefin amination of the zinc bromide complex of α -vinylated β -amino esters to afford various 2,3,4-trisubstituted pyrroles in good yields.

Comment: The synthetic utility of this efficient and atom-economical procedure is shown by the synthesis of pyrrolophenanthrenes and pyranopyrrolones through selective palladium- and copper-catalyzed C–C and C–O bond-forming reactions.

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