

Ru(II)-Catalyzed Regioselective Hydroxymethylation of β -Carbolines and Isoquinolines via C-H Functionalization: Probing the Mechanism by Online ESI-MS/MS Screening

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A Ru(II)-catalyzed regioselective C-H activation toward hydroxymethylation of β -carbolines and isoquinolines as effective directing groups has been developed, and the mechanism was probed by using online electrospray ionization-tandem mass spectrometry. The introduction of the hydroxymethyl group in the biologically relevant molecules routed via C-H functionalization remains an important task. Gratifyingly, this protocol draws attention to the regioselective formation of monohydroxymethylated β -carboline/isoquinoline products exclusively. © 2019 American Chemical Society.