ENANTIOSELECTIVE SYNTHESIS OF N-BENZYLIC HETEROCYCLES: A NICKEL- AND PHOTOREDOX-DUAL CATALYSIS APPROACH

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A dual nickel- and photoredox-catalysed modular approach for the preparation of enantioenriched \(N\)-benzylid heterocycles is presented. \(\alpha\)-Heterocyclic carboxylic acids are reported as suitable substrates for a decarboxylative cross-coupling with aryl bromides,[1] affording products in modest to good enantioselectivity when a chiral pyridine-oxazoline (PyOx) ligand is employed.[2] The presence of a directing group on the heterocyclic moiety is shown to be beneficial, affording improved stereocontrol in a number of cases. Similar effects can be observed when running the reaction at lower temperatures. A range of drug-like products is thus easily obtained from commercial starting materials.
