C-H Activation for Asymmetric Synthesis
Françoise Colobert (Editor), Joanna Wencel-Delord (Editor)

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DESCRIPTION

Provides, in one handbook, comprehensive coverage of one of the hottest topics in stereoselective chemistry

Written by leading international authors in the field, this book introduces readers to C-H activation in asymmetric synthesis along with all of its facets. It presents stereoselective C-H functionalization with a broad coverage, from outer-sphere to inner-sphere C-H bond activation, and from the control of olefin geometry to the induction of point, planar and axial chirality. Moreover, methods wherein asymmetry is introduced either during the C-H activation or in a different elementary step are discussed.

Presented in two parts?asymmetric activation of C(sp3)-H bonds and stereoselective synthesis implying activation of C(sp2)-H bonds? CH-Activation for Asymmetric Synthesis showcases the diversity of stereogenic elements, which can now be constructed by C-H activation methods. Chapters in Part 1 cover: C(sp3)-H bond insertion by metal carbenoids and nitrenoids; stereoselective C-C bond and C-N bond forming reactions through C(sp3)?H bond insertion of metal nitrenoids; enantioselective intra- and intermolecular couplings; and more. Part 2 looks at: C-H activation involved in stereodiscriminant step; planar chirality; diastereoselective formation of alkenes through C(sp2)?H bond activation; amongst other methods.

-Covers one of the most rapidly developing fields in organic synthesis and catalysis

-Clearly structured in two parts (activation of sp3- and activation of sp2-H bonds)

-Edited by two leading experts in C-H activation in asymmetric synthesis
CH-Activation for Asymmetric Synthesis will be of high interest to chemists in academia, as well as those in the pharmaceutical and agrochemical industry.

ABOUT THE AUTHOR

Françoise Colobert, PhD, is director of the team Syncat: Synthesis and asymmetric catalysis of the Chemistry Engineering High School ECPM at the University of Strasbourg. Her current research interests are oriented towards homogeneous catalysis, in particular C-H activation directed by sulfoxides.

Joanna Wencel-Delord, PhD, was educated in chemistry at the Ecole Nationale Supérieure de Chimie de Rennes, France. Her research focuses on the transition metal-catalyzed asymmetric C-H activation.

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