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.

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**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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