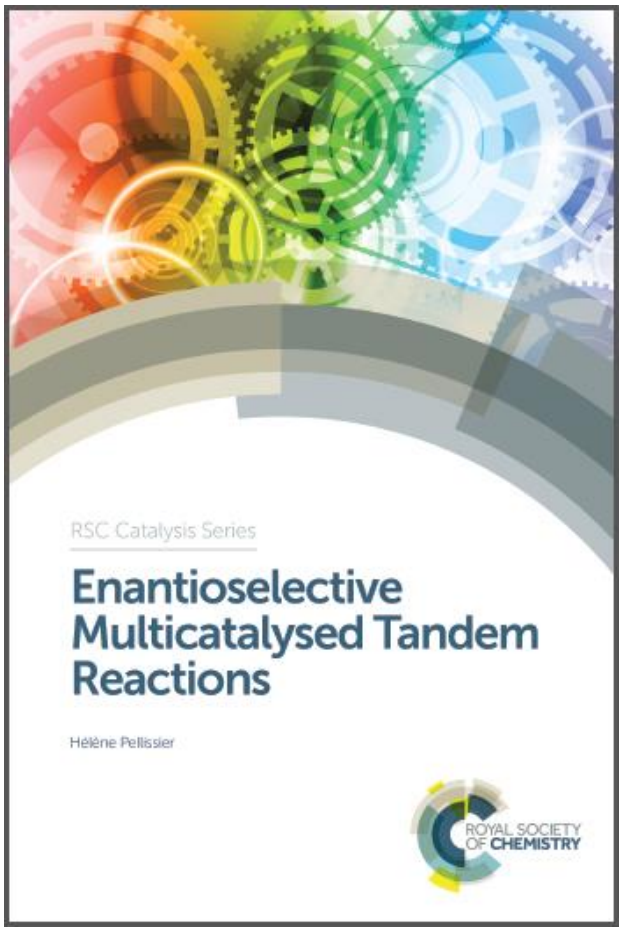

A comprehensive overview of enantioselective multicatalysed tandem reactions involving organocatalysts, transition metals and enzymes. The book will appeal to people interested in catalysis, biocatalysis and the organic synthesis of chiral compounds, such as researchers and professionals in academic and industrial laboratories.

Abstract:

Enantioselective Multicatalysed Tandem Reactions

Chiral molecules are needed for the production of many pharmaceuticals and materials, and catalytic asymmetric synthesis provides a method for the preparation of such chiral products. For the synthesis of complex molecules, such as natural products and biologically active compounds, more than one catalytic reaction may be necessary and tandem catalysis refers to the combination of catalytic reactions into one synthesis. By combing catalysts it enables a more efficient, economical and selective one pot approach for complex molecule synthesis which could not be achieved through single specific catalytic systems. The challenge is finding the right catalyst which is compatible with other catalysts but also tolerates reagents, solvent and intermediates generated during the course of the reaction.

Enantioselective Multicatalysed Tandem Reactions provides an overview of recent developments in the area. The first part of the book covers asymmetric tandem reactions catalysed by multiple catalysts from the same discipline (organocatalysts, two metal and multienzyme-catalysed reactions). The second part looks at tandem reactions catalysed by multiple catalysts from different disciplines including reactions catalysed by a combination of metals and organocatalysts, reactions catalysed by a combination of metals and enzymes, and finally reactions catalysed by a combination of organocatalysts and enzymes.

The book will appeal to researchers and professionals in academic and industrial laboratories interested in catalysis, biocatalysis and organic synthesis of chiral compounds.

Access the first chapter for free!

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