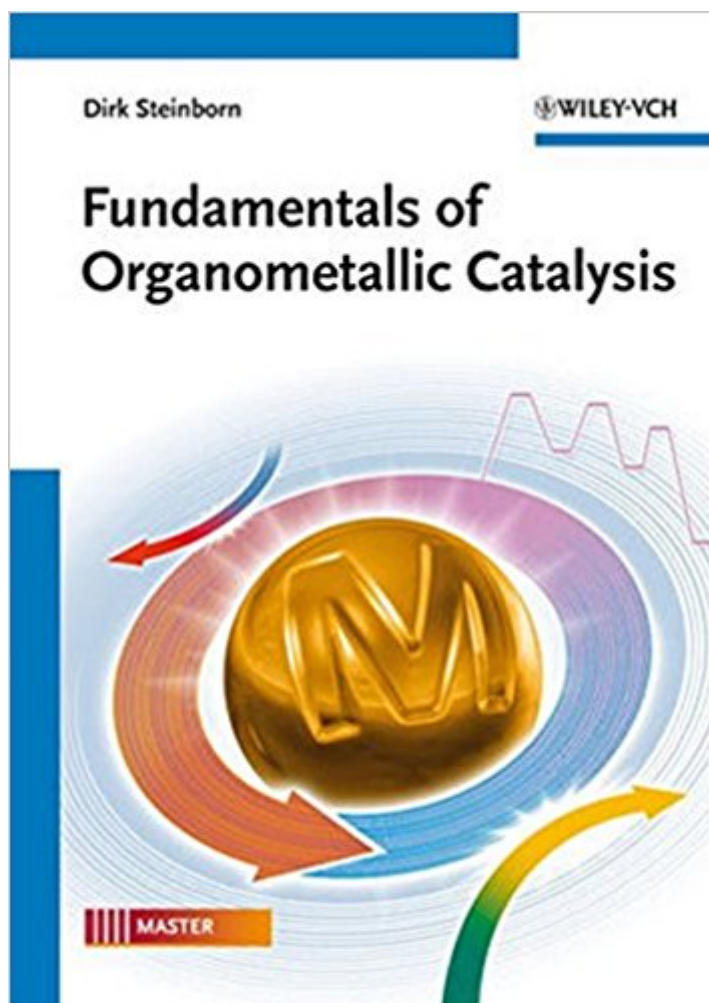


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# Fundamentals Of Organometallic Catalysis



## Synopsis

Clearly structured and written with advanced undergraduate, graduate and PhD students in mind, this English edition of a successful German textbook not only focuses on organic reactions, but also on bio-relevant reactions. Important aspects of the catalytic mechanisms are discussed in detail while much additional information is also provided, such as industrial applications of the processes covered. With its many questions and answers included in all chapters at different knowledge levels, this book is also ideal for self-testing before exams.

## Book Information

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## Customer Reviews

It is a must-have for advanced students in chemistry and biochemistry, as well as for inorganic and organic chemists, for those working with organometallics, and for those specializing in catalysis. (Chimie Nouvelle, 1 March 2013)

Catalysis, the basic principle for overcoming the kinetic inhibition of chemical reactions, is fundamental in chemistry. In particular, organometallic catalysis plays an overwhelming role in both research and industry. It opens the way to entirely novel synthetic methods and finds widespread applications ranging from mass-production of everyday polymers to stereocontrolled synthesis of bioactive chemicals used as pharmaceuticals and agrochemicals. The targeted development of improved and novel catalysts demands understanding of the relationships between their structures and catalytic properties. Accordingly, this textbook offers the reader a fundamental understanding of

the course of organometallic-catalyzed reactions, starting at the molecular level. The initial chapters explain the principles of catalysis and the elementary steps in organometallic catalysis. The book then explores important organometallic-catalyzed reactions, with a focus on mechanism. Current developments are emphasized throughout. Asymmetric synthesis is covered in depth. Finally, the book examines the catalytic behavior of particular metalloenzymes. A look at nitrogen fixation offers a comparative examination of the three major areas of catalysis - homogeneous, heterogeneous, and enzymatic. In addition to problems, the textbook offers solutions, making the book an invaluable learning tool. It is a must-have for advanced students in chemistry and biochemistry, as well as for inorganic and organic chemists, for those working with organometallics, and for those specializing in catalysis.

In this topic of catalysis, organometallic compounds are of interest, specially in synthesis of organic compounds. A great book from my point of view. Many explanations on mechanisms and other applications.

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