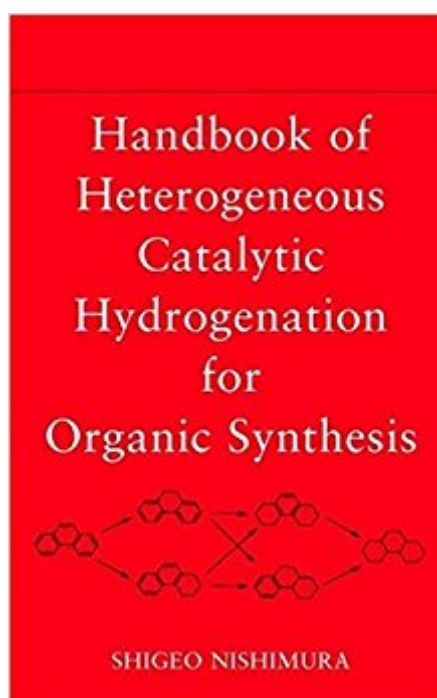


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# Handbook Of Heterogeneous Catalytic Hydrogenation For Organic Synthesis



## Synopsis

The most comprehensive reference in the field, *Handbook of Heterogeneous Catalytic Hydrogenation for Organic Synthesis* provides synthetic chemists and chemical engineers in fine chemicals and pharmaceuticals with detailed experimental guidelines for heterogeneous catalytic hydrogenation. Organized by functional groups for ready reference and featuring detailed examples of hundreds of reactions, this handbook covers hydrogenations of alkenes, alkynes, aldehydes and ketones, nitriles, imines, nitro and nitroso compounds, carboxylic acids and esters, and aromatic and heterocyclic compounds. In addition, coverage includes the preparation of amines by reductive alkylation and the hydrogenolysis of a variety of compounds. Examples of hydrogenation of functional groups and reaction pathways are illustrated with numerous equations and schemes. Practitioners will appreciate the plenitude of experimental details given for most of the reactions selected, including amounts of reagents and catalysts, reaction temperatures, hydrogen pressures, and reaction times. They will also find helpful the more than one hundred tables included throughout the book detailing the effects of key factors governing rate and selectivity, such as compound structure, the nature of catalysts and supports, and the nature of solvents. Researchers will benefit from the introductory chapters covering an array of hydrogenation catalysts, including nickel, cobalt, copper, iron, platinum group metals, rhenium, and other oxide and sulfide catalysts, as well as reactors and reaction conditions.

## Book Information

Hardcover: 700 pages

Publisher: Wiley-Interscience; 1 edition (January 15, 2001)

Language: English

ISBN-10: 0471396982

ISBN-13: 978-0471396987

Product Dimensions: 6.3 x 1.7 x 9.5 inches

Shipping Weight: 2.6 pounds (View shipping rates and policies)

Average Customer Review: 4.0 out of 5 stars 1 customer review

Best Sellers Rank: #3,828,169 in Books (See Top 100 in Books) #61 in [Books > Science & Math > Chemistry > Organic > Synthesis](#) #1789 in [Books > Science & Math > Chemistry > Industrial & Technical](#) #2547 in [Books > Textbooks > Engineering > Chemical Engineering](#)

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A complete guide to the most important reduction method in organic synthesis The most comprehensive reference in the field, Handbook of Heterogeneous Catalytic Hydrogenation for Organic Synthesis provides synthetic chemists and chemical engineers in fine chemicals and pharmaceuticals with detailed experimental guidelines for heterogeneous catalytic hydrogenation. Organized by functional groups for ready reference and featuring detailed examples of hundreds of reactions, this handbook covers hydrogenations of alkenes, alkynes, aldehydes and ketones, nitriles, imines, nitro and nitroso compounds, carboxylic acids and esters, and aromatic and heterocyclic compounds. In addition, coverage includes the preparation of amines by reductive alkylation and the hydrogenolysis of a variety of compounds. Examples of hydrogenation of functional groups and reaction pathways are illustrated with numerous equations and schemes. Practitioners will appreciate the plenitude of experimental details given for most of the reactions selected, including amounts of reagents and catalysts, reaction temperatures, hydrogen pressures, and reaction times. They will also find helpful the more than one hundred tables included throughout the book detailing the effects of key factors governing rate and selectivity, such as compound structure, the nature of catalysts and supports, and the nature of solvents. Researchers will benefit from the introductory chapters covering an array of hydrogenation catalysts, including nickel, cobalt, copper, iron, platinum group metals, rhenium, and other oxide and sulfide catalysts, as well as reactors and reaction conditions.

All, This book is a little bit pricey. That being said it is a must for those of us doing hydrogenations/reductions. The choice of catalyst/solvent/temperature is extremely important. The book provides very good summaries and references if you need more details. Overall I am very happy with this book, it's one of the few good review books out there./ Brian

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