DESCRIPTION

This multi-volume handbook is the first to cover all questions concerning homogeneous hydrogenation. As such, it presents the catalysts, the scope of their application, mechanistic aspects, asymmetric methods, combinatorials catalysis, recycling methods and industrial examples. In 45 clearly structured chapters, the book includes all hydrogenation reactions catalyzed by soluble transition metal-based catalysts. All authors adopt an applied approach, emphasizing those aspects important for industrial use.

With some 2,000 illustrations and 50 tables, this is a must-have for everyone working in the chemicals and pharmaceutical industries, as well as for graduate students in chemistry.

ABOUT THE AUTHOR

Kees Elsevier was born in 1957 in Den Haag, The Netherlands. He obtained his masters and PhD in chemistry at Utrecht University (1984) with Dr P. Vermeer and Professor H.J.T. Bos, on the topic of "transition-metal mediated synthesis of chiral allenes". Subsequently he moved to the University of Amsterdam, where he has developed his interests in organometallic chemistry and catalysis employing late-transition-metal compounds. He became associate professor in 1991, and then occupied the John van Geuns chair for developing transition-metal-NMR spectroscopy from 1995 till 1999. Since 1999 he holds the chair of Molecular Inorganic Chemistry at the University of Amsterdam. He has been visiting professor twice at the Weizmann Institute of Science, Israel, and at the Universities of Strasbourg and Toulouse (France). He is co-author of about 180 scientific papers on various topics in organometallic chemistry, homogeneous catalysis, and (transition metal) NMR spectroscopy, including
contributions to several books. He has lately focused on Pd-catalyzed hydrogenations, involving N-ligands and N-heterocyclic
carbenes, as well as catalysis involving aggregates (micelles and vesicles) of metallo-amphiphiles. He has supervised 20 PhD
graduations. Kees serves on the advisory board of several scientific journals and he is scientific director of the Holland Research
School of Molecular Chemistry.

Hans de Vries was born in Amsterdam, the Netherlands (1951). In 1979 he received his Ph.D from the University of Groningen,
were he worked under the guidance of Richard M. Kellogg on chiral, bridged dihydropyridines as NADH-mimetics. After a
postdoctoral stint at Brandeis University, Waltham, USA with Jim Hendrickson (total synthesis of Methoxatin or PQQ) from 79-81
he moved back to Europe. From 1982-1988 he worked as medicinal chemist for Sandoz, first in Vienna, afterwards in London.
Being more interested in chemistry than drugs he moved back to the Netherlands, were he took up employment with DSM, a
multinational specialty chemicals company. His current job is Principal Scientist Homogeneous Catalysis for Fine Chemicals. Since
1998 he has been appointed as part-time professor at the University of Groningen. In 2000 he was appointed visiting industrial
professor at the Univeristy of Bristol. During 2005 he was a visiting professor at the Université Louis Pasteur, Strasbourg. His
research interests are in the area of asymmetric hydrogenation (MonoPhos), aromatic substitution ("homeopathic" palladium),
hydroformylation, metathesis, combinations of enzymes with transition metal catalysis, HTS, combinatorial catalysis and process
intensification. He is (co-)author of 20 patents and over 100 publications. He is married and has three children.

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