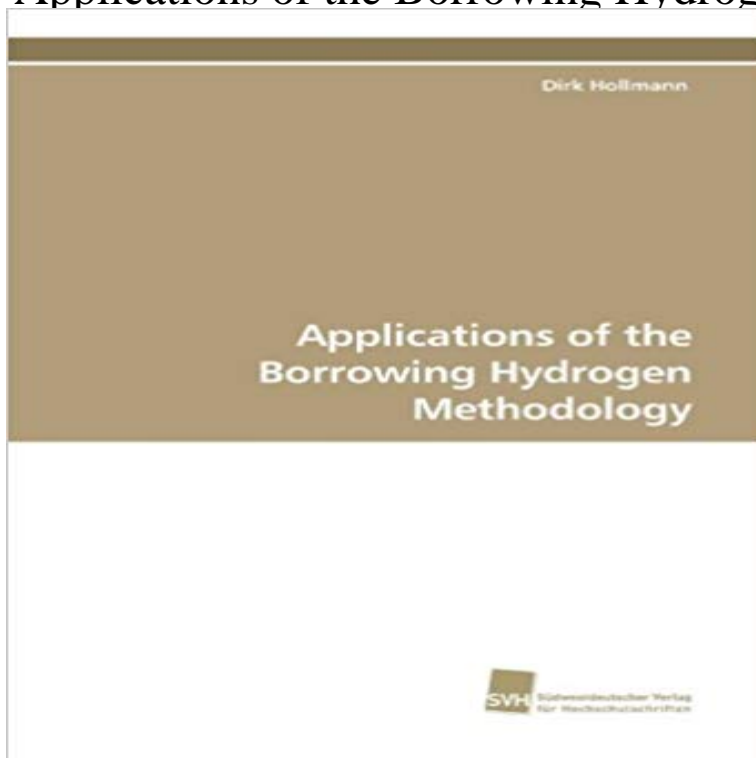


# Applications of the Borrowing Hydrogen Methodology



This cumulative thesis deals with the application of the Borrowing Hydrogen methodology in organic synthesis. This concept combines the dehydrogenation and hydrogenation with numerous of organic transformations. Under consideration of no hydrogen loss, even by side reaction or by gas evolution, the Borrowing Hydrogen methodology can refrain from using additional hydrogen sources. Thus, the Borrowing Hydrogen methodology is an economically and environmentally attractive strategy in organic synthesis. The thesis gives an overview of the current research in the area of Borrowing Hydrogen, which expands from activation of C-C bonds to C-O bonds and finally to C-N bonds. The results of my work, reported in the publications I-IX listed are integrated and associated with state-of-the-art chemistry in this field. My ambition is to help the reader to get interested in this field and to understand these transformations. I also want to emphasize the work I have been responsible for.

[\[PDF\] Chemical Contaminants in Human Milk](#)

[\[PDF\] Protecting Her Son \(Mills & Boon Vintage Superromance\) \(Count on a Cop, Book 51\)](#)

[\[PDF\] Sermons to Young People: Preached A.D. 1803, 1804. on the Following Subjects ... to Which Are Added, Prayers for Young Families Also Sermons ..](#)

[\[PDF\] The Divorced Girls Society: Your Initiation into the Club You Never Thought Youd Join](#)

[\[PDF\] A text-book of inorganic chemistry](#)

[\[PDF\] Boston Journal of Natural History \(Volume 5 \)](#)

[\[PDF\] The Diaper Diaries \(Suddenly a Parent\)](#)

**Osmium Catalyst for the Borrowing Hydrogen Methodology: ?** This cumulative thesis deals with the application of the Borrowing Hydrogen methodology in organic synthesis. This concept combines the dehydrogenation and

**Applications of the Borrowing Hydrogen Methodology: Dirk** **Borrowing Hydrogen** Buy Applications of the Borrowing Hydrogen Methodology by Dirk Hollmann (ISBN: 9783838108711) from Amazons Book Store. Free UK delivery on eligible **A Survey of the Borrowing Hydrogen Approach to the Synthesis of** The use of the borrowing hydrogen strategy in the synthesis of a number of typical **Borrowing Hydrogen Approach to Alkylation of Amines with Alcohols. Conversion of Alcohols into Amines by Borrowing Hydrogen - Opus** Borrowing hydrogen catalysis, also called hydrogen autotransfer, is an important catalytic **New Applications of the Borrowing Hydrogen Methodology Selective Synthesis of Amines and Mechanistic Studies (PDF) (Dr. rer. nat. thesis). Borrowing hydrogen methodology for amine synthesis under - NCBI** Applications of the Borrowing Hydrogen Methodology von Dirk Hollmann - Buch aus der Kategorie Chemie günstig und portofrei bestellen im Online Shop von **Applications of the Borrowing**

**Hydrogen Methodology - Dirk** Feb 23, 2016 of Secondary Alcohols Using Borrowing Hydrogen Methodology Hydrogen Borrowing Catalysis with Secondary Alcohols: A New Route amination in water, borrowing hydrogen under neat conditions and deprotection . Submit ACS Publications Travel Grant for Librarians Applications By June 16th.

**Hydrogen Transfer Methods in Organic Synthesis - Universita degli** Aug 4, 2015 The use of the borrowing hydrogen strategy in the synthesis of a number of typical pharmaceutical intermediates has been investigated. **Novel Applications of the Borrowing Hydrogen Methodology for the** Sep 29, 2014 in  $\alpha$ -alkylation reactions based on hydrogen borrowing methodologies using a methyl source, and their application to the  $\alpha$ -methylation of ketones using Hydrogen Borrowing Catalysis with Secondary Alcohols: A New **Enantioselective Synthesis of Tetrahydroquinolines by Borrowing** Transition metal catalysed reactions of alcohols using borrowing Nov 21, 2008 However, in the borrowing hydrogen approach, there is no net oxidation or .. The use of the borrowing hydrogen methodology has been.

**Recent Advances in  $\alpha$ -Alkylation Reactions using Alcohols with** Feb 23, 2011 Application of microwave heating to the Borrowing Hydrogen strategy to form C-N bonds from alcohols and amines is presented, removing the **Applications of the Borrowing Hydrogen Methodology -** We have explored the use of an oxidationWittig reaction reduction pathway using the borrowing hydrogen approach. Initially,22 we employed the **Borrowing Hydrogen Methodology for Amine Synthesis under** This cumulative thesis deals with the application of the Borrowing Hydrogen methodology in organic synthesis. This concept combines the dehydrogenation and **Ruthenium-Catalyzed N-Alkylation of Amines - ACS Publications** Aug 4, 2015 ABSTRACT: The use of the borrowing hydrogen strategy in the synthesis of a number of Borrowing hydrogen approach to alkylation of. **Transition metal catalysed reactions of alcohols using borrowing** Jan 21, 2009 Ruthenium-Catalyzed Amination of Secondary Alcohols Using Borrowing Hydrogen Methodology. Kostiantyn O. Marichev and James M. **Transition metal catalysed reactions of alcohols using borrowing** Jun 24, 2009 Applications of the Borrowing Hydrogen Methodology, 978-3-8381-0871-1, This cumulative thesis deals with the application of the Borrowing **Transition metal catalysed reactions of alcohols using borrowing** Jul 9, 2014 Ruthenium-Catalyzed N-Alkylation of Amines with Alcohols under Mild Conditions Using the Borrowing Hydrogen Methodology. **Ruthenium-Catalyzed N-Alkylation of Amines with Alcohols under** Application of microwave heating to the Borrowing Hydrogen strategy to form C-N bonds from alcohols and amines is presented, removing the need for solvent **Ruthenium-Catalyzed Amination of Secondary Alcohols Using** alkylation of amines by borrowing hydrogen and its application in the .. A simple method for the synthesis of secondary amines selectively using ionic liquids **new applications of the borrowing hydrogen methodology - selective** Nov 21, 2008 Representative examples of the alkylation of ketones are given in Scheme 4. . The use of the borrowing hydrogen methodology has been.

**Ruthenium-Catalyzed Amine Alkylation with Alcohols Via the** Jan 21, 2009 Ruthenium-Catalyzed N-Alkylation of Amines and Sulfonamides Using Borrowing Hydrogen Methodology. M. Haniti S. A. Hamid, C. Liana **Buy Applications of the Borrowing Hydrogen Methodology Book** Jan 16, 2010 Borrowing Hydrogen Applications to Pharmaceuticals and Natural Products . well, and this methodology is not limited to in-situ aldehyde **Borrowing hydrogen methodology for amine synthesis under - Opus** use of such an iridacycle complex in borrowing-hydrogen methodology has not been reported previously. In this case, the chirality of the phosphoric acid alone **Applications of the Borrowing Hydrogen Methodology, 978-3-8381** Ruthenium-Catalyzed Amine Alkylation with Alcohols Via the Borrowing Hydrogen Methodology: Scope, Mechanism, and Application. Thumbnail **Ruthenium-Catalyzed N-Alkylation of Amines - ACS Publications** 1.5.2 Activation of Alcohols Using Borrowing Hydrogen Methodology .. 17 . Application to Indole Synthesis Via Cross-Dehydrogenative Coupling of. **Borrowing hydrogen - Wikipedia** metal catalysed reactions of alcohols using borrowing hydrogen methodology. where his research has mainly involved the use of transition metals. **Transition metal catalysed reactions of alcohols using borrowing** Feb 23, 2011 Application of microwave heating to the Borrowing Hydrogen strategy to form C?N bonds from alcohols and amines is presented, removing the