

Special Issue Reprint

Advances in Cross-Coupling Reactions

www.mdpi.com/books/reprint/3157

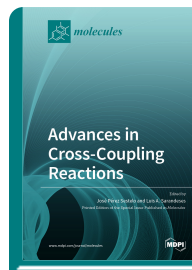
Edited by

José Pérez Sestelo

Luis A. Sarandeses

ISBN 978-3-03943-567-8 (Hardback)

ISBN 978-3-03943-568-5 (PDF)



In this Special Issue, recent advances in cross-coupling reactions are presented in the form of original research articles, reviews, and short communications. These contributions cover different topics in this area, including novel coupling reactions, reaction conditions, synthetic alternatives, metal ligands, and applications for new pharmaceutical compounds and organic materials. In particular, the reviews deal with methodologies such as the synthesis of diarylketones through palladium catalysis and the most relevant examples of Suzuki–Miyaura and Buchwald–Hartwig coupling reactions in the synthesis of bioactive compounds. The synthetic utility of cross-coupling reactions for the synthesis of medium-size rings and the utility of Stille and Suzuki coupling reactions for the synthesis of new molecular machines based on sterically hindered anthracenyl trypticyenyl units are also summarized. The original research articles present the synthesis of 2-alkynylpyrrols by inverse Sonogashira coupling and the synthesis of indoles under oxidative dearomative cross-dehydrogenative conditions. The efficient combination of iridium-catalyzed C–H borylation of aryl halides with the Sonogashira coupling and a sequential iridium-catalyzed borylation of NH-free pyrroles followed by a Suzuki–Miyaura reaction are included. The synthesis of aryl propionic acids, a common structural motif in medicinal chemistry, and the synthesis of new organic dyes are also covered.

MDPI Books offers quality open access book publishing to promote the exchange of ideas and knowledge in a globalized world. MDPI Books encompasses all the benefits of open access – high availability and visibility, as well as wide and rapid dissemination. With MDPI Books, you can complement the digital version of your work with a high quality printed counterpart.



Open Access

Your scholarly work is accessible worldwide without any restrictions. All authors retain the copyright for their work distributed under the terms of the Creative Commons Attribution License.



Author Focus

Authors and editors profit from MDPI's over two decades of experience in open access publishing, our customized personal support throughout the entire publication process, and competitive processing charges as well as unique contributor discounts on book purchases.



High Quality & Rapid Publication

MDPI ensures a thorough review for all published items and provides a fast publication procedure. State-of-the-art research and time-sensitive topics are released with a minimum amount of delay.



High Visibility

Due to our global network and well-known channel partners, we ensure maximum visibility and broad dissemination. Title information of books is sent to international indexing databases and archives, such as the Directory of Open Access Books (DOAB), and the Verzeichnis Lieferbarer Bücher (VLB).



Print on Demand and Multiple Formats

MDPI Books are available for purchase and to read online at any time. Our print-on-demand service offers a sustainable, cost-effective and fast way to publish MDPI Books printed versions.