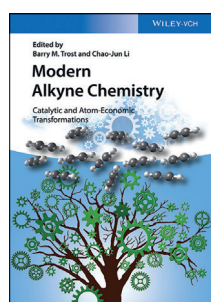


Modern Alkyne Chemistry

It seems rather common nowadays to read in journal articles and reviews that a certain field of chemistry is undergoing a “renaissance”. Whether or not such claims are really warranted, I feel that this descriptor is actually quite apropos for the field of alkyne chemistry. As a practitioner in the area for nearly a quarter century, I am amazed by the rapid expansion of acetylenic reactions and transformations with wide and varied uses, from natural product synthesis and drug development to fluorescent labeling and functional organic materials. Alkyne metathesis and azide–alkyne “click” reactions, both of which are covered in this book, are two of the more popular examples in the current literature.

Modern Alkyne Chemistry: Catalytic and Atom-Economic Transformations, edited by Barry Trost and Chao-Jun Li, appropriately captures and documents the current state of the alkyne “renaissance”. The thirteen 30-page chapters, written by many of the leaders of their respective subareas of acetylenic chemistry, are divided roughly evenly over the areas of catalytic isomerizations, catalytic cyclo-additions, catalytic nucleophilic additions and substitutions, and “other” reactions. Admittedly, several of the areas have been extensively reviewed in prior Wiley books. Do chemists really need another review of the Sonogashira reaction? The answer is probably not. Nonetheless, *Modern Alkyne Chemistry* does an excellent job of collecting the varied topics into a single 400-page volume.



Modern Alkyne Chemistry
Catalytic and Atom-Economic Transformations. Edited by Barry M. Trost and Chao-Jun Li. Wiley-VCH, Weinheim, 2014. 424 pp., € 139.00.—ISBN 978-3527335053

For me two chapters—azide–alkyne reactions (Chapter 5) and the Sonogashira reaction (Chapter 10)—stand out in particular given their prevalent use in the modern laboratory. The amount of material on both topics is voluminous, almost smothering, with ca. 2000 publications about each area in 2014 alone. Still, the authors do an excellent job of covering both the basics of the topic as well as highlighting modern uses and adaptations. Admittedly, I was not well-versed with the development of alternatives to the standard Pd catalysts for Sonogashira reactions, so I learned something new. It was also nice to read the latest on the alkyne zipper reaction (Chapter 13), a very old and extremely underutilized reaction that O’Doherty’s group has brought back to life.

My only complaint with this book is that the materials side of alkyne chemistry is noticeably absent. Then again, my attitude also reflects a personal bias towards such compounds. Perhaps this could be the focus of a future companion volume. Regardless of this minor criticism, *Modern Alkyne Chemistry* by Trost and Li should find a home on the bookshelf of any organic chemist—whether novice or experienced—with an interest in and/or working with acetylenic molecules.

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