

PREFACE TO VOLUME 73

Volume 73 represents another example in the *Organic Reactions* series in which a single chapter constitutes the volume. In the 66 year history of the series, this has happened six times before, most recently in Volume 71 which featured the chapter "Ionic and Organometallic-Catalyzed Organosilane Reductions" by Gerald L. Larson and James L. Fry. Such single-chapter volumes represent definitive treatises on extremely important chemical reactions. The organic chemistry community owes an enormous debt of gratitude to the authors of such chapters for the generous contribution of their time, effort, and insights on reactions that we clearly value.

The allylation of carbonyl compounds is universally recognized as one of the premier methods for carbon-carbon bond formation. The most prominent reasons for the popularity of the method include the high degree of both diastereo- and enantioselectively observed and the latent functionality in the homoallylic alcohol product which makes the reaction ideal for synthetic planning. Moreover, the reactions are mechanistically intriguing and their utility stimulates a synergy between fundamental studies of stereochemistry and applications in target-oriented synthesis. Among the most often employed methods for carbonyl allylation, the allylboration reaction holds a prominent position. This landmark chapter by Hugo Lachance and Dennis G. Hall provides a comprehensive survey of the various classes of allylic (propargylic and allenic) boron reagents that have been developed in the three decades since their introduction into the portfolio of synthetic methods. The chapter covers the practical features (stability, reactivity, and workup) that practitioners need to select among the available reagents. More importantly, Lachance and Hall have thoroughly covered the most significant aspects of allylboration, namely the stereochemical control elements including relative diastereoselection with crotylboranes, induced (internal) diastereoselection with chiral carbonyl compounds, auxiliary-controlled enantioselective allylations with chiral borane reagents, and the most recent advances in catalysis of allylboration.

Together with the chapter of allylsilanes by Ian Fleming, Jacques Dunoguès, and Roger Smithers (Volume 37) and the chapter of allylstannanes by Benjamin W. Gung (Volume 64) this chapter completes an outstanding triumvirate on this most important of chemical transformations.

It is appropriate here to acknowledge the expert assistance of the entire editorial board, in particular Scott D. Rychnovsky who shepherded this immense chapter, and Robert Bittman, the secretary responsible for processing this chapter. In addition, the *Organic Reactions* enterprise could not maintain the quality of production without the dedicated efforts of its editorial staff, Dr. Linda S. Press and Dr. Danielle Soenen. Insofar as the essence of *Organic Reactions* chapters resides in the massive tables of examples, the authors' and editorial coordinators' painstaking efforts are highly prized.

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