

Lewis Acid Reagents

A Practical Approach

Edited by
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Preface

Lewis acids are becoming a powerful tool in many different modern reactions, such as the Diels-Alder reactions, Ene reactions, Sakurai reactions, and Aldol synthesis. In fact, the importance and practicality of Lewis acid reagents as valuable means of obtaining a variety of organic molecules is now fully acknowledged by chemists in the synthetic organic society. This prominence is due to the explosive development of newer and even more efficient methods during the last decade, and the numbered publications on these reagents is actually increasing exponentially each year. Research on asymmetric synthesis has become more important and popular in the total synthesis of natural products, pharmaceuticals, and agricultural agents, and Lewis acid chemistry plays a major role in this arena.

Comprehensive coverage of the literature on each area of Lewis acid is not necessarily provided here. Rather, the aim of the book is to furnish a detailed and accessible laboratory guide useful for researchers who are not familiar with the benefits of Lewis acids. It includes information on reagent purification, reaction equipment and conditions, work-up procedures, and other expert advice. The primary goal is thus to dispel the mystery surrounding Lewis acid reagents and to encourage more scientists to use these powerful synthetic tools to maximum effect. The book contains 14 independently referenced chapters describing a variety of Lewis acids using different metals. Each metal has different characteristic features of reagent preparation and practicality which clearly described in that chapter.

I would like to thank Professor K. Ishihara for helping to check parts of the manuscripts and for useful suggestions. I would also like to express my personal gratitude to all of the invited contributors who carefully honored the deadlines and thus made the editorial job much easier.

It is my strong hope that this book will be found an invaluable reference for graduate students as well as chemists at all levels in both academic and industrial laboratories.

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H. Y.

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