Preface

N-Tosylhydrazones are a class of readily available and stable diazo precursors that have been widely used in organic synthesis. Since 2012, there have been numerous reports on the application of N-Tosylhydrazones as starting materials for cross-coupling, insertion, alkenylation, alkynylation and other types of reactions. In particular, the construction of structurally complex functional molecular skeletons by one-pot and cascade reactions proved to be very important in this field. Focusing on the construction of the core skeleton of functional fine chemicals, the team has carried out green synthesis and catalytic reaction studies of fine chemicals, achieved effective synthesis of high value-added fine chemicals, obtained a series of new systems of N-tosylhydrazones involved in the formation of C-C and C=C; realised the high efficiency in the preparation of diarylmethane, triarylmethane, aryl-substituted olefins and thiazole derivatives, and laid the foundation of the application of the fine organic synthesis technology in the field of pharmaceuticals. This has laid a solid foundation for the application of fine organic synthesis technology in the fields of pharmaceutical intermediates, agrochemicals and optoelectronic materials, forming a distinctive research direction of fine chemical synthesis technology and a stable R&D team, and improved the technical level of preparation of high value-added fine chemicals.

This book can be used as a reference for workers in organic chemistry of N-tosylhydrazones, pharmaceutical synthesis and other fields, as well as teachers and students of related universities and research institutes.