

Preface

The construction of C-X (X = C, N, S) bonds is an important research content in the field of organic synthesis and drug preparation. Focusing on the green construction of the core skeleton of functional fine chemicals, the team has carried out research on green synthesis and catalytic reactions of fine chemicals, realized the effective synthesis of high value-added fine chemicals, and obtained a series of new systems of transition metal palladium and copper-catalyzed halogenated aromatic hydrocarbons involved in C-C and C-N coupling reactions; realized the efficient preparation of biphenyl, arylamine and aryl thioether compounds using water as solvent. Aiming at atomic economy, we realized the new method of direct C-H functionalization of arenes to construct C-C and C-S bond formation, as well as the construction of structurally complex functional molecular skeletons through one-pot multi-step reactions, laying 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 it has formed 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. He has published a total of 30 academic papers, including 27 SCI papers.

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