

## PREFACE

The value of organocopper chemistry to the organic chemist is hardly a matter of dispute. Indeed, from the perspective of the synthetic chemist, it is a tool drawn from the ranks of transition metal-based technology for carbon-carbon bond constructions which surely has no peer in terms of popularity or usage. This active field, born close to four decades ago, has necessitated the commissioning of several reviews acknowledging its evolutionary development. And yet, this Symposium-in-Print issue of *Tetrahedron* represents, strangely enough, the very first forum of its kind dedicated solely to organocopper chemistry.

In light of the comments above, it is a pleasure to present the chemical community with the papers contained herein. Researchers throughout the world who are active in the area have made contributions which are truly representative of the various subdivisions comprising this important topic. Hence, synthetic uses of copper(I) complexes range from control of acyclic stereochemistry *via* substitution or conjugate addition schemes, to the remarkable effects of additives such as  $\text{BF}_3 \cdot \text{Et}_2\text{O}$  and  $(\text{CH}_3)_3\text{SiX}$  on traditional organocopper couplings. Mixed metal cuprates of silicon and tin are well addressed. Moreover, the pivotal role of cuprates in total synthesis is represented, and novel organocopper reagents still in their infancy are discussed complete with experimental details. A spectrum of physical organic studies, so crucial to our understanding of the many mysteries behind the synthetic advances, can likewise be found within this issue. Such subjects as solvent effects on reactivity patterns, molecular orbital comparisons of cyano versus Gilman cuprates, alterations in single electron transfer (SET) pathways due to additives, and variable nuclei NMR spectroscopic investigations of both the reagents themselves and of cuprate-substrate interactions are covered. Even X-ray analyses of novel homochiral aryl-copper and -cuprate species appear in this volume.

Given the quality of the participating scientists and the breadth of coverage of their work, this compilation will hopefully function not only for general reference purposes, but as a catalyst for future developments in organocopper chemistry.

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