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Preface

Polymer Supported Catalysts and Reagents in Synthetic Organic Chemistry

Over the past 15 years, we have seen major changes in the way combinatorial chemistry has been implemented. From its inception, 'combichem' was touted as the defining methodology that could create large chemical libraries in a very short time span for use in accelerating the drug discovery process. In reality, most of these libraries were grounded upon peptide, nucleic acid, or peptidomimetic chemistry and were typically constructed using clever but complicated coding schemes. Furthermore, the overall chemical diversity of these types of libraries has been under constant scrutiny. With the strengths and weaknesses of true combinatorial chemistry being exposed, we have seen a significant change in this very young field, wherein a back-to-basics approach has been adopted and a more traditional medicinal chemistry philosophy has been reintegrated. Thus, large libraries are now more the exception with an emphasis now being placed on maximum chemical diversity in a minimal number of steps with a strong accent being placed on designing libraries in which the members have 'drug-like' physicochemical properties. To address the changes and needs of combinatorial chemistry, research in this area has been retooled so that molecules are synthesized in a high-throughput parallel fashion. A defining research tool that has been implemented to meet this new wave of accelerated chemistry is the use of polymer-supported catalysts and reagents for the synthesis of these new drug-like libraries. In this issue are papers from some of the most outstanding laboratories conducting research at the forefront of this new 'combichem' effort.

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