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Introduction

Keith Smith

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INTRODUCTION

Sulfonic acids are important in the detergents and dyestuffs industries, while sulfones and related compounds have found application in finer chemical applications such as in agrochemicals and pharmaceuticals. Polymeric sulfonic acid resins are also important as catalysts or for ion-exchange. Despite the importance of such compounds, however, they retain a relatively low profile and continue to be manufactured by methods that were discovered a long time ago.

As the chemicals industry comes under increasing pressure to conduct its business in a more environmentally benign manner it is a good time to take a fresh look at such compounds and the chemistry that surrounds them. Therefore, in this special issue we have commissioned two chapters that deal with developments in these fields.

Gamal El-Hiti, discusses recent advances in the synthesis of sulfonic acids, with particular emphasis on controlled direct sulfonation of phenolic compounds, the reactions of sulfur trioxide and its amine complexes with organometallic and organometalloid reagents, and the preparation sulfazecins, a novel type of β-lacam antibiotic having a sulfonate group attached to the nitrogen atom of the azetidinone ring.

Robert S Ward discusses the synthesis of arylsulfones. The main methods employed involve alkylation of sulfonic acid salts, acid-catalysed sulfonylation of aromatic hydrocarbons, and oxidation of diaryl and alkyl aryl sulfides.

In both chapters the emphasis is on recent advances and current ideas. This special issue should therefore go some way to bringing these important classes of compounds back into the forefront of chemical thinking, where they ought to belong.

Keith Smith
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