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The Sulfur Problem

Cleaning up

Industrial Feedstocks

DIANE STIRLING

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The Sulfur Problem: Cleaning up Industrial Feedstocks

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Preface

Many industrially important feedstocks are contaminated with sulfur compounds, ultimately released into the atmosphere as sulfur oxides. The sulfur oxides are converted to acid rain, which damages the whole ecosystem, attacking vegetation and stonework, and acidifying lakes and rivers with detrimental effects on aquatic life. Current technologies for removing these sulfur contaminants at both percentage and ppm levels from industrial feedstocks are discussed. These are then linked to new materials which are currently being developed for sulfur clean-up. The synthesis, characterisation and testing of these materials are discussed in depth. Elements of solid state chemistry, the properties of small particles in solution (important in the synthesis step), the characterisation of materials and the kinetics of the sorption of gases in solids are included to place the clean-up of sulfur in industrial feedstocks on a sound theoretical footing.

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