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## Preface

This special issue of *Catalysis Today* focuses on environmental applications of catalysis and reaction engineering. The papers were originally presented at the American Institute of Chemical Engineers 1996 Annual meeting in two sessions on Environmental Reaction Engineering (session #17) and Environmental Catalysis (#97). Additional papers were solicited from leading scholars in these research fields to complete this special issue. One only needs to conduct a cursory review of the recent literature to appreciate the high level of interest and rapid scientific development throughout the areas of reaction engineering and catalysis related with environmental issues.

The purpose of this issue is to bring together some of the most recent advancements in the fields of environmental catalysis and reaction engineering. One of the major focus areas has traditionally been the catalytic treatment of  $\text{NO}_x$  and  $\text{SO}_x$ . In this issue, we present several papers related to the removal of  $\text{NO}_x$  with either ammonia or methane as reductants

and one paper dealing with the removal of sulfur and its transformation to elemental sulfur. A second major focus has been the oxidation of aqueous organic wastes. Within this issue, several papers describing novel reactor designs are presented. Photocatalytic and biological treatment methods are described using fundamental reaction engineering analyses. Recent emphasis has been placed on waste reduction, and in this issue, one paper is included that presents a reaction engineering analysis of a proposed plastics recycling technology.

A great deal of continuing research efforts focus on environmental issues of reaction engineering and catalysis. We hope that this issue provides a good overview of the current state of technology and a value contribution in setting directions for future research activities.

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