EDITORIAL INTRODUCTION

Much of the science of chemical reaction deals with stoichiometric changes, their kinetics and equilibria. Yet most of the external chemical processes that affect our lives, and indeed the life process itself, are catalytic. In the commercial synthesis of ammonia, arguably one of the most important ever practical applications of science in that it staved off world starvation by paving the way for facile production of nitrogeneous fertilizers, reaction occurs repeatedly on specific centres at the catalyst surface. In heterogeneous catalysis, generally, as in photosynthesis and enzymatic reactions, tens of millions of product molecules are manufactured at each reaction centre, in sharp contrast to what occurs via the single 'turnover' associated with a stoichiometric reaction. Advances in atomic and molecular scale characterization of chemical systems over the last two decades, ranging from surfaces of solids to molecular clusters, 'designer' enzymes and other macromolecules have brought catalysis into the arena of most scientific disciplines notably chemistry, physics, biology and materials sciences. Many new techniques and the fruits of prior research have already found application in technology, which, in turn, has led to the ever-increasing involvement of the engineering community in research and development of catalysts. Catalysts are now intensively studied and we seek to elucidate their multifarious modes of operation at the molecular and quantal level.

Catalysis Letters aims to report advances that occur in the field of catalysis ranging from research into new materials, new interpretations of reaction mechanisms, the discovery of new reactions and developments in theory and instrumentation. It is our hope that rapid and worldwide dissemination of such information will accelerate the progress of the science of catalysis to the benefit of all concerned.

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