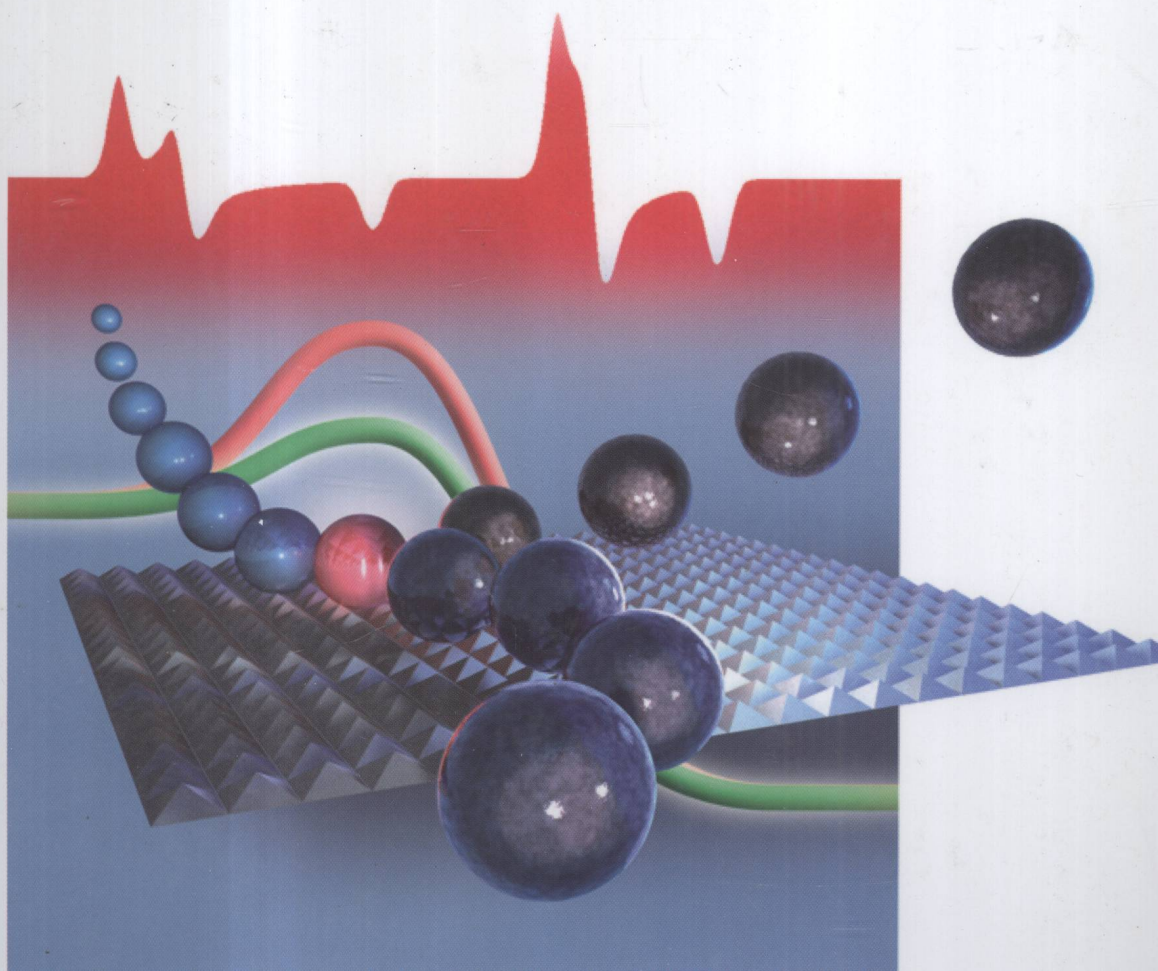


Edited by S. David Jackson and
Justin S. J. Hargreaves

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Volume 1



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Edited by

S. David Jackson and Justin S. J. Hargreaves



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Preface

Metal oxide catalysis continues to grow at a rapid rate, reflecting the wide range of chemical reactions that can be enhanced by the use of a metal oxide catalyst. The advances in characterization techniques and their application to the field have improved our understanding of the processes occurring on the surface and in the bulk. This two volume review series is therefore timely.

The first volume comprises a series of in-depth contributions detailing a number of characterization methods frequently applied to metal oxides. The aim of this volume, although not exhaustive, is to provide a basic introduction to each technique and then a general overview of its application in the area of metal oxide catalysis, thereby providing the general background against which many advances in the area of metal oxide catalysis have been made. The second volume is a compilation of review chapters detailing the catalytic applications of oxides and related materials. The contributions to this volume can be subdivided into two general categories—those that detail a specific material, or class of materials, and those that detail a specific reaction, or class of reactions. It was impossible to try to cover all the myriad reactions catalyzed by oxides so we have had to be selective. We hope we have managed to give a flavor of the range of chemistry accessible and would encourage the interested reader to investigate alternative sources for complementary coverage, for example on zeolites, etc.

Taken together, these volumes represent a marker of the high quality research that has been undertaken in the characterization of metal oxides and into the reactions they catalyze. We hope you will find them enjoyable and illuminating.

We would like to take this opportunity to thank all contributors for their chapters. Their cooperation in adhering to the, at times tight, deadlines is much appreciated. Finally, we wish to express our gratitude to the staff at Wiley-VCH, and in particular Manfred Köhl and Stefanie Volk, for their kind assistance in bringing these volumes to fruition.

Glasgow, May 2008

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