TABLE OF CONTENTS

Foreword

List of Participants	xiii
List of Contributors	xvii
REPORT OF THE NATO WORKSHOP: "SURFACE ORGANOMETALLIC CHEMISTRY: MOLECULAR APPROACHES TO SURFACE CATALYSIS"	1
THE SURFACES OF OXIDES AT A MOLECULAR LEVEL Helmut Knözinger	35
REACTION OF ORGANOMETALLICS WITH SURFACES OF METAL OXIDES John Evans	47
CATALYTIC REACTIONS CARRIED OUT WITH METALS DERIVED FROM CLUSTERS Robin Whyman	75
SOLUBLE AND SUPPORTED METAL CATALYSTS FOR HYDROCARBON OXIDATION IN LIQUID AND VAPOR PHASE James E. Lyons	97
REACTIONS OF ORGANOMETALLIC COMPOUNDS WITH SURFACES OF SUPPORTED AND UNSUPPORTED METALS Yuri A. Ryndin and Yuri I. Yermakov	127
LOW-NUCLEARITY METAL CLUSTERS: STRUCTURE AND REACTIVITY Pierre Gallezot	143

ix

LARGE MOLECULAR METAL CARBONYL CLUSTERS: MODELS OF METAL PARTICLES	
Giuliano Longoni, Alessandro Ceriotti, Mario Marchionna, and Giampietro Piro	157
MOLECULAR MODELS OF EARLY TRANSITION METAL OXIDES: POLYOXOANIONS AS ORGANIC FUNCTIONAL GROUPS Victor W. Day, Walter G. Klemperer, Curtis Schwartz,	
and Ren-Chain Wang	173
HOMOGENEOUS MODELS FOR MECHANISMS OF SURFACE REACTIONS:	
PROPENE AMMOXIDATION Dominic M. T. Chan, William A. Nugent, William C. Fultz,	
D. Christopher Roe, and Thomas H. Tulip	187
ORGANOMETALLIC OXIDES: FUTURE MODELS IN CATALYSIS? THE EXAMPLE OF TRIOXO(n ⁵ -PENTAMETHYLCYCLOPENTADIENYL)RHENIUM(VII)	
Wolfgang A. Herrmann	197
ZEOLITE SYNTHESIS: AN OVERVIEW	221
Richard M. Barrer	221
NEW DIRECTIONS IN MOLECULAR SIEVE SCIENCE AND TECHNOLOGY Jule A. Rabo	245
RECENT ADVANCES IN PILLARED CLAYS AND GROUP IV METAL PHOSPHATES Abraham Clearfield	271
REACTION OF ORGANOMETALLICS WITH THE SURFACES OF ZEOLITES	
Eric G. Derouane	299
Index	311