# Advances in catalysis.

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Monografía

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**Contenido:** Front Cover; Advances in Catalysis, Volume 44; Copyright Page; Contents; Contributors; Preface; Werner Otto Haag, 1926-1998; Charles Kemball, 1923-1998; John Turkevich, 1907-1998; Chapter 1. NMR Spectroscopy as a Probe of Surfaces of Supported Metal Catalysts; I. Introduction; II. Experimental Considerations; III. 1H NMR; IV. 13CO NMR: Survey of Results; V. 13CO NMR: Discussion; VI. 195Pt NMR; Chapter 2. Applications of Photoluminescence Techniques to the Characterization of Solid Surfaces in Relation to Adsorption, Catalysis, and Photocatalysis; I. Introduction II. Basic Principles of PhotoluminescenceIII. Practical Aspects of Photoluminescence; IV. Photoluminescence and the Nature of Surface Sites; V. Dynamics of Photoluminescence and the Reactivities of Catalysts; VI. Application to Adsorption; VII. Applications to Catalysis; VIII. Application to Photocatalysis; IX. Application to Chemical Detection; X. Relationships to Other Techniques; XI. Conclusions; Chapter 3. The Surface Science Approach toward Understanding Automotive Exhaust Conversion Catalysis at the Atomic Level; I. Introduction; II. Adsorption; III. CO-O2 Reaction IV. Reduction of NO by CO and H2V. Effects

of Alloy Formation; VI. Effects of the Additives Cerium and Lanthanum Oxides; VII. Summary, Assessment, and Forecast; Chapter 4. Experiments and Processes in the Transient Regime for Heterogeneous Catalysis; I. Introduction; II. General Principles; III. Case Studies; IV. Summary; Chapter 5. Influence of Phosphorus on the Properties of Alumina-Based Hydrotreating Catalysts; I. Introduction; II. Properties of Phosphorous-Based Compounds Related to the Co(Ni)-Mo-P-Alumina System III. Preparation of Alumina-Based Hydrotreating Catalysts Containing Phosphorus, Molybdenum, and Cobalt or NickelIV. Adsorption of Phosphorus-Containing Compounds on Alumina; V. Characterization of Phosphorus-Containing Hydrotreating Catalysts; VI. Activities of Phosphorus-Based Catalysts; VII. Structural Models of Phosphorus-Containing Hydrotreating Catalysts; VIII. Influence of Phosphorus on Other Hydrotreating Catalysts; IX. Impact of Phosphorus Introduction into Industrial Catalyst Formulations; X. Summary and Conclusions Chapter 6. Skeletal Isomerization of n-Butenes Catalyzed by Medium- Pore Zeolites and AluminophosphatesI. Introduction; II. Mechanisms of Skeletal Isomerization of n-Butenes; III. Trade-off of Selectivity and Activity; IV. Aluminosilicate and Aluminophosphate Molecular-Sieve Catalysts; V. Skeletal Isomerization of n-Butenes Catalyzed by Medium-Pore Microporous Molecular Sieves; VI. Experimental Evidence for Bimolecular and/or Monomolecular Mechanisms; VII. Nature and Location of the Active Sites; VIII. The Coke Deposits and Their Effects; IX. Factors Affecting Isobutylene Selectivity X. Deactivation of the Catalysts with Time on Stream

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