

会 告

開催事業

第2回「光がかわる触媒化学の小討論会」	6月14日(土)	東京大学生研	[会告3頁]
第7回国際触媒会議	6月30日(月)~7月4日(金)	東京	[会告1頁]
小討論会「ゼオライト触媒の新しい展開」	7月18日(金)	東京工業大学	[会告3頁]
第11回触媒サマーセミナー	7月31日(木)~8月2日(土)	箱根	[会告6頁]
第18回触媒研究懇談会	8月7日(木)~8月9日(土)	岐阜	[会告8頁]
研修会「触媒学会若手白馬の集い」	8月21日(金)~8月23日(月)	長野	[会告9頁]
第46回触媒討論会 昭和55年度触媒研究発表会 }	9月17日(水)~9月20日(土)	東北工業大学	[会告3頁]

レポート目次(106~112頁)

竹内豊三郎：第5回日ソ触媒セミナー
松本英之：第1回参照触媒討論会
—アルミナ参照触媒の物性測定
古尾谷逸生：シンポジウム「触媒寿命とその予測」
(第2回)
若手シンポジウム「C₁化合物の関与する触媒反応」

触媒調製(113~114頁)

Fe₂O₃触媒：メタン-重水素交換反应用γ-Al₂O₃触媒
炭化水素の酸化反应用V₂O₅/TiO₂触媒

資料(115頁)

参照触媒委員会：参照触媒の諸物性値



第7回国際触媒会議だより

昭和55年6月30日(月)~7月4日(金)

第7回国際触媒会議の通常講演ならびに速報講演の詳細なプログラム(題目、氏名を含む)は、会告11頁に掲載されていますので、ご覧下さい

連絡先 152 東京都目黒区大岡山2 東京工業大学理学部化学科安盛研究室気付 第7回国際触媒会議組織委員会(電話 03-726-0051)

第7回国際触媒会議の概要

会 期 昭和55年6月30日(月)~7月4日(金)
会 場 京王プラザホテル(東京都新宿区西新宿2-2-1)
共 催 第7回国際触媒会議組織委員会・日本化学会・触媒学会・国際純正応用化学連合
後 援 文部省・日本学術会議

プログラム

開会式：6月30日(月) 9時~9時30分
招待講演：毎日1件。 9時~10時
(ただし1日目は9時30分より)
速報講演：6月30日(月)
午前3会場、午後4会場で64件。
1件につき発表15分、討論5分、計20分。
通常講演：7月1日(火)~4日(金)

参加登録申込みについて

参加登録予約申込みは、4月30日に締切りましたが、事前参加登録申込みを受付けています。参加希望者は、ぜひとも事前に参加登録お申込み下さい。参加登録申込みに必要な規定用紙等は下記に連絡されれば郵送します。

登録費(プレプリント1冊付)

一 般：35,000円

学 生：20,000円

同伴者：6,000円(プレプリント無)

プレプリント 招待講演5件(1件約15頁)、通常講演104件の全文(1件10頁)と速報講演64件の要旨(1件2頁)を集録。約1,200頁。登録申込み次第、事前に郵送します。

2会場で1日26件
1件につき発表10分, 討論15分, 計25分。

関連行事

ミキサー: 6月29日(日) 17時 [登録者無料]
ウエルカムパーティ: 6月30日(月) 19時30分
参加費 2,000円 [同伴登録者無料]
バンケット: 7月2日(木) 19時
参加費 6,000円
(以上, 会場は何れも京王プラザホテル)
ファミリープログラム: 日光, 鎌倉箱根の日帰り, 都
内各所観光など8件(会期中)

招待講演

6月30日(月) 9時30分~10時30分
Dr. P. B. Weisz (U.S.A.)
“Molecular Shape Selective Catalysis”
7月1日(火) 9時~10時
Prof. G. Ertl (F.R.G.)
“Surface Science and Catalysis”
7月2日(水) 9時~10時
Prof. E. L. Muetterties (U.S.A.)
“Coordination Chemistry of Metal Surfaces”
7月3日(木) 9時~10時
Prof. K. Tamaru (Japan)
“Recent Progress in Elucidating the Mechanism of Heterogeneous Catalysis”
7月4日(金) 9時~10時
Prof. Yu. I. Yermakov (U.S.S.R.)
“Anchored Complexes in Fundamental Catalytic Research”

Post Congress Symposium

大阪

日時 7月7日(月) 9時~16時
会場 大阪科学技術センター
テーマ Catalyst Development
講師および題目
Dr. S. P. S. Anderw (U.K.) “The Development of Copper-based Catalysts for Methanol Synthesis and for Water Gas Shift”
Prof. J. Haber (Poland) “Dynamics of the Catalyst Surface”
Dr. V. U. S. Rao (U.S.A.) “Conversion of Synthesis Gas to Gasoline Range Hydrocarbon over Zeolite Catalysts”

Dr. G. Xixian (China) “The Present Situation in Investigations on Catalysts in China”

Dr. H. Inaba (Japan) “The Catalytic Reduction of NO_x in Exhaust Gas from Stationary Systems”

Dr. T. Ohara (Japan) “Development of Auto-Mobile Exhaust Gas Treating Catalyst”

参加費 4,000円(昼食を含む)
[国際触媒会議会期中, 会場ですけず]

九州

日時 7月8日(火) 8時30分~18時
会場 阿蘇観光ホテル
テーマ Solid Catalyst Research at Present and in Future
連絡先 (九大総合理工) 清山哲郎

東京(I)

日時 7月5日(土) 9時~16時
会場 国際観光ホテル
テーマ Nitrogen Fixation
連絡先 (東工大資源研) 尾崎 萃

東京(II)

日時 7月9日(水)
会場 東京大学
テーマ Recent Progress and Future of C₁ Chemistry
連絡先 (東大工) 米田幸夫

札幌

日時 7月9日(水)
会場 札幌
テーマ A New Approach to Preparation and Characterization of Heterogeneous Catalyst
連絡先 (北大理) 田部浩三

名古屋

日時 7月8日(火) 10時~17時
会場 名古屋科学館
テーマ Catalysis—From Fundamentals to Design
連絡先 (名大工) 村上雄一

The Seventh International Congress on Catalysis

Contributed Paper Program

Hall A (Concord Ballroom)

July 1 (Tuesday)

10:20 - 12:50

- A1 EXAFS Study of H₂, O₂, and CO Adsorption on Supported Platinum
T. Fukushima, J.R. Katzer, D.E. Sayers and J. Cook (U.S.A.)
- A2 Coadsorption of CO and C₂H₆ on Pt(111) Surfaces Studied by IR-Reflection and Thermal Desorption Spectroscopy
R.W. Ittner and H. Lüth (F.R.G.)
- A3 The Reduction of Nitric Oxide with Hydrogen on the Pt(111) Surface
J.L. Gland, B.A. Sexton and E.B. Kollin (U.S.A.)
- A4 Joint Use of X-Ray Photoelectron Spectroscopy and Analytical Electron Microscopy in the Investigation of Cobalt and Nickel Oxide Supported on Na-Doped Alumina
C. Defosse, M. Houalla, A. Lycourghiotis and F. Delannay (Belgium)
- A5 The Elementary Steps Limiting the Activity of Iron-, Nickel- and Palladium Foils in the Catalytic Decomposition of Methanol, as Studied under Steady State Operation of the Catalysts by Molecular Beam Relaxation Spectrometry
F. Steinfisch, H.-J. Spengler, H.-J. Bohlmann and J. Hynding (F.R.G.)
- A6 Infrared Study of CO Adsorption on Extremely Small Metal Clusters Obtained by Reduction under Mild Conditions of NiO-MgO and CoO-MgO Solid Solutions
A. Chiorino, E. Garrone, G. Ghiotti, E. Guglielminotti and A. Zecchina (Italy)

14:30 - 16:10

- A7 A Selective Route for the Hydrogenolysis of Alkanes into Ethane
J.R. Bernard, J. Bousquet and P. Turlier (France)
- A8 Synthesis, Characteristics and Catalytic Activity of Monodisperse Platinum Alloys with Gold and Palladium
R.S. Miner, Jr., S. Namba and J. Turkevich (U.S.A.)
- A9 Catalytic Activity of Alumina Supported Platinum-Nickel Alloys
A.J. Renouprez, B. Morawek, B. Imelik, V. Perrichon, J.M. Dominguez-Esquivel and J. Jablonksi (France)
- A10 On the Reforming Reactions of Hydrocarbons on Platinum-Copper Alloys
H.C. De Jongste and V. Ponck (The Netherlands)

16:10 - 16:30

Break

16:30 - 17:45

- A11 Isomerization of ¹³C Labeled Hexanes on Pt-Sn Catalysts (The late) F.G. Gault, O. Zahraa, J.M. Dartigues, G. Maire, M. Peyrot, E. Weisang and P.A. Engelhard (France)
- A12 Structure and Catalytic Activity of RuFe Bimetallic Catalysts Prepared from Metal Carbonyl Clusters
L. Gucci, Z. Schay, K. Matusek, I. Bogyay and G. Steffler (Hungary)
- A13 The Development of Catalysis of Hydrogen-Porous Membranes
V.M. Gryaznov, V.S. Smirnov and M.G. Siin'ko (U.S.S.R.)

July 2 (Wednesday)

10:20 - 12:50

- A14 Reverse Spillover of Hydrogen on Carbon and Its Participation in Catalytic Dehydrogenation
K. Fujimoto and S. Toyoshi (Japan)
- A15 Supported Iron Catalysts: Particle Size Dependence of Catalytic and Chemisorptive Properties
H. Topsøe, N. Topsøe, H. Bohlbros and J.A. Dumesic (Denmark)
- A16 Catalytic and Electronic Properties of Platinum Particles Encaged in Zeolite. Particle Size and Environment Effects on n-butane Conversion
T.M. Tri, J. Massardier, P. Gallézet and B. Imelik (France)
- A17 Activation for Catalytic Reactions of the Silica Gel by Hydrogen Spillover
M. Lacroix, G. Fajonk and S.J. Teichner (France)
- A18 Comparative Study of c-Pentane and n-Pentane Transformations on Ni and Pt Catalysts
A. Sárkány, J. Csál and L. Toth (Hungary)

Hall B (Concord Ballroom)

July 1 (Tuesday)

10:20 - 12:50 Industrial Catalysis Session

- B1 Vapor Phase Catalytic Oxidation of Isobutene to Methacrylic Acid
S. Nakamura and H. Ichihashi (Japan)
- B2 Rhodium Containing Automobile Exhaust Catalysts: Relationships between Rhodium Chemistry and Preparation, Activity and Durability
B. Harrison, J.P. Heffer and F. King (U.K.)
- B3 A New Route to Methacrylates from Isobutyraldehyde
M. Otake and T. Onoda (Japan)
- B4 Catalysts for the Hydrocracking of Heavy Gas Oils into Middle Distillates
J.P. Franck and J.F. Le Page (France)
- B5 A Newly Developed Gasification Process and the Catalyst Used
T. Tomita and S. Kawamura (Japan)
- B6 Catalyst Research for the Shell Chlorin Process
F. Wattimena and W.M.H. Sachtler (The Netherlands)

14:30 - 15:45

- B7 Use of Nickel Hydrosilicate as Active Component of Hydrocracking Catalysts
E.D. Radchenko, V.Ya. Kruglikov, N.V. Goncharova, E.A. Bulekova, V.M. Kurganov, I.Ya. Perezhigina, M.V. Landau, D.A. Agievsky and M.A. Kipnis (U.S.S.R.)
- B8 Acidic Forms of Cross-Linked Smectites - A Novel Type of Cracking Catalysts
J. Shabtai, R. Lazar and A.G. Oblad (U.S.A.)
- B9 Reduction of NOX in Combustion Flue Gases on Tungsten Based Catalysts
M. Imanari, Y. Watanabe, S. Matsuda and F. Nakajima (Japan)

15:45 - 16:05 Break

16:05 - 17:45

- B10 Ammonolysis of Alcohols and Other Oxygen Containing Compounds on Oxide Catalysts
E.H. Korchagova, V.A. Slavinska, E.J. Dziluma, V.M. Yevgrashin, G.I. Semenov, I.A. Milman and A.A. Avots (U.S.S.R.)
- B11 Exploitation of A Nonstationary Kinetic Phenomenon for the Elucidation of Surface Processes in A Catalytic Reaction
J. Koubek, J. Pasek and V. Ruzicka (Czechoslovakia)
- B12 The Performance of Catalysts with Nonuniform Activity Profile I. Theoretical Analysis for Isothermal Reactions
Hor-Da Juang, H-S. Weng and C-C. Wang (China)
- B13 Adsorption Mechanism of Boscan Porphyrins of Hydrodemetalization Catalysts. 1. Adsorption on Supports
P. Andreu, R. Galiasso, A. Morales, O. Abrams, L. Katan, L. Pantoja, P. Sojo and E. Vergara (Venezuela)

July 2 (Wednesday)

10:20 - 12:50

- B14 Surfactant Ligands. A New Method for the Heterogenization of A Homogeneous Catalyst
Y. Dror and J. Manassen (Israel)
- B15 Zeolite Entrapped Rhodium and Iridium Carbonyls: Carbonylation of Methanol
P. Gelin, Y. Ben Taarit and C. Naccache (France)
- B16 New Ruthenium Complex Stabilized in Faujasite Type Zeolites. An Active Watergas Shift Catalyst
J.J. Verdonck, R.A. Schoonheydt and P.A. Jacobs (Belgium)
- B17 Characterization of Surface Supported Rh, Pt and Ir Carbonyl Clusters and Their Catalytic Behaviors in the Syntheses of Methanol and Ethanol from CO and H₂
M. Ichikawa and K. Shikakura (Japan)
- B18 Polymer-Supported Tetranuclear Bimetallic Cluster Catalysts
R. Pierantozzi, K.J. Mcquade and B.C. Gates (U.S.A.)

- A19 Electronic State of Dispersed Metals on Supports and Their Catalytic Activity in Some Reactions of Hydrocarbon Conversion
G.V. Antoshin, E.S. Shpiro, O.P. Tkachenko, S.B. Mikhishenko, M.A. Ryashentseva, V.I. Avasev and Kh. M. Minachev (U.S.S.R.)
- 14:30 - 16:10
- A20 A New Approach to Supported Metal Catalysis: Ion Implantation in Single Crystals. Part I: Catalytic Activity of Pt Implanted in (1102) Face of α -Al₂O₃ Annealed in Argon
I.H.B. Haining, P. Rabette, M. Che, A.M. Deane and A.J. Tench (France)
- A21 Characterization of Rh Oxide on γ -Al₂O₃
H.G. Yao and M. Shelef (U.S.A.)
- A22 Microparacrystals as Catalysts
A. Fischer, R. Hosemann, W. Vogel, J. Koutecky, J. Pohl and M. Ralek (F.R.G.)
- A23 Metallic Glasses: New Catalyst Systems
G.V. Smith, W.E. Brower, M.S. Matyjaszczyk and T.L. Pettit (U.S.A.)
- 16:10 - 16:30 Break
- 16:30 - 17:45
- A24 Characterization of the Surface of Asymmetrically Modified Nickel Catalyst; An Approach for the Development of Highly Effective Enantioface-Differentiating (Asymmetric) Hydrogenation Catalyst
T. Harada, A. Tai, M. Yamamoto, H. Ozaki and Yo. Izumi (Japan)
- A25 Enantioselectivity of Nickel Catalysts Modified with Tartaric Acid or Nickel Tartrate Complexes
A. Hoek, H.M. Woerde and W.M.H. Sachtler (The Netherlands)
- A26 Enantioselective Hydrogenation on Dissymmetric Cu-Ni and Pd Catalysts
E.L. Klabunovskii, A.A. Vedenyapin, E.I. Karpeiskaya and V.A. Pavlov (U.S.S.R.)
- B19 Novel Radiation and UV Grafting Methods for the Immobilization of Enzymes and the Heterogenization of Catalytically Active Homogeneous Metal Complexes
C.H. Ang, J.L. Garnett, R. Levot, M.A. Long, N.T. Yen and K.J. Nicol (Australia)
- 14:30 - 15:45
- B20 The Mechanism of Olefin Isomerization on Different Forms of Chromia Investigated by Microwave Spectroscopy
G.L. Haller, C.S. John and J.K. Tyler (U.K.)
- B21 Structural and Catalytic Properties of NiO-Al₂O₃/SiO₂ Catalysts for the Dimerization and Isomerization of Olefins
G. Wendt, J. Finster, R. Schöllner and H. Siegel (G.D.R.)
- B22 Mechanisms of the Isomerization of Butenes on Titanium Dioxide
J.L. Lemberston, G. Perot and M. Guisnet (France)
- 15:45 - 16:05 Break
- 16:05 - 17:45
- B23 Isomerization of Pentane with Aluminum Chloride (Gallium Chloride)-Cupric Salt Complexes
Y. Ono, N. Kitajima, T. Nakajima, and T. Keii (Japan)
- B24 Ethyl Aluminum Chlorides Anchored on Platinum-Impregnated Alumina as Hyperacid Catalysts for Isomerization of Light Paraffins
J.P. Franck, J.F. Le Page and A. Roumegous (France)
- B25 Active Phase Characterization of Oxychlorination Catalysts
P. Avila, J. Blanco, J.L. Garcia-Pierro, S. Mendioroz and J. Soria (Spain)
- B26 The Nature of the Active-Site of Oxychlorination Catalysts (CuCl₂/Al₂O₃) Through Experimental Studies
J. Valle, A. Vargas, J.M. Ferreira, A. Flores and O. Novaro (Mexico)

July 3 (Thursday)

July 3 (Thursday)

- 10:20 - 12:50
- A27 CH₄, C₂H₆ and C₃H₈ Formation in CO + H₂ Reaction over Supported on Silica Nickel and Nickel-Copper Catalysts
J.A. Dalmon and G.A. Martin (France)
- A28 Catalysis by Supported Clusters: Chemisorption, Decomposition and Catalytic Properties in Fischer-Tropsch Synthesis of Fe₃(CO)₁₂, [HFe₂(CO)₁₁] (and Fe(CO)₅) Supported on Highly Divided Oxides
F. Hugues, P. Bussiere, J.M. Bassat, D. Commerceuc, Y. Chauvin, L. Bonnevier and D. Olivier (France)
- A29 Fischer-Tropsch Synthesis with Iron-Cobalt Alloy Catalysts
M. Nakamura, B.J. Wood, P.Y. Hou and H. Wise (U.S.A.)
- A30 A Steady-State Study of Fischer-Tropsch Product Distributions over Cobalt, Iron and Ruthenium
R.B. Farnell, C.L. Kibby and T.P. Kobylinski (U.S.A.)
- A31 The Catalytic Behavior of Carbon-Supported Iron in the CO Hydrogenation Reaction
M.A. Vannice, P.L. Walker, Jr., H.-J. Jung, C. Moreno-Castilla and O.P. Mahajan (U.S.A.)
- A32 Catalytic Synthesis of Methanol from CO/H₂ III. The Role of Alumina and Ceria in the Cu/ZnO System
R.G. Herman, G.W. Simmons and K. Klier (U.S.A.)
- 14:30 - 16:10
- A33 The Reaction of Surface Carbon with Water on Ni and Co Catalysts; A New Process for the Production of Concentrated Methane from Dilute Carbon Monoxide Waste Streams
J.A. Rabo, L.F. Elek and J.N. Francis (U.S.A.)
- A34 Catalyst Structure and Mechanism in Carbon Gasification Reactions; Influence of Preparation on the Ni and K Catalysed Hydrogenative and Steam Gasification
T. Wigmans and J.A. Moulijn (The Netherlands)
- A35 The Design and Testing of A New Range of Methanation Catalysts
D.L. Trimm and E.R. Karal (Norway)
- A36 Investigation of Surface Species in the Methanation of Carbon Monoxide on Supported Nickel Catalyst
J. Gałuszka, J.R. Chang and Y. Amenomiya (Canada)
- 16:10 - 16:30 Break
- 16:30 - 17:45
- A37 Transient Isotope Tracing of Methanation over Nickel Catalyst
J. Happeel, V. Fthenakis, I. Suzuki, T. Yoshida and S. Ozawa (U.S.A.)
- A38 A Model of Active Center, Reaction Kinetics and Mechanism of Ammonia Synthesis on Iron Catalysts
K.H. Huang (China)
- 10:20 - 12:50
- B27 Acid-Redox Bifunctional Properties of Heteropoly Compounds of Molybdenum and Tungsten Correlated with Catalytic Activity for Oxidation of Methacrolein
M. Misono, K. Sakata, Y. Yoneda and W.Y. Lee (Japan)
- B28 Effect of Metal-Oxide Combination on the Catalytic Action in Vapor-Phase Oxidation
M. Ai (Japan)
- B29 Isotopic Exchange of Molecular Oxygen with the Oxygen of Isostructural Al₂(MoO₄)₃, Cr₂(MoO₄)₃ and Fe₂(MoO₄)₃ Catalysts
D. Georgiev-Klissurski and M.M. Kancheva (Bulgaria)
- B30 Study of Multicomponent Metal Oxide Catalysts by ¹⁸O Tracer
Y. Moro-Oka, W. Ueda, S. Tanaka and T. Ikawa (Japan)
- B31 Active Bismuth Molybdate on Mo²⁺-Molybdate Based Catalysts
I. Matsuura (Belgium)
- B32 Studies of the Catalytic Oxidation of Propylene on AMoO₄ Type Molybdates
M.V.C. Sastri, B. Viswanathan and C.V. Bhuvana (India)
- 14:30 - 15:45
- B33 Preparation, Sulphidation and Activity of Ni-Mo-Alumina Coal Conversion Catalysts
R. Badilla-Oñibaum and D. Chadwick (U.K.)
- B34 Studies on A New Highly Selective and Stable Catalyst for the Transformation of Formamides to Nitriles
M.V.E. Rodriguez, B. Delmon and J.P. Damon (Belgium)
- B35 Spectroscopic Studies of Hydrogen Adsorption on Highly Dispersed MgO
S. Coluccia and A.J. Tench (U.K.)
- 15:45 - 16:05 Break
- 16:05 - 17:45
- B36 Olefin Photooxidation and Oxygen Anion Radicals on Oxide Surfaces
Y. Kubokawa, M. Anpo and C. Yun (Japan)
- B37 Photo-Adsorption of Oxygen on Chlorinated TiO₂ Surfaces; A Possible Way to Photo-Oxy-Chlorinations
G. Munuera, A. Navio, J. Soria and A.R. Gonzalez-Elipe (Spain)
- B38 Photocatalytic Decomposition of Water by Solar Energy - Hydrogen Evolution, CO₂ Fixation on Powdered Semiconductors and Their Mechanisms with Pulsed Laser-Dynamic Mass Technique
T. Kawai and T. Sakata (Japan)

A39 Interaction of Nitrogen, Hydrogen and Ammonia with Iridium Surfaces
V.V. Gorodetskiĭ and V.A. Sobyenin (U.S.S.R.)

July 4 (Friday)

10:20 - 12:50

- A40 Molybdenum Carbide, Oxycarbide and Nitride as Catalysts in the Activation of C-O, N-N, C-C and H-H Bonds
M. Boudart, S.T. Oyama and L. Leclercq (U.S.A.)
- A41 Deuterium Tracer Study of Some Hydrodesulphurisations Catalysed by Powdered Molybdenum Disulphide
M.R. Blake, M. Eyre, R.B. Moyes and P.B. Wells (U.K.)
- A42 Characterization of NiO-MoO₃-Al₂O₃ Catalysts
H. Knözinger, H. Jeziorowski and E. Taglauer (F.R.G.)
- A43 Surface Characterization of Supported Cobalt-Molybdenum Catalysts by X-Ray Photoelectron Spectroscopy: The Role of Cobalt in Hydrodesulfurization
Y. Okamoto, H. Tomioka, T. Imanaka and S. Teranishi (Japan)
- A44 Studies of Molybdena-Alumina Catalysts IX. Effect of Cobalt on Thiophene Hydrodesulfurization
F.E. Massoth and K.S. Chung (U.S.A.)
- A45 Claus Reaction. Influence of Electron-Donor and Related Properties of Activated Alumina Catalyst
H.G. Karge, R.W. Tower, Z. Dudzik and Z.M. George (Canada)

14:30 - 16:10

- A46 Surface Phases and Their Role in Adsorption and Catalysis on Metals
G.K. Borekov and V.I. Savchenko (U.S.S.R.)
- A47 Catalytic Activation of Rhodium, Revealed by C₂H₄ Hydrogenation and Resulting from Pre-Incorporation of O₂ and Back-Diffusion to Its Surface under H₂ Exposure
A. Amariglio, M. Lakhdar and H. Amariglio (France)
- A48 Mechanism of the Interaction of Ethylene with Atomic Oxygen on a Silver Surface
I.E. Wachs and S.R. Kelemen (U.S.A.)
- A49 Mass-Spectrometrical Study of Ammonia Oxidation on Platinum
V.L. Kuchayev and L.M. Nikitushina (U.S.S.R.)

16:10 - 16:30 Break

16:30 - 17:45

- A50 Dehydrocyclization of n-Paraffins over Te-NaX Zeolite Catalysts
G.L. Price, Z.R. Ismagilov and J.W. Hightower (U.S.A.)
- A51 An Investigation of the Ethylene Conversion on H-ZSM-5
J.C. Vedrine, P. Dejaifve, C. Naccache and E.G. Derouane (France)
- A52 Selective Formation of p-Xylene by Alkylation of Toluene with Methanol on ZSM-5 Type Zeolites
T. Yashima, Y. Sakaguchi and S. Namba (Japan)

B39 Low Temperature Photoreduction - A New Approach to Preparation of Low-Coordinated Ions of Transition Metals on Surface of Oxide Catalysts
V.B. Kazansky, A.N. Pershin and B.N. Shelimov (U.S.S.R.)

July 4 (Friday)

10:20 - 12:50

- B40 Propane Oxidation over Mixed Metal Oxides: Perovskites, Trirutiles and Columbites
W.C. Conner, Jr., S. Soled and A. Signorelli (U.S.A.)
- B41 Surface State and Active Surface Layer Formation of Fe₂O₃-Sb₂O₄ Catalyst in Propene Oxidation
N. Yamazoe, I. Aso, T. Amamoto and T. Seiyama (Japan)
- B42 Carbanionic Hydrogenation of Conjugated Dienes and Nature of Active Sites on Magnesium Oxide Catalyst
Y. Tanaka, Y. Imizu, H. Hattori and K. Tanabe (Japan)
- B43 Formic Acid Dehydration on Titanium Dioxides. Application of ESR, NMR and Quantum Mechanics to the Study of A Reaction Mechanism
M.A. Enriquez, J.P. Fraissard and B. Bigot (France)
- B44 Comparative Studies of Mixed Oxide Perovskite Catalysts, LaCoO₃, LaFeO₃ and LaAlO₃, for Hydrogenation of Alkenes and Hydrogenolysis of Alkanes
K. Ichimura, Y. Inoue, I. Kojima, E. Miyazaki and I. Yasumori (Japan)
- B45 The Catalytic Activity of Binary Oxide Systems in the Reaction of n-Butane Oxidative Dehydrogenation
G.A. Stepanov, A.L. Tsalingold, V.A. Levin and F.S. Piliipenko (U.S.S.R.)

14:30 - 15:45

- B46 Identification of the Catalytically Active Sites for Olefin Hydrogenation over Reduced Molybdena-Alumina Catalysts
W.K. Hall and W.S. Millman (U.S.A.)
- B47 Olefin Metathesis Reaction over Supported Molybdenum Oxide Catalysts
Katsumi Tanaka, Koshiro Miyahara and Ken-ichi Tanaka (Japan)
- B48 Isotopic Exchange between Alkanes and Deuterium on Activated Mo(CO)₆/Al₂O₃
C. Defossé, M. Zaniecki and R.L. Burwell, Jr. (U.S.A.)

15:45 - 16:05 Break

16:05 - 17:45

- B49 Structure Sensitive and Insensitive Reactions on Supported Vanadium Oxide Catalysts
Y. Murakami, M. Inomata, A. Miyamoto and K. Mori (Japan)
- B50 Investigation of Catalytic Reactions of Ethanol Proceeding on Oxidic Clusters of Vanadium on Aerosil Using A Transient Response Method
M. Richter, G. Öhlmann, G. Lischke and B. Parltitz (G.D.R.)
- B51 Catalytic Activity of Model α -Al₂O₃ Catalysts for the Decomposition of N₂O - The Importance of Site Interaction Effects
P. Pomonis and J.C. Vickerman (U.K.)
- B52 The Nature of Active Oxygen Species in Copper Vanadate Catalyst
S. Yoshida, A. Ueda and K. Tarama (Japan)

The Seventh International Congress on Catalysis

Communication Program

Hall C (Concord Ballroom)

June 30 (Monday)

10:50 - 12:50

- C1 Study of Catalytic Activity of Cd in Various Surroundings in A Series of CdO, CaO and CdO, CdSO₄ Systems
Z.G. Szabó, B. Jóvér and J. Juhász (Hungary)
- C2 Adsorption and Reaction of HCN on Copper Oxide
F.S. Stone and T.H. Williams (U.K.)
- C3 Role of the Layered Structure of Bi₂MoO₆ During Oxidative Dehydrogenation of 1-Butene
H. Miura, Y. Arai, K. Sugiyama and T. Matsuda (Japan)
- C4 On the Reactive Specificity of (020) Crystalline Faces of MoO₃ in Selective Oxidation
J.C. Volta, W. Desquesnes, B. Morawek and J.M. Tatibouet (France)
- C5 IR Spectra of Cs-Vanadates and Its Catalytic Properties
Y. Kera (Japan)
- C6 Surface Transformations of Copper Molybdate Oxidation Catalysts
J. Haber, J. Stoch and T. Wiltowski (Poland)

14:30 - 17:50

- C7 New Evidence for A Protonated Cyclopropane Mechanism in Catalytic Isomerization of n-Alkanes
J. Weitkamp (F.R.G.)
- C8 Temperature Programmed Desorption Studies of the Adsorption and Reactivity of Nitric Oxide on Copper Exchanged Y-Type Zeolite
S. Kagawa, H. Furukawa and M. Iwamoto (Japan)
- C9 Transalkylation of Ethylbenzene over Mordenite-Type Zeolites
H.G. Karge, J. Ladebeck and Z. Sarbak (F.R.G.)
- C10 Unusual Properties of Platinum Alkaline Zeolites in n-Hexane Dehydrocyclisation and Benzene Hydrogenation
C. Besoukhanova, M. Breyse, J.R. Bernard and D. Barthomeuf (France)
- C11 Adsorption and Conversion of Ethylene on H-ZSM-5 Zeolite Studied by ¹³C NMR and Thermogravimetry
E.G. Derouane, J.B. Nagy, J.P. Gilson and Z. Gabelica (Belgium)
- C12 Conversion of Methanol into Hydrocarbons over Acidic Catalysts
Y. Ono, T. Mori and T. Keii (Japan)
- C13 Acid-Type Catalysis by Metal Cation-Substituted Heteropoly Compounds
H. Niiyama, Y. Saito and E. Echigoya (Japan)
- C14 Liquid Phase Oxidation of 1-Butene by Pd(II)-Heteropoly Acid
K. Urabe, F. Kimura and Yu. Izumi (Japan)
- C15 Structure and Activity of Unsupported Ni-Mo HDS Catalysts
K.C. Pratt and J.V. Sanders (Australia)
- C16 Experimental Proof of the Remote Control Effect in the Contact Synergy Mechanism in Hydrodesulfurization Catalysts
D. Frotte, F. Grange and B. Delmon (Belgium)

17:50 - 18:30

- C17 A Comparison of Hydrogen Sorption by Tungsten and Molybdenum Sulphides
D. Fraser, R.E. Moyes and P.B. Wells (U.K.)
- C18 Hydrodesulfurization Catalysis by Transition Metal Sulfides
R.R. Chianelli and T.A. Pecoraro (U.S.A.)

Hall D (Concord Ballroom)

June 30 (Monday)

10 50 - 12:50

- D1 On the Problem of Catalyst Deactivation in Amination Processes
A. Baiker and W. Richarz (Switzerland)
- D2 Effects of Catalyst Components on Silica Phase Transformations
P.S. Putanov, E.E. Kis, R.P. Nedučin, G.A. Lomić, M.S. Genova and L.J.M. Radonjić (Yugoslavia)
- D3 Characterization of Supported Molybdate Catalysts Using Pyridine Adsorption
C.P. Cheng and G.L. Schrader (U.S.A.)
- D4 Low Temperature Hydrogasification of Carbons Using Nickel-Base Catalyst
Y. Nishiyama and T. Haga (Japan)
- D5 Hydrogenation of CO on Lamellar Compound of Graphite with Iron
E. Kikuchi, Y. Aramishi, A. Koizumi and Y. Morita (Japan)
- D6 Modelling of Catalytic Fixed Bed Reactors for Fischer-Tropsch-Synthesis
M. Baerns and G. Bub (F.R.G.)

14:30 - 17:50

- D7 Structural Change of Ni/SiO₂ Catalysts During Methanation of CO/H₂
R.Z.C. Van Meerten, H.M.J. Habets, A.H.G.M. Beaumont and J.W.E. Coenen (The Netherlands)
- D8 Heat-Resistance of Nickel-Molybdenum Carbide Catalysts for Methanation
H. Takaya, M. Araki, S. Shin, K. Suzuki, T. Hosoya, K. Ogawa and N. Todo (Japan)
- D9 Improvement of Methanation Activity by Regulating the Pore Structure and the Supported State of the Catalyst
T. Inui, K. Miyaji, T. Sezume and Y. Takegami (Japan)
- D10 The Influence of Platinum Particle Size on the Activity and Selectivity of Reforming Catalysts
H. Arai and H. Tomimaga (Japan)
- D11 Methanation of CO₂ on Supported Rhodium Catalysts
F. Solymosi and A. Erdšhelyi (Hungary)
- D12 The Nature of Coke-Forming Centres on Alumina Catalyst for Oxidative Dehydrogenation of Ethylbenzene
R. Fiedorow, W. Przystajko, M. Sopa and I.G. Dalla Lana (Poland)
- D13 The Oxidation States of Copper on Alumina Studied by Redox Cycles
A. Cimino and M. Lo Jacomo (Italy)
- D14 Ammoxidation: A New, Catalytic Process Applicable to the Direct Synthesis of Caprolactam
J.M. Armor (U.S.A.)
- D15 General Regularities of the Catalytic Activity of Oxides in Different Olefin Isomerization Reactions
Gy. Gati and I. Halasz (Hungary)
- D16 An Unexpected Reaction: Formation of Alkane from Alkane-1-ol on Anatase
H. Vinek, J. Lercher and H. Noller (Austria)

17:50 - 18:30

- D17 Correlations between Catalytic Activity and Physico-Chemical Properties of Rare Earth-Transition Metal Perovskites
V. Srinivasan, C.S. Swamy, G. Muraidhar, S. Louis Raj, R. Pitchai and K.M. Vijayakumar (India)
- D18 Catalysts for Heterogeneous Chlorobenzene Hydrolysis
N.S. Figoli, H.R. Keselman and P.C. L'Argentiere (Argentina)

Hall E (Concord Ballroom)

June 30 (Monday)

10:50 - 12:50

- E1 Preparation and Characterization of Highly Dispersed Rhodium on Al_2O_3 , TiO_2 , ZrO_2 and CeO_2
P. Gajardo, E.F. Gleason, J.R. Katzer and A.W. Sleight (U.S.A.)
- E2 TiO_2 -Supported Pt or Rh Catalysts: Evidence of Metal-Support Interaction
F. Meriaudeau, H. Ellestad and C. Naccache (France)
- E3 Structure and Reactivity of Pt-Sn Bimetallic Catalyst
L. Lin, J. Tsang, J. Wu and P. Chiang (China)
- E4 Carbon Monoxide and Nitrogen Activation on Supported Ruthenium
A. Bossi, F. Garbassi, G. Petrini and L. Zanderighi (Italy)
- E5 Ultradispersed Rhodium as A Probe of Strong Metal-Support Interactions
L.L. Murrell and D.J.C. Yates (U.S.A.)
- E6 Application of Soft X-Ray Spectroscopy to Catalyst Research: Ni on $\gamma\text{-Al}_2\text{O}_3$
K. Komiyama and R.P. Merrill (U.S.A.)

14:30 - 17:50

- E7 Hydrogenative Quinoline Denitrification on Ni-W-Alumina
H. Schulz and H.D. Eichhorn (F.R.G.)
- E8 Characterization of Nickel Catalysts by Pulse Titration of Sorbed Hydrogen Using Various Acceptors
K. Kochloefl, A. Neumeier and O. Bock (F.R.G.)
- E9 Asymmetric Hydrogenation of 2-Methylpyridine to 2-Methylpiperidine. Raney-Nickel Modified with A Molecular Template
R.M. Laine, G. Hum, B.J. Wood and M. Dawson (U.S.A.)
- E10 Adsorbed Hydrogens and Reduction of Butadiene on Platinum in Acid Aqueous Solution
H. Kita and K. Shimazu (Japan)
- E11 Effect on Reaction Kinetics of Coverages by the Gaseous Reactants Measured on the Metal Catalyst in Its Working State
A. Frennet, G. Lienard, A. Crucq and L. Degols (Belgium)
- E12 Tracer Studies on the Reaction Paths and Kinetics of the CO Oxidation over Platinum, Iridium, Palladium and Rhodium
T. Matsushima (Japan)
- E13 Transient Response Studies of NO Reduction by H_2 over A Rh/SiO₂ Catalyst
A.T. Bell and B.J. Savatsky (U.S.A.)
- E14 A Dual Molecular-Beams Technique for the Study of Surface Catalyzed Gas Reactions
T. Dogu and N.A. Dougharty (Turkey)
- E15 Kinetic Separability of Catalyst Poisoning
I. Onal and J.B. Butt (U.S.A.)
- E16 Obtaining Intrinsic Kinetic Data Using A Micro Trickle Bed Reactor: The Hydrogenation of Glucose on Supported Ruthenium
A.H. Germain, M.L. Wauters, G.A.L'Homme and A.G. Lefebvre (Belgium)
- 17:50 - 18:30
- E17 IR Study of Dinitrogen Species over Ru-K/Al₂O₃
M. Oh-Kita, H. Midorikawa, K. Aika, K. Urabe and A. Ozaki (Japan)
- E18 Catalysts for Low-Temperature Ammonia Synthesis Based on Lamellar Compounds of Graphite
K. Katucki, W. Morawski and W. Arabczyk (Poland)

Hall F (Miyabi Room)

June 30 (Monday)

14:30 - 17:50

- F7 Heterogeneous Photocatalysis: NO Decomposition and Oxidation of Butanols by NO over TiO_2 at Room Temperature
F. Pichat, H. Courbon, J. Disdier, M.-N. Mozzanega and J.-M. Herrmann (France)
- F8 Photoassisted Catalysis Used Platinized Titania
S. Sato and J.M. White (U.S.A.)
- F9 Active Sites in the Photocatalytic Isomerization of cis-But-2-ene on Porous Silica Glass
A. Morikawa, H. Kondo and K. Otsuka (Japan)
- F10 Catalytic Dehydrogenation of 2-Propanol by Dinuclear Rh(II) Complex Immobilized on A Chemically Modified Silica Surface
S. Shinoda, T. Kojima and Y. Saito (Japan)
- F11 Kinetics and Stereochemistry of Hydrogenation of 4-t-Butylmethylencyclohexane Catalyzed by Hydridotetrakis(triphenylphosphine)rhodium (I)
S. Siegel and J.J. Davis (U.S.A.)
- F12 Characterization and Catalytic Properties of Platinum-, Palladium-, and Rhodium-Polyamide Catalysts
C. Hoang-Van, G. Tournier, C. Michel and S.J. Teichner (France)
- F13 Catalytic Oxidation of Cyclohexanol Promoted by 18-Crown-6 Ether/K/Pd/Acetate/Chloride
O.T. Onsager (Norway)
- F14 Heterogenized Cobalt-Molybdenum Bimetallic Complexes over Modified Silica Gel: Activation of Molecular Oxygen
O. Leal, M.R. Goldwasser, R. Lopez and H. Arzoumanian (Venezuela)
- F15 Catalytic Reduction of Nitric Oxide by Ammonia on Cobalt-Amine Complexes in Y-Zeolite and in the Solution
S. Naito (Japan)
- F16 Catalytic Reduction of Nitric Oxide over Metallo-Porphyrins and Their Modified Derivatives
I. Mochida, H. Fujitsu, K. Takeshita and K. Tsuji (Japan)