

## Contents

Vol. 137, Nos. 1–3

### Articles

#### Chemical and metal complex catalysis

- Fluorinated alcohol modified nickel–phosphine catalyst system for efficient dimerization of propylene  
K. Nomura (Chiba, Japan), C. Minamide, M. Nagase, M. Itagaki and G. Suzukamo (Osaka, Japan) . . . . . 1
- Effect of metal phthalocyanine complex aggregation on the catalytic and photocatalytic oxidation of sulfur containing compounds  
V. Iliev, V. Alexiev and L. Bilyarska (Sofia, Bulgaria) . . . . . 15
- Homogeneous and biphasic autoxidation of tetralin catalyzed by transition metal salts and complexes  
Y.M. Chung, K.K. Kang, W.S. Ahn (Inchon, South Korea) and P.K. Lim (Raleigh, NC, USA) . . . . . 23
- Regulatory nature of  $\beta$ -cyclodextrin in selective ring-opening during reduction of styrene oxide  
R. Ravichandran and S. Divakar (Mysore, India) . . . . . 31
- Oxidation of aromatic monoterpenes with hydrogen peroxide catalysed by Mn(III) porphyrin complexes  
R.R.L. Martins, M.G.P.M.S. Neves, A.J.D. Silvestre, A.M.S. Silva and J.A.S. Cavaleiro (Aveiro, Portugal) . . . . . 41
- 1,3-butadiene telomerization with methanol catalyzed by heterogenized palladium complexes  
F. Benvenuti, C. Carlini, A.M. Raspolli Galletti, G. Sbrana (Pisa, Italy), M. Marchionna and R. Patrini (San Donato Milanese, Italy) . . . . . 49
- Synthesis of alkyl- and arylthioglycosides and thiodisaccharides via thioiminium salts in a two-phase system  
T. Fujihira, T. Takido and M. Seno (Tokyo, Japan) . . . . . 65
- Oxidation of (*E,E,Z*)-1,5,9-cyclododecatriene catalysed by palladium(II) acetate in the presence of copper(II) acetate and air: A kinetic study  
E. Balbolov and M. Skumov (Burgas, Bulgaria) . . . . . 77
- Oxidation of 1-naphthol and related phenols with hydrogen peroxide and potassium superoxide catalysed by 5,10,15,20-tetra-arylporphyrinatoiron(III)chlorides in different reaction conditions  
S.M.S. Chauhan, B. Kalra and P.P. Mohapatra (Delhi, India) . . . . . 85
- Hydroformylation of allyl ethers. A study of the regioselectivity using rhodium catalysts  
N. Ruiz (Tarragona, Spain), A. Polo (Girona, Spain), S. Castellón and C. Claver (Tarragona, Spain) . . . . . 93
- Oxidative addition of dihydrogen as the key step of the active center formation in the HDS sulfide bimetallic catalysts: ab initio MO/MP2 study  
I.I. Zakharov, A.N. Startsev, G.M. Zhidomirov and V.N. Parmon (Novosibirsk, Russian Federation) . . . . . 101
- Studies on catalytic hydrogenation of citral by water-soluble palladium complex  
K.-C. Tin, N.-B. Wong, R.-X. Li (Hong Kong, China), Y.-Z. Li and X.-J. Li (Chengdu, China) . . . . . 113
- Hydrogenation of crotonaldehyde and cinnamaldehyde catalyzed by water-soluble palladium complex  
K.-C. Tin, N.-B. Wong, R.-X. Li (Hong Kong, China), Y.-Z. Li, J.-Y. Hu and X.-J. Li (Chengdu, China) . . . . . 121
- Mn<sup>III</sup>L<sub>2</sub>/t-BuOOH-induced activation of dioxygen for the oxygenation of cyclohexene  
T. Matsushita (Otsu, Japan), D.T. Sawyer (College Station, TX, USA) and A. Sobkowiak (Rzeszow, Poland) . . . . . 127
- Catalytic amination of unsaturated hydrocarbons: reactions of *p*-nitrophenylazide with alkenes catalysed by metallo-porphyrins  
S. Cenini, S. Tollari, A. Penoni and C. Cereda (Milano, Italy) . . . . . 135
- Direct synthesis of diphenyl carbonate by oxidative carbonylation of phenol using Pd–Cu based redox catalyst system  
M. Goyal, R. Nagahata, J.-i. Sugiyama, M. Asai (Tsukuba, Japan), M. Ueda and K. Takeuchi (Tsukuba, Japan) . . . . . 147
- One-pot synthesis of ketones and lactones by oxidation of the parent hydrocarbons with KHSO<sub>5</sub> catalyzed by manganese(III) porphyrins in a biphasic, solid–liquid, system  
L. Cammarota, S. Campestrini, M. Carrieri, F. Di Furia and P. Ghiotti (Padova, Italy) . . . . . 155
- The role of copper in particulate methane monooxygenase from *Methylosinus trichosporium* OB3b  
M. Takeguchi, K. Miyakawa and I. Okura (Yokohama, Japan) . . . . . 161

Aluminium alkoxide sulphate catalyst: a computational study R. Improta, M. Di Serio and E. Santacesaria (Napoli, Italy) . . . . .	169
Polymer anchored palladium(II)-diaminopropane complexes: synthesis and catalytic behaviour J. John, M.K. Dalal and R.N. Ram (Baroda, India) . . . . .	183
Hydroformylation of styrene catalyzed by a rhodium thiolate binuclear catalyst supported on a cationic exchange resin J. Balué and J.C. Bayón (Barcelona, Spain) . . . . .	193
Oxidative degradation of chlorinated phenols catalyzed by a non-heme iron(III) complex C. Hemmert, M. Renz and B. Meunier (Toulouse, France) . . . . .	205
Toward a quantitative evaluation of Lewis acid strength. A $^{13}\text{C}$ NMR study of the interaction of boron trifluoride with diethyl ether D. Fărcașiu, P. Lukinskas, A. Ghenciu and R. Martin (Pittsburgh, PA, USA) . . . . .	213
Zeolite-encapsulated vanadium picolinate peroxo complexes active for catalytic hydrocarbon oxidations A. Kozlov, A. Kozlova, K. Asakura and Y. Iwasawa (Tokyo, Japan) . . . . .	223

### **Molecular aspects of heterogeneous catalysis**

Effects of structural defects and acid–basic properties on the activity and selectivity of isopropanol decomposition on nanocrystallite sol–gel alumina catalyst J.A. Wang, X. Bokhimi, O. Novaro, T. López, F. Tzompantzi, R. Gómez, J. Navarrete, M.E. Llanos and E. López-Salinas (México, Mexico) . . . . .	239
$\text{Ru}_3(\text{CO})_{12}/1,10$ -phenanthroline-catalyzed hydroformylation of styrene and acrylic esters T.-a. Mitsudo, N. Suzuki, T.-a. Kobayashi and T. Kondo (Kyoto, Japan) . . . . .	253
Asymmetric hydrogenation of itaconates by hectorite-intercalated Rh-DIOP complex T. Sento, S. Shimazu, N. Ichikuni and T. Uematsu (Chiba, Japan) . . . . .	263
FT-IR Study of $\text{H}_2^{16}\text{O}$ and $\text{H}_2^{18}\text{O}$ adsorption on H-ferrierite B. Lee, J.N. Kondo, K. Domen (Yokohama, Japan) and F. Wakabayashi (Tokyo, Japan) . . . . .	269
Selective catalytic reduction of NO with hydrocarbon on $\text{Cu}^{2+}$ -exchanged pillared clay: An IR study of the NO decomposition mechanism M. Sirilumpen, R.T. Yang and N. Tharapiwattananon (Ann Arbor, MI, USA) . . . . .	273
Preparation and characterization of $\text{W}/\gamma\text{-Al}_2\text{O}_3$ and $\text{Pd-W}/\gamma\text{-Al}_2\text{O}_3$ catalysts from organometallic precursors. The catalytic activity for NO decomposition A.M. Sica (Bahía Blanca, Argentina), J.H.Z. Dos Santos, I.M. Baibich (Porto Alegre, Brazil) and C.E. Gigola (Bahía Blanca, Argentina) . . . . .	287

## **Letters**

### **Chemical and metal complex catalysis**

Effects of chelating diphosphines on the rhodium catalysed carbonylation of allylamines R. Gomes da Rosa, J.D. Ribeiro de Campos and R. Buffon (Campinas, Brazil) . . . . .	297
Author index . . . . .	303
Subject index . . . . .	307
Contents . . . . .	313