

## Contents Volume 121

### Vol. 121, No. 1

#### Articles

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

- The effect of decomposition atmosphere on the activity and selectivity of the carbonyl cluster derived Co/SiO<sub>2</sub> and Rh/SiO<sub>2</sub> catalysts [M1410]  
J. Kiviaho, M.K. Niemelä, M. Reinikainen, T. Vaara (Espoo, Finland) and T.A. Pakkanen (Joensuu, Finland) . . . . . 1
- Olefin hydrogenations with hydrido(phosphonite)cobalt(I) under photoirradiation and EHMO calculations for the phosphonite photodissociation process [M1405]  
M. Onishi, M. Yonekura, K. Hiraki, M. Shugyo, H. Kawano (Nagasaki, Japan) and H. Kobayashi (Kurashiki, Japan) . . . . . 9
- Oxidation of alkanes by *tert*-butyl hydroperoxide catalyzed by polynuclear manganese Schiff base complexes [M1412]  
G.L. Tembe, P.A. Ganeshpure and S. Satish (Vadodara, India) . . . . . 17
- Synthesis, physicochemical studies and aerobic enantioselective epoxidation of non functionalized olefins catalyzed by new Co(II) chiral salen complexes [M1411]  
R.I. Kureshy, N.H. Khan, S.H.R. Abdi, A.K. Bhatt and P. Iyer (Bhavnagar, India) . . . . . 25

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

- Effect of hydrogen reduction on the CO adsorption and methanation reaction over Ru/TiO<sub>2</sub> and Ru/Al<sub>2</sub>O<sub>3</sub> catalysts [M1408]  
V.P. Londhe, V.S. Kamble and N.M. Gupta (Trombay, India) . . . . . 33
- Theoretical studies of CO adsorption on H-ZSM-5 and hydrothermally treated H-ZSM-5 [M1415]  
H.V. Brand, A. Redondo and P.J. Hay (Los Alamos, NM, USA) . . . . . 45
- In situ FTIR studies of extraframework aluminum bound methoxy species in H-ZSM-5 zeolites [M1404]  
X.-Z. Jiang (Zhejiang, China) . . . . . 63
- Hydrogenation of crotonaldehyde over Pt based bimetallic catalysts [M1409]  
M. Englisch, V.S. Ranade and J.A. Lercher (Enschede, The Netherlands) . . . . . 69
- Infrared spectra of ( $\eta^6$ -C<sub>6</sub>H<sub>2</sub>Me<sub>4</sub>)Cr(CO)<sub>3</sub> adsorbed on silica and silica–alumina [M1407]  
G. Hunter, C. Rochester and A.G. Wilkinson (Dundee, UK) . . . . . 81
- Transition metal pillared clay: 3. A para selective catalyst for nitration of chlorobenzene [M1403]  
T. Mishra and K.M. Parida (Bhubaneswar, India) . . . . . 91
- Contribution of different mechanisms and different active sites to the clay-catalyzed Diels–Alder reactions [M1406]  
J.M. Fraile, J.I. García, D. Gracia (Zaragoza, Spain), J.A. Mayoral (Villeurbanne, France), T. Tarnai (Zaragoza, Spain) and F. Figueras (Villeurbanne, France) . . . . . 97
- Solid acid catalysts from clays: Acid leached metakaolin as isopropanol dehydration and 1-butene isomerization catalyst [M1413]  
M. Perissinotto, M. Lenarda, L. Storaro and R. Ganzerla (Venice, Italy) . . . . . 103
- Solid acid catalysts from clays: Cumene synthesis by benzene alkylation with propene catalyzed by cation exchanged aluminum pillared clays [M1414]  
A. Geatti, M. Lenarda, L. Storaro, R. Ganzerla and M. Perissinotto (Venice, Italy) . . . . . 111

**Vol. 121, Nos. 2–3****Articles*****Chemical and metal complex catalysis***

Reductive carbonylation of nitrobenzenes catalyzed by a new binuclear rhodium complex [M1474] T. Mizuno and H. Alper (Ottawa, Ont., Canada) . . . . .	119
Supported metalloporphyrins catalyze the oxidation of isobutane by dioxygen [M1417] T.M. Nenoff, M.C. Showalter and K.A. Salaz (Albuquerque, NM, USA) . . . . .	123
Palladium(II) catalyzed oxidation of naturally occurring terpenes with dioxygen [M1473] E. Gusevskaya and J. Ailton Gonsalves (Belo Horizonte, Brazil) . . . . .	131
Catalytic reactions of methylrhenium trioxide on solid oxide supports [M1418] Z. Zhu and J.H. Espenson (Ames, IA, USA) . . . . .	139
Autoxidation of limonene, $\alpha$ -pinene and $\beta$ -pinene by dioxygen catalyzed by $\text{Co}(\text{OAc})_2/\text{bromide}$ [M1477] M. De Fátima Teixeira Gomes and O.A.C. Antunes (Rio de Janeiro, Brazil) . . . . .	145

***Molecular aspects of heterogeneous catalysis***

Conversion of 2-octanol over nickel–alumina, cobalt–alumina, and alumina catalysts [M1485] S. Chokkaram, R. Srinivasan, D.R. Milburn and B.H. Davis (Lexington, KY, USA) . . . . .	157
Oxidation of benzoin with anchored vanadyl and molybdenyl catalysts [M1480] R.K. Bhatia and G.N. Rao (New Delhi, India) . . . . .	171
A study of catalytic <i>p</i> -cyclodextrin carbonate membrane reactor performance in PNPA hydrolysis [M1478] M. Natoli (Arcavacata di Rende, Italy), C. Pagliero (San Luis, Argentina), F. Trotta (Torino, Italy) and E. Drioli (Arcavacata di Rende, Italy) . . . . .	179
Author Index . . . . .	187
Subject Index . . . . .	189
Contents Volume 121 . . . . .	193