

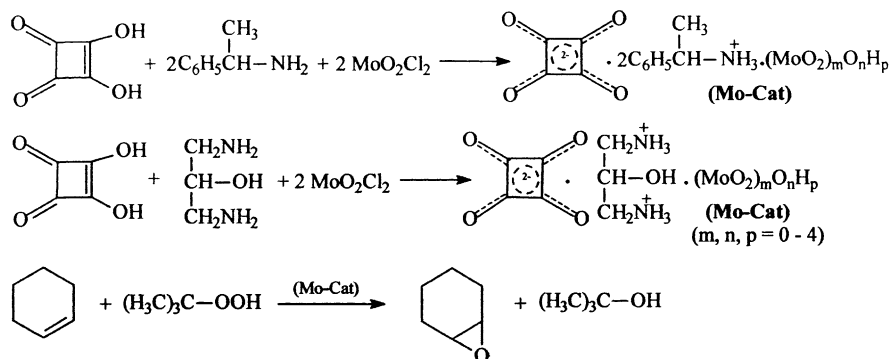
Contents

Articles

**Stefan V. Kotov, Mariana G. Georgieva,
Tsonko M. Kolev**

*Journal of Molecular Catalysis A: Chemical 207
(2004) 5*

Preparation and use of novel molybdenum-containing organic complexes as catalysts in the epoxidation of cyclohexene II. Synthesis and applicability of molybdenum complexes based on squaric acid, 1-phenyl-1-ethanamine and 1,3-diamino-2-propanol

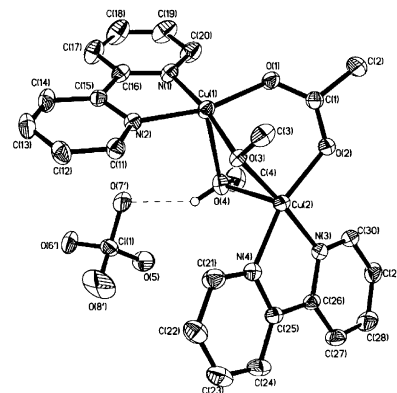


Jian Gao, Shun H. Zhong, Ralph A. Zingaro

*Journal of Molecular Catalysis A: Chemical 207
(2004) 15*

The oxidative coupling polymerization of 2,6-dimethylphenol catalyzed by a μ -OCH₃-bridged dicopper(II) complex catalyst

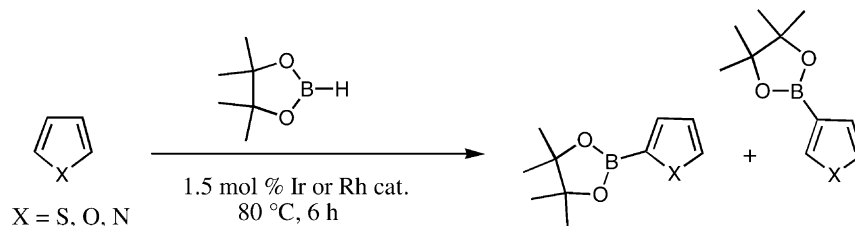
A μ -OCH₃-bridged dicopper(II) complex, a model reaction intermediate of the oxidative coupling polymerization of 2,6-dimethylphenol has been synthesized and characterized by X-ray crystallography. A new reaction mechanism is proposed based on the kinetic investigation.



**Kristin Mertins, Alexander Zapf,
Matthias Beller**

*Journal of Molecular Catalysis A: Chemical 207
(2004) 21*

Catalytic borylation of *o*-xylene and heteroarenes via C–H activation

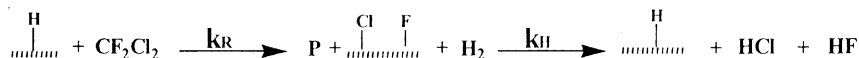


Rateb H. Hina, Rasha Kh. Al-Fayyumi

Journal of Molecular Catalysis A: Chemical 207 (2004) 27

Conversion of dichlorodifluoromethane with hydrogen over Pd/AlF₃ and Ru/AlF₃ prepared by sol-gel method

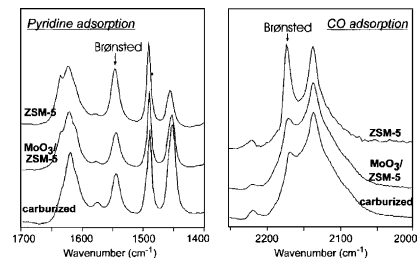
The catalyzed reaction of CF₂Cl₂ and H₂ has been studied in the gas phase at temperatures 438–538 K. The main two products, CH₂F₂ and CH₄ represented more than 97% of the products. The high dispersion of Pd and Ru over the support are responsible for the high activity and high selectivity in CH₂F₂. Schematic representation of halogenation/dehalogenation mechanism for CF₂Cl₂ hydrodechlorination. P: two main products, CH₂F₂ and CH₄, (//): catalyst surface of Pd or Ru supported AlF₃ catalyst prepared by sol-gel method.

**László Óvári, Frigyes Solymosi**

Journal of Molecular Catalysis A: Chemical 207 (2004) 35

Determination of acidic centers on supported Mo₂C catalysts

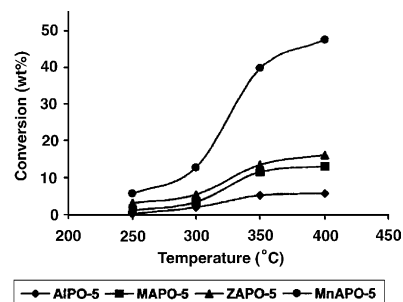
Deposition of Mo on HZSM-5 caused the consumption of Brønsted acidic OH groups as shown by FTIR spectroscopy. Carburization did not result in regeneration of acidic OH (see figure). Brønsted sites were not found on MoO₃/SiO₂ and carburized MoO₃/SiO₂. Lewis acidic sites are formed, however, upon the deposition of Mo. Carburization led to stronger Lewis centers.

**V.R. Vijayaraghavan, K. Joseph Antony Raj**

Journal of Molecular Catalysis A: Chemical 207 (2004) 41

Ethylation of benzene with ethanol over substituted large pore aluminophosphate-based molecular sieves

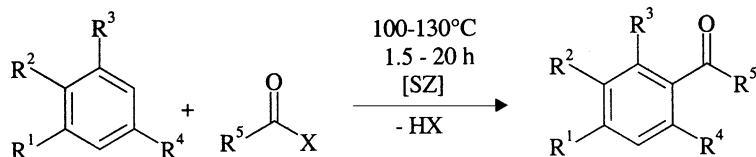
Ethylation of benzene with ethanol in the vapour phase was studied over AlPO₄-5, MAPO-5, ZAPO-5 and MnAPO-5. The products were ethylbenzene (EB), 1,4-diethylbenzene (PDEB), 1,3-diethylbenzene (MDEB) and polyalkyl benzenes (1,2,4- and 1,3,5-triethylbenzene, and 1,2,4,5-tetraethylbenzene). MnAPO-5 was found to be more active than the other catalysts.

**J. Deutsch, A. Trunschke, D. Müller, V. Quaschnig, E. Kemnitz, H. Lieske**

Journal of Molecular Catalysis A: Chemical 207 (2004) 51

Acetylation and benzoylation of various aromatics on sulfated zirconia

Anisole, 2-chloroanisole, 3-chloroanisole, mesitylene, *m*-xylene, and toluene were reacted on sulfated zirconia (SZ) as a heterogeneous catalyst with benzoic anhydride, benzoyl chloride, and acetic anhydride to give the resulting benzophenones and acetophenones, respectively.



Keith J. Stanger, Robert J. Angelici

Journal of Molecular Catalysis A: Chemical 207 (2004) 59

Hydrodefluorination of fluorobenzene catalyzed by rhodium metal prepared from $[\text{Rh}(\text{COD})_2]^+\text{BF}_4^-$ and supported on SiO_2 and Pd-SiO_2

Reaction of fluorobenzene (PhF) and H_2 catalyzed by $\text{Rh-SiO}_2(\text{A})$ gives predominately fluorocyclohexane (CyF) (path a) in heptane and 1,2-dichloroethane (DCE) solvents. In heptane/methanol and heptane/water, hydrodefluorination–hydrogenation to cyclohexane (CyH) occurs exclusively (path bc). The reaction is faster under acidic conditions because the benzene (PhH) intermediate, which inhibits hydrodefluorination (step b) by adsorbing at the same catalyst sites as PhF, undergoes hydrogenation faster at low pH.

