



ELSEVIER

Journal of Molecular Catalysis A: Chemical 251 (2006) 297–298



www.elsevier.com/locate/molcata

Contents

Vol. 251, Nos. 1–2**Invited papers**

Preface

A. Berkessel (Germany)	1
Similarities between the reactions of dioxygen and alkenes with palladium(0): Relevance to the use of benzoquinone and molecular oxygen as stoichiometric oxidants in palladium-catalyzed oxidation reactions	
B.V. Popp, J.L. Thorman and S.S. Stahl (Madison, WI, USA)	2
Design and study of homogeneous catalysts for the selective, low temperature oxidation of hydrocarbons	
B.L. Conley, W.J. Tenn III, K.J.H. Young, S.K. Ganesh, S.K. Meier, V.R. Ziatdinov, O. Mironov (Los Angeles, CA, USA), J. Oxgaard, J. Gonzales, W.A. Goddard III (Pasadena, CA, USA) and R.A. Periana (Los Angeles, CA, USA)	8
Stoichiometric oxidations of σ -bonds: Radical and possible non-radical pathways	
J.M. Mayer, E.A. Mader, J.P. Roth, J.R. Bryant, T. Matsuo, A. Dehestani, B.C. Bales, E.J. Watson, T. Osako, K. Valliant-Saunders, W.H. Lam, (Seattle, WA, USA), D.A. Hrovat, W.T. Borden (Seattle, WA, USA and Denton, TX, USA) and E.R. Davidson (Seattle, WA, USA)	24
Vanadium calixarene complexes as molecular models for supported vanadia	
E. Hoppe, C. Limberg, B. Zierner and C. Mügge (Berlin, Germany)	34
Type II photooxygenation in polymer matrices for the synthesis of new antimalarial peroxides	
A.G. Griesbeck, A. Bartoschek, T.T. El-Idreesy, O. Höinck and C. Miara (Köln, Germany)	41
Bio-inspired iron-catalyzed olefin oxidation. Additive effects on the <i>cis</i> -diol/epoxide ratio	
R. Mas-Ballesté, M. Fujita, C. Hemmila and L. Que Jr. (Minneapolis, MN, USA)	49
Basis for specificity in methane monooxygenase and related non-heme iron-containing biological oxidation catalysts	
J. Zhang, H. Zheng, S.L. Groce and J.D. Lipscomb (Minneapolis, MN, USA)	54
Biocatalytic oxidation of <i>sec</i> -alcohols via hydrogen transfer	
K. Edeger, H. Mang, K. Faber, J. Gross and W. Kroutil (Graz, Austria)	66
The Juliá-Colonna epoxidation: Access to chiral, non-racemic epoxides	
T. Geller (Monheim, Germany), A. Gerlach (Frankfurt, Germany), C.M. Krüger (Walsrode, Germany) and H.-C. Militzer (Wuppertal, Germany)	71
Discovery and optimization of rapid manganese catalysts for the epoxidation of terminal olefins	
A. Murphy and T.D.P. Stack (Stanford, CA, USA)	78
Mono- and bimetallic catalysts for glucose oxidation	
M. Comotti, C.D. Pina and M. Rossi (Milano, Italy)	89
Bio-inspired oxidations with polyoxometalate catalysts	
M. Bonchio, M. Carraro, A. Sartorel, G. Scorrano (Padova, Italy) and U. Kortz (Bremen, Germany)	93
Probing metal-mediated O_2 activation in chemical and biological systems	
V.V. Smirnov, D.W. Brinkley, M.P. Lenci, K.D. Karlin and J.P. Roth (Baltimore, MD, USA)	100
Application of recyclable, polymer-immobilized iodine(III) oxidants in catalytic C–H bond functionalization	
E.W. Kalberer, S.R. Whitfield and M.S. Sanford (Michigan, MI, USA)	108
Manganese 1,4,7-trimethyl-1,4,7-triazacyclononane complexes: Versatile catalysts for the oxidation of organic compounds with hydrogen peroxide	
J.R. Lindsay Smith, B.C. Gilbert, A. Mairata i Payeras, J. Murray (York, UK), T.R. Lowdon (West Yorkshire, UK), J. Oakes (Merseyside, UK), R. Pons i Prats and P.H. Walton (York, UK)	114
Effective asymmetric oxidation of enones and alkyl aryl sulfides	
M. Hinch, O. Jacques, C. Drago, L. Caggiano, R.F.W. Jackson (Sheffield, United Kingdom), C. Dexter (Cramlington, United Kingdom), M.S. Anson and S.J.F. Macdonald (Stevenage, United Kingdom)	123
Mechanisms of the aerobic oxidations catalyzed by <i>N</i> -hydroxyderivatives. Enthalpic, polar and solvent effects, “molecule-induced homolysis” and synthetic involvements	
F. Minisci, C. Punta and F. Recupero (Milano, Italy)	129
Bleach and oxidation catalysis by manganese-1,4,7-triazacyclononane complexes and hydrogen peroxide	
R. Hage and A. Lienke (Vlaardingen, The Netherlands)	150
Catalytic bleach: Most valuable applications for smart oxidation chemistry	
J.J. Dannacher (Basel, Switzerland)	159
Fingerprints of bleach systems	
G. Reinhardt (Frankfurt am Main, Germany)	177

Inorganic compounds and materials as catalysts for oxidations with aqueous hydrogen peroxide V. Nardello, J.-M. Aubry (Villeneuve d'Ascq, France), D.E. De Vos (Leuven, Belgium), R. Neumann (Rehovot, Israel), W. Adam (Rio Piedras, Puerto Rico), R. Zhang (Würzburg, Germany), J.E. ten Elshof (Enschede, The Netherlands), P.T. Witte (De Meern, The Netherlands) and P.L. Alsters (Geleen, The Netherlands)	185
Convenient singlet oxygenation in multiphase microemulsion systems L. Caron, V. Nardello (Villeneuve d'Ascq, France), P.L. Alsters (Geleen, The Netherlands) and J.-M. Aubry (Villeneuve d'Ascq, France)	194
Catalytic oxidations mediated by metal ions and nitroxyl radicals R.A. Sheldon and I.W.C.E. Arends (Delft, The Netherlands)	200
Contributed papers	
Ru=O complexes as catalysts for oxidative transformations, including the oxidation of water to molecular dioxygen M. Rodríguez, I. Romero, C. Sens (Girona, Spain) and A. Llobet (Barcelona, Spain)	215
Understanding the autoxidation of hydrocarbons at the molecular level and consequences for catalysis I. Hermans, P.A. Jacobs and J. Peeters (Heverlee, Belgium)	221
A DFT study on the decomposition of semiperacetals W.R. Thiel (Kaiserslautern, Germany)	229
New complexes and materials for O ₂ -based oxidations C.L. Hill, T.M. Anderson, J.W. Han, D.A. Hillesheim, Y.V. Geletii, N.M. Okun, R. Cao, B. Botar, D.G. Musaev and K. Morokuma (Atlanta, GA, USA)	234
Mechanistic study on regioselective oxygenation reaction of 1,2-quinones with peroxybenzoic acids: Relevant to mechanisms of catecholdioxygenases Y. Hitomi, H. Yoshida, T. Tanaka and T. Funabiki (Kyoto, Japan)	239
Palladium-neocuproine catalyzed aerobic oxidation of alcohols in aqueous solvents I.W.C.E. Arends, G.-J. ten Brink and R.A. Sheldon (Delft, The Netherlands)	246
Ionic-strength dependence of electron-transfer reactions of Keggin heteropolytungstates: Mechanistic probes of O ₂ activation in water Y.V. Geletii (Atlanta, GA, USA) and I.A. Weinstock (New York, NY, USA)	255
Synthesis, spectroscopy, and structures of chiral rhodium(I) corrole complexes I. Saltsman, Y. Balazs (Haifa, Israel), I. Goldberg (Tel Aviv, Israel) and Z. Gross (Haifa, Israel)	263
A functional phenoxazinone synthase model based on dioximatomanganese(II). Kinetics and mechanism of the catalytic oxidation of 2-aminophenols by dioxygen I.Cs. Szigyártó, T.M. Simándi, L.I. Simándi, L. Korecz and N. Nagy (Budapest, Hungary)	270
2-Amino ketones from osmium-catalysed oxidations of alkenes K. Muñiz (Bonn, Germany and Strasbourg, France), C.H. Hövelmann, A. Villar, R. Vicente, J. Streuff and M. Nieger (Bonn, Germany)	277
Bis(μ -hydroxo) bridged di-vanadium-catalyzed selective epoxidation of alkenes with H ₂ O ₂ N. Mizuno (Tokyo, Japan and Saitama, Japan), Y. Nakagawa (Tokyo, Japan) and K. Yamaguchi (Tokyo, Japan and Saitama, Japan)	286
Open-shell rhodium and iridium species in (catalytic) oxygenation reactions D.G.H. Hetterscheid (Nijmegen, The Netherlands) and B. de Bruin (Amsterdam, The Netherlands)	291
Volume contents	297