

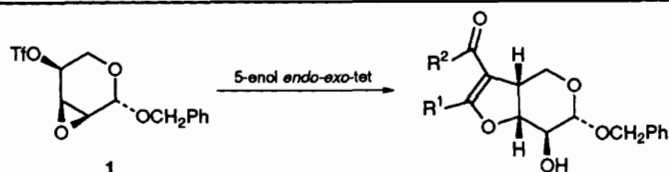
JOURNAL OF THE CHEMICAL SOCIETY

## Chemical Communications

Number 15  
1994

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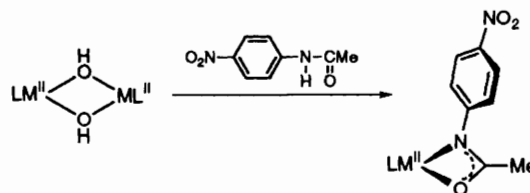
## 1735 A Facile Approach to Polysubstituted Chiral Dihydrofurans on Carbohydrate Templates



A mild and efficient strategy for the regio- and stereo-specific synthesis of polyfunctionalised dihydrofurans using monoanions of  $\beta$ -dicarbonyl compounds and *cis*-orientated pyranose trifluoromethanesulfonate derivatives is described.

Taleb H. Al-Tel, Y. Al-Abed, W. Voelter

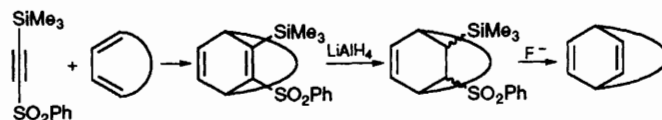
## 1737 Reaction of Hydroxo Complexes of Divalent Metal Ions with Amide



L = hydrotris (3,5-diisopropyl-1-pyrazolyl)borate  
M = Cu, Ni

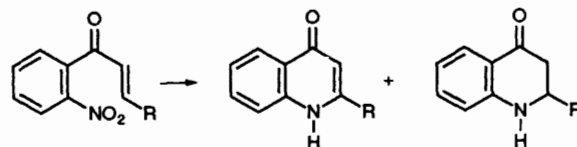
Shiro Hikichi, Masako Tanaka, Yoshihiko Moro-oka, Nobumasa Kitajima

## 1739 1-Benzenesulfonyl-2-trimethylsilylacetylene: a New Acetylene Equivalent for the Diels–Alder Reaction



Richard Vaughan Williams, Kamlesh Chauhan, Vijay R. Gadgil

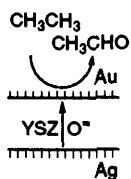
## 1741 Intramolecular Amination of Olefins. Synthesis of 2-Substituted-4-quinolones from 2-Nitrochalcones catalysed by Ruthenium



2-Substituted 4-quinolones and the corresponding 2,3-dihydro 2-substituted 4-quinolones have been obtained by reduction by CO/H<sub>2</sub>O of 2-nitrochalcones catalysed by Ru<sub>3</sub>(CO)<sub>12</sub>/DIAN-Me.

Stefano Tollari, Sergio Cenini, Fabio Ragaini, Lucia Cassar

1743 **Partial Oxidation of Ethane into Acetaldehyde by Active Oxygen generated Electrochemically on Gold through Yttria-stabilized Zirconia**



The cell system Au|YSZ|Ag (YSZ = yttria-stabilised zirconia) has been used for the oxidation of ethane with oxygen pumping. Ethane was partially oxidised to acetaldehyde by the oxygen species generated electrochemically on the gold anode *via* the YSZ.

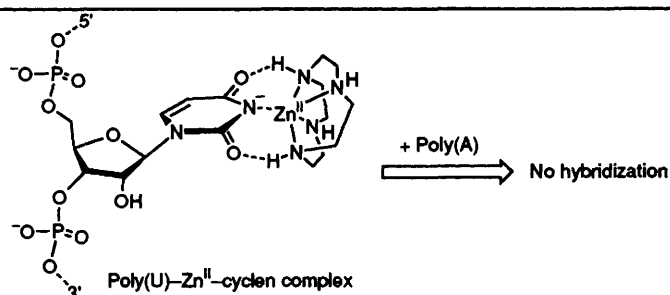
T. Hayakawa, K. Sato, T. Tsunoda, K. Suzuki, M. Shimizu, K. Takehira

1745 **Superparamagnetic-like Properties of the Valence-trapped  $Mn^{II}Mn^{III}_7Mn^{IV}_4$  Anion in the Salt  $(PPh_4)[Mn_{12}O_{12}(O_2CEt)_{16}(H_2O)_4]$**

$(PPh_4)[Mn_{12}O_{12}(O_2CEt)_{16}(H_2O)_4]$  is obtained by the reduction of the neutral compound with  $PPh_4I$  in dichloromethane. A single-crystal diffraction study shows the anion to be the highly unusual, trapped valence  $Mn^{II}, 7Mn^{III}, 4Mn^{IV}$ . Magnetic susceptibility studies indicate an  $S = 19/2$  ground state and a superparamagnetic-like, frequency-dependent out-of-phase response in an AC susceptibility study, unprecedented behaviour for an ionic species.

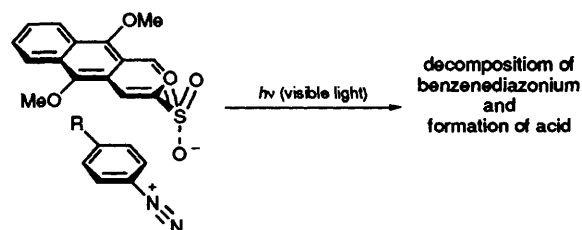
Hui-Lien Tsai, Hilary J. Eppley, Nadine de Vries, Kirsten Folting, George Christou, David N. Hendrickson

1747 **Uracil-targeted Inhibition of Poly(A)–Poly(U) Hybridization by a Zinc(II)–cyclen Complex**



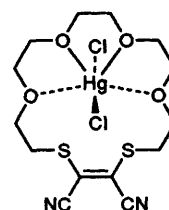
Mitsuhiko Shionoya, Masanori Sugiyama, Eiichi Kimura

1749 **Photochemistry of Benzenediazonium Anthracenesulfonates: Photolysis of Benzenediazonium Salts by Excitation of the Anion**



Nobuyuki Tamaoki, Yasushi Takahashi, Tsuguo Yamaoka

1751 **Unusual Coordination of  $HgCl_2$  by a Mixed Oxathioether Crown**



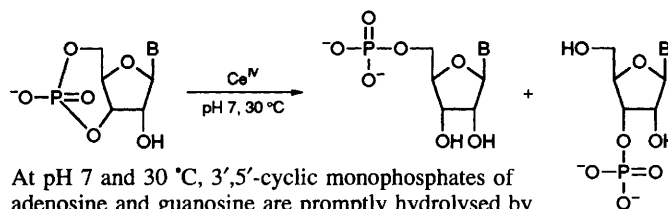
John W. Sibert, Steven J. Lange, Charlotte Stern, Brian M. Hoffman, A. G. M. Barrett

1753 **Separation of Europium from Crown Ether Complex Solutions**

Europium is separated from the dichloromethane phase in solvent extraction with benzo-15-crown-5 in the presence of picrate ions by the use of a diaphragm electrolyser. The diaphragm is a cation-exchange membrane. The crown ether and picrate are present only in the anolyte and there is no loss of the expensive extractant during the electrolytic separation.

Yu Zhangyu, Kong Fanqi, Qin Mei, Wang Binghai, Zhao Bin, Miao Shenhua

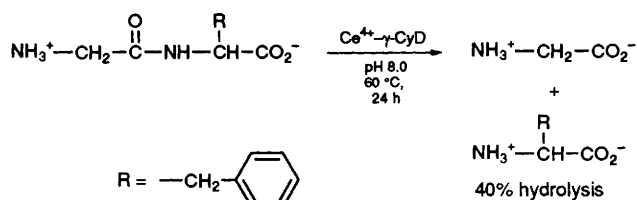
1755 **Enormous Acceleration by Cerium(IV) for the Hydrolysis of Nucleoside 3',5'-Cyclic Monophosphates at pH 7**



At pH 7 and 30 °C, 3',5'-cyclic monophosphates of adenosine and guanosine are promptly hydrolysed by  $\text{Ce}(\text{NH}_4)_2(\text{NO}_3)_6$  (10 mmol  $\text{dm}^{-3}$ ) with half-lives of 7 and 16 s respectively.

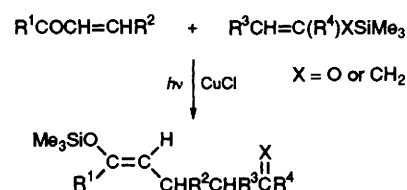
Jun Sumaoka, Sachiko Miyama, Makoto Komiyama

1757 **Cerium(IV)–Cyclodextrin Complex for Peptide Hydrolysis in Neutral Homogeneous Solutions**



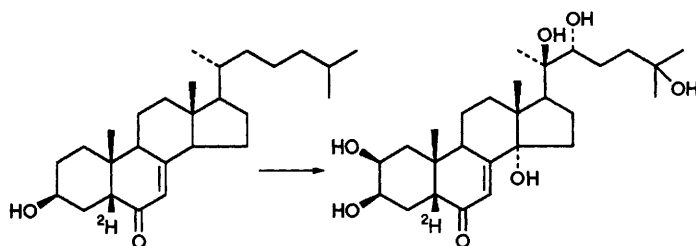
Morio Yashiro, Tohru Takarada, Sachiko Miyama, Makoto Komiyama

1759 **Michael Reactions of Silylated Nucleophiles with Conjugated Enones accompanied by Silyl Group Transfer catalysed by Copper(I) Chloride under Photoirradiation**



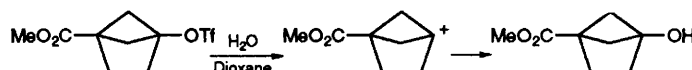
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1761 **3β-Hydroxy-5β-cholest-7-en-6-one as an Intermediate of 20-Hydroxyecdysone Biosynthesis in a Hairy Root Culture of *Ajuga reptans* var. *atropurpurea***



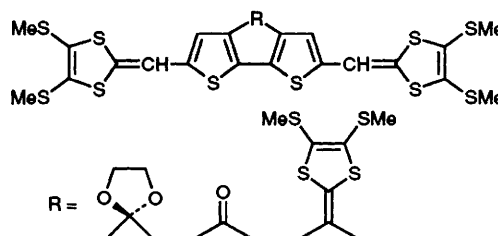
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1763 **Bridgehead Carbocations: Formation of a 1-Bicyclo[2.1.1]hexyl Cation as the Primary Intermediate in the Solvolysis of 3-Methoxycarbonylbicyclo[2.1.1]hexyl Triflate**



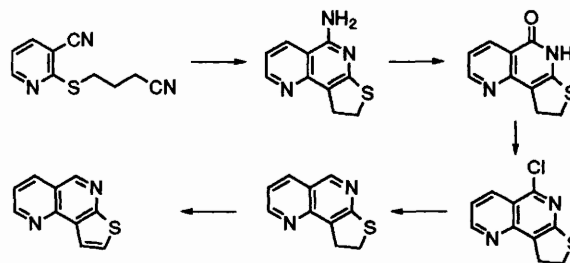
Ernest W. Della, Wit K. Janowski

1765 **Small Bandgap Molecular Semiconductors based on Rigidified Tetrathiafulvalene–Bithiophene Hybrid Conjugated Systems**



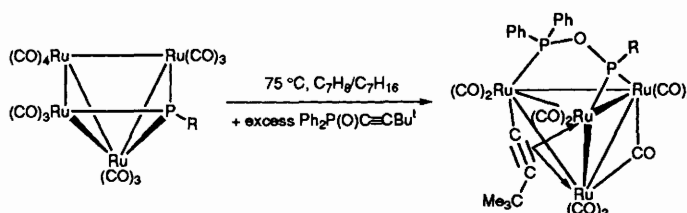
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- 1767 **Synthesis of Thieno[2,3-*h*][1,6]naphthyridine from 2-(3-Cyanopropylthio)pyridine-3-carbonitrile: Formation of a Novel Ring System**



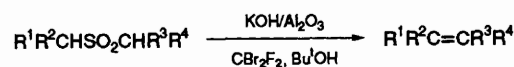
Kenji Sasaki, Rouf A. S. Shamsur, Setsuo Kashino, Takashi Hirota

- 1769 **Novel P–O Bond Forming Reactions *via* Coupling of Phosphinidene and Phosphidoxo Groups on a Tetranuclear Ruthenium Cluster: Face Capping Ph<sub>2</sub>POPR Ligands and the X-Ray Structure of Ru<sub>4</sub>(CO)<sub>8</sub>(μ-CO)(μ<sub>3</sub>-η<sup>2</sup>-C≡CBu<sup>t</sup>)[μ<sub>3</sub>-η<sup>2</sup>-PPh<sub>2</sub>(OPPh)]**



John F. Corrigan, Nicholas J. Taylor, Arthur J. Carty

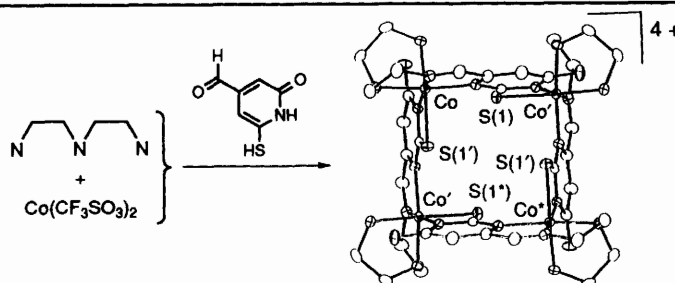
- 1771 **A New One-flask Ramberg–Bäcklund Reaction**



Treatment of α- and α'-hydrogen-bearing sulfones of various structural types with the reagent alumina-supported KOH–CBr<sub>2</sub>F<sub>2</sub>–Bu<sup>t</sup>OH leads to alkenes in good to excellent yields.

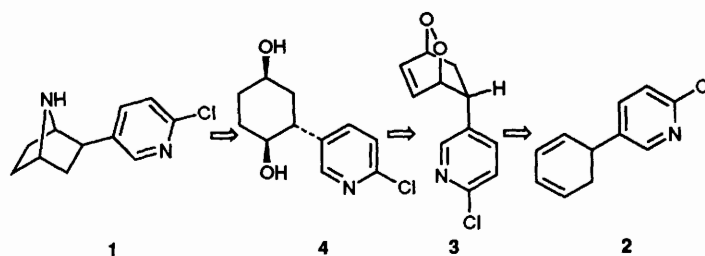
Tze-Lock Chan, Sun Fong, Yu Li, Tim-On Man, Chi-Duen Poon

- 1773 **Design of Complex–Ligand Systems based on Thiouracil. A Novel Cyclic Tetramer of Cobalt(III) with 1-(2-Thiouracil-4-aldimino)-3,6-diazahexane**



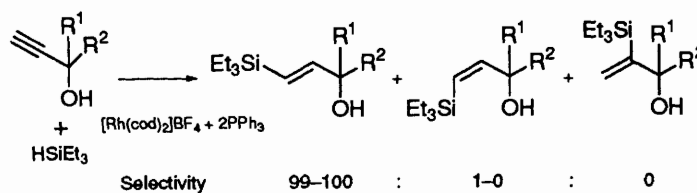
Takashi Kajiwara, Tasuku Ito

- 1775 **The Total Synthesis of Epibatidine**



Soo Y. Ko, Joanne Lerpiniere, Ian D. Linney, Roger Wrigglesworth

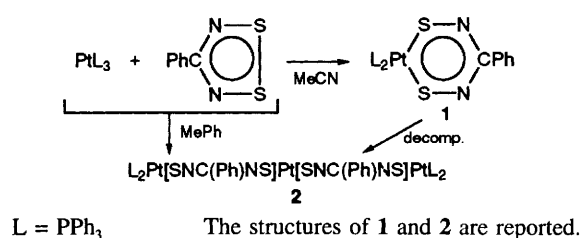
- 1777 **Cationic Rhodium Complex-catalysed Highly Selective Hydrosilylation of Propynylic Alcohols: a Convenient Synthesis of (*E*)-γ-Silyl Allylic Alcohols**



Ryo Takeuchi, Shuichi Nitta, Dai Watanabe

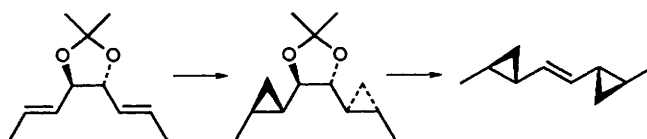
1779 **Novel Bonding Modes in Metallo-Dithiadiazolyl Complexes: Preparation and Crystal Structures of [Pt(SNCPhNS-S,S)(PPh<sub>3</sub>)<sub>2</sub>]-MeCN and [Pt<sub>2</sub>(μ-SNCPhNS-S,S)<sub>2</sub>(PPh<sub>3</sub>)<sub>4</sub>]-2PhMe**

Arthur J. Banister, Ian B. Gorrell, Simon E. Lawrence, Christian W. Lehmann, Iain May, Gillian Tate, Alexander J. Blake, Jeremy M. Rawson



1781 **Approaches to the Assembly of the Antifungal Agent FR-900848: Studies on Double Asymmetric Cyclopropanation and an X-Ray Crystallographic Study of (1*R*,2*R*)-1,2-Bis-[(1*S*,2*S*)-2-methylcyclopropyl]-1,2-ethanediyl 3,5-Dinitrobenzoate**

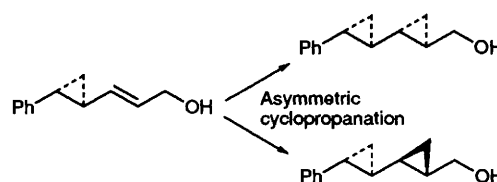
Anthony G. M. Barrett, Krista Kasdorf, David J. Williams



The preparation of (*E*)-[(1*S*,2*S*)-2-methylcyclopropyl]ethene via double bond Simmons Smith cyclopropanation and Whitham elimination is described.

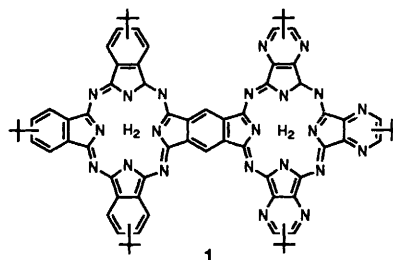
1783 **Approaches to the Assembly of the Antifungal Agent FR-900848: Studies on the Asymmetric Synthesis of Bicyclopropanes and an X-Ray Crystallographic Analysis of (4*R*,5*R*)-2-[(1*R*,3*S*,4*S*,6*R*)-6-Phenyl-1-bicyclopropyl]-1,3-dimethyl-4,5-diphenylimidazolidine**

Anthony G. M. Barrett, Wendel W. Doubleday, Gary J. Tustin, Andrew J. P. White, David J. Williams



1785 **Planar Phthalocyanine-Pyrazinoporphyrazine Heterodinucleates**

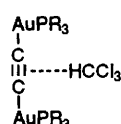
Nagao Kobayashi, Yasuhiro Higashi, Tetsuo Osa



A planar phthalocyanine (Pc) pyrazinoporphyrazine (PyZ) heterodinucleate 1 and its dizinc complex have been synthesised and characterised. They show no fluorescence, probably owing to intense intramolecular charge transfer from the Pc to the PyZ moieties.

1787 **T-Shaped Intermolecular CH...π (C≡C) Interactions in Chloroform Solvates of Gold(I) Ethyne Complexes**

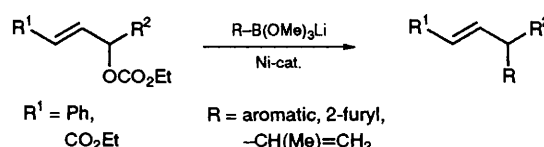
Thomas E. Müller, D. Michael P. Mingos, David J. Williams



The molecular structures of the chloroform solvates of the ethynediyl digold complexes NpPh<sub>2</sub>P-Au-C≡C-Au-PNpPh<sub>2</sub>-2CHCl<sub>3</sub> 1 (Np = naphthyl) and Np<sub>2</sub>PhP-Au-C≡C-Au-PNp<sub>2</sub>Ph-6CHCl<sub>3</sub> 2 have been determined by X-ray techniques. Compounds 1 and 2 show novel C-H...π interactions between the protons of CHCl<sub>3</sub> molecules and the π-electron system of the C≡C bond.

1789 **Nickel-catalysed Substitution Reactions of Allylic Carbonates with Aryl- and Alkenyl-borates**

Yuichi Kobayashi, Eitatsu Ikeda

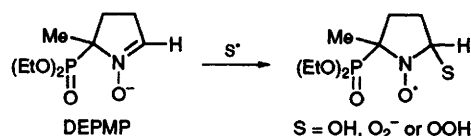


1791 **The Degree of Crystallinity of ZSM-5 determined by Raman Spectroscopy**

A new procedure for determining the degree of crystallinity of ZSM-5 using the Raman peak at  $382\text{ cm}^{-1}$  is discussed and is shown to be as accurate as the same measurement determined by X-ray diffraction and more accurate than that determined by infrared absorption measurements.

S. Mintova, B. Mihailova, V. Valtchev, L. Konstantinov

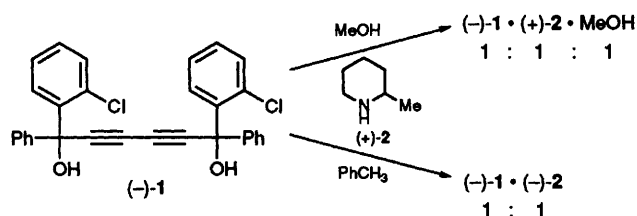
1793 **5-Diethoxyphosphoryl-5-methyl-1-pyrroline N-Oxide (DEPMPO): a New Phosphorylated Nitron for the efficient *In Vitro* and *In Vivo* Spin Trapping of Oxygen-centred Radicals**



The rate of spin-trapping with DEPMP and the lifetime of the spin adducts in aqueous media are compared with those reported for DMPO.

Claudine Frejaville, Hakim Karoui, Béatrice Tuccio, François le Moigne, Marcel Culcasi, Sylvia Pietri, Robert Lauricella, Paul Tordo

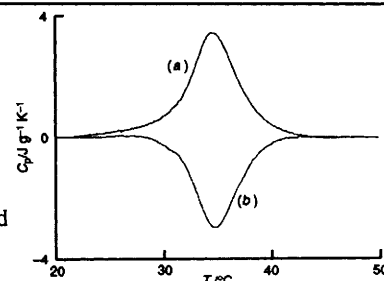
1795 **Role of Methanol in Chiral Combinations of Host-Guest Molecules in the Inclusion Crystal: Structure Determination by X-Ray Crystallography**



1803 Colloidal Microgel Systems: Phase Transition Properties in Aqueous Solution of Poly(*N*-isopropylacrylamide)

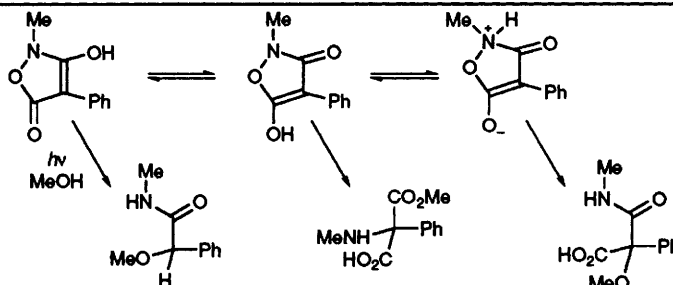
Mary Murray, Friduddin Rana, Ihtshamul Haq, Janice Cook, Babur Z. Chowdhry, Martin J. Snowden

A reversible phase transition, in aqueous solution, of the colloidal poly-(*N*-isopropylacrylamide) microgel system with an excess specific heat capacity maximum at 307.7 K (in the concentration range 0.05–0.5% v/v) has been observed using high-sensitivity differential scanning calorimetry.

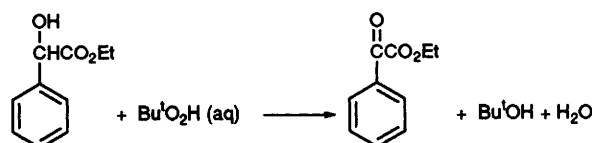


## 1805 Photolysis of Phenylidic Acids: Evidence for Unique Product Formation from Discrete Tautomers

Rolf H. Prager, Jason A. Smith

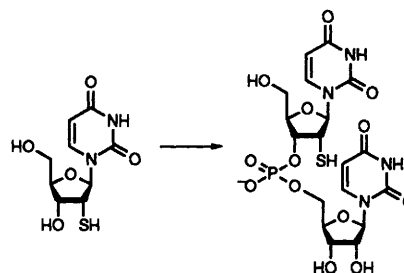
1807 Copper-catalysed Oxidation of Hydroxy Compounds by *tert*-Butyl Hydroperoxide Under Phase-transfer Conditions

Liron Feldberg, Yoel Sasson



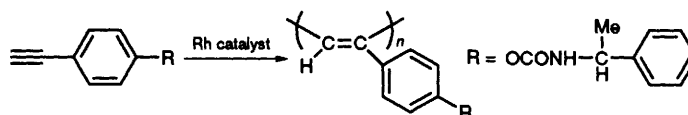
## 1809 The Synthesis of 2'-Thiouridylyl-(3' → 5')-uridine

Colin B. Reese, Claire Simons, Zhang Pei-Zhuo



## 1811 An Optically Active Stereoregular Polyphenylacetylene Derivative as a Novel Chiral Stationary Phase for HPLC

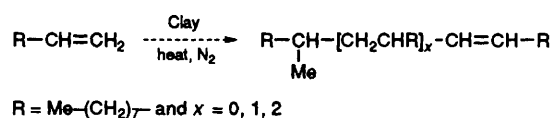
Eiji Yashima, Songlin Huang, Yoshio Okamoto



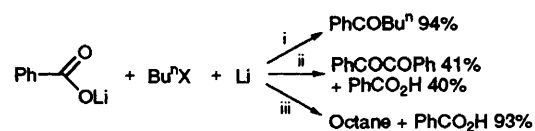
The stereoregular polyacetylene bearing (*R*)-1-phenylethylcarbamoyl groups shows high chiral recognition as a chiral stationary phase for HPLC and can resolve racemates such as *trans*-stilbene oxide, Tröger's base, and alcohols.

## 1813 Oligomerization of Dec-1-ene over Montmorillonite Clay Catalysts

S. Muthukumar Pillai, M. Ravindranathan



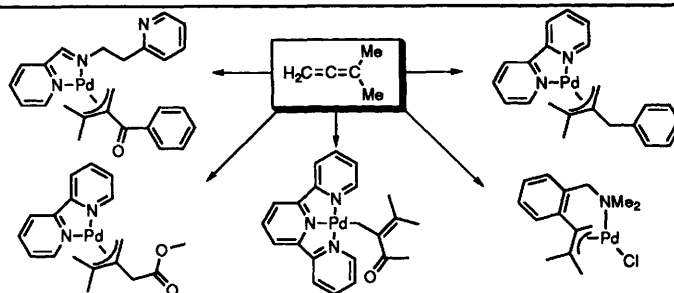
1815 **The Sonochemical Barbier Reaction applied to Carboxylates. Study of a Model Case**



i; X = Cl, ))), 38 kHz; ii, X = I, ))), 38 kHz; iii, X = I, ))), 400 kHz

Yang Danhui, Jacques Einhorn, Cathy Einhorn,  
M. José Aurell, Jean-Louis Luche

1817 **Facile Synthesis of Highly Substituted Pd- $\eta^3$ -Allyl Complexes Containing Nitrogen Ligands**



Richard E. Rülke, Dave Kliphuis, Cornelis J. Elsevier, Jan Fraanje, Kees Goubitz, Piet W. N. M. van Leeuwen, Kees Vrieze



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