JOURNAL OF THE CHEMICAL SOCIETY

Perkin Transactions 2

Physical Organic Chemistry

CONTENTS

- Photoisomerisation of (E)- to (Z)-N, N-dimethylhydrazones and thermal reversion Leo F. Clarke, Fiona O'Sullivan and Anthony F. Hegarty
- Dependence of transition-state structure on nucleophile in the reaction of aryl oxide anions with aryl diphenylphosphate esters Salem A. Ba-Saif, Mark A. Waring and Andrew Williams
- The influence of lone-pair repulsions on C-C bond lengths: a critical evaluation of the experimental and theoretical evidence Ananthaiah Rathna and Jayaraman Chandrasekhar
- 1667 Iminophosphorane-substituted proton sponges. Part 2. Preparation and crystal structure of four phosphoranylideneammonionaphthalene derivatives Antonio L. Llamas-Saiz, Concepción Foces-Foces, José Elguero, Pedro Molina, Mateo Alajarín and Angel Vidal
- 1677 Amidines. Part 31. pK_a Values of N^1,N^1 -dialkyl- N^2 -phenylformamidines in water-ethanol solutions **Janusz** Oszczapowicz and **Jolanta Jaroszewska-Manaj**
- Redox reactions of thiol free radicals with the antioxidants ascorbate and chlorpromazine: role in radioprotection Maurizio Tamba and Peter O'Neill
- Reactions of CO₂^{*-} radicals with pterin and pterin-6-carboxylate ions Mohsen Farahani, Parminder S. Surdhar, Scott Allen, David A. Armstrong, Christian Schöneich, Yun Mao and Klaus-Dieter Asmus
- Reduction of alkyl alkyl, aryl alkyl and cyclic ketones by catalytic hydrogen transfer over magnesium oxide Jacek Kijeński, Marek Gliński and Jacek Czarnecki
- 1699 Kinetic and mechanistic studies of the reactions between 2-nitrothiazole, 2-nitrobenzothiazole and some nucleophiles Luciano Forlani
- 1703 Mechanism of thermal eliminations. Part 30. Pyrolysis of 2-trimethylsilylethanol and 1-aryl derivatives Roger Taylor
- 1707 Complexation with hydroxy host compounds. Part 4. Structures and thermal stabilities of inclusion compounds with dioxane as the guest Susan A. Bourne, Louise Johnson, Charles Marais, Luigi R. Nassimbeni, Edwin Weber, Konstantinos Skobridis and Fumio Toda
- 1715 Intrinsic reactivities of some carbanions in σ-adduct forming reactions Michael R. Crampton and J. Andrew Stevens
- NMR of terminal oxygen. Part 7. 17 O NMR spectra of benzoyl derivatives of Ge, Se, Te and I: π -bond order and excitation energy in benzoyl compounds Hans Dahn and Péter Péchy
- Molecular design of crown ethers. Part 9. Complexation thermodynamics of 1,4,7,10,13-pentaoxacyclohexadecane (16-crown-5) and its lariat derivative in methanol-water: solvent effect upon lariat complexation Yu Liu, Lin-Hui Tong, Yoshihisa Inoue and Tadao Hakushi
- 1729 AM1 Study of a β-carboline set. Part III: substituent effects María Muñoz, Manuel Balón, José Hidalgo, Carmen Carmona, Rafael R. Pappalardo and Enrique Sánchez Marcos
- Lithium isotope discrimination by the anion radical of an anthraquinone-15-crown-5 lariat ether Servando Muñoz and Luis Echegoyen
- Substituent effects on transition-state structures for dissociative and associative S_N2 reactions Ikchoon Lee, Han Joong Koh, Bon-Su Lee, Dong Sook Sohn and Byung Choon Lee
- 1747 Chemistry of amidines. Part 1. Determination of the site of initial protonation in N'-pyridylformamidines Ian D. Cunningham, James S. Blanden, Juan Llor, Luis Muñoz and Andrew P. Sharratt

- 1751 Chemistry of amidines. Part 2. Substituent and solvent effects on rotational barriers in N'-pyridylformamidines Ian D. Cunningham, Juan Llor and Luis Muñoz
- 1755 Identifying functional groups in IR spectra using an artificial neural network Ralph J. Fessenden and László Györgyi
- 1763 Electrochemical reduction of substituted isothiazole-3-thiones in aprotic media Thierry Martens and Maurice-Bernard Fleury
- 1769 Contributions of electrostatic and hydrophobic interactions to the host-guest complexation of pyrocatecholate anions with cationic cyclodextrins Anatoly K. Yatsimirsky and Alexey V. Eliseev
- 1773 The nitrous acid catalysed nitration of naphthalene and its derivatives. Part 2. The kinetics of the reactions in methanesulphonic acid and trifluoroacetic acid Peter J. Gross and John H. Ridd
- 1779 Electron transfer reactions. A reinvestigation of the chlorination of 1-methyl-2-phenylindole with N-chlorobenzotriazole.

 The role of oxygen and oxygenated solvent Patricia Carloni, Lennart Eberson, Lucedio Greci, Pierluigi Stipa and Giorgio Tosi
- 1785 Retinylidene Schiff bases in phosphatidylcholine reverse micelles: formation, protonation and stability Mrunalini M. Kapil and Anil K. Singh
- Unexpected rearrangements induced by the metal cation in the reduction of cycloocta[b] naphthalene with alkali metals in ethers. An EPR and ENDOR study M. Celina R. L. R. Lazana, M. Luisa T. M. B. Franco and Bernardo J. Herold
- 1797 Structure-lipophilicity relationships of zwitterionic amino acids Ruey-Shiuan Tsai, Bernard Testa, Nabil El Tayar and Pierre-Alain Carrupt
- Photolysis of tris(4-tert-butoxycarbonyloxyphenyl) sulphonium salts. A mechanistic study Reinhold Schwalm, Ruth Bug, Guang-Song Dai, Peter M. Fritz, Michael Reinhardt, Siegfried Schneider and Wolfram Schnabel
- The complex anionic rearrangements of deprotonated α-oximino carbonyl derivatives in the gas phase Gregory W. Adams, John H. Bowie and Roger N. Hayes
- 1819 A quantum mechanical/molecular mechanical model of inhibition of the enzyme phospholipase A₂ Bohdan Waszkowycz, Ian H. Hillier, Nigel Gensmantel and David W. Payling
- Enantioselective photoreduction of tris(acetylacetonato)cobalt(III) by 1,4-dihydropyridine derivatives in the presence of molecular aggregates Katsutoshi Ohkubo, Kohichi Yamashita, Hitoshi Ishida, Hidefumi Haramaki and Yasutake Sakamoto
- Kinetic study of the H₂O₂ oxidation of phenols, naphthols and anilines catalysed by the haem octapeptide microperoxidase-8 Ian D. Cunningham, John L. Bachelor and John M. Pratt
- 1845 Crystal structures of H₂[Me₂dibenzo[14]tetraene]N₄ and H₂[Me₂dixylyl[14]tetraene]N₄: new tetraaza macrocycles **Peter J. Lukes, Joe A. Crayston, David J. Ando, Mary E. Harman** and **Michael B. Hursthouse**
- 1851 Effect of detergent attached to enzyme molecules on the activity of organic-solvent-soluble lipases Wakako Tsuzuki, Takashi Sasaki and Tateo Suzuki
- Synthesis and radical-addition stereochemistry of two trimethyl-1-pyrroline 1-oxides as studied by EPR spectroscopy Yong-Kang Zhang, Dao-Hui Lu and Guang-Zhi Xu
- Reaction between various benzaldehydes and phenylhydroxylamine: special behaviour compared with other amines Inês M. Costa Brighente, Rosane Budal and Rosendo A. Yunes

AUTHOR INDEX

Adams, Gregory W., 1809 Alajarin, Mateo, 1667 Allen, Scott, 1687 Ando, David J., 1845 Armstrong, David A., 1687 Asmus, Klaus-Dieter, 1687 Bachelor, John L., 1839 Balón, Manuel, 1729 Ba-Saif, Salem A., 1653 Blanden, James S., 1767 Bourne, Susan A., 1707 Bowie, John H., 1809 Brighente, Inês M. Costa, 1861 Budal, Rosane, 1861 Bug, Ruth, 1803 Carloni, Patricia, 1779 Carmona, Carmen, 1729 Carrupt, Pierre-Alain, 1797 Chandrasekhar, Jayaraman, 1661 Clarke, Leo F., 1649 Crampton, Michael R., 1715 Crayston, Joe A., 1845 Cunningham, Ian D., 1747, 1751, Czarnecki, Jacek, 1695 Dahn, Hans, 1721 Dai, Guang-Song, 1803 Eberson, Lennart, 1779 Echegoyen, Luis, 1735 Elguero, José, 1667

Eliseev, Alexey V., 1769 El Tayar, Nabil, 1797 Farahani, Mohsen, 1687 Fessenden, Ralph J., 1755 Fleury, Maurice-Bernard, 1763 Foces-Foces, Concepción, 1667 Forlani, Luciano, 1699 Franco, M. Luisa T. M. B., 1791 Fritz, Peter M., 1803 Gensmantel, Nigel, 1819 Gliński, Marek, 1695 Greci, Lucedio, 1779 Gross, Peter J., 1773 Györgyi, László, 1755 Hakushi, Tadao, 1725 Haramaki, Hidefumi, 1833 Harman, Mary E., 1845 Hayes, Roger N., 1809 Hegarty, Anthony F., 1649 Herold, Bernardo J., 1791 Hidalgo, José, 1729 Hillier, Ian H., 1819 Hursthouse, Michael B., 1845 Inoue, Yoshihisa, 1725 Ishida, Hitoshi, 1833 Jaroszewska-Manaj, Jolanta, 1677 Johnson, Louise, 1707 Kapil, Mrunalini M., 1785 Kijeński, Jacek, 1695 Koh, Han Joong, 1741

Lazana, M. Celina R. L. R., 1791
Lee, Bon-Su, 1741
Lee, Byung Choon, 1741
Lee, Ikchoon, 1741
Liu, Yu, 1725
Llamas-Saiz, Antonio L., 1667
Llor, Juan, 1747, 1751
Lu, Dao-Hui, 1855
Lukes, Peter J., 1845
Mao, Yun, 1687
Marais, Charles, 1707
Martens, Thierry, 1763
Molina, Pedro, 1667
Muñoz, Luis, 1747, 1751
Muñoz, Maria, 1729
Muñoz, Servando, 1735
Nassimbeni, Luigi R., 1707
Ohkubo, Katsutoshi, 1833
O'Neill, Peter, 1681
O'Sullivan, Fiona, 1649
Oszczapowicz, Janusz, 1677
Pappalardo, Rafael R., 1729
Payling, David W., 1819
Péchy, Péter, 1721
Pratt, John M., 1839
Rathna, Ananthaiah, 1661
Reinhardt, Michael, 1803
Ridd, John H., 1773
Sakamoto, Yasutake, 1833
Sánchez Marcos, Enrique, 1729

Sasaki, Takashi, 1851
Schnabel, Wolfram, 1803
Schneider, Siegfried, 1803
Schöneich, Christian, 1687
Schwalm, Reinhold, 1803
Sharratt, Andrew P., 1747
Singh, Anil K., 1785
Skobridis, Konstantinos, 1707
Sohn, Dong Sook, 1741
Stevens, J. Andrew, 1715
Stipa, Pierluigi, 1779
Surdhar, Parminder S., 1687
Suzuki, Tateo, 1851
Tamba, Maurizio, 1681
Taylor, Roger, 1703
Testa, Bernard, 1797
Toda, Fumio, 1707
Tong, Lin-Hui, 1725
Tosi, Giorgio, 1779
Tsai, Ruey-Shiuan, 1797
Tsuzuki, Wakako, 1851
Vidal, Angel, 1667
Waring, Mark A., 1653
Waszkowycz, Bohdan, 1819
Weber, Edwin, 1707
Williams, Andrew, 1653
Xu, Guang-Zhi, 1855
Yamashita, Kohichi, 1833
Yatsimirsky, Anatoly K., 1769
Yunes, Rosendo A., 1861
Zhang, Yong-Kang, 1855

Communications in Physical Organic Chemistry

Following the highly successful introduction of a communications section into the journal *Perkin Transactions 1*, we are pleased to announce that from January 1992 the same facility will be offered in the sister journal *Perkin Transactions 2*. Scientists having results in all areas of physical organic chemistry that warrant urgent publication should send three copies of the manuscript to the following address:

Dr. Sheila R. Buxton Royal Society of Chemistry Thomas Graham House Science Park Milton Road Cambridge CB4 4WF, UK

Authors should provide written justification for urgent publication and, where appropriate, key experimental data should be included in the paper.