

JOURNAL OF THE CHEMICAL SOCIETY

Perkin Transactions II

Physical Organic Chemistry

CONTENTS

- 523 Correlation analysis of electron spin resonance spectra: the α -spectrum **Richard A. Jackson**
- 531 Electron-transfer processes: metal salt catalysed oxidation of olefins by peroxydisulphate **Claudio Arnaldi, Attilio Citterio, and Francesco Minisci**
- 543 The unusual behaviour of nitro-substituted radical σ -complexes. The reactions of alkyl radicals with 9-nitro-anthracene **Lorenzo Testaferri, Marco Tingoli, and Marcello Tiecco**
- 547 Intramolecular addition of alkoxy radicals. Part 4. Reductive cyclisation of olefinic hydroperoxides **Bernard Taillez, Michèle Paula Bertrand, and Jean-Marie Surzur**
- 555 Intramolecular and intermolecular reactions of alkenylsilyl radicals **Chrysostomos Chatgilialoglu, Helmut Woynar, Keith U. Ingold, and Alwyn G. Davies**
- 563 Oxidative coupling of phenols. Part 6. A study of the role of spin density factors on the product composition in the oxidations of 3,5-dimethylphenol and phenol **David R. Armstrong, Colin Cameron, Derek C. Nonhebel, and Peter G. Perkins**
- 569 Oxidative coupling of phenols. Part 7. Spin-density calculations on the phenoxy radical **David R. Armstrong, Colin Cameron, Derek C. Nonhebel, and Peter G. Perkins**
- 575 Oxidative coupling of phenols. Part 8. A theoretical study of the coupling of phenoxy radicals **David R. Armstrong, Colin Cameron, Derek C. Nonhebel, and Peter G. Perkins**
- 581 Oxidative coupling of phenols. Part 9. The role of steric effects in the oxidation of methyl-substituted phenols **David R. Armstrong, Colin Cameron, Derek C. Nonhebel, and Peter G. Perkins**
- 587 Oxidative coupling of phenols. Part 10. The role of steric effects in the formation of C–O coupled products **David R. Armstrong, Colin Cameron, Derek C. Nonhebel, and Peter G. Perkins**
- 591 Factors affecting the stability and equilibria of free radicals. Part 11. 1-Benzoyl-2,2-bis-(3,5-di-t-butylphenyl)hydrazyl and its temperature-dependent electron spin resonance spectrum **M. Teodor Caproiu, Mihai Elian, Nicoleta Grecu, Nicolae Negoiță, and Alexandru T. Balaban**
- 595 Direct oxidation of alcanoic acids and their amides to γ -lactones by peroxydisulphate-containing systems **Gennady I. Nikishin, Igor V. Svitanko, and Emmanuil I. Troyansky**
- 603 An electron spin resonance study of fatty acids and esters. Part 1. Hydrogen abstraction from olefinic and acetylenic long-chain esters **Emanuele Bascetta, Frank D. Gunstone, and John C. Walton**
- 615 Sensitization and quenching processes of alkylcobalt(III) compounds **Hisham Y. Al-Saigh and Terence J. Kemp**
- 621 Model systems for cytochrome P450 dependent mono-oxygenases. Part 2. Kinetic isotope effects for the oxidative demethylation of anisole and $[Me^{-2}H_3]$ anisole by cytochrome P450 dependent mono-oxygenases and model systems **John R. Lindsay Smith and Paul R. Sleath**
- 629 Free radical substitution. Part 38. The effect of solvent on the atomic chlorination and bromination of 2-substituted butanes and the importance of steric effects **Saeed Y. Atto, John M. Tedder, and John C. Walton**

- 635 Silylaminyl radicals. Part 2. Free radical chain halogenation of hydrocarbons using *N*-halogenobis(trialkylsilyl)-amines **Malcolm D. Cook, Brian P. Roberts, and Karamjit Singh**
- 645 The construction and use of potential-pH diagrams in organic oxidation-reduction reactions **Stuart I. Bailey, Ian M. Ritchie, and Frank R. Hewgill**
- 653 An electron spin resonance study of radicals produced by oxidation of *ortho*-mono- and -di-hydroxybiphenyls **Frank R. Hewgill and Frank Legge**
- 661 Stereoelectronic effects in hydrogen-atom transfer reactions of substituted cyclohexyl radicals **Athelstan L. J. Beckwith and Christopher J. Easton**
- 669 The photolysis of pentamethylcyclopentadiene: experiments with isotopically labelled material **Alwyn G. Davies, Ewa Lusztyk, Janusz Lusztyk, Vernon P. J. Marti, Robin J. H. Clark, and Martin J. Stead**
- 675 Radical reactions of carbohydrates. Part 4. Electron spin resonance studies of radical-induced oxidation of some aldopentoses, sucrose, and compounds containing furanose rings **Bruce C. Gilbert, David M. King, and C. Barry Thomas**
- 685 Oxidation of organic compounds with quinquevalent vanadium. Part 15. Oxidation of 2,6-dimethylphenol **Peter G. Johnson, John S. Littler, and Geoffrey R. Quick**
- 691 Homolytic reactions of polyfluoroaromatic compounds. Part 16. Competitive phenylation of polyfluorobenzenes **Kim J. Allen, Roger Bolton, and Gareth H. Williams**
- 697 Intramolecular reactions of *o*-alkoxy- and *o*-alkylthio-benzyl radicals **J. I. G. Cadogan, James B. Husband, and Hamish McNab**
- 703 The reactions of norbornyl-type cations derived from the reaction of silver toluene-4-sulphonate with 3-substituted 5-iodonorbornane-2,6-lactones **Amirin bin Sadikun, David I. Davies, and Sri Nurestri bt Haji Abdul Malek**
- 711 Reaction of arenesulphonyl halides with free radicals. Part 2 **Carlos M. M. da Silva Corrêa and Maria Augusta B. C. S. Oliveira**
- 717 Acyl nitroxides. Part 4. Estimation of OH bond dissociation energies for *N*-t-butylhydroxamic acids **Terence C. Jenkins and M. John Perkins**
- 721 Radical reactions of trimethylaluminium with a sterically hindered chloro-nitroso-compound **Johan Lub, Marinus L. Beekes, and Thymen J. de Boer**
- 727 Radiation-induced electron capture by proteins containing disulphide linkages: an electron spin resonance study **D. N. Ramakrishna Rao, Martyn C. R. Symons, and Jennifer M. Stephenson**
- 731 Electron spin resonance studies. Part 64. The hydroxyl radical-induced decarboxylation of methionine and some related compounds **Michael J. Davies, Bruce C. Gilbert, and Richard O. C. Norman**
- 739 Free radical reactions in solution. Part 9. Further σ^{\cdot} values from decomposition of substituted dibenzylmercurials **Hikmet Ağırbaş and Richard A. Jackson**

AUTHOR INDEX

- AĞIRBAŞ, H., 739
Allen, K. J., 691
Al-Saigh, H. Y., 615
Armstrong, D. R., 563, 569,
 575, 581, 587
Arnoldi, C., 531
Atto, S. Y., 629
Bailey, S. I., 645
Balaban, A. T., 591
Bascetta, E., 603
Beckwith, A. L. J., 661
Beekes, M. L., 721
Bertrand, M. P., 547
bin Sadikun, A., 703
Bolton, R., 691
Cadogan, J. I. G., 697
Cameron, C., 563, 569, 575,
 581, 587
Căproiu, M. T., 591
Chatgilialoglu, C., 555
Citterio, A., 531
- Clark, R. J. H., 669
Cook, M. D., 635
da Silva Corrêa, C. M. M.,
 711
Davies, A. G., 555, 669
Davies, D. I., 703
Davies, M. J., 738
de Boer, T. J., 721
Easton, C. J., 661
Elian, M., 591
Gilbert, B. C., 675, 738
Grecu, N., 591
Gunstone, F. D., 603
Hewgill, F. R., 645, 653
Husband, J. B., 697
Ingold, K. U., 555
Jackson, R. A., 523, 739
Jenkins, T. C., 717
Johnson, P. G., 685
Kemp, T. J., 615
King, D. M., 675
- Legge, F., 653
Lindsay Smith, J., 621
Littler, J. S., 685
Lub., J., 721
Lusztyk, E., 669
Lusztyk, J., 669
Marti, V. P. J., 669
McNab, H., 697
Minisci, F., 531
Malek, S. N. bt H. A., 703
Negoiță, N., 591
Nikishin, G. I., 595
Nonhebel, D. C., 563, 569,
 575, 581, 587
Norman, R. O. C., 738
Oliveira, M. A. B. C. S., 711
Perkins, M. J., 717
Perkins, P. G., 563, 569, 575,
 581, 587
Quick, G. R., 685
Ramakrishna Rao, D. N., 727
- Ritchie, I. M., 645
Roberts, B. P., 635
Singh, K., 635
Sleath, P. R., 621
Stead, M. J., 669
Stephenson, J. M. 727
Surzur, J-M., 547
Svitanko, I. V., 595
Symons, M. C. R., 727
Taillez, B., 547
Tedder, J. M., 629
Testaferrri, L., 543
Thomas, C. B., 675
Tiecco, M., 543
Tingoli, M., 543
Troyansky, E. I., 595
Walton, J. C., 603, 629
Williams, G. H., 691
Woynar, H., 555

NOTE: An asterisk in the heading of each paper indicates the author who is
to receive any correspondence.

