

JOURNAL
OF
THE CHEMICAL SOCIETY

PERKIN TRANSACTIONS II
Physical Organic Chemistry

CONTENTS

	PAGE
Solid-state dehydrochlorination and decarboxylation reactions. Part 1. Reactions of <i>p</i> -aminosalicylic acid hydrochloride and <i>p</i> -aminosalicylic acid, and revised crystal structure of <i>p</i> -aminosalicylic acid By CHUNG-TANG LIN, PIK-YEN SIEW, and STEPHEN R. BYRN	957
Solid-state dehydrochlorination and decarboxylation reactions. Part 2. Reactions of three crystal habits of <i>p</i> -aminosalicylic acid hydrochloride and the crystal structure of <i>p</i> -aminosalicylic acid hydrochloride By CHUNG-TANG LIN, PIK-YEN SIEW, and STEPHEN R. BYRN	963
Conformation of (\pm)-19,20-cyclopodocarpa-8,11,13-trien-19-one By MONIKA MONDAL and SANKARANANDA GUHA	968
Crystal and molecular structure of <i>exo</i> -2, <i>exo</i> -3-dichloro- <i>endo</i> -5,6-(<i>o</i> -phenylene)norbornane By RAY BAKER and JOHN S. WOOD	971
Effect of <i>sp</i> ² and <i>sp</i> hybridised atoms on barriers to rotation in highly substituted ethanes. Steric acceleration of conformational processes By J. E. ANDERSON, C. W. DOECKE, H. PEARSON, and D. I. RAWSON	974
Metal catalysis in oxidation by peroxides. Part 3. Significance of ligand exchange and acid-base equilibria of vanadium(v) catalyst in oxidation by <i>t</i> -butyl hydroperoxide in alcohols By SERGIO CENCI, FULVIO DI FURIA, GIORGIO MODENA, RUGGERO CURCI, and JOHN O. EDWARDS	979
Radiation chemistry of acetals. Part 4. Photolysis (λ 185) of liquid 1,3-dioxolan and 2,2-dimethyl-1,3-dioxolan By ENGIN ÇETINKAYA, HEINZ-PETER SCHUCHMANN, and CLEMENS VON SONNTAG	985
A simple through-bond approach to optical activity By EDGAR E. ERNSTBRUNNER and MICHAEL R. GIDDINGS	989
Substituent effects in the di- π -methane rearrangement of 1,1-dicyano-2-methyl-3-phenylpropene By AURELIO B. B. FERREIRA and KINGSLEY SALISBURY	995
Conformational equilibria of six-membered ring sulphoxides: the effect of β -electron-withdrawing groups By KNUT BERGESEN, BRIAN M. CARDEN, and MICHAEL J. COOK	1001
Reactions of <i>p</i> -nitrophenyl dodecanoate in normal and modified cholic acid micelles By A. GRAHAM CAIRNS-SMITH and SHAUKAT RASOOL	1007
Vibrational spectra and structure of crystalline potassium perthiocarbonate-methanol K ₂ CS ₄ , CH ₃ OH By WILLIE A. BUENO, ALAIN LAUTIE, CLAUDE SOURISSEAU, DANIEL ZINS, and MICHEL ROBINEAU	1011
Nitroxide radicals. Part 19. Nuclear magnetic resonance study of [2,2]paracyclophan-4-yl <i>t</i> -butyl nitroxide By ALEXANDER R. FORRESTER, FRANZ A. NEUGEBAUER, and HANS FISCHER	1014
Reactivity of halogenothiazoles towards nucleophiles. Kinetics of reactions between 2- and 4-halogenothiazoles and nucleophiles By LUCIANO FORLANI, PAOLO E. TODESCO, and LUIGI TROISI	1016

	PAGE
Benzotriptycenes (<i>o</i> -benzenobenzanthracenes). A proton magnetic resonance study By RUSSELL GODFREY	1019
The preparation and rates of deprotonation of some cyclopropylcarbinyl ketones By M. JOHN PERKINS, N. BEKIR PEYNIRCIOGLU, and BRIAN V. SMITH	1025
Crystal and molecular structure of 2,4,6-tribromo-1,3,5-trineopentylbenzene: indications for attractive steric effects in the crystal By BENGT AURIVILLIUS and ROBERT E. CARTER	1033
Conformational studies. Part 10. Crystal and molecular structure of 17 β -iodoacetoxy-4,4-dimethyl-5 α -androst-7-en-3-one By GEORGE FERGUSON, RODERIC J. RESTIVO, GEOFFREY A. LANE, JOHN M. MIDGLEY, and W. BASIL WHALLEY	1038
Conformational studies. Part 11. Crystal and molecular structure of the anaesthetic, 3 α -hydroxy-5 α -pregnane-11,20-dione By JOHN M. MIDGLEY, W. BASIL WHALLEY, GEORGE FERGUSON, and WAYNE C. MARSH	1042
Application of a quadratic free energy relationship to non-additive substituent effects By MYLES O'BRIEN and R. A. MORE O'FERRALL	1045
Electrophilic aromatic reactivities <i>via</i> pyrolysis of 1-arylethyl esters. Part 17. The reactivity of the 2- and 3-positions of benzo[<i>b</i>]furan and of all positions in benzo[<i>b</i>]thiophen By HASSAN B. AMIN and ROGER TAYLOR	1053
Nitroxide radical formation by the addition of aromatic <i>C</i> -nitroso-compounds to olefins By (MRS.) DENISE MULVEY and WILLIAM A. WATERS	1059
Formation of 1,1-dihalogeno-4-methylpenta-1,4-dienes by reaction of isobutene with trihalogenoethylenes By WARREN HEWERTSON, DAVID HOLLAND, and DAVID J. MILNER	1062
Potential energy profiles for the unimolecular reactions of organic ions: some isomers of C ₃ H ₈ N ⁺ and C ₄ H ₁₀ N ⁺ By RICHARD D. BOWEN and DUDLEY H. WILLIAMS	1064
Electro-organic reactions. Part 12. The anodic oxidation of alicyclic unsaturated carboxylic acids By CHITRA ADAMS, NIELS JACOBSEN, and JAMES H. P. UTLEY	1071
Mechanism of the reaction of ³ SO ₂ with alkanes By JOHN SHERWELL and JOHN M. TEDDER	1076
Crystal and molecular structure of 4-acetyl-3-methyl-7 β -phenoxyacetamido- Δ^3 -cephem By PAOLO DOMIANO, MARIO NARDELLI, ALDO BALSAMO, BRUNO MACCHIA, FRANCO MACCHIA, and GIUSEPPE MEINARDI	1082
A carbon-13 and proton nuclear magnetic resonance study of annular tautomerism and interannular conjugation in some substituted-5-aryltetrazoles By RICHARD N. BUTLER and TERENCE M. McEVOY	1087
The mechanism of the gas-phase pyrolysis of esters. Part 5. Pyrolysis of 1-arylethyl phenyl carbonates; the origin of the kinetic isotope effect By HASSAN B. AMIN and ROGER TAYLOR	1090
The mechanism of the gas-phase pyrolysis of esters. Part 6. Pyrolysis of 1-arylethyl benzoates and <i>t</i> -butyl phenylacetates By HASSAN B. AMIN and ROGER TAYLOR	1095
Adducts of group 4B organometallic radicals with quinones and aromatic ketones: an electron resonance investigation By ANGELO ALBERTI and ANDREW HUDSON	1098
Heterocyclic free radicals. Part 8. The influence of the structure and the conformation of the side-chain on the properties of phenothiazine cation-radicals substituted at nitrogen By DAVID CLARKE, BRUCE C. GILBERT, PETER HANSON, and CHRISTOPHER M. KIRK	1103
Appearance potential studies of some geminal substituted <i>C</i> -nitroso-compounds By JOHN S. DAY, BRIAN G. GOWENLOCK, CHRISTOPHER A. F. JOHNSON, IAN D. McINALLY, and JOSEF PFAB.	1110

INDEX OF AUTHORS' NAMES

- ADAMS, C., Jacobsen, N., and Utley, J. H. P., 1071
Alberti, A., and Hudson, A., 1098
Amin, H. B., and Taylor, R., 1053, 1090, 1095
Anderson, J. E., Doecke, C. W., Pearson, H., and Rawson, D. I., 974
Aurivillius, B., and Carter, R. E., 1033
Baker, R., and Wood, J. S., 971
Balsamo, A. See Domiano, P., 1082
Bergesen, K., Carden, B. M., and Cook, M. J., 1001
Bowen, R. D., and Williams, D. H., 1064
Bueno, W. A., Lautie, A., Sourisseau, C., Zins, D., and Robineau, M., 1011
Butler, R. N., and McEvoy, T. M., 1087
Byrn, S. R. See Lin, C-T., 957, 963
Cairns-Smith, A. G., and Rasool, S., 1007
Carden, B. M. See Bergesen, K., 1001
Carter, R. E. See Aurivillius, B., 1033
Cenci, S., Di Furia, F., Modena, G., Curci, R., and Edwards, J. O., 979
Çetinkaya, E., Schuchmann, H-P., and von Sonntag, C., 985
Clarke, D., Gilbert, B. C., Hanson, P., and Kirk, C. M., 1103
Cook, M. J. See Bergesen, K., 1001
Curci, R. See Cenci, S., 979
Day, J. S., Gowenlock, B. G., Johnson, C. A. F., McNally, I. D., and Pfab, J., 1110
Di Furia, F. See Cenci, S., 979
Doecke, C. W. See Anderson, J. E., 974
Domiano, P., Nardelli, M., Balsamo, A., Macchia, B., Macchia, F., and Meinardi, G., 1082
Edwards, J. O. See Cenci, S., 979
Ernstbrunner, E. E., and Giddings, M. R., 989
Ferguson, G., Restivo, R. J., Lane, G. A., Midgley, J. M., and Whalley, W. B., 1038
Ferguson, G. See also Midgley, J. M., 1042
Ferreira, A. B. B., and Salisbury, K., 995
Fischer, H. See Forrester, A. R., 1014
Forlani, L., Todesco, P. E., and Troisi, L., 1016
Forrester, A. R., Neugebauer, F. A., and Fischer, H., 1014
Giddings, M. R. See Ernstbrunner, E. E., 989
Gilbert, B. C. See Clarke, D., 1103
Godfrey, R., 1019
Gowenlock, B. G. See Day, J. S., 1110
Guha, S. See Mondal, M., 968
Hanson, P. See Clarke, D., 1103
Hewertson, W., Holland, D., and Milner, D. J., 1062
Holland, D. See Hewertson, W., 1062
Hudson, A. See Alberti, A., 1098
Jacobsen, N. See Adams, C., 1071
Johnson, C. A. F. See Day, J. S., 1110
Kirk, C. M. See Clarke, D., 1103
Lane, G. A. See Ferguson, G., 1038
Lautie, A. See Bueno, W. A., 1011
Lin, C-T., Siew, P-Y., and Byrn, S. R., 957, 963
Macchia, B. See Domiano, P., 1082
Macchia, F. See Domiano, P., 1082
McEvoy, T. M. See Butler, R. N., 1087
McNally, I. D. See Day, J. S., 110
Marsh, W. C. See Midgley, J. M., 1042
Meinardi, G. See Domiano, P., 1082
Midgley, J. M., Whalley, W. B., Ferguson, G., and Marsh, W. C., 1042
Midgley, J. M. See also Ferguson, G., 1038
Milner, D. J. See Hewertson, W., 1062
Modena, G. See Cenci, S., 979
Mondal, M., and Guha, S., 968
Mulvey, D., and Waters, W. A., 1059
Nardelli, M. See Domiano, P., 1082
Neugebauer, F. A. See Forrester, A. R., 1014
O'Brien, M., and O'Ferrall, R. A. M., 1045
O'Ferrall, R. A. M. See O'Brien, M., 1045
Pearson, H. See Anderson, J. E., 974
Perkins, M. J., Peynircioğlu, N. B., and Smith, B. V., 1025
Peynircioğlu, N. B. See Perkins, M. J., 1025
Pfab, J. See Day, J. S., 1110
Rasool, S. See Cairns-Smith, A. G., 1007
Rawson, D. I. See Anderson, J. E., 974
Restivo, R. J. See Ferguson, G., 1038
Robineau, M. See Bueno, W. A., 1011
Salisbury, K. See Ferreira, A. B. B., 995
Schuchmann, H-P. See Çetinkaya, E., 985
Sherwell, J., and Tedder, J. M., 1076
Siew, P-Y. See Lin, C-T., 957, 963
Smith, B. V. See Perkins, M. J., 1025
Sourisseau, C. See Bueno, W. A., 1011
Taylor, R. See Amin, H. B., 1053, 1090, 1095
Tedder, J. M. See Sherwell, J., 1076
Todesco, P. E. See Forlani, L., 1016
Troisi, L. See Forlani, L., 1016
Utley, J. H. P. See Adams, C., 1071
von Sonntag, C. See Çetinkaya, E., 985
Waters, W. A. See Mulvey, D., 1059
Whalley, W. B. See Ferguson, G., 1038; and Midgley, J. M., 1042
Williams, D. H. See Bowen, R. D., 1064
Wood, J. S. See Baker, R., 971
Zins, D. See Bueno, W. A., 1011

* The author to whom correspondence should be addressed is indicated by an asterisk after his name in the heading of the Paper.

