

JOURNAL
OF
THE CHEMICAL SOCIETY

PERKIN TRANSACTIONS II
Physical Organic Chemistry

Part I, pp. 1—1290

LONDON: THE CHEMICAL SOCIETY
1972

COPYRIGHT RESERVED

*Printed in Great Britain by
Richard Clay (The Chaucer Press), Ltd.,
Bungay, Suffolk*

JOURNAL
OF
THE CHEMICAL SOCIETY

PERKIN TRANSACTIONS II
Physical Organic Chemistry

CONTENTS

	PAGE
Carbon-13 and nitrogen-15 nuclear magnetic resonance spectroscopy: a Fourier n.m.r. study of [¹⁵ N]quinoline By P. S. PREGOSIN, E. W. RANDALL, and A. I. WHITE	1
Covalent hydrates as transient species in heterocyclic rearrangements. Part I. The ring fission of some <i>s</i> -triazolopyrazines By S. NICHOLSON, G. J. STACEY, and P. J. TAYLOR	4
Mutarotation of 2-amino-2-deoxy-D-glucose By A. P. FLETCHER and A. NEUBERGER	12
Photochromism: nature of the coloured form of 1,2-dihydroquinolines By JAROSLAV KOLC and RALPH S. BECKER	17
Solvolysis of <i>exo</i> - and <i>endo</i> -5,6-(<i>o</i> -phenylene)- and -(1,8-naphthylene)-2-norbornyl toluene- <i>p</i> -sulphonates By R. BAKER and T. J. MASON	18
Rearrangements of pinane derivatives. Part IV. Solvolysis of the myrtanyl toluene- <i>p</i> -sulphonates By P. I. MEIKLE, J. R. SALMON, and D. WHITTAKER	23
The synthesis and fluorescent characteristics of some heteroaromatic derivatives of 2,2'-bithienyl By R. E. ATKINSON and F. E. HARDY	27
The carbon-13 and phosphorus-31 nuclear magnetic resonance spectra of some tertiary phosphines By B. E. MANN	30
The conformational analysis of saturated heterocycles. Part XLII. 1,2-Dimethylhexahydropyridazine By RICHARD A. Y. JONES, A. R. KATRITZKY, D. L. OSTERCAMP, K. A. F. RECORD, and A. C. RICHARDS	34
The conformational analysis of saturated heterocycles. Part XLIII. 1-t-butylpiperidine-4-spiro-2'-aziridine, -oxiran, and -thiiran By RICHARD A. Y. JONES, A. R. KATRITZKY, P. G. LEHMAN, A. C. RICHARDS, and R. SCATTERGOOD	41
The kinetics of nitrilimine formation in base-catalysed hydrolysis of hydrazonyl halides By A. F. HEGARTY, M. P. CASHMAN, and F. L. SCOTT	44
Kinetics of reactions of Friedel-Crafts acylating agents. Part II. Effect of substituents in the acid chloride on the acylation of aromatic substrates By L. R. PETTIFORD	52
Organosilicon compounds. Part XLIX. Some reactions of bis(triphenylsilyl)mercury By C. EABORN, R. A. JACKSON, and M. T. RAHMAN	55
Thermal equilibration of substituted <i>trans</i> -1,2-dibromocyclohexanes By P. L. BARILI, G. BELLUCCI, G. BERTI, F. MARIONI, A. MARSILI, and I. MORELLI	58

	PAGE
The chemistry of heteroarylphosphorus compounds. Part II. The importance of inductive effects on pre-equilibria in the alkaline hydrolysis of heteroarylphosphonium salts; phosphorus-31 nuclear magnetic resonance studies	
By DAVID W. ALLEN, B. G. HUTLEY, and MALCOLM T. J. MELLOR	63
The chemistry of heteroarylphosphorus compounds. Part III. The alkaline hydrolysis of heteroarylmethyl analogues of benzyltriphenylphosphonium bromide; relative stabilities of heteroarylmethyl carbanions	
By DAVID W. ALLEN and B. G. HUTLEY	67
The dependence of the ρ values of electrophilic substitutions upon the nature of the aromatic substrate: trifluoroacetylation of substituted furans, thiophens, and pyrroles	
By SERGIO CLEMENTI and GIANLORENZO MARINO	71
Kinetics and mechanism of the Fischer-Hepp rearrangement. Part I. Rearrangement of <i>N</i> -nitroso- <i>N</i> -methylaniline in hydrochloric acid	
By T. D. B. MORGAN and D. L. H. WILLIAMS.	74
Antimony halides as solvents. Part IX. The dimerisation of <i>trans</i> -stilbene in molten antimony trichloride	
By M. HISCOCK and G. B. PORTER	79
Aromatic substitution in the gas phase. Part III. Reaction of the D_2T^+ ion with gaseous arenes. General remarks on the reactivity of gaseous Brønsted acids	
By FULVIO CACACE, ROMANO CIPOLLINI, and GIORGIO OCCHIUCCI	84
Deuterium solvent isotope effects on reactions involving the aqueous hydroxide ion	
By V. GOLD and S. GRIST	89
Aromatic reactivity. Part XLIX. Detritiation of [3H]phenanthrenes and 9,10-dihydro[2- 3H]phenanthrene	
By K. C. C. BANCROFT, R. W. BOTT, and C. EABORN	95
Aromatic reactivity. Part L. Thiophen, benzo[<i>b</i>]thiophen, anisole, and thioanisole in detritiation. Substituent constants for use in electrophilic aromatic substitution	
By R. BAKER, C. EABORN, and R. TAYLOR	97
Long-range coupling in the proton nuclear magnetic resonance spectra of some benzothiophen and benzofuran analogues	
By E. V. BLACKBURN, T. J. CHOLERTON, and C. J. TIMMONS	101
The stereochemistry of organometallic compounds. Part XII. The acid strengths of some tricarbonyl-(alkylbenzoic acid)chromium compounds, their nuclear magnetic resonance spectra, and the spectra of some related compounds	
By M. ASHRAF and W. R. JACKSON	103
Electric dipole moments and molecular conformations of benzophenones, benzils, benzhydrols, and benzoin	
By C. W. N. CUMPER and A. P. THURSTON	106
Polyfluoroalkyl derivatives of nitrogen. Part XXXII. The kinetics and mechanism of the copolymerisation of trifluoronitrosomethane and tetrafluoroethylene	
By J. D. CRABTREE, R. N. HASZELDINE, A. J. PARKER, K. RIDINGS, R. F. SIMMONS, and S. SMITH	111
Polyfluoroalkyl derivatives of nitrogen. Part XXXIII. The kinetics of the reaction between trifluoronitrosomethane and tetrafluoroethylene to form perfluoro-2-methyl-1,2-oxazetidine	
By J. D. CRABTREE, R. N. HASZELDINE, K. RIDINGS, R. F. SIMMONS, and S. SMITH	119