

JOURNAL
OF
THE CHEMICAL SOCIETY

PERKIN TRANSACTIONS II
Physical Organic Chemistry

CONTENTS

	PAGE
The thermochemical kinetics of the retro-'ene' reactions of molecules with the general structure (allyl)XYH in the gas phase. Part IX. Unimolecular thermal decomposition of allylmethylamine By PETER VITINS and KURT W. EGGER	1289
The thermochemical kinetics of the retro-'ene' reactions of molecules with the general structure (allyl)XYH in the gas phase. Part X. Unimolecular thermal decomposition of diallyl ether By PETER VITINS and KURT W. EGGER	1292
The kinetics and mechanism of the electrophilic substitution of heteroaromatic compounds. Part XXXIX. Transmission of substituent effects in the pyridine system: Hammett-like treatment of hydrogen-exchange data By SERGIO CLEMENTI, C. DAVID JOHNSON, and ALAN R. KATRITZKY	1294
Crystal structure of 3-methyl-5-phenylpyrazole By EDWARD N. MASLEN, JACK R. CANNON, ALLAN H. WHITE, and ANTHONY C. WILLIS	1298
1,3-Cycloadditions of 3,5-dichloro-2,4,6-trimethylbenzonitrile oxide to 1,1-diphenylallene. A reinvestigation By PAOLO BELTRAME, PIER LUIGI BELTRAME, MARIA GRAZIA CATTANIA, and GAETANO ZECCHI	1301
Use of steric effects in determining the position of the transition state for the S_N2 reaction between methyl iodide and Δ^4 -thiazoline-2-thiones By CHRISTIAN ROUSSEL, ROGER GALLO, MICHEL CHANON, and JACQUES METZGER	1304
Intermediates in the decomposition of aliphatic diazo-compounds. Part XI. Mechanistic studies on the reaction of diphenylmethylene with amines in solution By DONALD BETHELL, JOHN HAYES, and A. RAYMOND NEWALL	1307
Thermodynamics of hydration of 3-substituted and 3,5-disubstituted phenols By GERALD H. PARSONS and COLIN H. ROCHESTER	1313
Conformations of 2-formyl-, 2-acetyl-, and 2 benzoyl-pyrroles By CHUN LAI CHENG, IAN G. JOHN, GEOFFREY L. D. RITCHIE, and PETER H. GORE	1318
Acylnitrosamines. Part VII. [2H] Labelling experiments and the mechanism of formation of benzyne from <i>N</i> -nitrosoacetanilide and benzenediazonium acetate By J. I. G. CADOGAN, CHARLES D. MURRAY, and JOHN T. SHARP	1321
Nucleophilic cleavage of the silicon-oxygen bond: acid-catalysed hydrolysis of tributylphenoxy silanes in aqueous organic solvents By JOHN R. CHIPPERFIELD and GEOFFREY E. GOULD	1324
Nucleophilic cleavage of the germanium-oxygen bond: acid-catalysed hydrolysis of phenoxygermanes By JOHN R. CHIPPERFIELD and GEOFFREY E. GOULD	1331
Crystal and molecular structure of 4'-(acridin-9-ylamino)methanesulphonanilide hydrochloride, a compound showing antileukemic activity By DAVID HALL, DAVID A. SWANN, and T. NEIL WATERS	1334

¹ H Nuclear magnetic resonance study of <i>para</i> -substituted derivatives of triphenylphosphine By ROIS BENASSI, MARIA L. SCHENETTI, FERDINANDO TADDEI, PIERO VIVARELLI, and PASQUALE DEMBACH	1338
Substituent effect of the sulphinyl group in electrophilic aromatic substitution By ANDREA C. BOICELLI, ROBERTO DANIELI, ANGELO MANGINI, ALFREDO RICCI, and GRAZIELLA PIRAZZINI	1343
Mechanism of ring cleavage of acetylcylopropanes by metal-ammonia solutions By ANTHONY J. BELLAMY, EWEN A. CAMPBELL, and IAN R. HALL	1347
Sesquiterpenoids. Part XVII. X-Ray crystallographic determination of the stereochemistry and conformation of dihydromikanolide, a germacranolide diepoxyde By PHILIP J. COX and GEORGE A. SIM	1355
Sesquiterpenoids. Part XVIII. X-Ray crystallographic determination of the stereochemistry and conformation of miscandenin, an elemenediolide with a dihydro-oxepin ring By PHILIP J. COX and GEORGE A. SIM	1359
Substituent effects on the rates of formation of pyridinium ylides By JOHN A. ZOLTEWICZ and ROBERT E. CROSS	1363
Two-step conversion of pyridines into their ylides. Compensatory effects of substituents on reactivity By JOHN A. ZOLTEWICZ and ROBERT E. CROSS	1368
The carbanion mechanism of olefin-forming elimination. Part V. Evidence from linear free energy relationships for E1cB dehydrochlorination of 1,1-diaryl-2,2,2-trichloroethanes By DUNCAN J. MCLENNAN and RONALD J. WONG	1373
The carbanion mechanism of olefin-forming elimination. Part VI. Mechanism of the dehydrochlorination of 1,1-diaryl-2,2-dichloroethanes By ADRIAN B. N. GRAY and DUNCAN J. MCLENNAN	1377
Carbon-13 nuclear magnetic resonance studies of piperidine and piperazine compounds. Part II. Empirical substituent parameters for, and the shielding anisotropy of, the <i>N</i> -nitroso-group By GERALD E. ELLIS, RAYMOND G. JONES, and MATHEW G. PAPADOPOULOS	1381
Reactions of radical anions. Part XIV. An electron spin resonance study of the radical anions of 9,9'-azophenanthrene and 9,9'-azoanthracene By ALWYN G. EVANS, JEFFREY C. EVANS, and PETER J. POMERY	1385
Cyclic sulphones. Part XVII. Probes for conjugation of the sulphonyl group: thiopyrano[3,2- <i>b</i>]-pyran, -pyridine, and -thiopyran SS-dioxides By GIORGIO A. PAGANI	1389
Cyclic sulphones. Part XVIII. Probes for conjugation of the sulphonyl group: thiopyrano [3,2- <i>b</i>]quinoline 1,1-dioxides By GIORGIO A. PAGANI	1392
Crystal structure of the 1 : 1 molecular complex of chrysene and 7,7,8,8-tetracyanoquinodimethane By PETER J. MUNNOCH and JOHN D. WRIGHT	1397
Hydrolysis of t-butyl chloride in water containing hydrogen peroxide or poly(vinylpyrrolidone) By MICHAEL J. BLANDAMER and JILL R. MEMBREY	1400
Kinetic electron spin resonance spectroscopy. Part IV. Photoreduction of triplet pyruvic acid and triplet biacetyl in alcoholic solvents By PETER B. AYSCOUGH and ROGER C. SEALY	1402
Thermal unimolecular decomposition of 2,3-dihydro- <i>p</i> -dioxin By HENRY M. FREY and ROBERT A. SMITH	1407
Crystal and molecular structure of 5-diacetylamino-3,4-diphenylisoxazole By KÁLMÁN SIMON, KÁLMÁN SASVÁRI, PÉTER DVORTSÁK, KÁROLY HORVÁTH, and KÁLMÁN HARSÁNYI	1409

INDEX OF AUTHORS' NAMES

- AYSCOUGH, P. B., and Sealy, R. C., 1402
Bellamy, A. J., Campbell, E. A., and Hall, I. R., 1347
Beltrame, P., Beltrame, P. L., Cattania, M. G., and Zecchi, G., 1301
Beltrame, P. L. See Beltrame, P., 1301
Benassi, R., Schenetti, M. L., Taddei, F., Vivarelli, P., and Dembech, P., 1338
Bethell, D., Hayes, J., and Newall, A. R., 1307
Blandamer, M. J., and Membrey, J. R., 1400
Boicelli, A. C., Danieli, R., Mangini, A., Ricci, A., and Pirazzini, G., 1343
Cadogan, J. I. G., Murray, C. D., and Sharp, J. T., 1321
Campbell, E. A. See Bellamy, A. J., 1347
Cannon, J. R. See Maslen, E. N., 1298
Cattania, M. G. See Beltrame, P., 1301
Chanon, M. See Roussel, C., 1304
Cheng, C. L., John, I. G., Ritchie, G. L. D., and Gore, P. H., 1318
Chipperfield, J. R., and Gould, G. E., 1324, 1331
Clementi, S., Johnson, C. D., and Katritzky, A. R., 1294
Cox, P. J., and Sim, G. A., 1355, 1359
Cross, R. E. See Zoltewicz, J. A., 1363, 1368
Danieli, R. See Boicelli, A. C., 1343
Dembech, P. See Benassi, R., 1338
Dvortsák, P. See Simon, K., 1409
Egger, K. W. See Vitins, P., 1289, 1292
Ellis, G. E., Jones, R. G., and Papadopoulos, M. G., 1381
Evans, A. G., Evans, J. C., and Pomery, P. J., 1385
Evans, J. C. See Evans, A. G., 1385
Frey, H. M., and Smith, R. A., 1407
Gallo, R. See Roussel, C., 1304
Gore, P. H. See Cheng, C. L., 1318
Gould, G. E. See Chipperfield, J. R., 1324, 1331
Gray, A. B. N., and McLennan, D. J., 1377
Hall, D., Swann, D. A., and Waters, T. N., 1334
Hall, I. R. See Bellamy, A. J., 1347
Harsányi, K. See Simon, K., 1409
Hayes, J. See Bethell, D., 1307
Horváth, K. See Simon, K., 1409
John, I. G. See Cheng, C. L., 1318
Johnson, C. D. See Clementi, S., 1294
Jones, R. G. See Ellis, G. E., 1381
Katritzky, A. R. See Clementi, S., 1294
McLennan, D. J. See Gray, A. B. N., 1377
McLennan, D. J., and Wong, R. J., 1373
Mangini, A. See Boicelli, A. C., 1343
Maslen, E. N., Cannon, J. R., White, A. H., and Willis, A. C., 1298
Membrey, J. R. See Blandamer, M. J., 1400
Metzger, J. See Roussel, C., 1304
Munnnoch, P. J., and Wright, J. D., 1397
Murray, C. D. See Cadogan, J. I. G., 1321
Newall, A. R. See Bethell, D., 1307
Pagani, G. A., 1389, 1392
Papadopoulos, M. G. See Ellis, G. E., 1381
Parsons, G. H., and Rochester, C. H., 1313
Pirazzini, G. See Boicelli, A. C., 1343
Pomery, P. J. See Evans, A. G., 1385
Ricci, A. See Boicelli, A. C., 1343
Ritchie, G. L. D. See Cheng, C. L., 1318
Rochester, C. H. See Parsons, G. H., 1313
Roussel, C., Gallo, R., Chanon, M., and Metzger, J., 1304
Sasvári, K. See Simon, K., 1409
Schenetti, M. L. See Benassi, R., 1338
Sealy, R. C. See Ayscough, P. B., 1402
Sharp, J. T. See Cadogan, J. I. G., 1321
Sim, G. A. See Cox, P. J., 1355, 1359
Simon, K., Sasvári, K., Dvortsák, P., Horváth, K., and Harsányi, K., 1409
Smith, R. A. See Frey, H. M., 1407
Swann, D. A. See Hall, D., 1334
Taddei, F. See Benassi, R., 1338
Vitins, P., and Egger, K. W., 1289, 1292
Vivarelli, P. See Benassi, R., 1338
Waters, T. N. See Hall, D., 1334
White, A. H. See Maslen, E. N., 1298
Willis, A. C. See Maslen, E. N., 1298
Wong, R. J. See McLennan, D. J., 1373
Wright, J. D. See Munnnoch, P. J., 1397
Zecchi, G. See Beltrame, P., 1301
Zoltewicz, J. A., and Cross, R. E., 1363, 1368

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

