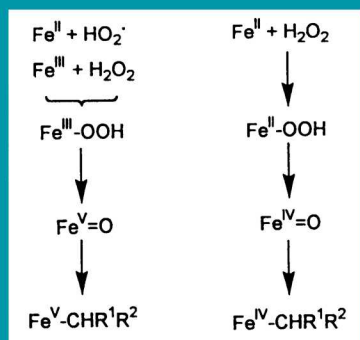
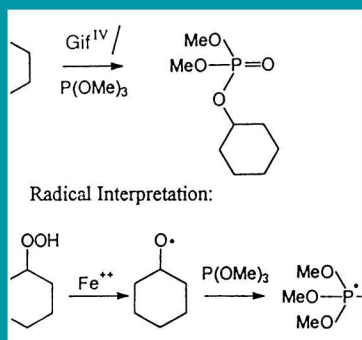




Volume 25 Issue 4

Pages 229–296

August 1996



A Radical Reappraisal of Gif Reactions

By *M. John Perkins*

229

On the Mechanism of Gif Reactions

By *Derek H. R. Barton*

237

Application of Fluorescence Microscopy to a Study of Chemical Problems

By *R. S. Davidson*

241

Assembly and Encapsulation with Self-complementary Molecules

By *Julius Rebek, Jr.*

255

New Approaches to Chemical Patterns

By *Barry R. Johnson and Stephen K. Scott*

265

INGOLD LECTURE: Reactive Intermediates: Carboxylic Acid Enols and Other Unstable Species

By *A. J. Kresge*

275

Photoelectron Spectroscopy in a New Light: Zero Kinetic Energy (ZEKE) Photoelectron Spectroscopy with Coherent Vacuum Ultraviolet Light

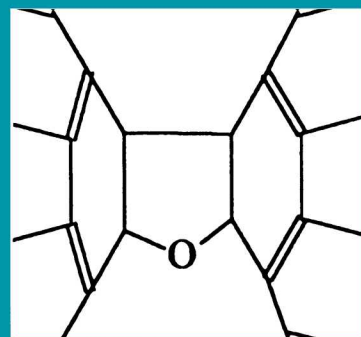
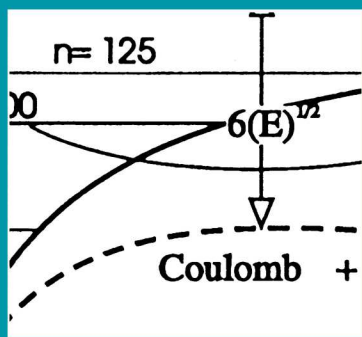
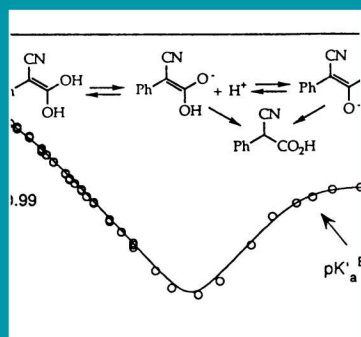
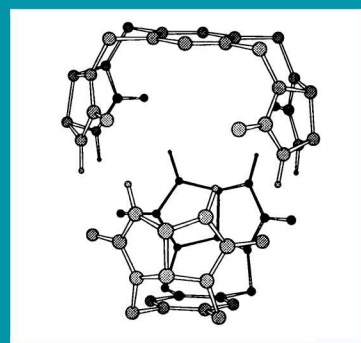
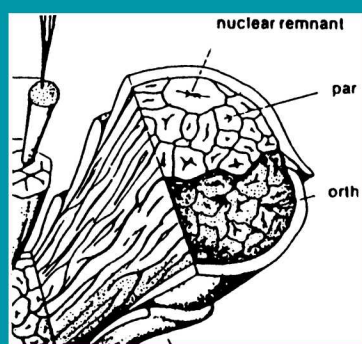
By *John W. Hepburn*

281

The Changing Face of Arene Oxide-Oxepine Chemistry

By *Derek R. Boyd and Narain D. Sharma*

289



Chemical Society Reviews

Editorial Board

Professor H. W. Kroto FRS (Chairman) (University of Sussex)
Professor M. J. Blandamer (University of Leicester)
Dr. A. R. Butler (University of St. Andrews)
Professor E. C. Constable (University of Basel, Switzerland)
Professor T. C. Gallagher (University of Bristol)
Professor D. M. P. Mingos FRS (Imperial College London)

Editorial Staff

Managing Editor Martin Sugden
Editorial Production Peter Whittington
Editorial Secretary Debbie Halls

Consulting Editors

Dr. G. G. Balint-Kurti (University of Bristol)
Dr. J. M. Brown (University of Oxford)
Dr. J. Burgess (University of Leicester)
Dr. N. Cape (Institute of Terrestrial Ecology, Lothian)
Professor B. T. Golding (University of Newcastle upon Tyne)
Professor M. Green (University of Bath)
Professor A. Hamnett (University of Newcastle upon Tyne)
Dr. T. M. Herrington (University of Reading)
Professor R. Hillman (University of Leicester)
Professor R. Keese (University of Bern, Switzerland)
Dr. T. H. Lilley (University of Sheffield)
Dr. H. Maskill (University of Newcastle upon Tyne)
Professor A. de Meijere (University of Göttingen, Germany)
Professor J. N. Miller (Loughborough University of Technology)
Professor S. M. Roberts (University of Liverpool)
Professor B. H. Robinson (University of East Anglia)
Professor M. R. Smyth (Dublin City University, Republic of Ireland)
Professor A. J. Stace (University of Sussex)

Editorial Office

The Royal Society of Chemistry
Thomas Graham House
Science Park
Milton Road
Cambridge
UK CB4 4WF

Telephone +44 (0) 1223 420066
Facsimile +44 (0) 1223 420247

Electronic Mail (Internet) csr@rsc.org or
sugdenm@rsc.org
<http://chemistry.rsc.org/rsc/>

Advertisement sales

Telephone +44 (0) 171 287 3091
Facsimile +44 (0) 171 494 1134

Typeset by Servis Filmsetting Ltd.
Printed in Great Britain by Black Bear Press Ltd.

Chemical Society Reviews aims to foster current progress in the chemical sciences and related disciplines. The journal has the broad appeal necessary to enable scientists to benefit from recent advances made in research outside their immediate interests. In particular, students embarking on a research career should find *Chemical Society Reviews* a particularly

stimulating and instructive springboard to further reading.

The Editorial Board encourages an international and interdisciplinary approach to science, which is reflected in the succinct, authoritative articles commissioned. The Board members welcome comments and suggestions; these should be directed to the Managing Editor

Chemical Society Reviews (ISSN 0306-0012) is published bimonthly by The Royal Society of Chemistry, Thomas Graham House, Science Park, Milton Road, Cambridge, UK CB4 4WF. All orders accompanied by payment should be sent directly to The Royal Society of Chemistry, Turpin Distribution Services Ltd., Blackhorse Road, Letchworth, Herts., UK SG6 1HN. *N.b.* Turpin Distribution Services Ltd., distributors, is wholly owned by The Royal Society of Chemistry. 1996 annual subscription rate: EEA £120.00; Rest of World £123.00; USA \$225.00. Customers in Canada will be charged the Rest of World price plus a surcharge to cover GST. Customers should make payments by cheque in sterling payable on a UK clearing bank or in US dollars payable on a US clearing bank. Second-class postage is paid at Jamaica, NY 1141-9998. Airfreight and mailing in the USA by Publications

Expediting Services Inc., 200 Meacham Avenue, Elmont, NY 11003, and at additional mailing offices. US Postmaster: send address changes to *Chemical Society Reviews*, c/o Publications Expediting Services Inc., 200 Meacham Avenue, Elmont, NY 11003. All despatches outside the UK by Bulk airmail within Europe and Accelerated Surface Post outside Europe. PRINTED IN THE UK.

© The Royal Society of Chemistry, 1996.
All rights reserved. No parts of this publication may be reproduced, stored in a retrieval system, or transmitted in any form, or by any means, electronic, mechanical, recording, or otherwise, without the prior permission of the publishers.