

---

# Chemical Society Reviews

---

Vol 19 No 3 1990

	Page
<b>TILDEN LECTURE</b>	
<b>The Properties of Hydrogen-bonded Dimers from Rotational Spectroscopy</b>	
By A. C. Legon	197
<b>Stereochemical and Conformational Control of Metal Redox Processes: The Co-ordination Chemistry of the Mixed N- and S-Donor Macrocyclic Crowns [18]aneN<sub>2</sub>S<sub>4</sub> and Me<sub>2</sub> [18]aneN<sub>2</sub>S<sub>4</sub></b>	
By Gillian Reid and Martin Schröder	239
<b>Tumour Targeting with Radiolabelled Macrocyclic-Antibody Conjugates</b>	
By David Parker	271
<b>Chemistry of Enzyme-Substrate Complexes Revealed by Resonance Raman Spectroscopy</b>	
By Paul R. Carey and Peter J. Tonge	293
<b>Characterization of Transition States for Reactions in Solution by Cross-interaction Constants</b>	
By Ikchoon Lee	317
<b>MELDOLA LECTURE</b>	
<b>New Stereoselective Reactions in Organic Synthesis</b>	
By N. S. Simpkins	335

**The Royal Society of Chemistry  
Cambridge**

# Chemical Society Reviews

## EDITORIAL BOARD

Dr. M. J. Blandamer  
Dr. A. R. Butler  
Professor B. T. Golding  
Professor M. Green

Professor H. W. Kroto F.R.S. (*Chairman*)  
Professor J. A. McCleverty  
Professor S. M. Roberts  
Professor B. H. Robinson

---

*Editor:* Mr. K. J. Wilkinson

*Chemical Society Reviews* (ISSN 0306-0012) is published quarterly and comprises approximately 20 articles (*ca.* 500 pp) per annum. Articles of three types appear: (a) personalized accounts of their own contributions by recognized authorities; (b) in-depth articles covering the state of the art of the subject under review; (c) introductory reviews of new topics, suitable for non-specialist readers. The texts of the lectures given by the Society's named lecturers are also published in *Chemical Society Reviews*.

Although the majority of articles are intended to be specially commissioned, the Society is always prepared to consider offers of articles for publication. In such cases a short synopsis, rather than the completed article, should be submitted to the Managing Editor, Books and Reviews Section, The Royal Society of Chemistry, Thomas Graham House, Science Park, Milton Road, Cambridge CB4 4WF.

Members of the Royal Society of Chemistry may subscribe to *Chemical Society Reviews* at £22.00 per annum; they should place their orders on the Annual Subscription renewal forms in the usual way.

All other orders accompanied with payment should be sent directly to The Royal Society of Chemistry, The Distribution Centre, Blackhorse Road, Letchworth, Herts. SG6 1HN England. 1990 annual subscription rate U.K. £64.00, E.E.C. (x U.K.) £71, Rest of World £74.00, U.S.A. \$144.00. Air freight and mailing in the U.S.A. by Publications Expediting Inc., 200 Meacham Avenue, Elmont, New York 11003. U.S.A. Postmaster: Send address changes to Chemical Society Reviews, Publications Expediting Inc., 200 Meacham Avenue, Elmont, New York 11003. Second class postage is paid at Jamaica, New York 11431. All other despatches outside the U.K. by Bulk Airmail within Europe, Accelerated Surface Post outside Europe.

© The Royal Society of Chemistry, 1990

### *All Rights Reserved*

*No part of this book may be reproduced or transmitted in any form or by any means – graphic, electronic, including photocopying, recording, taping, or information storage and retrieval systems – without written permission from The Royal Society of Chemistry*

Published by The Royal Society of Chemistry, Thomas Graham House, Science Park, Milton Road, Cambridge CB4 4WF.

Printed by Clays Ltd, St Ives plc