

## IN THIS ISSUE

ISSN 0306-0012 CODEN CSRVBR 34(5) 369–460 (2005)

### In this issue...

Chemical Science – a ‘snapshot’ of the latest news and developments across the chemical sciences  
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Chemical biology articles published in this journal also appear in the *Chemical Biology Virtual Journal*:  
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#### Cover

See Paul S. Monks, *Chem. Soc. Rev.*, 2005, **34**, 376.

A picture of Hurricane Elena over the Gulf of Mexico taken from the space shuttle. The image is a graphic illustration of the atmosphere from space. The article by Monks in this issue on the gas-phase chemistry of the troposphere explores how chemistry controls the composition of the atmosphere. Front cover image reproduced courtesy of NASA.

## CHEMICAL SCIENCE

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Drawing together the research highlights and news from all RSC publications, *Chemical Science* provides a ‘snapshot’ of the latest developments across the chemical sciences showcasing newsworthy articles, as well as the most significant scientific advances.

## Chemical Science

May 2005/Volume 2/Issue 5

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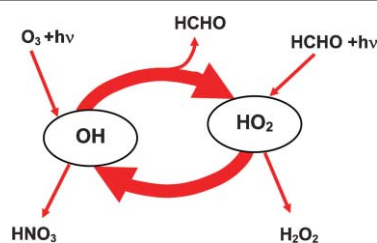
## TUTORIAL REVIEWS

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### Gas-phase radical chemistry in the troposphere

Paul S. Monks

The chemistry of radical species is a critical part of controlling the composition of the atmosphere.



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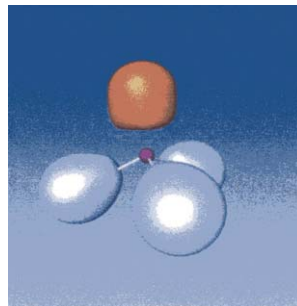
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**Models of molecular geometry**

Ronald J. Gillespie and Edward A. Robinson

Various models such as the VSEPR, LCP, and VB models, have been developed to answer the question "What determines the geometry of a given molecule?" These models are discussed and compared in this tutorial review.

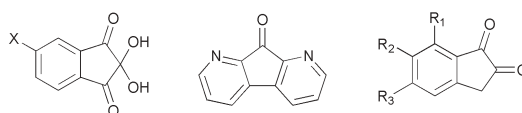


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**The development of novel ninhydrin analogues**

Darren B. Hansen and Madeleine M. Joullié\*

The development of novel ninhydrin analogues for the detection of latent fingerprints.

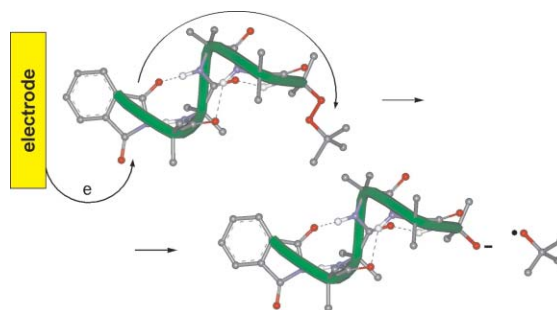


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**Intramolecular dissociative electron transfer**

Sabrina Antonello and Flavio Maran\*

There are chemical systems in which intramolecular electron transfer causes the cleavage of a  $\sigma$ -bond, either concertedly or by a stepwise mechanism. The main features and peculiarities of these dissociative electron transfer reactions are described and discussed.

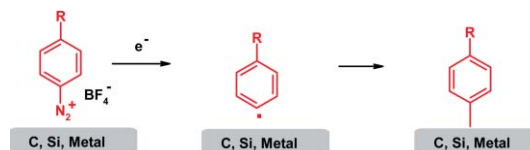


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**Attachment of organic layers to conductive or semiconductive surfaces by reduction of diazonium salts**

Jean Pinson\* and Fetah Podvorica

Strong bonding of aryl groups to a variety of surfaces is achieved by electrochemical reduction of diazonium salts.



**Activity of water in aqueous systems; A frequently neglected property**


Mike J. Blandamer,\* Jan B. F. N. Engberts,  
Peter T. Gleeson and João Carlos R. Reis

The role of water activity is highlighted in aqueous solutions containing neutral solutes and salts (including seawater) with digressions into food chemistry, biochemistry and life sciences.

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