

## IN THIS ISSUE

ISSN 0306-0012 CODEN CSRVBR 34(7) 545–628 (2005)

## In this issue...

Chemical Science – a ‘snapshot’ of the latest news and developments across the chemical sciences  
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### Cover

See Paolo Samori, p. 551.

Tapping-mode SFM image of poly(*p*-phenyleneethynylene) supramolecular nanoribbons self-assembled on a mica surface. These oriented anisotropic architectures, consisting of  $\pi$ - $\pi$  stacked molecular bilayers, possess a length of several micrometers and a molecular cross-section.

Front cover image reproduced by permission of Dr. Paolo Samori, *Chem. Soc. Rev.*, 2005, **34**, 551.

## CHEMICAL SCIENCE

C49

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

July 2005/Volume 2/Issue 7

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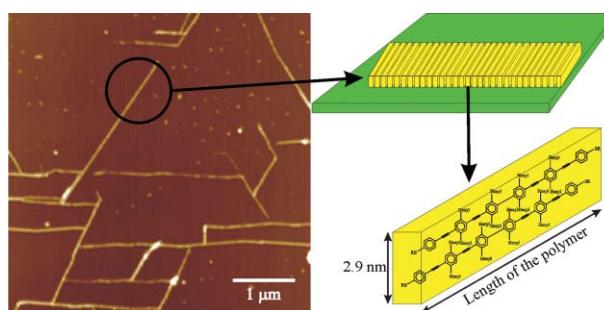
## TUTORIAL REVIEWS

551

### Exploring supramolecular interactions and architectures by scanning force microscopies

Paolo Samori

New Scanning Force Microscopy based methodologies allow the exploration of different physico-chemical properties of supramolecular interactions and assemblies, and the nanofabrication of new functional architectures.



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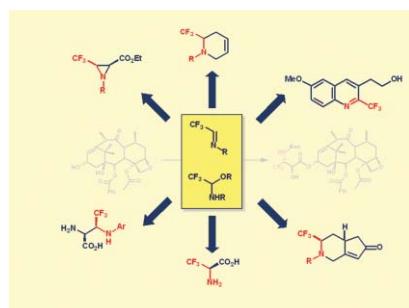
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**The chemistry of trifluoromethyl imines and related acetals derived from fluoral**

Jean-Pierre Bégué, Danièle Bonnet-Delpon,\*  
Benoit Crousse and Julien Legros

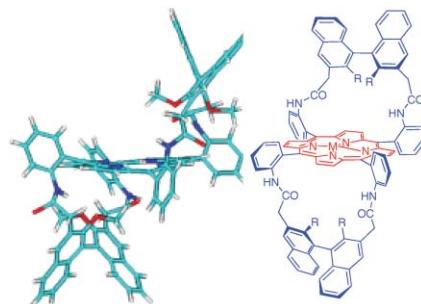
“N-Derivatives” of fluoral offer a direct entry to a variety of functionalised trifluoromethyl molecules, that are relevant precursors for the pharmaceutical industry.



**Enantioselective epoxidation of olefins with chiral metalloporphyrin catalysts**

Eric Rose,\* Bruno Andrioletti, Samia Zrig and  
Mélanie Quelquejeu-Ethève

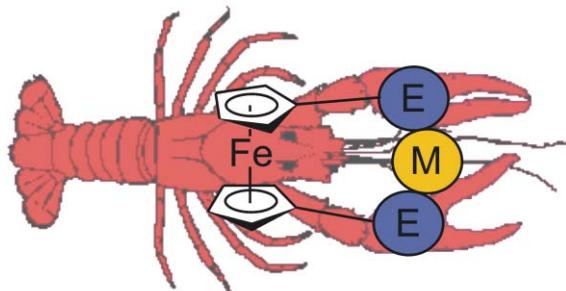
How to differentiate the prochiral faces of a terminal olefin?  
The renewal of porphyrin-based catalysts for enantioselective epoxidation.



**1,1'-Di(heteroatom)-functionalised ferrocenes as [N,N], [O,O] and [S,S] chelate ligands in transition metal chemistry**

Ulrich Siemeling\* and Tanja-Corinna Auch

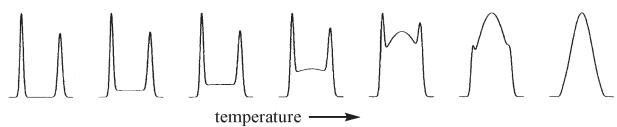
*Welcome to the club* – The dominance of dppf has made life difficult for related ligands with two ligating N, O or S atoms. Recently, however, dynamic progress concerning such species can be noted.

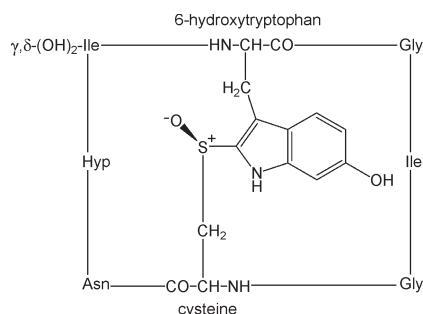


**Stereolabile chiral compounds: analysis by dynamic chromatography and stopped-flow methods**

Christian Wolf

Dynamic chromatography and chromatographic and electrophoretic stopped-flow analysis have evolved as highly useful means for the investigation of isomerization reactions of chiral compounds. The scope and limitations of these techniques are discussed and compared to well-established DNMR and chiroptical methods.





### Role of sulfur chirality in the chemical processes of biology

Ronald Bentley

A critical review introducing sulfur stereochemistry and nomenclature and detailing chiral sulfur compounds and their enzymatic reactions.

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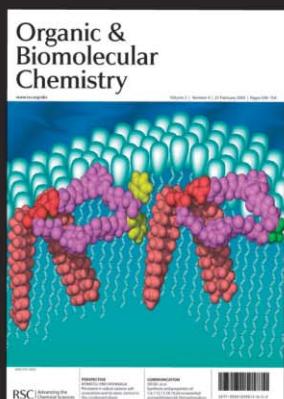
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