

## IN THIS ISSUE

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### In this issue...

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

See Paolo Samorì, 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 Samorì, *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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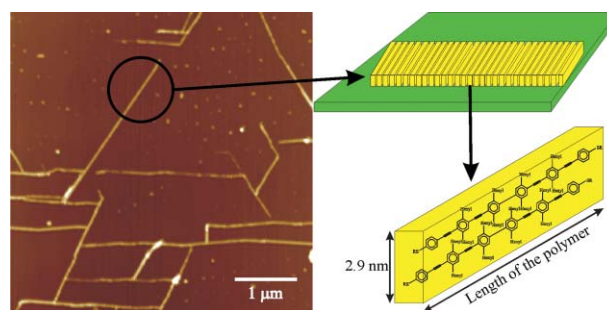
## TUTORIAL REVIEWS

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

Paolo Samorì

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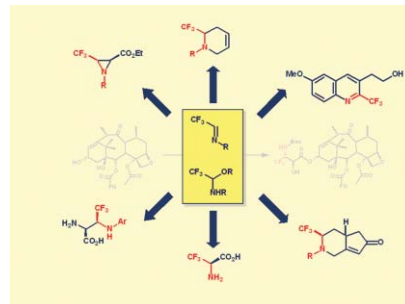
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### The chemistry of trifluoromethyl imines and related acetals derived from fluoral

Jean-Pierre Bégue, 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.

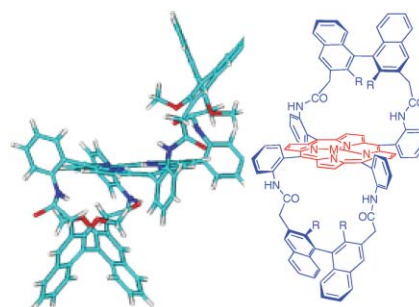


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### Enantioselective epoxidation of olefins with chiral metalloporphyrin catalysts

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

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

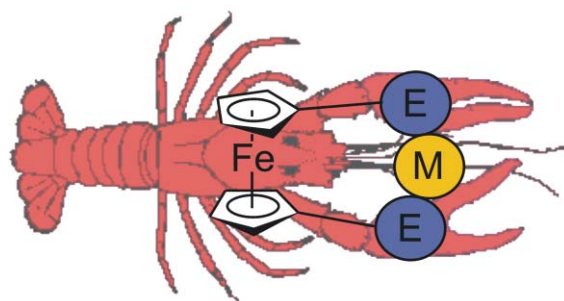


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### 1,1'-Di(heteroatom)-functionalised ferrocenes as [N,N], [O,O] and [S,S] chelate ligands in transition metal chemistry

Ulrich Siemeling\* and Tanja-Corinna Auch

*'Welcome to the club'* – The dominance of dppe 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.

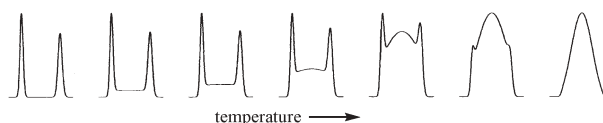


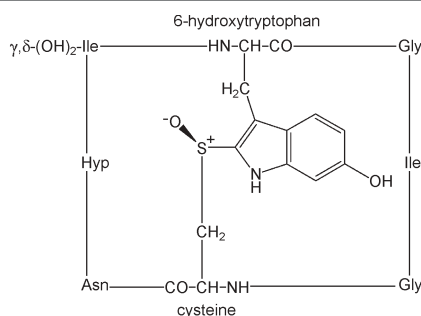
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### Stereolabile chiral compounds: analysis by dynamic chromatography and stopped-flow methods

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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