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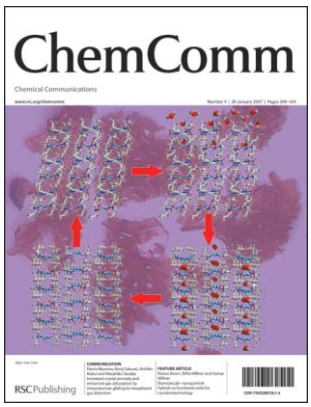
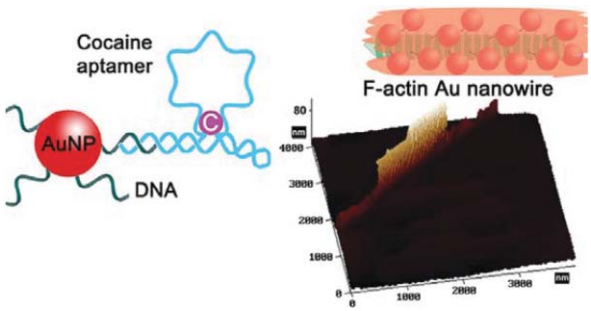
ISSN 1359-7345 CODEN CHCOFS (4) 309–424 (2007)

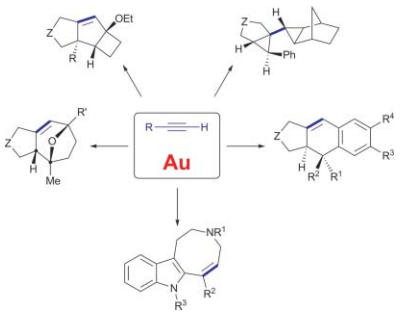


Cover
See Panče Naumov *et al.*, page 347.
Asymmetric coordinatively unsaturated units glide back and forth to open structural channels for accommodation of small gaseous molecules.
Image reproduced by permission of Panče Naumov, Kenji Sakurai, Akihiko Nukui and Masahiko Tanaka from *Chem. Commun.*, 2007, 347.

Inside cover
See Piero Sozzani *et al.*, page 350.
^{129}Xe HP NMR resonance can be fine-tuned to a given radiofrequency by turning a porous single-crystal as the tuning knob.
Image reproduced by permission of Angiolina Comotti, Silvia Bracco, Lisa Ferretti, Michele Mauri, Roberto Simonutti and Piero Sozzani from *Chem. Commun.*, 2007, 350.

FEATURE ARTICLES





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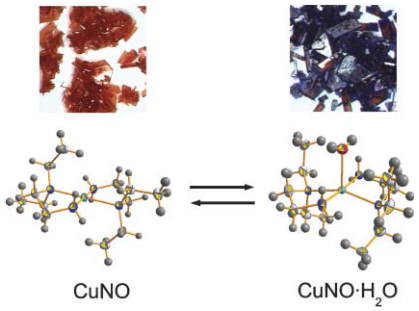

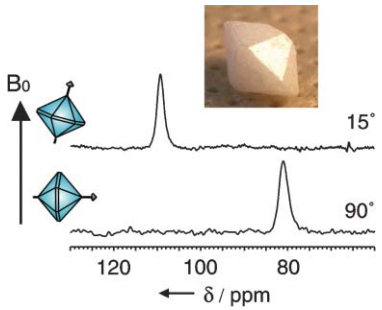

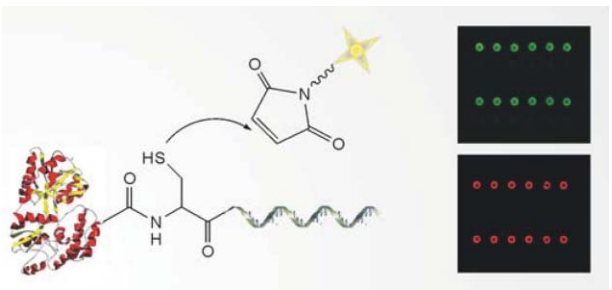

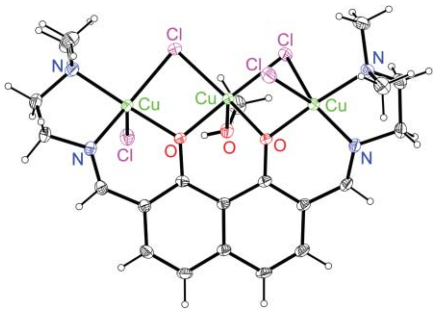

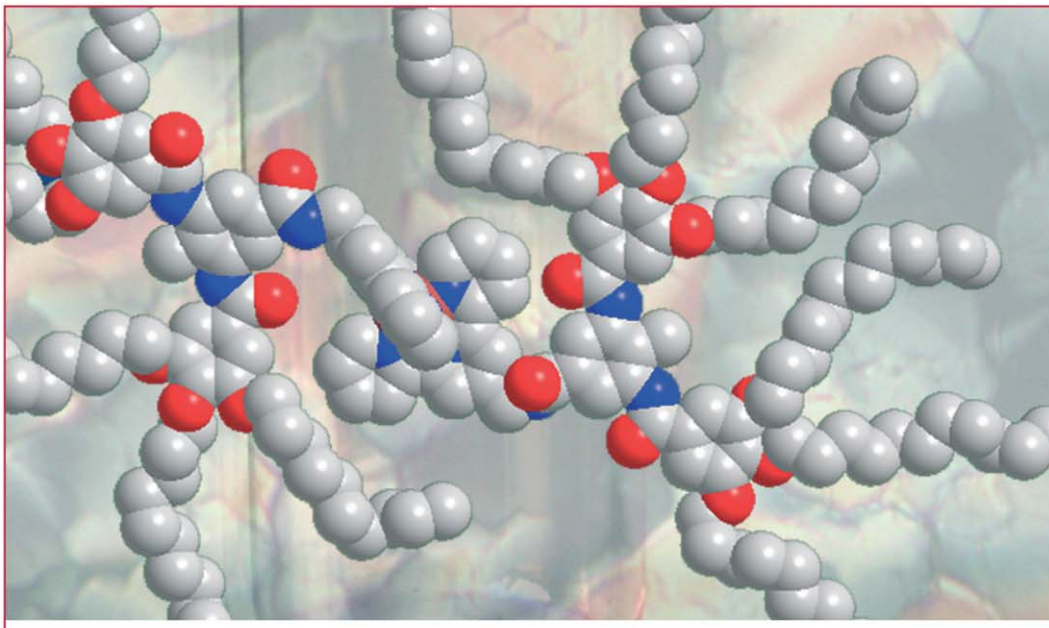

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Benoît Champin, Valérie Sartor, Jean-Pierre Sauvage (France)

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Laurent Vial, Jeremy K. M. Sanders, Sijbren Otto (UK)

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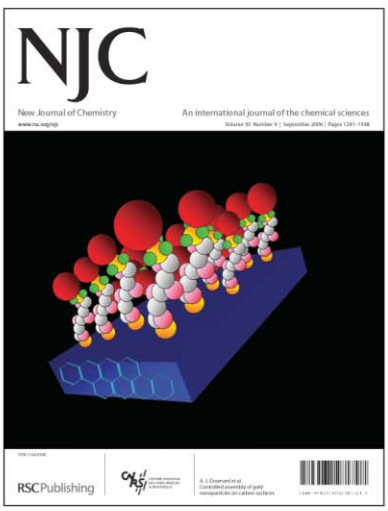

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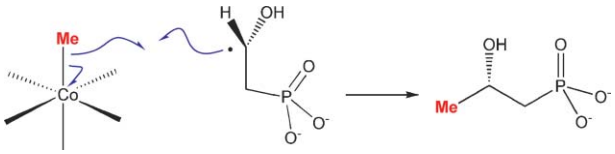

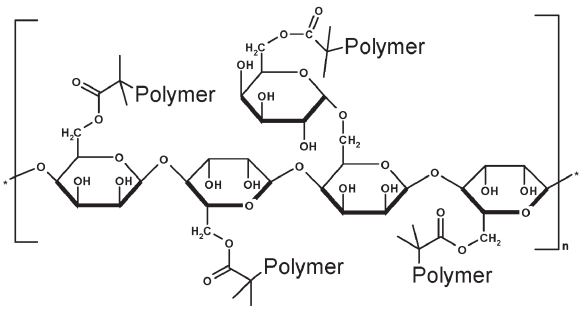

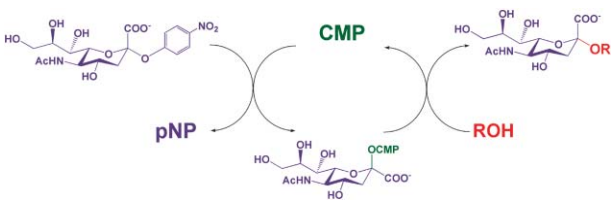

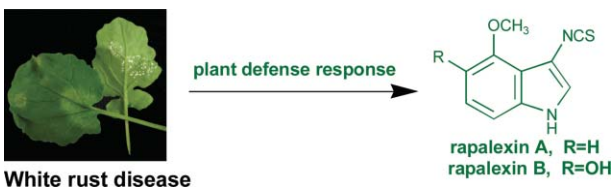

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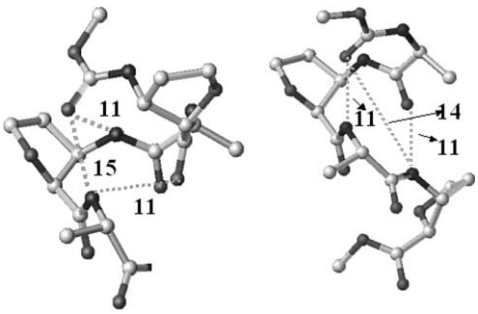

Formation of left-handed helices in hybrid peptide oligomers with *cis* β-sugar amino acid and L-Ala as building blocks

Bharatam Jagadeesh,* Anabathula Prabhakar, Ganti Dattatreya Sarma, Srivari Chandrasekhar,* Gudise Chandrashekar, Marepally Srinivasa Reddy and Bulusu Jagannadh*

A new class of short hybrid peptide oligomers consisting of alternating L-Ala and *cis*-β-furanoid sugar amino acid residues are reported, which exhibit the co-existence of left-handed 11- and 14/15-helical conformations.

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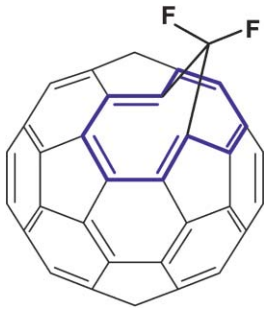

Synthesis and characterization of difluoromethylene-homo[60]fullerene, $C_{60}(CF_2)$

Anna S. Pimenova, Andrey A. Kozlov, Alexey A. Goryunkov, Vitaliy Yu. Markov, Pavel A. Khavrel, Stanislav M. Avdoshenko, Ilya N. Ioffe, Sergey G. Sakharov, Sergey I. Troyanov and Lev N. Sidorov*

Homo[60]fullerene $C_{60}(CF_2)$ with a cleaved [6,6]-bond has been obtained by reacting C_{60} with $CF_2ClCOONa$. Its molecular structure has been elucidated by means of NMR, IR, and UV/Vis spectroscopic studies and DFT calculations.

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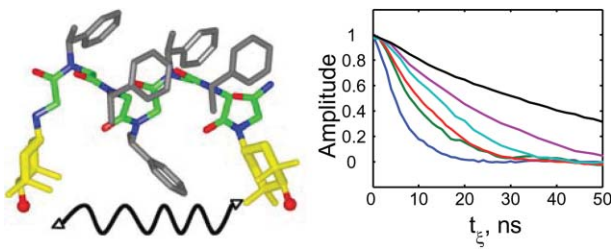

Characterizing the structure and dynamics of folded oligomers: Pulsed ESR studies of peptoid helices

Aaron T. Fafarman, Peter P. Borbat, Jack H. Freed and Kent Kirshenbaum*

Pulsed electron spin resonance spectroscopy is applied to elucidate the structure and dynamics of helical N-substituted glycine "peptoids" incorporating nitroxide spin probes in the oligomer sidechains.

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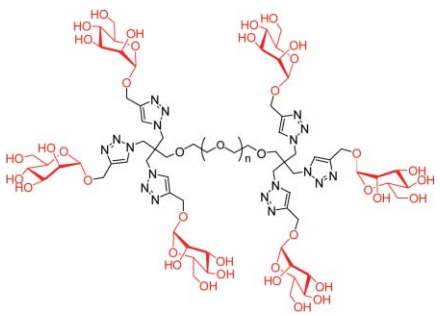

Tri- and hexavalent mannoside clusters as potential inhibitors of type 1 fimbriated bacteria using pentaerythritol and triazole linkages

Mohamed Touaibia, Tze Chieh Shiao, Alex Papadopoulos, Jonathan Vaucher, Qingan Wang, Karima Benhamioud and René Roy*

Several oligomannoside clusters showing a hundred-fold increase in affinities toward *E. coli* were synthesized by Cu(I)-catalyzed [1,3]-dipolar cycloadditions using pentaerythritol scaffolds bearing either alkyne or azide functionalities.

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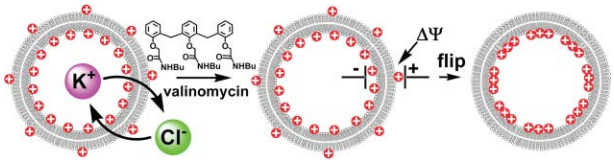
Towards improved gene delivery: Flip of cationic lipids in highly polarized liposomes

Richard G. Uhl, II, Amalia Stevenson and Vladimir Sidorov*

Hyperpolarization of cationic liposomes by a concerted action of K^+-transporter valinomycin and Cl^--transporter triphenoxyacetamide improves their stability in the presence of human serum albumin.



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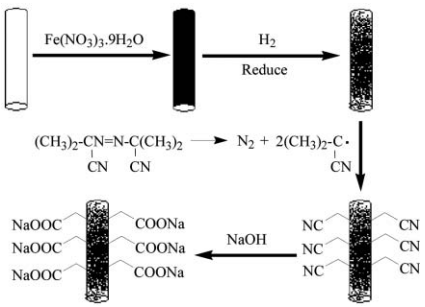
Magnetic Fe nanoparticle functionalized water-soluble multi-walled carbon nanotubules towards the preparation of sorbent for aromatic compounds removal

Jun Jin, Rong Li, Huanling Wang, Hangning Chen, Kun Liang and Jiantai Ma*

Magnetic Fe nanoparticle functionalized water-soluble multi-walled carbon nanotubules (MWNTs) were prepared, characterized and used for the removal of aromatic compounds in water and re-use.



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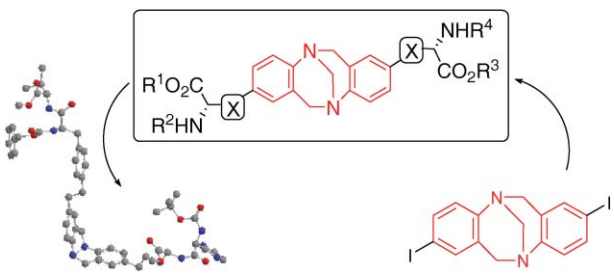
α-Amino acid Tröger base derivatives, possible conformationally restricted scaffolds?

Sean P. Bew,* Laurent Legentil, Vincent Scholier and Sunil V. Sharma

The first synthesis of innovative α-amino acid Tröger base derivatives is reported and their application as conformationally restricted scaffolds proposed.



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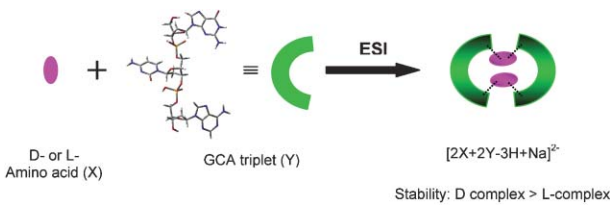
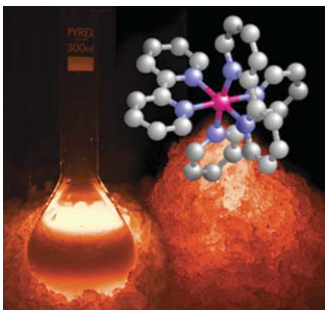
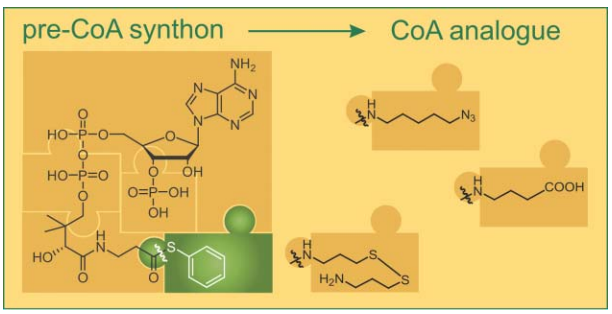
Chiral discrimination of α-amino acids by the DNA triplet GCA

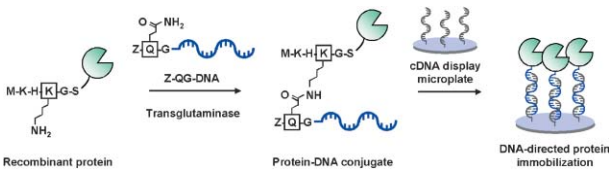
Maddula Ravikumar, Sripadi Prabhakar and Mariappanadar Vairamani*

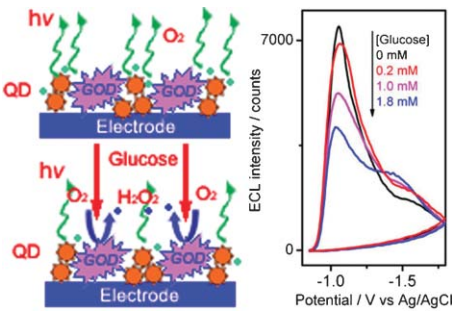
This communication reports for the first time on the use of a DNA triplet as a selector for the chiral discrimination of amino acids by mass spectrometry.

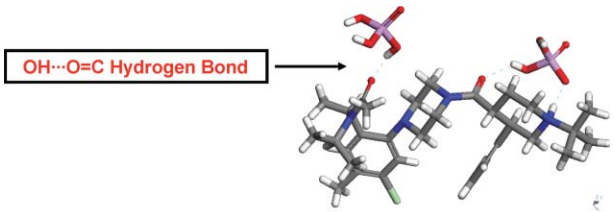












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