



Tetrahedron Vol. 65, Issue 35, 2009

Tetrahedron Symposium-in-Print Number 145

Molecular Container Chemistry

Guest editor: Ralf Warmuth

Department of Chemistry & Chem. Biology, Rutgers, The State University of New Jersey, 610 Taylor Road, Piscataway, NJ 08854, USA

Contents

Tetrahedron Symposia-in-Print
Preface

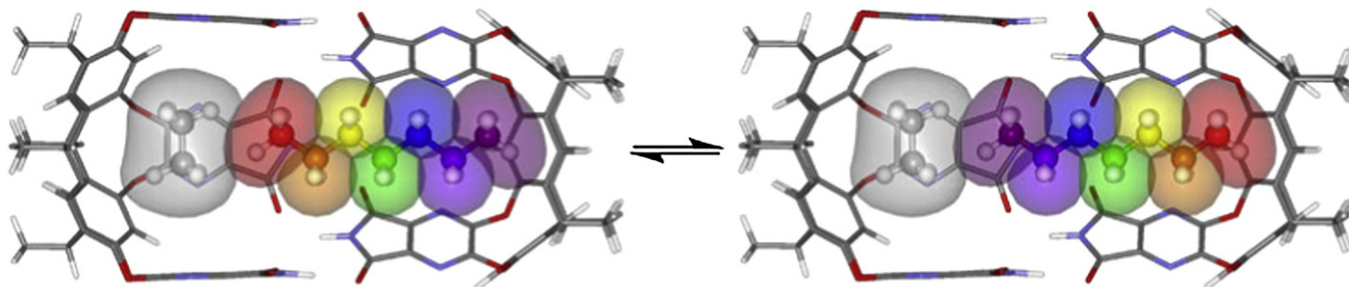
pp 7203–7205
p 7207

ARTICLES

Translational motion inside self-assembled encapsulation complexes

Dariusz Ajami, Michael P. Schramm, Julius Rebek, Jr.*

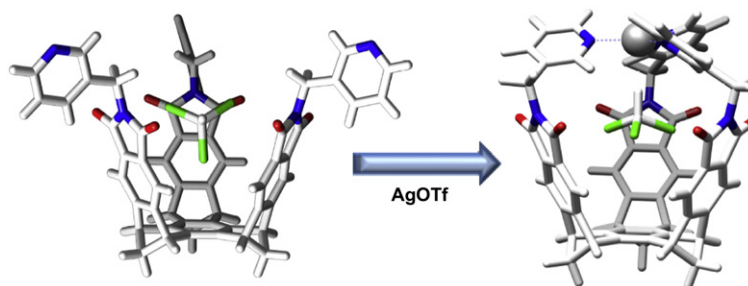
pp 7208–7212



A close inspection of Ag(I) coordination to molecular baskets. A study of solvation and guest encapsulation in solution and the solid state

Matthew Gardlik, Zhiqing Yan, Shijing Xia, Stephen Rieth, Judith Gallucci, Christopher M. Hadad, Jovica D. Badjić*

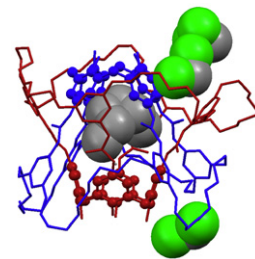
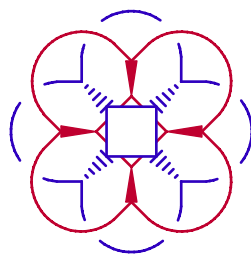
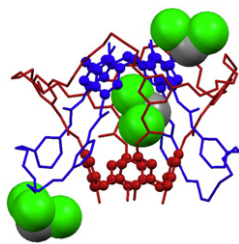
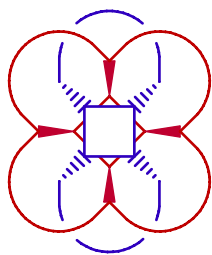
pp 7213–7219



Multiple catenanes based on tetraloop derivatives of calix[4]arenes

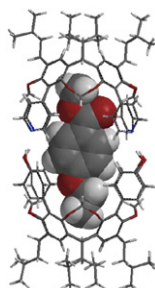
pp 7220–7233

Olena Molokanova, Ganna Podoprygorina, Michael Bolte, Volker Böhmer*

**Guest-encapsulation behavior in a self-assembled heterodimeric capsule**

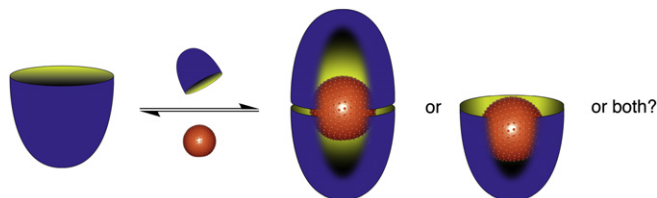
pp 7234–7239

Hitomi Kitagawa, Masatoshi Kawahata, Ryosuke Kitagawa, Yoshifumi Yamada, Masamichi Yamanaka, Kentaro Yamaguchi, Kenji Kobayashi*

**Guests of differing polarities provide insight into structural requirements for templates of water-soluble nano-capsules**

pp 7240–7248

Corinne L.D. Gibb, Bruce C. Gibb*

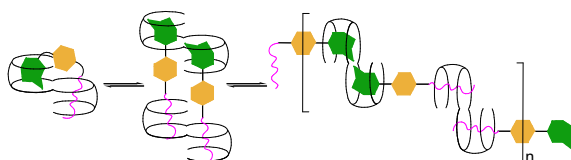


Approximately isosteric guests covering a range of polarities were examined for their ability to bind to a water-soluble cavitand and trigger its assembly into a supramolecular capsule.

Toward supramolecular polymers incorporating double cavity cucurbituril hosts

pp 7249–7258

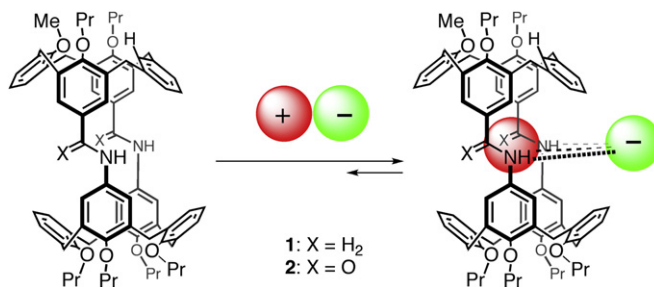
Regan Nally, Lyle Isaacs*



Energetics of guest binding to calix[4]arene molecular containers

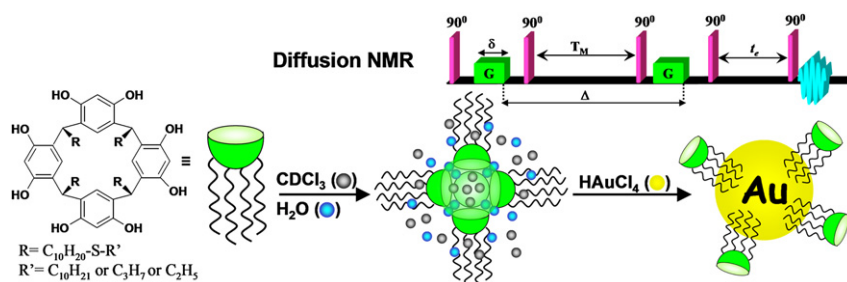
pp 7259–7267

Hajime Iwamoto, Kahoru Niimi, Takeharu Haino*, Yoshimasa Fukazawa

**Thio-ether-footed resorcin[4]arenes: self-assembly in solution and interaction with gold nanoparticles as viewed by diffusion NMR**

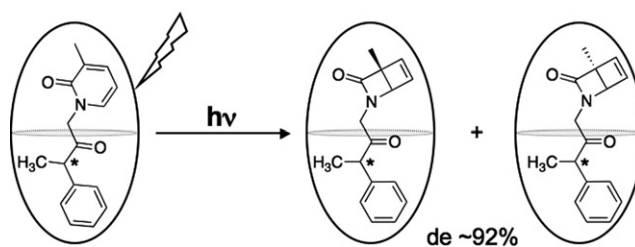
pp 7268–7276

Einat Wirtheim, Liat Avram, Yoram Cohen*

**Chiral photochemistry in a confined space: torquoselective photoelectrocyclization of pyridones within an achiral hydrophobic capsule**

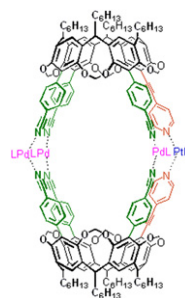
pp 7277–7288

Arun Kumar Sundaresan, Corinne L.D. Gibb, Bruce C. Gibb, V. Ramamurthy*

**Self-assembly of a cavitand-based heteronuclear coordination cage**

pp 7289–7295

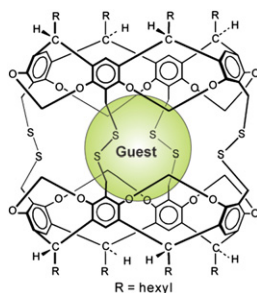
Francesca Gruppi, Francesca Boccini, Lisa Elviri, Enrico Dalcanale*



A new [4]carceplex, and a crystal structure and dynamic combinatorial chemistry of a [5]carceplex

pp 7296–7302

Jianyu Sun, Brian O. Patrick, John C. Sherman*

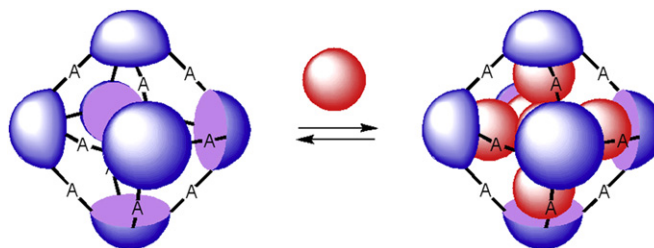


We report (1) a disulfide-linked [4]carceplex, its template formation, and its twisted structure, and (2) a crystal structure of a [5]carceplex and its reversible formation with mixed pairs of guests.

**Water-soluble octahedral polyammonium nanocapsules: synthesis and encapsulation studies**

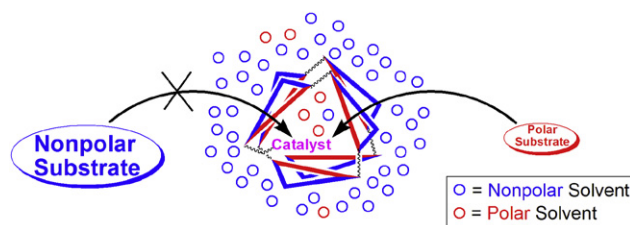
pp 7303–7310

Xuejun Liu, Junling Sun, Ralf Warmuth*


**A DMAP-functionalized oligocholate foldamer for solvent-responsive catalysis**

pp 7311–7316

Hongkwan Cho, Zhenqi Zhong, Yan Zhao*



*Corresponding author

 Supplementary data available via ScienceDirect

COVER

The cover illustrates space-filling models of container molecules that are the topic of this *Symposium-in-Print* 'Molecular Container Chemistry'. The selection of container molecules includes a cavitand-base heteronuclear coordination capsule (top left; see Francesca Gruppi *et al.* pp.), a disulfide-linked [4]catenane (bottom left; see Jianyu Sun *et al.* pp.), a molecular basket (center; see Matthew Gardlik *et al.* pp. ...), a bis[3]catenane capsule (center top; see Olena Molokanova *et al.* pp. ...), a deep cavitand that assembles into a dimeric capsule in water (bottom right; see Corinne L. D. Gibb and Bruce C. Gibb, pp. ... and Arun Kumar Sundaresan *et al.* pp. ...) and a self-assembled hydrogen bonded capsule (top right; see Dariush Ajami *et al.* pp. ...).

Cover figure designed by Ralf Warmuth.

© 2009 R. Warmuth Published by Elsevier Ltd.



Full text of this journal is available, on-line from **ScienceDirect**. Visit www.sciencedirect.com for more information.

Abstracted/indexed in: AGRICOLA, Beilstein, BIOSIS Previews, CAB Abstracts, Chemical Abstracts, Current Contents: Life Sciences, Current Contents: Physical, Chemical and Earth Sciences, Current Contents Search, Derwent Drug File, Ei compendex, EMBASE/Excerpta Medica, Medline, PASCAL, Research Alert, Science Citation Index, SciSearch. Also covered in the abstract and citation database SCOPUS®. Full text available on ScienceDirect®



ELSEVIER

ISSN 0040-4020