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## IN THIS ISSUE

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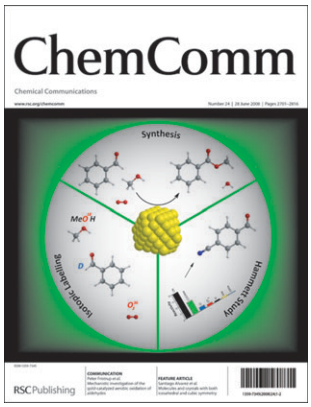
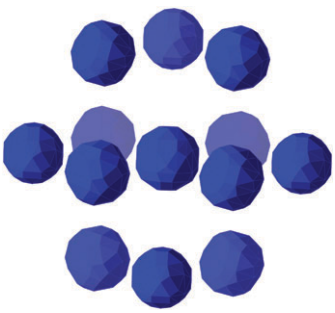



**Cover**
See Peter Fristrup *et al.*, pp. 2750–2752. A mechanistic study of gold-nanoparticle catalyzed oxidations sheds more light on the fundamental aspects of this important green chemical reaction. Image reproduced by permission of Peter Fristrup, Louise Bahn Johansen and Claus Hviid Christensen from *Chem. Commun.*, 2008, 2750.

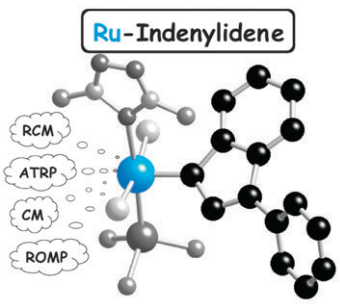

**Inside cover**
See Jieshan Qiu *et al.*, pp. 2747–2749. Well-defined carbon polyhedrons with hexagonal, heptagonal, octagonal cross-sections and hollow central cavities have been fabricated *via in situ* self-assembly of carbon nanotubes inside microchannels. Image reproduced by permission of Jiangying Qu, Zongbin Zhao, Jieshan Qiu and Yury Gogotsi from *Chem. Commun.*, 2008, 2747.

## FEATURE ARTICLES









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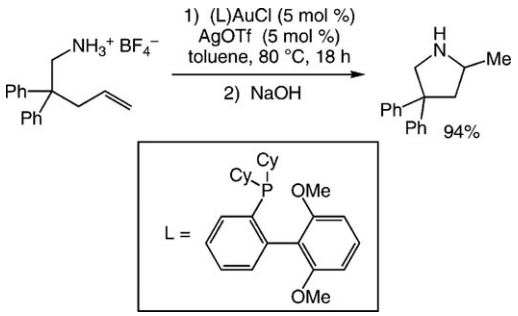
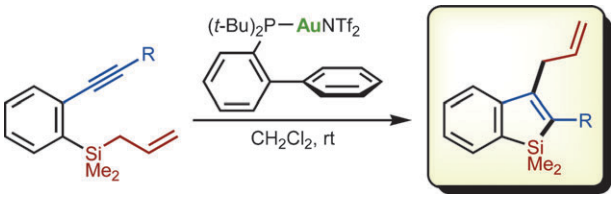
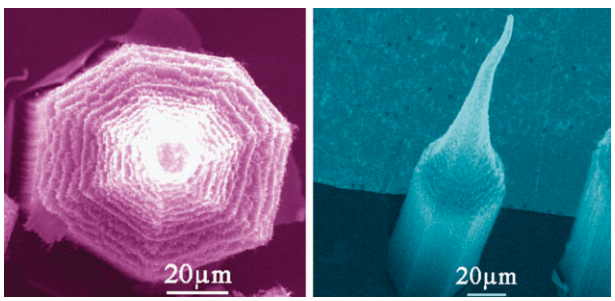


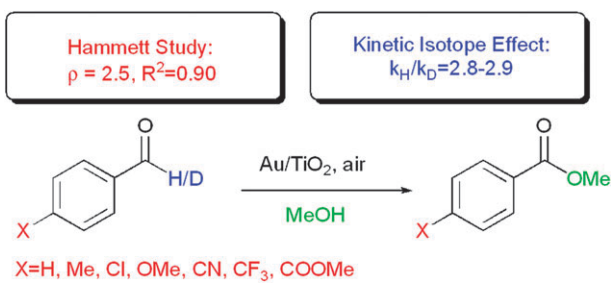






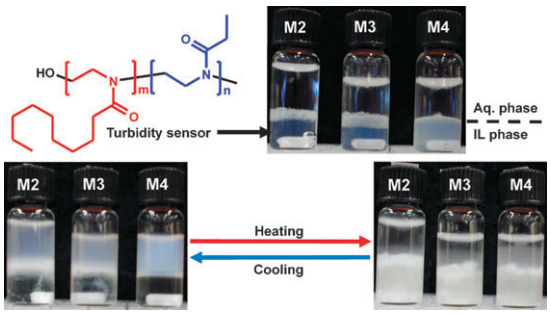



2753

## Controlled thermoreversible transfer of poly(oxazoline) micelles between an ionic liquid and water

Carlos Guerrero-Sanchez, Jean-François Gohy, Cecile D'Haese, Hanneke Thijs, Richard Hoogenboom and Ulrich S. Schubert*

The thermoreversible and controlled transfer of poly(2-nonyl-2-oxazoline-*block*-2-ethyl-2-oxazoline) micelles between a hydrophobic ionic liquid and water is demonstrated. The approach may allow the development of advanced heterogeneous micellar catalytic systems with novel separation processes.

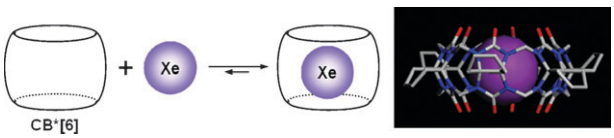



2756

## Water soluble cucurbit[6]uril derivative as a potential Xe carrier for $^{129}$Xe NMR-based biosensors

Byoung Soo Kim, Young Ho Ko, Youngkook Kim, Hyeong Ju Lee, N. Selvapalam, Hee Cheon Lee* and Kimoon Kim*

The water soluble cucurbit[6]uril derivative CB∗[6] forms a thermodynamically and kinetically stable host–guest complex with xenon in water, which suggests that it may serve as an effective molecular "carrier" for $^{129}$Xe NMR-based biosensors.

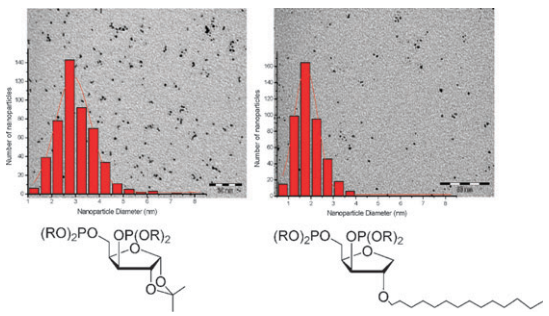



2759

## Diphosphite ligands derived from carbohydrates as stabilizers for ruthenium nanoparticles: promising catalytic systems in arene hydrogenation

Aitor Gual, M. Rosa Axet, Karine Philippot,* Bruno Chaudret, Audrey Denicourt-Nowicki, Alain Roucoux,* Sergio Castillon and Carmen Claver*

Diphosphite ligands, derived from carbohydrates and containing a lipidic chain, stabilize nanoparticles of small size and good dispersity, which provides high activity and selectivity in arene hydrogenation.

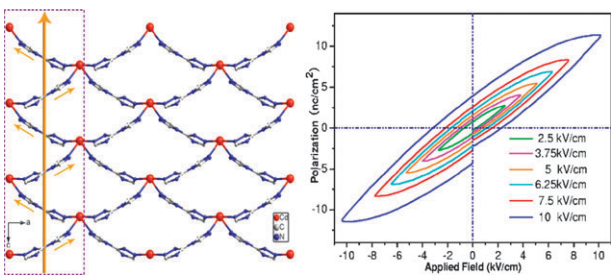



2762

## Nonlinear optical and ferroelectric properties of a 3-D Cd(II) triazolate complex with a novel $(6^3)_2(6^{10}\cdot 8^5)$ topology

Wei-Wei Zhou, Jiu-Tong Chen,* Gang Xu, Ming-Sheng Wang, Jian-Ping Zou, Xi-Fa Long, Guo-Jian Wang, Guo-Cong Guo* and Jin-Shun Huang

A solvothermally synthesized 3-D Cd(II) complex with an unprecedented $(6^3)_2(6^{10}\cdot 8^5)$ topology was found to adopt a non-centrosymmetric polar packing arrangement, resulting in strong SHG response and ferroelectric property.



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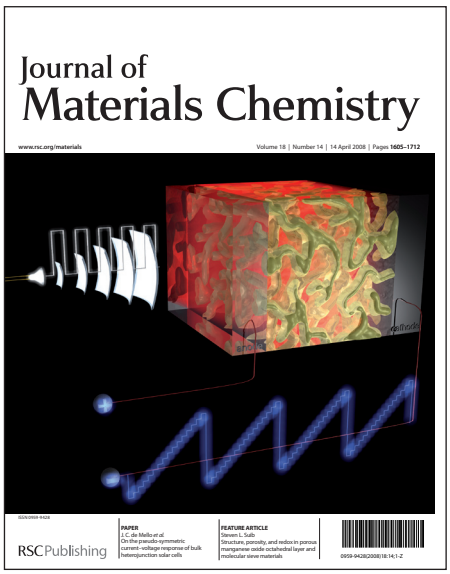


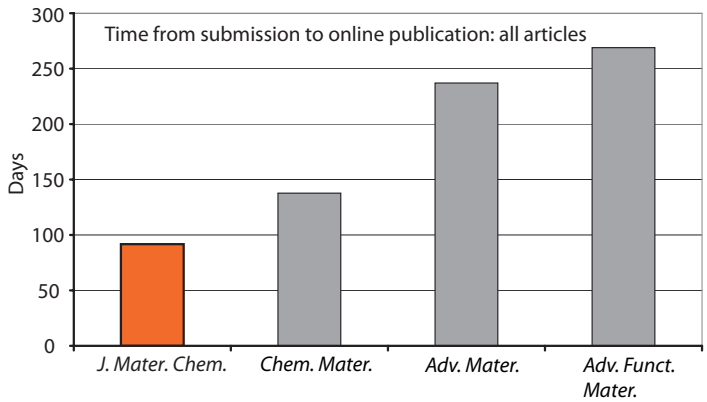


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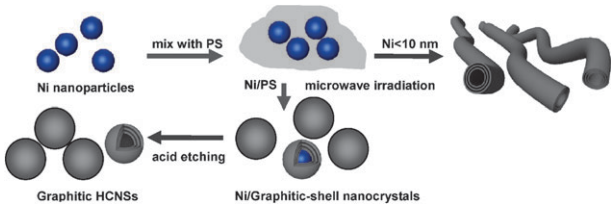




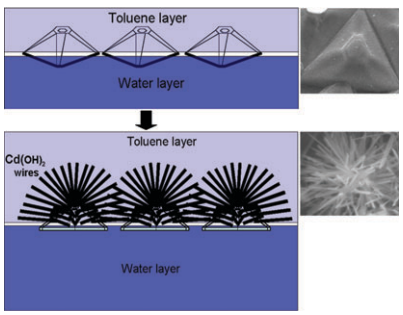




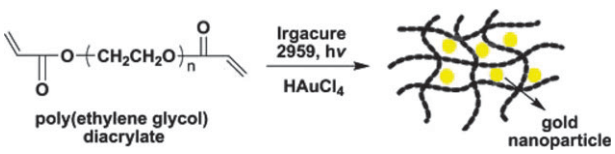




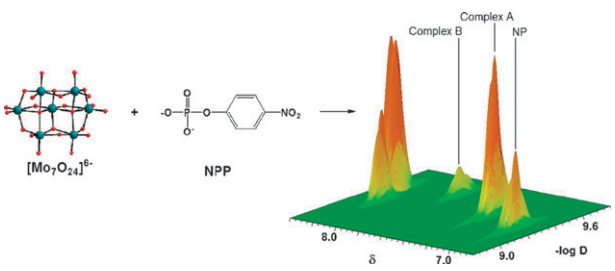

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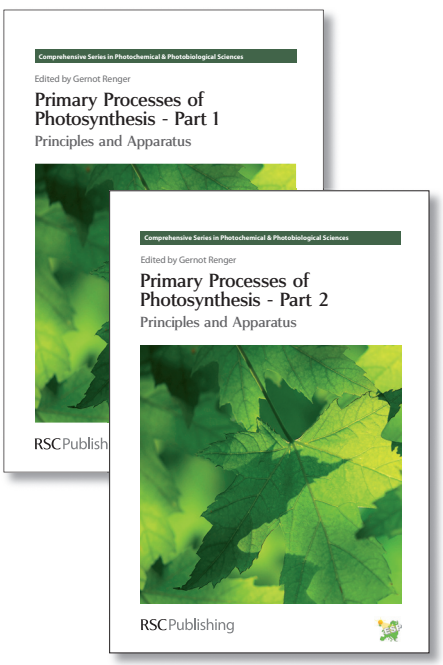


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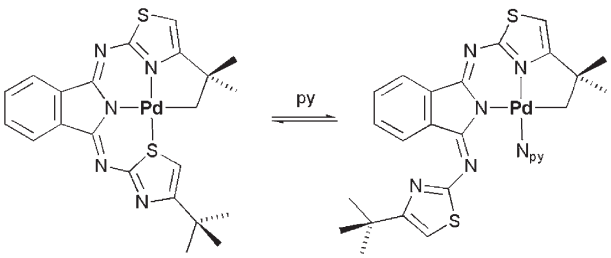




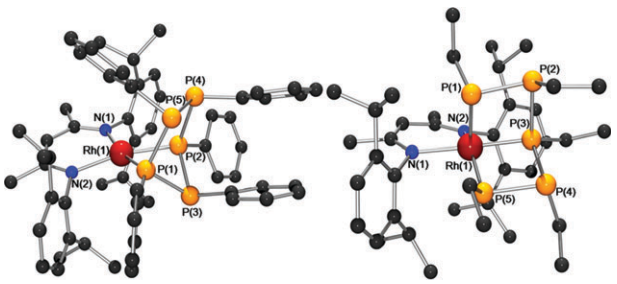




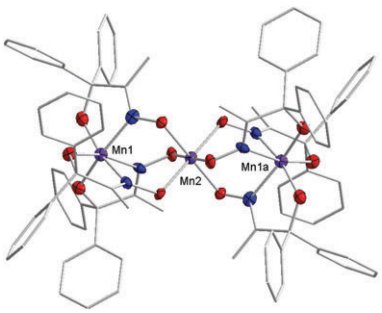




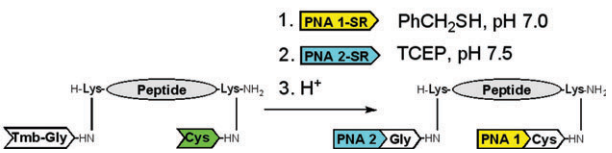

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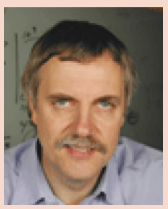

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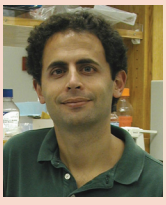

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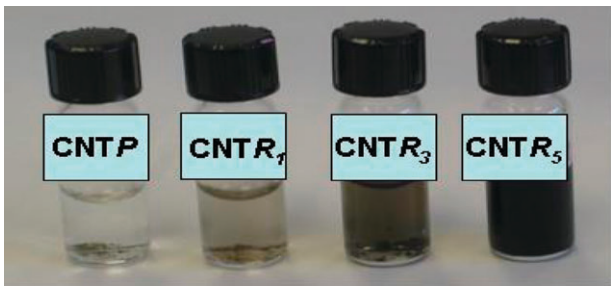




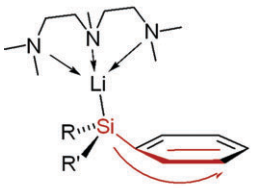


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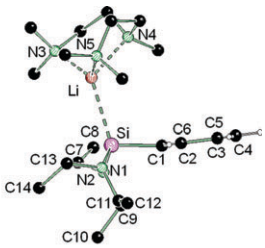




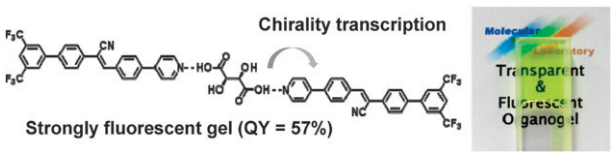




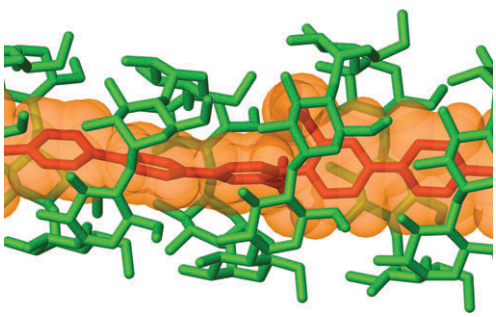

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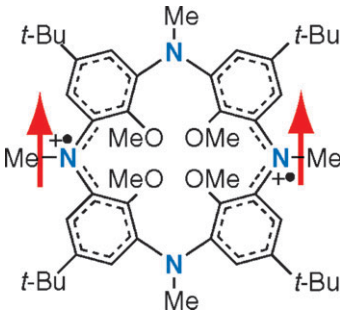
**Azacalix[4]arene cation radicals: spin-delocalised doublet- and triplet-ground states observed in the macrocyclic *m*-phenylene system connected with nitrogen atoms**

Koichi Ishibashi, Hirohito Tsue,* Naoko Sakai, Satoshi Tokita, Kazuhiro Matsui, Jun Yamauchi and Rui Tamura

Electron paramagnetic resonance spectroscopy has unmasked for the first time the spin-delocalised doublet- and triplet-ground states of azacalix[4]arene cation radicals.



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