



### Carbon Nanotubes

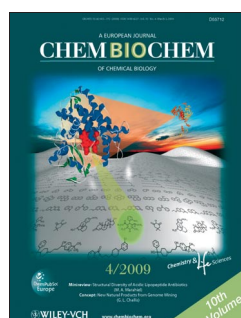
G. Q. Ning, H. Shinohara\*

#### Unsynchronized Diameter Changes of Double-Wall Carbon Nanotubes during Chemical Vapour Deposition Growth

**Unsynchronized growing!** Unsynchronized diameter changes of the inner and the outer tubes are observed in the double-wall carbon nanotubes (DWNTs) prepared by CoMo/MgO catalysts. The difference of the growth surroundings for the inner and outer tubes of DWNTs can consistently explain the observed unsynchronized diameter changes.



*Chem. Asian J.*  
DOI: 10.1002/asia.200800347

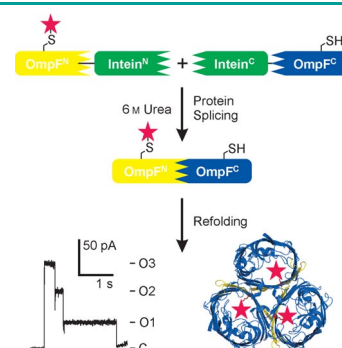


### Protein Splicing

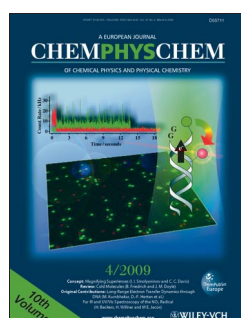
S. Brenzel, M. Cebi, P. Reiß, U. Koert,\* H. D. Mootz\*

#### Expanding the Scope of Protein Trans-Splicing to Fragment Ligation of an Integral Membrane Protein: Towards Modulation of Porin-Based Ion Channels by Chemical Modification

**It's raining, it's porin:** Fragment ligation of OmpF ion channels was achieved by using the split *Psp*-GBD Pol intein; this allowed reconstitution of active trimeric porin. In combination with cysteine modification at an internal position, the porin's conductance properties were altered.



*ChemBioChem*  
DOI: 10.1002/cbic.200900039

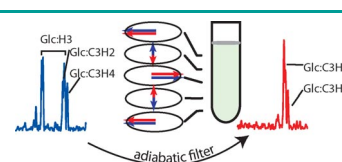


### NMR

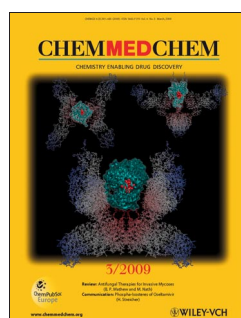
S. Meier, A. J. Benie, J. Ø. Duus, O. W. Sørensen\*

#### Adiabatic Low-Pass J Filters for Artifact Suppression in Heteronuclear NMR

**NMR artifact purging:** Modern NMR experiments depend on efficient coherence transfer pathways for their sensitivity and on suppression of undesired pathways leading to artifacts for their spectral clarity. A novel robust adiabatic element suppresses hard-to-get-at artifacts (see picture).



*ChemPhysChem*  
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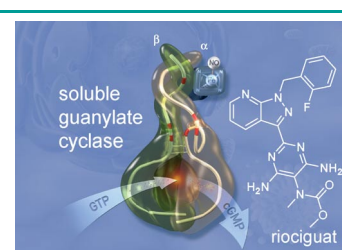


### Treating Hypertension

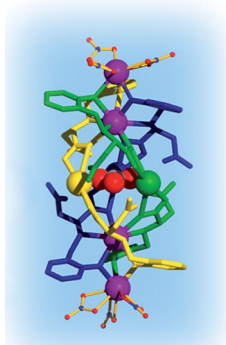
J. Mittendorf,\* S. Weigand, C. Alonso-Alija, E. Bischoff, A. Feurer, M. Gerisch, A. Kern, A. Knorr, D. Lang, K. Muentner, M. Radtke, H. Schirok, K.-H. Schlemmer, E. Stahl, A. Straub, F. Wunder, J.-P. Stasch

#### Discovery of Riociguat (BAY 63-2521): A Potent, Oral Stimulator of Soluble Guanylate Cyclase for the Treatment of Pulmonary Hypertension

**Direct stimulation of soluble guanylate cyclase (sGC)** represents a promising therapeutic strategy for the treatment of a range of diseases, including the severely disabling pulmonary hypertension (PH). Optimization of the unfavorable DMPK profile of previous sGC stimulators provided riociguat, which is currently being investigated in phase III clinical trials for the oral treatment of PH.



*ChemMedChem*  
DOI: 10.1002/cmdc.200900014



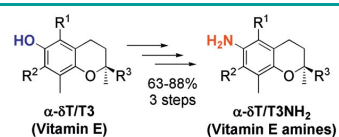
*Angew. Chem. Int. Ed.*  
DOI: 10.1002/anie.200900838

### Heptameric Lanthanum Clusters

X.-L. Tang, W.-H. Wang, W. Dou, J. Jiang, W.-S. Liu,\*  
W.-W. Qin, G.-L. Zhang, H.-R. Zhang, K.-B. Yu, L.-M. Zheng

# Olive-Shaped Chiral Supramolecules: Simultaneous Self-Assembly of Heptameric Lanthanum Clusters and Carbon Dioxide Fixation

**Cluster's last stand:** Six chiral reduced Schiff base ligands containing amino acids and seven La<sup>III</sup> ions self-assemble to form a novel heptameric lanthanum supramolecule with the aid of the CO<sub>3</sub><sup>2-</sup> ion (see picture). The cluster exists as a single chiral triple helix. The CO<sub>3</sub><sup>2-</sup> ion, which is derived from atmospheric CO<sub>2</sub>, adopts a rare μ<sub>3</sub>-tridentate bridging mode that links three La<sup>III</sup> ions, thus allowing the cluster to efficiently fix CO<sub>2</sub>.



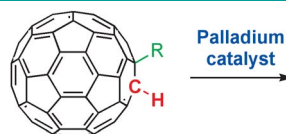
*Eur. J. Org. Chem.*  
DOI: 10.1002/ejoc.200900088

### Vitamin E Amines

F. Mazzini,\* T. Netscher, P. Salvadori\*

## Efficient Synthesis of Vitamin E Amines

Tocopheryl amide derivatives (VE amides) show very interesting and promising proapoptotic activity against various tumor cell lines. Key precursors of VE amides are the corresponding tocopheryl- and tocotrienylamines. An efficient and easy synthesis of enantiopure VE amines by palladium-catalyzed *N*-arylation is reported.



- C-H Bond Allylation
- C-H Bond Arylation
- C-H Bond Dimerization
- C-C Bond Cleavage

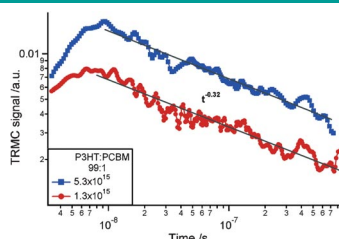
*Chem. Eur. J.*  
DOI: 10.1002/chem.200900022

## Fullerene Functionalization

M. Nambo, K. Itami\*

## Palladium-Catalyzed Carbon–Carbon Bond Formation and Cleavage of Organo(hydro)fullerenes

**Palladium can tailor fullerenes:** Palladium catalysts enable a number of C–H bond transformations of organo(hydro)fullerene. In addition to anticipated coupling reactions (C–H bond allylation and arylation), unexpected new C–H bond dimerization reaction and C–C bond-cleavage reaction were also uncovered.



ChemSusChem  
DOI: 10.1002/cssc.200900002

## Solar Cells

T. Moehl, V. G. Kytin,\* J. Bisquert,\* M. Kunst, H. J. Bolink,  
G. Garcia-Belmonte

## Relaxation of Photogenerated Carriers in P3HT:PCBM Organic Blends

**Relaxing in the sunlight:** Long time-transient decays of photo-generated carriers in P3HT:PCBM blends for organic solar cells are interpreted in terms of the relaxation of hole carriers in a broad density of states.



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