

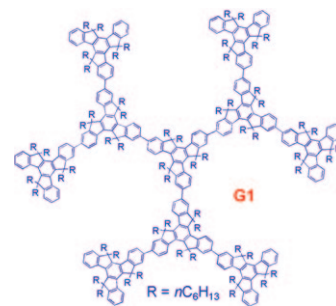


## Luminescent Dendrimer Materials

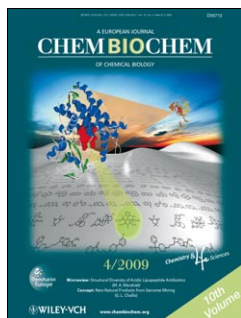
Y. Jiang, L. Wang, Y. Zhou, Y.-X. Cui, J. Wang, Y. Cao,\* J. Pei\*

$\pi$ -Conjugated Dendrimers as Stable Pure-Blue Emissive Materials: Photophysical, Electrochemical, and Electroluminescent Properties

**Bigger, stronger, better:** A family of giant  $\pi$ -conjugated dendrimers has been developed as pure-blue active materials for organic light-emitting diodes. The dendrimer-generation number has little effect on the photophysical, electrochemical, and EL properties, and device efficiency of **G0** and **G1**. The preliminary OLED devices achieve pure-blue color with stable CIE chromaticity coordinates (0.16, 0.08) for both **G0** and **G1**.



Chem. Asian J.  
DOI: 10.1002/asia.200800329

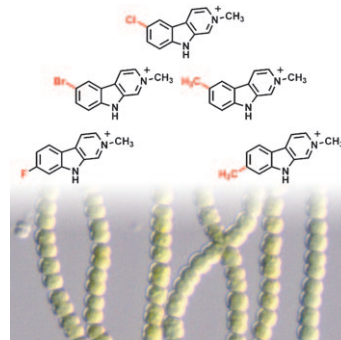


## Biosynthesis

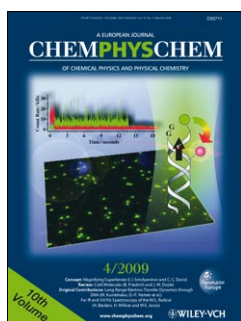
C. Portmann, C. Prestinari, T. Myers, J. Scharfe,\* K. Gademann\*

Directed Biosynthesis of Phytotoxic Alkaloids in the Cyanobacterium *Nostoc* 78–12A

**Out of the green!** Precursor-directed biosynthesis allowed for the production of new nostocarboline derivatives that display phytotoxic and algicidal properties—in a phototrophic organism. The mechanism of action includes downregulation of photosynthesis, as demonstrated by chlorophyll-*a* fluorescence imaging.



ChemBioChem  
DOI: 10.1002/cbic.200800837

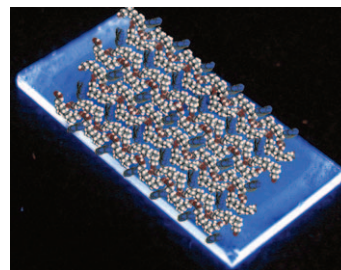


## Thin Films

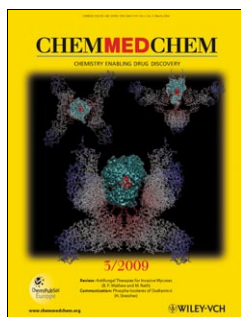
J. Moreau, U. Giovannella, J.-P. Bombenger, W. Porzio, V. Vohra, L. Spadacini, G. Di Silvestro, L. Barba, G. Arrighetti, S. Destri, M. Pasini, M. Saba, F. Quochi, A. Mura, G. Bongiovanni, M. Fiorini, M. Uslenghi, C. Botta\*

Highly Emissive Nanostructured Thin Films of Organic Host–Guests for Energy Conversion

**All-organic** nanostructured host–guest materials (see picture) show enhanced, tunable fluorescence due to a high concentration of dyes with controlled spatial and geometrical organization that allows controlled resonant energy transfer. Homogeneous films of deoxycholic acid host–guests, provide coatings that convert near-UV light into blue light with an efficiency higher than that of the standard polymeric blends.



ChemPhysChem  
DOI: 10.1002/cphc.200800682

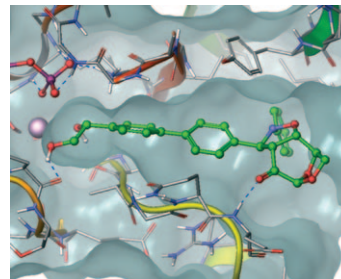


## Antitumor Agents

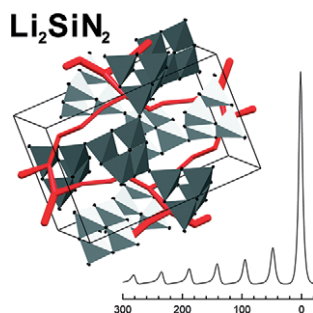
C. Müller, M. A. Gomez-Zurita Frau, D. Ballinari, S. Colombo, A. Bitto, E. Martegani, C. Airolti, A. S. van Neuren, M. Stein, J. Weiser, C. Battistini,\* F. Peri\*

Design, Synthesis, and Biological Evaluation of Levoglucosenone-Derived Ras Activation Inhibitors

**A panel of new potential Ras ligands** was generated by decorating a tricyclic levoglucosenone-derived scaffold with aromatic moieties. Some members of the panel show in vitro inhibitory activity toward the nucleotide exchange process on Ras and are toxic to some human cancer cell lines.



ChemMedChem  
DOI: 10.1002/cmdc.200800416



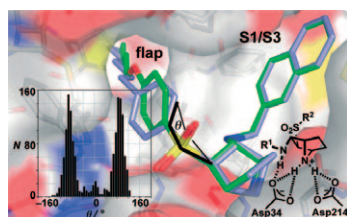
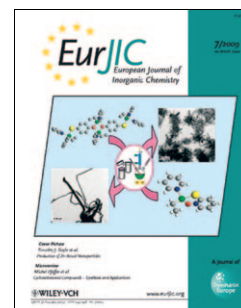
*Eur. J. Inorg. Chem.*  
DOI: 10.1002/ejic.200801168

### Lithium Nitridosilicates

S. Pagano, M. Zeuner, S. Hug, W. Schnick\*

Single-Crystal Structure Determination and Solid-State NMR Investigations of Lithium Nitridosilicate  $\text{Li}_2\text{SiN}_2$  Synthesized by a Precursor Approach Employing Amorphous “ $\text{Si}(\text{CN})_2$ ”

“ $\text{Si}(\text{CN})_2$ ” has been identified as a novel precursor for nitridosilicates. The crystal structure of the  $\text{Li}^+$  ion conductor  $\text{Li}_2\text{SiN}_2$  has been determined.  $\text{Li}_2\text{SiN}_2$  consists of two interpenetrating cristobalite type nets which are made up from hetero-adamantane-like  $[\text{Si}_4\text{N}_6]\text{N}_{4/2}$  groups. The  $^7\text{Li}$  and  $^{29}\text{Si}$  solid-state NMR spectra of  $\text{Li}_2\text{SiN}_2$  are reported.



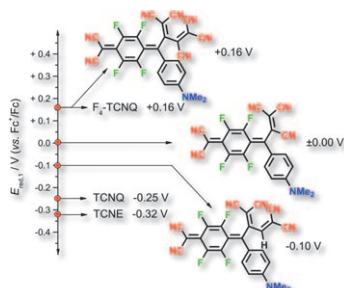
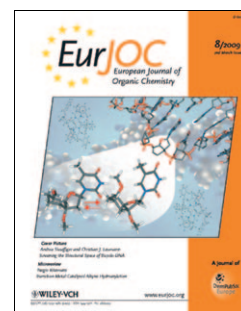
*Eur. J. Org. Chem.*  
DOI: 10.1002/ejoc.200801184

### Plasmeptin Inhibitors

M. Zürcher, F. Hof, L. Barandun, A. Schütz, W. B. Schweizer, S. Meyer, D. Bur, F. Diederich\*

Synthesis of *exo*-3-Amino-7-azabicyclo[2.2.1]heptanes as a Class of Malarial Aspartic Protease Inhibitors: Exploration of Two Binding Pockets

Substituted *exo*-3-amino-7-azabicyclo[2.2.1]heptanes as inhibitors of the plasmeptins are described. An O scan of the alkyl-chain substituent, filling the crucial flap pocket at the active site of these malarial aspartic proteases, is reported; dramatic differences in activity were found. Conformational analysis of the ligands is presented, and the basicity of the amine centers is discussed.



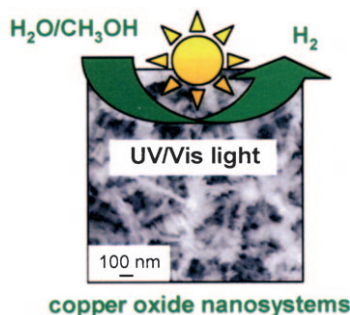
*Chem. Eur. J.*  
DOI: 10.1002/chem.200802563

### Electron Acceptors

M. Kivala, C. Boudon, J.-P. Gisselbrecht, B. Enko, P. Seiler, I. B. Müller, N. Langer, P. D. Jarowski, G. Gescheidt, F. Diederich\*

Organic Super-Acceptors with Efficient Intramolecular Charge-Transfer Interactions by [2+2] Cycloadditions of TCNE, TCNQ, and  $\text{F}_4\text{-TCNQ}$  to Donor-Substituted Cyanoalkynes

**Rivaling the best one:** Thermal [2+2] cycloadditions of TCNE, TCNQ, and  $\text{F}_4\text{-TCNQ}$  to *N,N*-dimethylanilino-substituted cyanoalkynes afforded a new class of organic super-acceptors featuring efficient intramolecular charge-transfer interactions. These acceptors rival the acceptor  $\text{F}_4\text{-TCNQ}$  in the propensity for reversible electron uptake as well as in electron affinity, which makes them interesting as p-type dopants for potential application in optoelectronic devices.



*ChemSusChem*  
DOI: 10.1002/cssc.200900032

### Hydrogen Production

D. Barreca,\* P. Fornasiero,\* A. Gasparotto, V. Gombac, C. Maccato, T. Montini, E. Tondello

The Potential of Supported  $\text{Cu}_2\text{O}$  and  $\text{CuO}$  Nanosystems in Photocatalytic  $\text{H}_2$  Production

**Hy wire:** Supported  $\text{Cu}_2\text{O}$  nanosystems and  $\text{CuO}$  nanowires obtained by chemical vapor deposition were used in the photocatalytic splitting of methanol/water solutions to produce hydrogen. The results obtained with these systems open appealing perspectives for the clean conversion of sunlight into storable chemical energy.

