Organocatalysis

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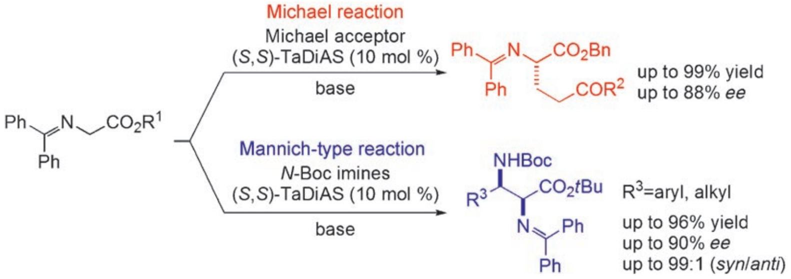
Catalytic Asymmetric Phase-Transfer Michael Reaction and Mannich-Type Reaction of Glycine Schiff Bases with Tartrate-Derived Diammonium Salts

Chem. Asian J.
DOI: **10.1002/asia.200700070**



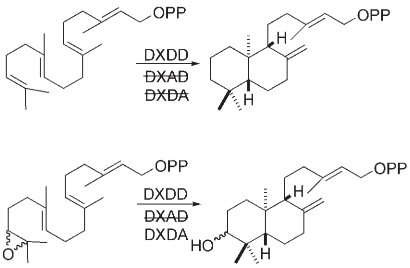
Schiff-ing up a gear: Tartrate-derived diammonium salts (TaDiASs) catalyze asymmetric Michael and Mannich-type reactions of glycine Schiff bases. Higher enantioselectivity is attained with TaDiASs than with previously known catalysts. Boc = *tert*-butoxycarbonyl.

Diterpene Cyclases

S. Prisic, J. Xu, R. M. Coates,
R. J. Peters*

Probing the Role of the DXDD Motif in Class II Diterpene Cyclases

ChemBioChem
DOI: **10.1002/cbic.200700045**



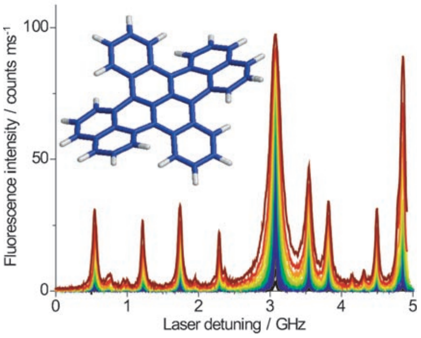
On common ground. An epoxy analogue of geranylgeranyl diphosphate was used together with site-directed mutagenesis to provide evidence that the DXDD motif in class II diterpene cyclases is involved in C=C double-bond protonation (see scheme). This function is similar to the role of the DXDD motif found in the otherwise unrelated triterpene cyclases, which also catalyze C=C protonation initiated cyclization.

Conduction at Nanometer Scales

A. A. L. Nicolet, C. Hofmann,
M. A. Kol'chenko, B. Kozankiewicz,
M. Orrit*

Single Dibenzoterrylene Molecules in an Anthracene Crystal: Spectroscopy and Photophysics

ChemPhysChem
DOI: **10.1002/cphc.200700091**



Nanoprobes for organic electronics: Fluorescence excitation lines (see picture) of single dibenzoterrylene molecules in an anthracene crystal at low temperatures are very stable and bright. A photophysical study indicates that the triplet yield is low and the triplet lifetime short, which makes them attractive local probes of charge transport in the host crystal.

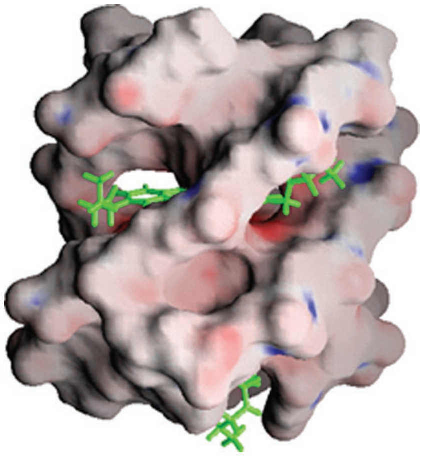
Nucleic Acid Structure

C. Hounsou, L. Guittat, D. Monchaud,
M. Jourdan, N. Saettel, J.-L. Mergny,
M.-P. Teulade-Fichou*

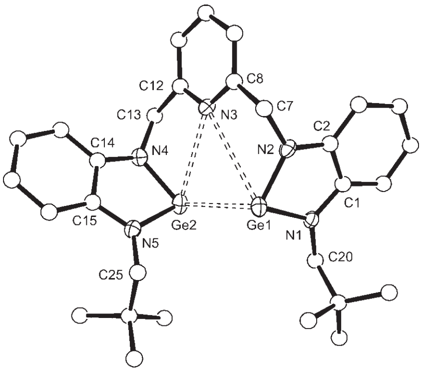
G-Quadruplex Recognition by Quinacridines:
a SAR, NMR, and Biological Study

ChemMedChem
DOI: **10.1002/cmdc.200600286**

The synthesis and evaluation of G-quadruplex binding properties of a series of quinacridine-based ligands (MMQs) are described. Structure–activity relationship studies support a model of interaction of these compounds with G-quadruplex structures which is furthermore confirmed by the solution structure determined by 2D NMR experiments.



Stable benzannulated bis(germylenes) with pincer topology have been prepared and characterized by X-ray analysis.

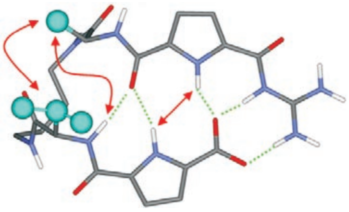


N-Heterocyclic Germylenes

F. E. Hahn,* A. V. Zabula, T. Pape, A. Hepp

Preparation and Molecular Structures of Stable Bis(germylenes) with Pincer Topology

Eur. J. Inorg. Chem.
DOI: **10.1002/ejic.200700295**



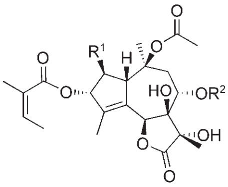
Flexible zwitterion **10** folds into a stable loop due to directed charge interactions between the two chain ends. This loop is stable even in polar protic solvents (methanol) as shown by NMR studies.

Intramolecular Ion Pairing

C. Schmuck,* J. Dudaczek

Ion Pairing Between the Chain Ends Induces Folding of a Flexible Zwitterion in Methanol

Eur. J. Org. Chem.
DOI: **10.1002/ejoc.200700164**



thapsigargin: R^1 = octanoate, R^2 = butanoyl
thapsivillosin C: R^1 = octanoate, R^2 = (*S*)-2-methylbutanoyl
thapsivillosin F: R^1 = H, R^2 = senecioyl
trilobolide: R^1 = H, R^2 = (*S*)-2-methylbutanoyl
nortrilobolide: R^1 = H, R^2 = butanoyl

The first absolute stereochemical assignment of thapsivillosin C is delineated along with its total synthesis, as well as four other guaianolide natural products: thapsigargin, thapsivillosin F, trilobolide and nortrilobolide.

Natural Products

S. P. Andrews, M. Ball, F. Wierschem, E. Cleator, S. Oliver, K. Högenauer, O. Simic, A. Antonello, U. Hünger, M. D. Smith, S. V. Ley*

Total Synthesis of Five Thapsigargins: Guaianolide Natural Products Exhibiting Sub-Nanomolar SERCA Inhibition

Chem. Eur. J.
DOI: **10.1002/chem.200700302**

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