

Total Synthesis

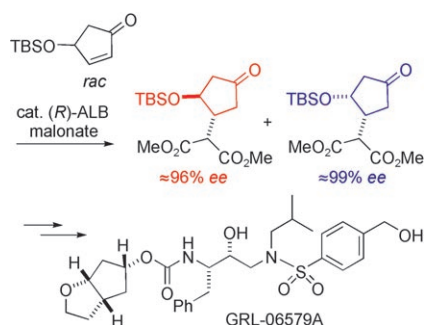
H. Mihara, Y. Sohtome, S. Matsunaga,*
M. Shibasaki*

Chiral-Catalyst-Based Convergent
Synthesis of HIV Protease Inhibitor
GRL-06579A

Chem. Asian J.

DOI: 10.1002/asia.200700330

Metallic mix: GRL-06579A, an HIV-1 protease inhibitor, can be synthesized with the aid of heterobimetallic multifunctional catalysts. The key steps are an ALB-catalyzed Michael reaction and an LLB-catalyzed diastereoselective nitroaldol reaction. ALB = Al–Li–bis(binaphthoxide), LLB = La–Li₃–tris(binaphthoxide), TBS = *tert*-butyldimethylsilyl.



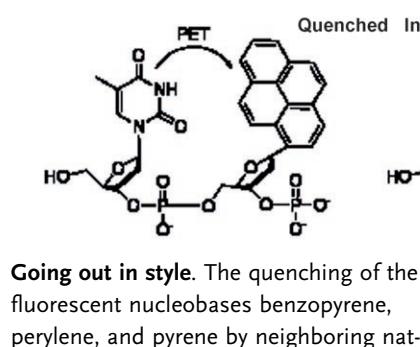
Fluorescent Nucleobases

J. N. Wilson, Y. Cho, S. Tan,
A. Cuppoletti, E. T. Kool*

Quenching of Fluorescent Nucleobases
by Neighboring DNA: The “Insulator”
Concept

ChemBioChem

DOI: 10.1002/cbic.200700381



ural bases is described, as well as a strategy for insulating fluorophores from PET quenching.

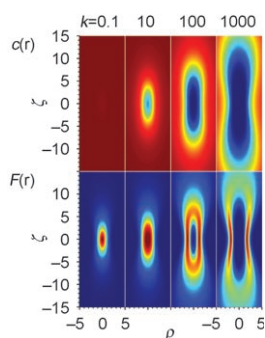
Fluorescence Photobleaching

Z. Petrášek,* P. Schwill

Photobleaching in Two-Photon Scanning
Fluorescence Correlation Spectroscopy

ChemPhysChem

DOI: 10.1002/cphc.200700579



Good agreement: A circularly scanning laser focus studies photobleaching effects as a function of intensity and scan parameters. The observations agree with a theoretical model of photobleaching effects, which takes into account the nonuniform excitation profile, the stationary profile of nonbleached molecules $c(r)$, and the resulting fluorescence profile $F(r)$ (see picture).

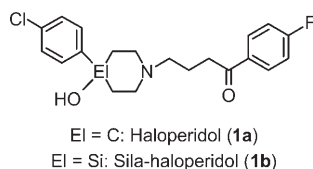
Silicon Drug Analogues

R. Tacke,* F. Popp, B. Müller, B. Theis,
C. Burschka, A. Hamacher,
M. U. Kassack, D. Schepmann,
B. Wünsch, U. Jurva, E. Wellner

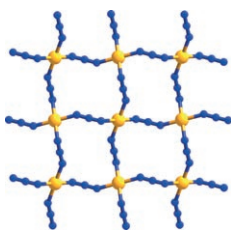
Sila-Haloperidol, a Silicon Analogue of
the Dopamine (D₂) Receptor Antagonist
Haloperidol: Synthesis, Pharmacological
Properties, and Metabolic Fate

ChemMedChem

DOI: 10.1002/cmdc.200700205



Sila-haloperidol (1b), a silicon analogue of the dopamine (D₂) antagonist haloperidol (**1a**), was synthesized. As shown in receptor binding studies, sila-haloperidol (**1b**) shows a higher potency at hD₂ receptors than the parent carbon compound **1a** and exhibits higher subtype selectivity at dopamine receptors and at σ receptors as well. The metabolic fates of the C/Si analogues **1a** and **1b** are totally different.



Two Fe^{II} azides with 1D and 2D topologies, both displaying canted ferromagnetism in agreement with the structural features and other recent findings for Fe^{II} and Mn^{II} azides, were prepared. The new network topology **jsm** is assigned to some related six-connected 3D M^{II} azides.

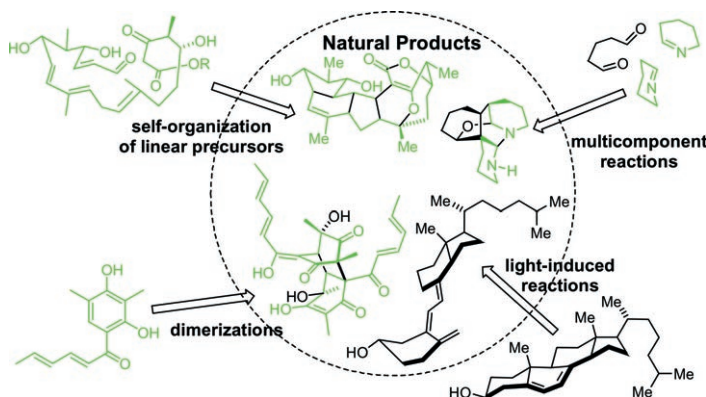
Molecular Magnetism

M. A. M. Abu-Youssef,* V. Langer, D. Luneau, E. Shams, M. A. S. Goher, L. Öhrström*

1D and 2D Fe^{II} Azide Coordination Polymers with Ferromagnetic Canting

Eur. J. Inorg. Chem.

DOI: 10.1002/ejic.200700646



In some cases, complex structures of natural products can be generated with surprising spontaneity, through self-construction mechanisms. Rearrangements of linear molecules, light-induced reac-

tions, dimerizations and multi-component reactions can explain the formation of secondary metabolites through the intrinsic reactivity of their precursors.

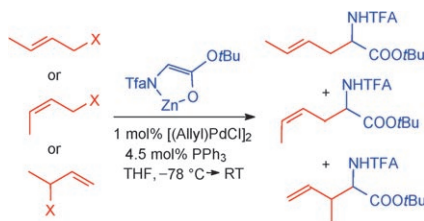
Biomimetic Chemistry

E. Gravel, E. Poupon*

Biogenesis and Biomimetic Chemistry: Can Complex Natural Products Be Assembled Spontaneously?

Eur. J. Org. Chem.

DOI: 10.1002/ejoc.200700331



Do you remember? Chelated amino acid ester enolates are excellent nucleophiles for palladium-catalyzed allylic alkylations. These enolates react rapidly at -78°C and in general without isomerization of π -allyl palladium complexes. Therefore, they are good candidates for mechanistical studies, for example of the memory effect.

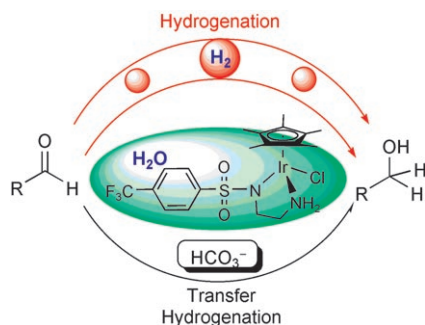
Chelated Enolates

U. Kazmaier,* D. Stolz, K. Krämer, F. L. Zumpe

Influences on the Regioselectivity of Palladium-Catalyzed Allylic Alkylations

Chem. Eur. J.

DOI: 10.1002/chem.200701332



A Cat that loves water: Ir-N-tosyldiamine complexes, previously shown to be excellent catalysts for the transfer hydrogenation of aldehydes in water, also catalyze the hydrogenation of aldehydes in water. The reaction is fast and chemoselective, providing a green and efficient method for the reduction of aromatic, aliphatic, heterocyclic, and α,β -unsaturated aldehydes.

Catalysis in Water

X. Wu, C. Corcoran, S. Yang, J. Xiao*

A Versatile Iridium Catalyst for Aldehyde Reduction in Water

ChemSusChem

DOI: 10.1002/cssc.200700086