

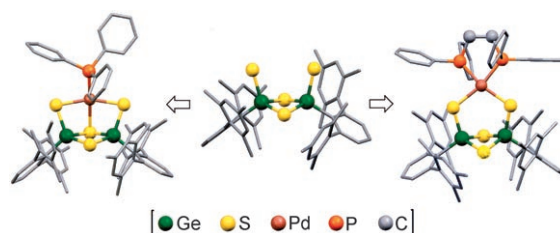
Ge/Pd/S Clusters

T. Matsumoto, Y. Matsui, M. Ito,
K. Tatsumi*

Synthesis of *syn*-2,4-Dimercapto-
1,3,2,4-dithiadigermetane and Its
Application to Ge₂PdS₄ Cluster Synthesis

Chem. Asian J.

DOI: 10.1002/asia.200700355



Group work: *syn*-[DmpGe(SH)(μ-S)₂-
GeDmp(SH)] (Dmp = 2,6-dimesityl-
phenyl) is a new entry to mercaptoger-
manes, synthesized from a series of
polythiadigermabicyclo[x.1.1]alkanes

(x = 3–5) obtained by sulfurization of
DmpGeH₃ in melted elemental sulfur.
The mercaptogermane is a good precur-
sor to heteronuclear complexes com-
posed of Ge and transition metals.

Bioluminescent Substrates

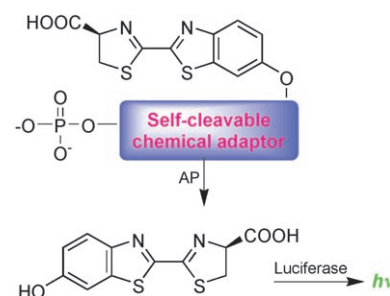
W. Zhou,* C. Andrews,* J. Liu,
J. W. Shultz, M. P. Valley, J. J. Cali,
E. M. Hawkins, D. H. Klaubert,
R. F. Bulleit, K. V. Wood

Self-Cleavable Bioluminescent Luciferin
Phosphates as Alkaline Phosphatase
Reporters

ChemBioChem

DOI: 10.1002/cbic.200700644

After glow. Reactive chemical adaptors
were used to stabilize bioluminescent
phosphates for monitoring alkaline phos-
phatase (AP) activity (see scheme). The
1,6-elimination based luciferin phosphate
exhibited ultrasensitive ability to detect
~10⁻²² mol of AP enzyme in a homoge-
neous solution, and picograms of pro-
tein in an immunoassay.



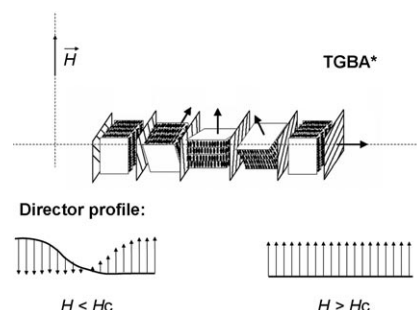
Liquid Crystals

V. Domenici,* C. A. Veracini,
V. Novotná, R. Y. Dong

Twist Grain Boundary Liquid-Crystalline
Phases under the Effect of the Magnetic
Field: A Complete ²H and ¹³C NMR
Study

ChemPhysChem

DOI: 10.1002/cphc.200700647



Magnetic twist: A complete ²H and
¹³C NMR study on a wide range of
TGBA* and TGBC* phases reveals a
peculiar effect of the external magnetic
field in winding and deforming the TGB
supramolecular structure (see picture).

QSAR Studies

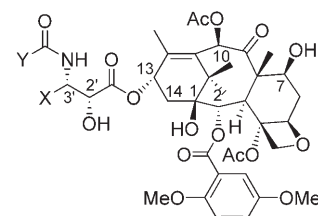
R. P. Verma,* C. Hansch

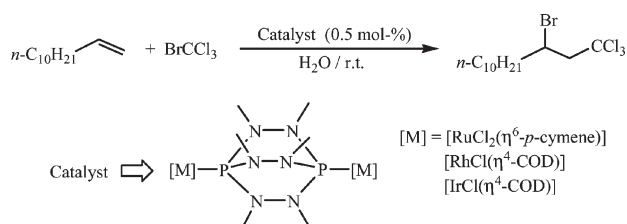
Taxane Analogues against Breast Cancer:
A Quantitative Structure–Activity
Relationship Study

ChemMedChem

DOI: 10.1002/cmdc.200700278

Revealing relationships: Quantitative
structure–activity relationships were
developed for four series of taxane deriv-
atives with respect to their inhibitory
activities against breast cancer cells. The
activities of these taxane derivatives are
largely dependent either on their hydro-
phobicity or the hydrophobic/molar
refractivity descriptor of their substitu-
ents.





The novel dinuclear complexes [{RuCl₂(η⁶-p-cymene)}₂(μ-THDP)] and [{MCl(η⁴-cod)}₂(μ-THDP)] (M = Rh, Ir), containing the bridging ligand tris(1,2-dimethylhydrazino)diphosphane (THDP),

have been synthesized and used as catalysts in the atom-transfer radical addition of bromotrichloromethane to olefins (Kharasch reaction) in aqueous media.

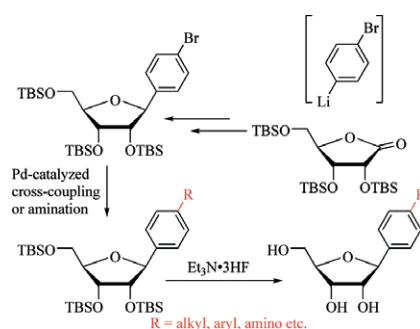
Kharasch Reaction

A. E. Díaz-Álvarez, P. Crochet,*
M. Zablocka,* C. Duhayon, V. Cadierno,
J.-P. Majoral*

Developing the Kharasch Reaction in Aqueous Media: Dinuclear Group 8 and 9 Catalysts Containing the Bridging Cage Ligand Tris(1,2-dimethylhydrazino)diphosphane

Eur. J. Inorg. Chem.

DOI: 10.1002/ejic.200701132



A modular and efficient synthesis of a series of diverse 4- and 3-substituted benzene and aniline C-ribonucleosides was developed on the basis of Pd-catalyzed cross-coupling and amination reactions of protected bromophenyl C-nucleosides.

Benzene C-Ribonucleosides

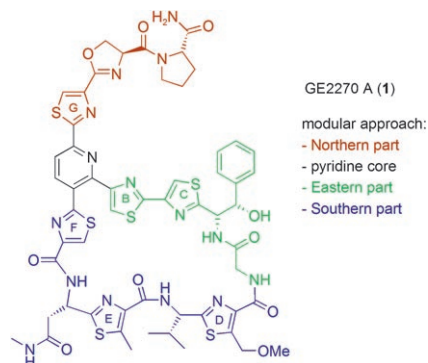
M. Štefko, R. Pohl, B. Klepetářová,
M. Hocek*

A Modular Methodology for the Synthesis of 4- and 3-Substituted Benzene and Aniline C-Ribonucleosides

Eur. J. Org. Chem.

DOI: 10.1002/ejoc.200701168

A modular assembly of the individual thiazole fragments to the central pyridine core was achieved by regioselective cross-coupling reactions giving access to the title compound (see graphic) in an overall yield of 4.8% over 20 steps. The successful implementation of orthogonal metalation and protecting group strategies further contributed to the brevity of the total synthesis.



Antibiotics

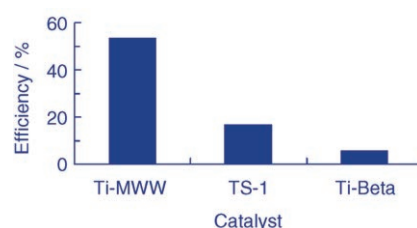
O. Delgado, H. M. Müller, T. Bach*

Concise Total Synthesis of the Thiazolyl Peptide Antibiotic GE2270 A

Chem. Eur. J.

DOI: 10.1002/chem.200701823

Ti time for dioxane: Oxidation of 1,4-dioxane with aqueous H₂O₂ over various titanosilicates was investigated. Use of Ti-MWW as catalyst leads to much higher conversions than with TS-1 and Ti-Beta under solvent-free conditions and is accounted for by a radical mechanism. The number of active intermediate Ti species is highly dependent on the substrate, solvent, and titanosilicate used.



Heterogeneous Catalysis

W. Fan, Y. Kubota, T. Tatsumi*

Oxidation of 1,4-Dioxane over Ti-MWW in the Presence of H₂O₂

ChemSusChem

DOI: 10.1002/cssc.200700003



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