

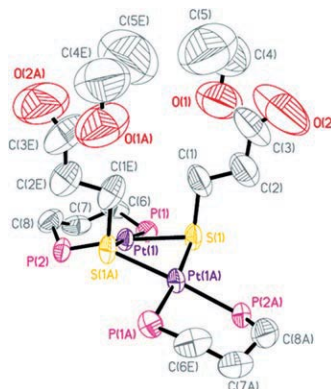
SPOTLIGHTS ...

Platinum–Thiolate Complexes

S. H. Chong, D. J. Young,
T. S. A. Hor*

Pressure-Assisted Hetero- and Homodialkylolation of Sulfide in $[\text{Pt}_2(\mu\text{-S})_2(\text{dppp})_2]$: One-Pot Conversion of $\{\text{Pt}_2(\mu\text{-S})_2\}$ into $\{\text{Pt}_2(\text{SR})_2\}$ and $\{\text{Pt}_2(\text{SR})(\text{SR}')\}$

Chem. Asian J.
DOI: 10.1002/asid.200700203



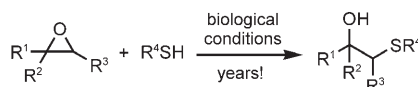
Cool under pressure: Elevated pressure and the use of dppp ($\text{Ph}_2\text{P}(\text{CH}_2)_3\text{PPh}_2$) to enhance the nucleophilicity of the sulfide centers in $[\text{Pt}_2(\mu\text{-SR})(\mu\text{-S})(\text{dppp})_2]^+$ lead to the successful synthesis of novel diplatinum complexes that contain hetero- and homothiolate bridges. Functional alkyls and aryls are thus converted into functional thiolates.

Epoxides

B. J. Albert, K. Koide*

How Rapidly Do Epoxides Nonspecifically Form Covalent Bonds with Thiols in Water?

ChemBioChem
DOI: 10.1002/cbic.200700365



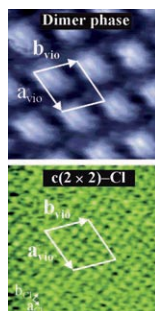
Rating reaction rates. Due to some concerns about the reactivity of epoxides towards the most abundant and powerful nucleophiles, thiols, in a biological setting, we report kinetic data for the consumption of five common epoxide motifs in the presence of a thiol under biologically relevant conditions.

Monolayers

D. T. Pham, K. Wandelt,
P. Broekmann*

2D Ordering Phenomena Under Non-Equilibrium Conditions: An In Situ STM Approach

ChemPhysChem
DOI: 10.1002/cphc.200700507



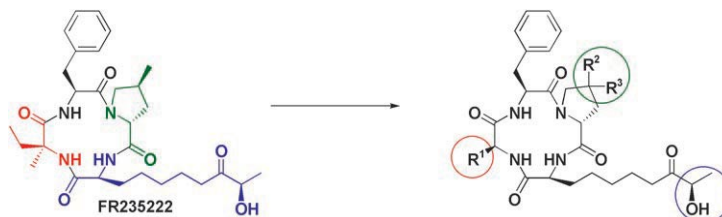
Ordering phenomena: The “reactive” adsorption and lateral ordering of redox-active dibenzyl viologens (DBV) on a chloride-modified Cu(100) electrode surface is studied. At electrode potentials where the first electron transfer step from the di-cationic to the radical mono-cationic viologen takes place, the preferred products at the surface are metastable viologen dimer species (see STM images).

Peptide Analogues

L. Gomez-Paloma, I. Bruno, E. Cini,
S. Khochbin, M. Rodriguez,
M. Taddei,* S. Terracciano, K. Sadoul

Design and Synthesis of Cyclopeptide Analogues of the Potent Histone Deacetylase Inhibitor FR235222

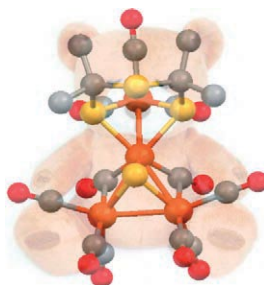
ChemMedChem
DOI: 10.1002/cmdc.200700095



FR235222, one of the most potent HDAC inhibitors, is a natural tetrapeptide formed by some not easily available amino acids. We found that it is possible to build a structurally similar tetrapeptide made with simpler amino

acids but maintaining Ahoda (indispensable) which has the high activity of the parent natural product and shows selective inhibition of class 1 histone deacetylase.

The synthesis of novel structural models for the active site of [Fe-only] hydrogenase is described starting from 1,2,4-trithiolane and its derivatives. The products are characterised by spectroscopic methods and X-ray structure analyses. Density functional calculations are reported for a representative example of the unusual tetranuclear iron clusters formed.



[Fe-only] Hydrogenase Models

J. Windhager, H. Görls, H. Petzold, G. Mloston, G. Linti,* W. Weigand*

Reactions of 1,2,4-Trithiolanes with Nonacarbonyldiiron: Sulfur dithiolatodiiron and -tetrairon Complexes as Mimics for the Active Site of [Fe-only] Hydrogenase

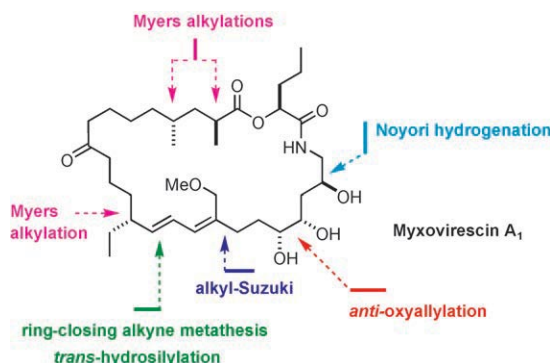
Eur. J. Inorg. Chem.
DOI: 10.1002/ejic.200700465

Natural Products

A. Fürstner,* M. Bonnekessel, J. T. Blank, K. Radkowski, G. Seidel, F. Lacombe, B. Gabor, R. Mynott

Total Synthesis of Myxovirescin A₁

Chem. Eur. J.
DOI: 10.1002/chem.200700926

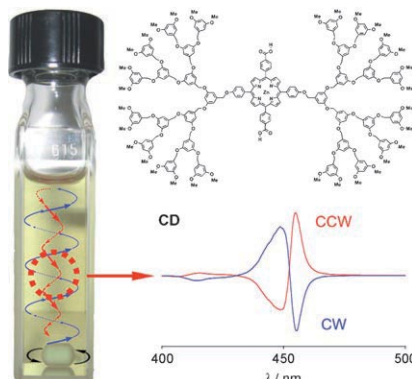


A convergent total synthesis of the antibiotic macrolide myxovirescin A₁ is described that is largely based on reagent- and catalyst-controlled transformations. This includes a highly regioselective Negishi reaction of a dibromo-

alkene, a palladium-catalyzed alkyl-Suzuki coupling, an exquisitely selective ring-closing alkyne metathesis, and a ruthenium-catalyzed *trans*-hydrosilylation tandem.

Macroscopic Chirality

Which way around? J-aggregated zinc porphyrin dendrimer can be used to detect the macroscopic chirality of a vortex. The sign of the circular dichroism response changes quickly upon switching from clockwise (CW) to counterclockwise (CCW) stirring (see picture). The observed chiroptical activity most likely arises from a macroscopic helical alignment of nanofibers formed from the polymeric J-aggregate.



A. Tsuda,* M. A. Alam, T. Harada, T. Yamaguchi, N. Ishii, T. Aida*

Spectroscopic Visualization of Vortex Flows Using Dye-Containing Nanofibers

Angew. Chem. Int. Ed.
DOI: 10.1002/anie.200703083



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