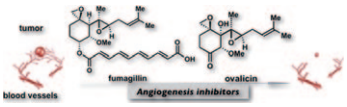
On these pages, we feature a selection of the excellent work that has recently been published in our sister journals. If you are reading these pages on a computer, click on any of the items to read the full article. Otherwise please see the DOIs for easy online access through Wiley InterScience.

Total Synthesis

J. Yamaguchi, Y. Hayashi*

Syntheses of Fumagillin and Ovalicin

Strategic planning! This review focuses on the synthetic strategies used for the construction of fumagillin, ovalicin, and other natural products of this family that are known angiogenesis inhibitors. Despite the relatively small size of these molecules, their syntheses highlight the efficient construction of stereogenic centers in organic synthesis (see scheme).



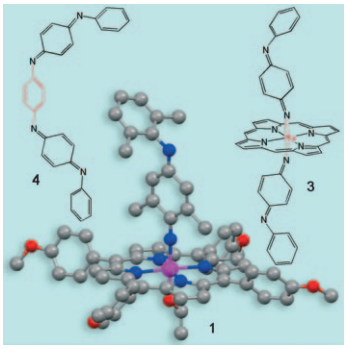
Chem. Eur. J.
DOI: **10.1002/chem.200902433**

Metalloporphyrins

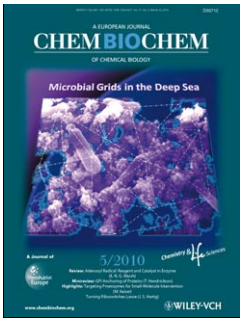
W.-M. Tsui, J.-S. Huang, G. S. M. Tong, S. C. F. Kui, C.-M. Che,* N. Zhu

Quinoneimido Complexes of a Metalloporphyrin: Isolation, X-ray Crystal Structures, and DFT Calculations

Terminal quinoneimido complexes [Ru^{IV}(por)(NQu)(X)] (X = OEt: **1**, OH: **2**) were formed from the reaction of [Ru^{VI}(por)O_2] with 2,6-dimethylaniline. The X-ray crystal structures of **1** feature Ru–N(quinoneimido) bond lengths of 1.787(7)–1.80(2) Å. Reaction of **2** with *N*-phenyl-benzene-1,4-diamine afforded bis(quinoneimido) complex [Ru(por)(NQu)(NQu′)]. DFT calculations on **3** and **4** revealed a significant effect of 'Ru doping' on the oligoaniline structure.



Chem. Asian J.
DOI: **10.1002/asia.200900666**

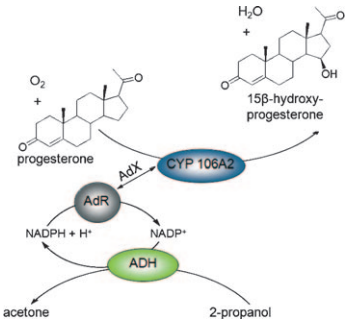


Biocatalysis

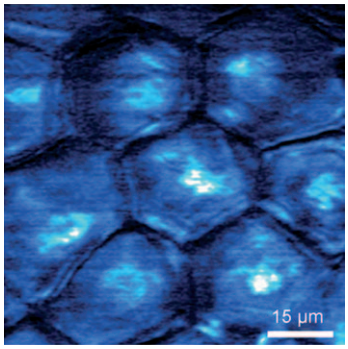
D. Zehentgruber, F. Hannemann, S. Bleif, R. Bernhardt, S. Lütz*

Towards Preparative Scale Steroid Hydroxylation with Cytochrome P450 Monooxygenase CYP106A2

Four proteins join forces: CYP106A2-catalyzed 15β-hydroxylation of progesterone and testosterone could be improved towards higher productivities through the identification of reaction-limiting steps.



ChemBioChem
DOI: **10.1002/cbic.200900706**

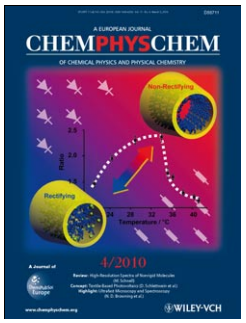


Non-Linear Optics

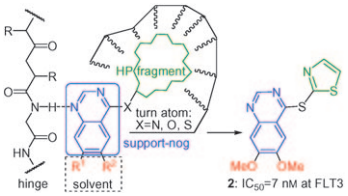
G. Haran*

Targeting Non-Fluorescent Molecules by Nonlinear Optical Imaging

Nonlinear optics to the rescue: Fluorescence-based methods provide powerful means for imaging biological samples (see picture) with molecular specificity. But what if the molecule-of-choice, such as hemoglobin, is non-fluorescent? Novel applications of nonlinear optics provide solutions.



ChemPhysChem
DOI: **10.1002/cphc.200900979**



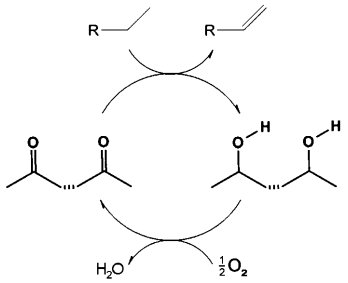
De Novo Design

W.-W. Li, J.-J. Chen, R.-L. Zheng, W.-Q. Zhang, Z.-X. Cao, L.-L. Yang, X.-Y. Qing, L.-X. Zhou, L. Yang, L.-D. Yu, L.-J. Chen, Y.-Q. Wei, S.-Y. Yang*

Taking Quinazoline as a General Support-Nog to Design Potent and Selective Kinase Inhibitors: Application to FMS-like Tyrosine Kinase 3

Molecular joinery: Herein we propose a concept for the design of selective kinase inhibitors. This de novo design method involves restricted fragment growth by using quinazoline as a general molecular support-nog. Application of this concept to the design of FMS-like tyrosine kinase 3 (FLT3) inhibitors led to a potent (IC_{50} = 7 nM) and selective FLT3 inhibitor.

ChemMedChem
DOI: **10.1002/cmdc.200900537**

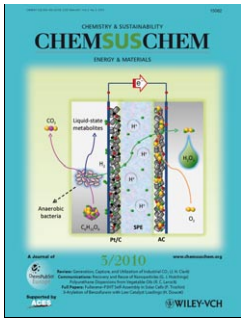


Metal-Free Catalysis

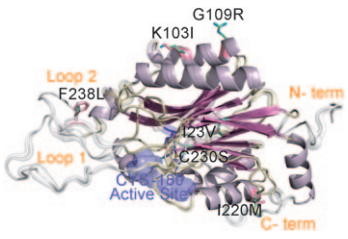
D. S. Su,* J. Zhang, B. Frank, A. Thomas,* X. Wang, J. Paraknowitsch, R. Schlögl

Metal-Free Heterogeneous Catalysis for Sustainable Chemistry

No heavy metal: This Review highlights recent promising activities and developments in heterogeneous catalysis using only carbon and carbon nitride as catalysts. Carbon and carbon nitride combine environmental acceptability with inexhaustible resources and allow a favorable management of energy with good thermal conductivity.



ChemSusChem
DOI: **10.1002/cssc.200900180**

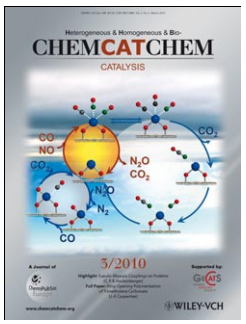


Enzymes

U. Schreiner, G. Steinkellner, J. D. Rozzell, A. Glieder, M. Winkler*

Improved Fitness of *Arabidopsis thaliana* Nitrilase 2

A matter of fitness: An *Arabidopsis thaliana* nitrilase 2 (NIT2) variant with improved specific activity is generated by error prone PCR followed by recombination of advantageous mutations. The improvement is shown not only for the test substrate phenylacetonitrile but also for a diverse set of aromatic nitriles, dicyanides, and other functionalized nitriles.



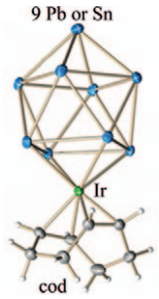
ChemCatChem
DOI: **10.1002/cctc.200900212**

Bimetallic Clusters

D. O. Downing, P. Zavalij, B. W. Eichhorn*

The *closo*-$[Sn_9Ir(cod)]^{3-}$ and $[Pb_9Ir(cod)]^{3-}$ Zintl Ions: Isostructural Ir^{I} Derivatives of the *nido*-E_9^{4-} Anions (E = Sn, Pb)

The ions $[Sn_9Ir(cod)]^{3-}$ and $[Pb_9Ir(cod)]^{3-}$ (cod = 1,5-cyclooctadiene) were synthesized and the reactions of the labile Ir complexes with Sn_9^{4-} and Pb_9^{4-} studied. Both clusters possess a C_{4v}-type *closo*-deltahedral structure with 22 electrons and are diamagnetic. The clusters described are the first Ir–Sn and Ir–Pb bimetallic clusters and are examples of homologous Sn-Pb transition-metal derivatives.



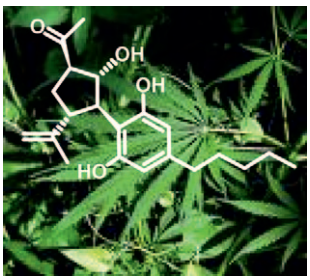
Eur. J. Inorg. Chem.
DOI: **10.1002/ejic.200900983**

Natural Products

O. Taglialatela-Scafati,* A. Pagani, F. Scala, L. De Petrocellis, V. Di Marzo, G. Grassi, G. Appendino*

Cannabimovone, a Cannabinoid with a Rearranged Terpenoid Skeleton from Hemp

A nonpsychotropic variety of *Cannabis sativa* L. afforded cannabimovone, a new type of cannabinoid characterized by a rearrranged terpenoid skeleton and a biological profile similar to that of cannabidiol. Attempts to prepare cannabimovone from cannabidiol gave only the intramolecular oxy-Michael adduct of the crotonized natural product, a compound with a biological profile similar to that of THC.



Eur. J. Org. Chem.
DOI: **10.1002/ejoc.200901464**