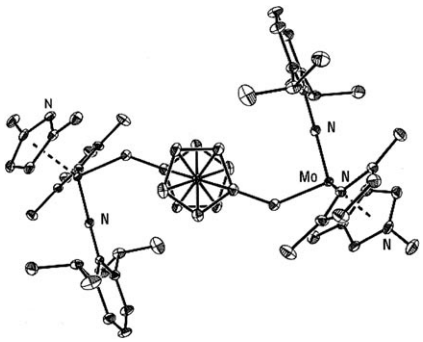
Bifunctional Complexes

A. J. Gabert, R. R. Schrock,* P. Müller

Synthesis of Bifunctional Imido Alkylidene Bis Pyrrolide Complexes of Molybdenum and Their Conversion into Bifunctional Imido Alkylidene Diolate Complexes That Can Be Employed as ROMP Initiators

Chem. Asian J.
DOI: **10.1002/asia.200800076**

A "bifunctional" approach to triblocks has been employed in order to synthesize triblocks from monomers that are prone to ring-opening metathesis polymerization (ROMP). The synthesis of three pyrrolide complexes and the reaction of these complexes with various chiral diols is reported and shows that bifunctional diolate complexes may be employed as initiators for ROMP.



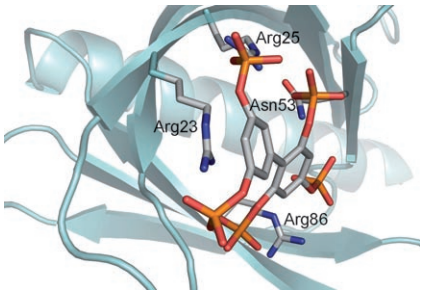
Cell Signalling

S. J. Mills, F. Vandeput, M. N. Trusselle, S. T. Safrany, C. Erneux, B. V. L. Potter*

Benzene Polyphosphates as Tools for Cell Signalling: Inhibition of Inositol 1,4,5-Trisphosphate 5-Phosphatase and Interaction with the PH Domain of Protein Kinase Bα

ChemBioChem
DOI: **10.1002/cbic.200800104**

Benzene polyphosphates, which are emerging as new cell signalling tools, were synthesised and evaluated as inhibitors of type I $Ins(1,4,5)P_3$ 5-phosphatase and of the pleckstrin homology (PH) domain of protein kinase Bα (PKBα). Biphenyl 2,3′,4,5′,6-pentakisphosphate exhibits a low nanomolar K_i value at the PH domain of PKBα.



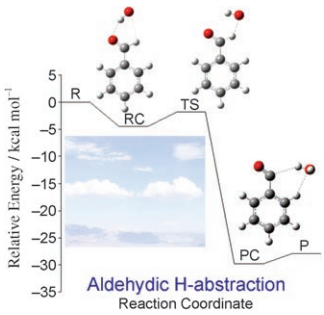
Atmospheric Chemistry

C. Iuga, A. Galano, A. Vivier-Bunge*

Theoretical Investigation of the $OH^{\bullet}$-Initiated Oxidation of Benzaldehyde in the Troposphere

ChemPhysChem
DOI: **10.1002/cphc.200800144**

Aldehydic abstraction dominates: A mechanistic and kinetic study of the $OH^{\bullet}$-initiated oxidation of benzaldehyde is carried out using quantum chemical methods and classical transition state theory. The aldehydic abstraction is the most important reaction channel within the entire range of temperatures studied (see graphic), especially at the temperatures relevant to atmospheric chemistry.

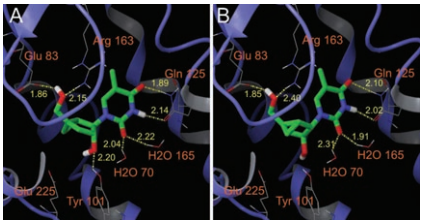


Asymmetric Synthesis

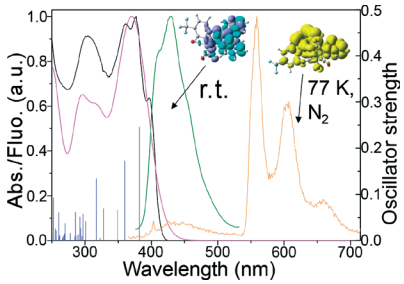
M. J. Comin, B. C. Vu, P. L. Boyer, C. Liao, S. H. Hughes, V. E. Marquez*

D-(+)-*iso*-Methanocarbathymidine: a High-Affinity Substrate for Herpes Simplex Virus 1 Thymidine Kinase

ChemMedChem
DOI: **10.1002/cmdc.200800027**



Herpes thymidine kinase recognizes exclusively the (+)-D enantiomer of racemic *iso*-methanocarbathymidine (*iso*-MCT). This was shown after achieving the stereoselective syntheses of both (+)-D and (−)-L enantiomers of the active racemate. The bicyclo[3.1.0]hexane scaffold seems to provides an optimal combination of sugar pucker, nucleobase orientation, and disposition of hydroxy groups for efficient substrate activity.



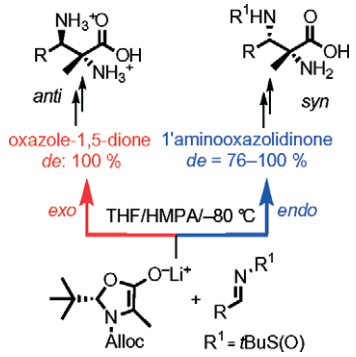
Synthesis, characterization, and photophysical properties of new $Re(CO)_3Cl$ complexes containing 1-pyridylimidazo-[1,5-*a*]pyridine ligands are presented. The complexes display high-energy singlet emissions arising from a $\pi \rightarrow \pi^*$ ligand-centered state and intense ligand-centered triplet emission in oxygen-free acetonitrile solutions. The nature of the excited states was analyzed by using TDDFT methods.

Luminescent Rhenium Complexes

C. Garino, T. Ruiu, L. Salassa, A. Albertino, G. Volpi, C. Nervi, R. Gobetto,* K. I. Hardcastle

Spectroscopic and Computational Study on New Blue Emitting $ReL(CO)_3Cl$ Complexes Containing Pyridylimidazo[1,5-*a*]pyridine Ligands

Eur. J. Inorg. Chem.
DOI: **10.1002/ejic.200800348**



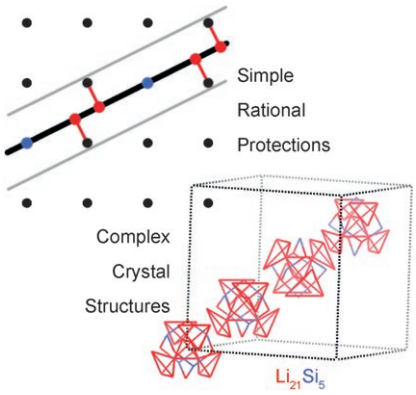
Chiral $\alpha^{2,2},\beta^3$-diamino acids were synthesized by double stereoinduction reactions of chiral oxazolidinone enolates with *N*-sulfinyl aldimines. Among a variety of highly functionalized diamino acids, this highly diastereoselective protocol provides a synthetic route for yet unreported *C*-glycosyl and α-nucleoside diamino acids.

$\alpha^{2,2},\beta^3$-Diamino Acids

A. Guerrini,* G. Varchi,* C. Samorì, A. Battaglia

Synthesis of $\alpha^{2,2},\beta^3$-Diamino Acids by Double Stereodifferentiation Aldol Addition of Oxazolidinone Enolates to *N*-(*tert*-Butylsulfinyl) Imines

Eur. J. Org. Chem.
DOI: **10.1002/ejoc.200800356**



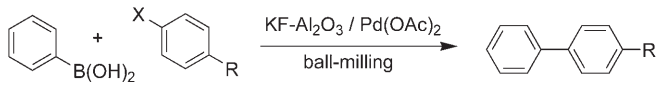
Parallel structure: Several complex cubic crystal structures of varying size and complexity (including $Li_{21}Si_5$, lower right) are shown to be rational projections of the same higher dimensional crystal lattice (schematic, upper left). This suggests the possible existence of a parent quasicrystal—one with perpendicular pseudo fivefold axes—which has never been observed.

Quasicrystals

R. F. Berger, S. Lee,* J. Johnson, B. Nebgen, A. C.-Y. So

Laves Phases, γ-brass, and $2\times2\times2$ Superstructures: A New Class of Quasicrystal Approximants and the Suggestion of a New Quasicrystal

Chem. Eur. J.
DOI: **10.1002/chem.200800336**



Run of the 'mill: An inorganic support ($KF\text{-}Al_2O_3$) was used to generate the base in situ for Suzuki reactions carried out using mechanochemical treatment in a ball mill. Various aryl halides were tested in the Pd-catalyzed coupling reaction with phenylboronic acid and $KF\text{-}Al_2O_3$. The best results were obtained with aryl bromides.

Solid-State Reactions

F. Schneider, B. Ondruschka*

Mechanochemical Solid-State Suzuki Reactions Using an In Situ Generated Base

ChemSusChem
DOI: **10.1002/cssc.200800086**

Auf diesen beiden Seiten weisen wir auf wichtige aktuelle Beiträge in unseren Schwesterzeitschriften hin. Wenn Sie die Seiten online lesen, dann können Sie die Artikel mit einem Klick direkt aufrufen, ansonsten sind sie durch Eingabe der DOIs über Wiley InterScience leicht online zugänglich.