

Carboxylic Esters

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Synthesis of Diamino Carboxylic Esters by Palladium-Catalyzed Oxidative Intramolecular Diamination of Acrylates

Chem. Asian J.

DOI: 10.1002/asia.200800148



To make Ns meet: The development of a palladium-catalyzed direct diamination of acrylates enables the synthesis of 2,3-diamino carboxylates. The ester group can be used for subsequent

elaboration of more-complex diamine derivatives. This is exemplified by a short synthesis of the alkaloid absoulone. Tos = 4-toluenesulfonyl.

cAMP Analogues

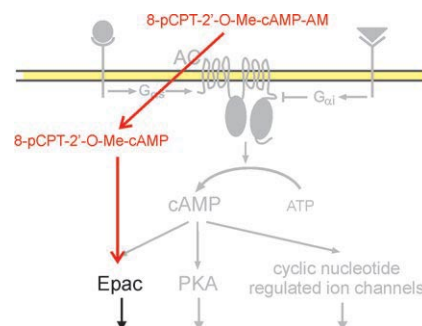
M. J. Vliem, B. Ponsioen, F. Schwede,
W.-J. Pannekoek, J. Riedl,
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8-pCPT-2'-O-Me-cAMP-AM: An Improved Epac-Selective cAMP Analogue

ChemBioChem

DOI: 10.1002/cbic.200800216

An Epac-selective precursor with high potency: Signalling by the second messenger cAMP is mediated by its receptor proteins protein kinase A (PKA), Epac and cyclic-nucleotide-regulated ion channels. This manuscript describes the synthesis and biological characterisation of a precursor that selectively activates Epac and that is 100 to 1000 times more efficient under biological conditions than the parental compound.



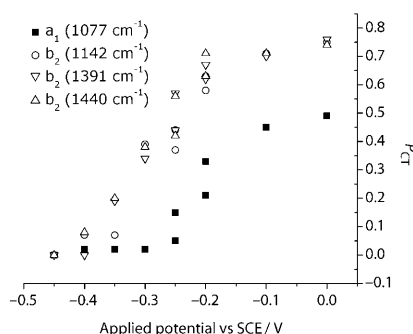
Surface-Enhanced Raman Spectroscopy

C. Chenal, R. L. Birke,*
J. R. Lombardi

Determination of the Degree of Charge-Transfer Contributions to Surface-Enhanced Raman Spectroscopy

ChemPhysChem

DOI: 10.1002/cphc.200800221



Quantitative clear contributions: The degree of charge transfer (P_{CT}), a dimensionless parameter, provides an experimental tool to express the amount of charge-transfer contribution to an observed spectral line in SERS. The usefulness of this parameter is tested on various systems (see figure showing degree of charge transfer in p-aminothiophenol).

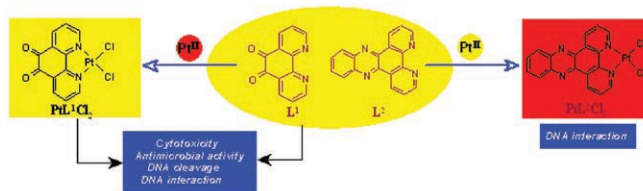
Anticancer Drugs

S. Roy, K. D. Hagen,
D. P. U. Maheswari, M. Lutz,
A. L. Spek, J. Reedijk,*
G. P. van Wezel*

Phenanthroline Derivatives with Improved Selectivity as DNA-Targeting Anticancer or Antimicrobial Drugs

ChemMedChem

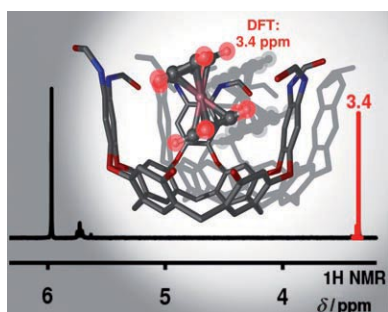
DOI: 10.1002/cmdc.200800097



Leading a double life: The dual action of DNA-targeting drugs as both anti-neoplastic and antimicrobial agents is exemplified by the phenanthroline de-

rivatives and then resolved through their complexation with Pt leading to greater specificity and hence improved therapeutic utility.

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Tumbling guests: The inclusion process of a series of metallocenes inside the aromatic cavity of a self-folding cavitand (see figure) has been elucidated by a combined experimental and theoretical approach. We have also studied the dissimilar motions experienced by the metallocene guests included inside the aromatic cavity of the host.

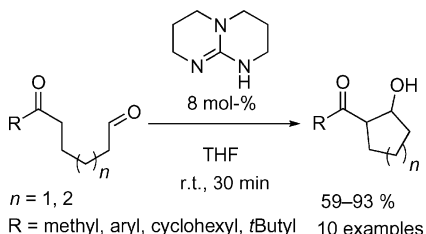
Inclusion Complexes

E. Zuidema, M. A. Sarmentero, C. Bo,* P. Ballester*

A Combined Experimental and Theoretical Study of the Molecular Inclusion of Organometallic Sandwich Complexes in a Cavitand Receptor

Chem. Eur. J.
DOI: 10.1002/chem.200800628

1,5,7-Triazabicyclo[4.4.0]dec-5-ene represents a new and very active class of organocatalysts for the direct 5- and 6-*enolexo* aldolization of unfunctionalized acyclic ketoaldehydes. The aldol addition products are obtained in good-to-excellent yields.



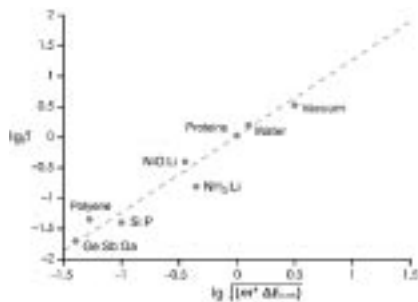
Direct enolexo Aldolizations

C. Ghobril, C. Sabot, C. Mioskowski, R. Baati*

TBD-Catalyzed Direct 5- and 6-*enolexo* Aldolization of Ketoaldehydes

Eur. J. Org. Chem.
DOI: 10.1002/ejoc.200800539

A new vision for ET: Electron-transfer (ET) processes in biological and synthetic materials (such as proteins and semiconductors, respectively) are of immense importance. A unified approach to describe these processes is useful in understanding, and controlling the various facets of electron transfer in condensed matter. The diagram shows a plot of the decay constant for the electron-tunneling process against the effective tunneling barrier in different materials.

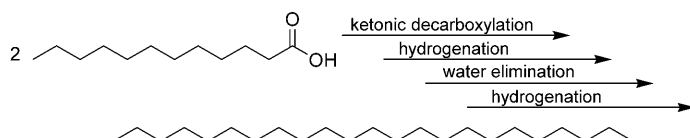


Electron Transfer

P. P. Edwards,* H. B. Gray, M. T. J. Lodge, R. J. P. Williams*

Electron Transfer and Electronic Conduction through an Intervening Medium

Angew. Chem. Int. Ed.
DOI: 10.1002/anie.200703177



In bed with magnesium: Long-chain alkanes that can be used as alternative premium diesel or lubricants can be obtained by a four-step process in a single reactor with two catalyst beds. First, two fatty acid molecules are cou-

pled by ketonic decarboxylation over MgO. The carbonyl product is then hydrogenated, and after the elimination of water the resulting olefin is further hydrogenated to produce the alkane in up to 58% yield (Pt/MgO).

Biomass Conversion

A. Corma,* M. Renz, C. Schaverien

Coupling Fatty Acids by Ketonic Decarboxylation Using Solid Catalysts for the Direct Production of Diesel, Lubricants, and Chemicals

ChemSusChem
DOI: 10.1002/cssc.200800103



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