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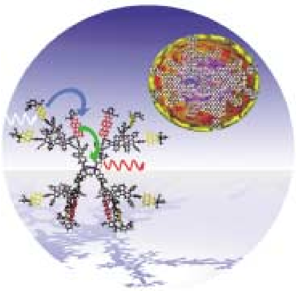
COVER PICTURE

The cover picture shows the calculated energy-minimized 3D-structure of a polyphenylene dendrimer, which was prepared in a multistep synthesis. The nanoparticle carries three different types of chromophores, located in the center (terrylene), within the scaffold (perylene), and at the periphery (naphthalene). This multichromophoric triad absorbs over the whole range of the visible spectrum and shows, as shown in the picture, a stepwise vectorial energy transfer over a distance of 30 Å from the surface to the core. There is more about polyphenylene chromophores in the communication from Müllen et al. on p. 1904 ff.

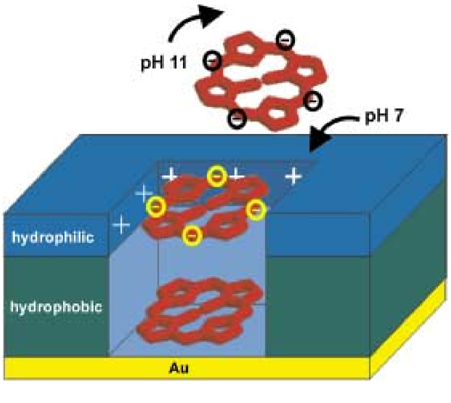


REVIEW

Contents

Hydrogen-bond chains and stiff segments rigidify spherical lipid membranes in bulk water and molecular monolayers on carrier systems. Reactive components can be anchored within them at any desired separation on the Ångström scale. Reactive nanometer-sized hills and clefts are thus accessible and should be useful in the construction of complex reaction systems, including redox-active dyes (see picture).

Angew. Chem. **2002**, *114*, 1906–1931

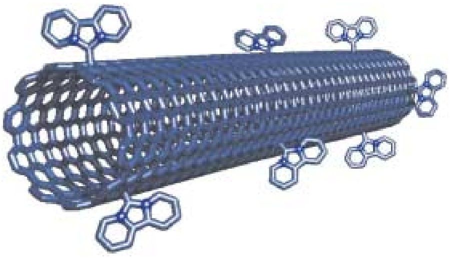


G. Li, W. Fudickar, M. Skupin, A. Klyszcz, C. Draeger, M. Lauer, J.-H. Fuhrhop* 1828–1852

Rigid Lipid Membranes and Nanometer Clefts: Motifs for the Creation of Molecular Landscapes

Keywords: membranes · molecular landscapes · nanostructures · self-assembly · synkinesis

MINIREVIEW



Soluble carbon nanotubes can be obtained by chemical derivatization, such as functionalization of defects, covalent sidewall functionalization (see picture), and noncovalent formation of adducts with surfactants or polymers. This new nanochemistry not only provides a combination of the unprecedented materials properties of nanotubes with those of other compound classes, but also forms the basis for the processibility of these systems.

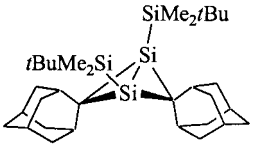
Angew. Chem. **2002**, *114*, 1933 – 1939

A. Hirsch* .... 1853 – 1859

Functionalization of Single-Walled Carbon Nanotubes

Keywords: addition · carbon allotropes · electronic components · host – guest systems · nanotubes

HIGHLIGHTS



1

Si bond-stretch isomers? Different Si–Si separations are proposed for the bond-stretch isomers of tetrasilabicyclobutane compounds. With **1**, the existence of an isomer with a longer bond between the bridge-head Si atoms could be demonstrated. Thus the Si compound **1** has been obtained even before the corresponding carbon homologue. With regard to the great advances in the chemistry of small Si rings, other ring systems are discussed.

Angew. Chem. **2002**, *114*, 1941 – 1943

R. Koch, M. Weidenbruch* 1861 – 1863

A Spiropentasiladiene and Other Strained Silicon-Containing Rings

Keywords: bond-stretch isomers · silicon · small-ring systems · solid-state structures · spiro compounds

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"Definitely not" is the answer to the question posed in the title: New experiments, which allow a comparison between microwave reaction conditions and conventional reaction conditions for the first time, support this statement. However, it has not yet been clarified whether or not there are special microwave effects in the selectivity of chemical reactions.

Angew. Chem. **2002**, *114*, 1943 – 1946

N. Kuhnert* .... 1863 – 1866

Microwave-Assisted Reactions in Organic Synthesis —Are There Any Nonthermal Microwave Effects?

Keywords: microwave chemistry · solid-phase synthesis · solvent effects · synthetic methods

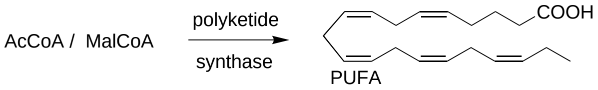
VIPs

The following communications are "Very Important Papers" in the opinion of two referees. They will be published shortly. Short summaries of these articles can be found on the *Angewandte Chemie* homepage at the address http://www.angewandte.com

Catalytic Activity and Poisoning of Specific Sites on Supported Metal Nanoparticles	J. Hoffmann, V. Johánek, J. Hartmann, J. Libuda,* H.-J. Freund
Understanding Zeolite Catalysis: Inverse Shape Selectivity Revised	M. Schenk, S. Calero, T. L. M. Maesen, L. L. van Benthem, M. G. Verbeek, B. Smit*
Highly Selective Transport of Organic Compounds by Using Supported Liquid Membranes Based on Ionic Liquids	L. C. Branco, J. G. Crespo, C. A. M. Afonso*
Atom-Transfer Tandem Radical Cyclization Reactions Promoted by Lewis Acids	D. Yang,* S. Gu, H.-W. Zhao, N.-Y. Zhu

1433-7851/02/4111-1812 $ 20.00+.50/0

Psychrophilic marine bacteria can produce polyunsaturated fatty acids (PUFAs; see scheme). Until recently, PUFAs were known as important metabolites exclusively produced by eukaryotes with oxygen-dependent desaturases. Surprisingly, functional analysis of a PUFA biosynthetic gene cluster from *Shewanella* sp. strain SCRC2738 points towards a unique mixed pathway involving a polyketide synthase.



Angew. Chem. **2002**, *114*, 1947–1950

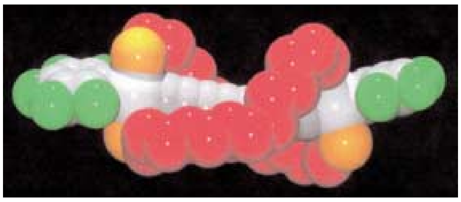
U. Kaulmann, C. Hertweck* 1866–1869

Biosynthesis of Polyunsaturated Fatty Acids by Polyketide Synthases

Keywords: biosynthesis · biotechnology · fatty acids · marine bacteria · polyketides

COMMUNICATIONS

Neither bonding interactions between the strands nor covalent bonds to metal templates dispersed throughout the strands are needed for the molecules presented here to adopt double-helical structures (see picture). The molecules consist of rigid $(C{\equiv}C)_m$ chains that bridge two platinum atoms, which are in turn bridged by two diphosphane ligands of the formula $Ar_2P(CH_2)_nPAr_2$.



Angew. Chem. **2002**, *114*, 1951–1957

J. Stahl, J. C. Bohling, E. B. Bauer,
T. B. Peters, W. Mohr,
J. M. Martín-Alvarez, F. Hampel,
J. A. Gladysz* 1871–1876

sp Carbon Chains Surrounded by sp^3 Carbon Double Helices: A Class of Molecules that are Accessible by Self-Assembly and Models for "Insulated" Molecular-Scale Devices

Keywords: Helical structures · Metathesis · Molecular devices · Platinum · Self-assembly

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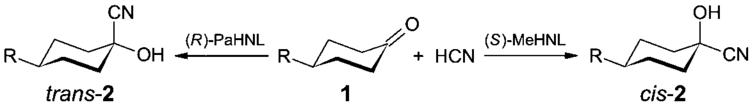
The choice of enzyme is decisive: for the enzyme-catalyzed addition of HCN to 4-substituted cyclohexanones **1**, highly selective biocatalysts are available that allow control to yield the *cis* or the *trans* addition product **2**. Modeling of the *S* enzyme–substrate complex reveals remarkable parallels with the Prelog/Ringold model of the LADH-catalyzed hydrogenation of cyclohexanones.



Angew. Chem. **2002**, *114*, 1957–1959

F. Effenberger,* J. Roos,
C. Kobler 1876–1879

cis–trans Selectivity of Enzyme-Catalyzed Additions to 4-Substituted Cyclohexanones—Correlation with the Prelog/Ringold Model of Enzymatic Hydrogenation

Keywords: cyanohydrins · enzyme catalysis · ketones · lyases · molecular modeling

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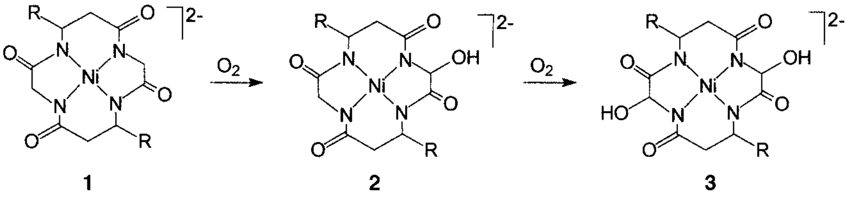
Hydroxy groups added consecutively: the reaction of Ni^{II} cyclotetrapeptide complexes **1** with oxygen affords selective and stepwise α-C hydroxylation of the two ligand glycine units (formation of **2** and **3**). The mechanism of these reactions, which occur via Ni^{III} intermediates, is related to the function of the copper-containing enzyme peptidylglycine α-hydroxylating monooxygenase (PHM).



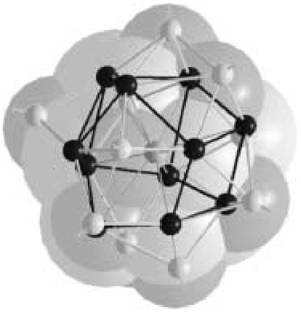
Angew. Chem. **2002**, *114*, 1969–1972

K. Haas, H. Dialer, H. Piotrowski,
J. Schapp, W. Beck* 1879–1881

Selective α-Carbon Hydroxylation of Glycine in Nickel(II)–Cyclotetrapeptide Complexes by Oxygen

Keywords: amino acids · cyclopeptides · hydroxylation · nickel · N ligands

A nanostructured phase: this is how the Ga_{22} unit in the $[Ga_{12}(GaR)_{10}]^{2-}$ cluster (see picture), which exhibits a structure distinctly different from the one reported for other Ga_{22} units, can be interpreted. In this cluster 11 Ga atoms (black spheres) are grouped around a central Ga atom, this Ga_{12} core is then stabilized by ten GaR units.



Angew. Chem. **2002**, *114*, 1959–1962

A. Schnepf,* G. Stösser,
H. Schnöckel* 1882–1884

$[Ga_{22}\{N(SiMe_3)_2\}_{10}]^{2-}$: A Metalloid Cluster Compound with a Variation of the Ga_{22} Framework

Keywords: cluster compounds · gallium · metal–metal interactions · subvalent compounds

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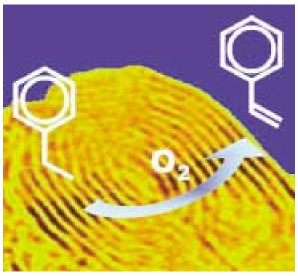
The microstructure is appealing: Onion-like carbon forms are used for the first time in the field of catalysis and thus open new routes for the potential applications of nonplanar carbon materials. An example is given with the oxidative dehydrogenation of ethylbenzene to styrene (see scheme).



Angew. Chem. **2002**, *114*, 1962–1966

N. Keller, N. I. Maksimova,
V. V. Roddatis, M. Schur, G. Mestl,*
Y. V. Butenko, V. L. Kuznetsov,
R. Schlögl* 1885–1888

The Catalytic Use of Onion-Like Carbon Materials for Styrene Synthesis by Oxidative Dehydrogenation of Ethylbenzene

Keywords: carbon allotropes · dehydrogenation · heterogeneous catalysis · surface chemistry

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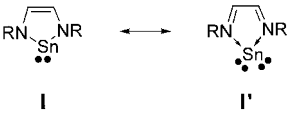
The cyclic stannylenes I which are accessible by transamination from $[Sn(NSiMe_3)_2]$ and α-amino aldimines undergo easy cheletropic decomposition and may formally transfer a “naked” tin atom to a diazadiene. Computational studies suggest an electronic polarization in the form of the chelated atom canonical structure **I′** as the reason for this behavior.



Angew. Chem. **2002**, *114*, 1966–1969

T. Gans-Eichler, D. Gudat,*
M. Nieger 1888–1891

Tin Analogues of “Arduengo Carbenes”: Synthesis of 1,3,2λ^2-Diazastannoles and Transfer of Sn Atoms between a 1,3,2λ^2-Diazastannole and a Diazadiene

Keywords: carbene homologues · cheletropic reaction · cycloaddition · oxidative addition · tin

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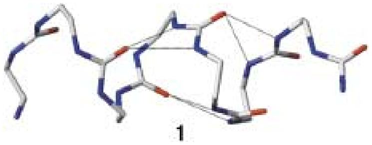
Closely related to the (*P*)2.6$_{14}$ helix of γ-peptides: Heptamer **1** bearing side chains of Ala, Val, and Tyr adopts a stable 2.5-helical secondary structure in solution that is characterized by a pitch of approximately 5.1 Å and by the simultaneous presence of 12- and 14-membered hydrogen-bonded rings. Thus *N,N′*-linked oligoureas belong to the growing family of non-natural non-peptide oligomers with defined and predictable secondary structure.



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Angew. Chem. **2002**, *114*, 1973–1975

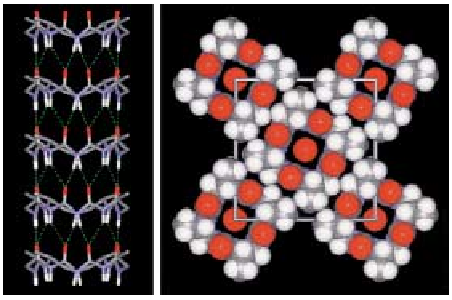
V. Semetey, D. Rognan, C. Hemmerlin,
R. Graff, J.-P. Briand, M. Marraud,
G. Guichard* 1893–1895

Stable Helical Secondary Structure in Short-Chain N,N′-Linked Oligoureas Bearing Proteinogenic Side Chains

Keywords: molecular modeling · NMR spectroscopy · oligoureas · peptidomimetics · structure elucidation

Square-shaped hydrogen-bonded polar nanotubes are formed when the C_4-symmetrical *all-S* cyclotetraurea bearing side chains of alanine self-assembles in the solid state (see picture). The four urea fragments in the macrocyle present an *all-trans* planar conformation with an unidirectional alignment of all the carbonyl groups. The anisotropy is further maintained in the crystal as neighboring tubes are all arranged in the same direction.

Angew. Chem. **2002**, *114*, 1975 – 1978



V. Semetey, C. Didierjean, J.-P. Briand, A. Aubry, G. Guichard* .... 1895 – 1898

Self-Assembling Organic Nanotubes from Enantiopure Cyclo-*N*,*N*′-Linked Oligoureas: Design, Synthesis, and Crystal Structure

Keywords: macrocycles · nanotubes · peptidomimetics · self-assembly · solid-state structures

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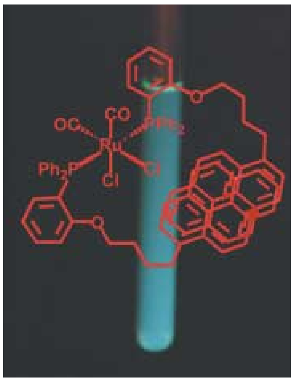
From weak blue to intense blue-green: this change in emission results when $[RuCl_2(POC4Pyr\text{-}P,O)_2]$ reacts with carbon monoxide. The reason is the formation of the dicarbonyl complex shown (see picture), in which CO has replaced the labile coordinating site of the hemilabile ligand POC4-Pyr. The increased flexibility in the tethered pyrenyl groups allows the formation of inter- and intramolecular excimers in this complex. POC4Pyr = 4-{2-(diphenylphosphanyl)phenoxy}-butylpyrene.

Angew. Chem. **2002**, *114*, 1978 – 1980



C. W. Rogers, M. O. Wolf* 1898 – 1900

Drastic Luminescence Response to Carbon Monoxide from a Ru^{II} Complex Containing a Hemilabile Phosphane Pyrene Ether

Keywords: fluorescence · hemilabile ligands · ruthenium · sensors

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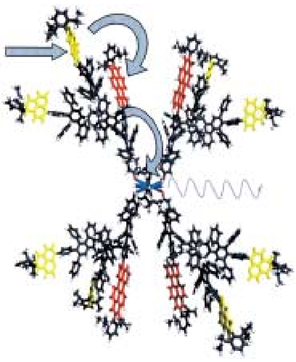
Dendritic multichromophores based on a rigid polyphenylene scaffold contain up to three different types of rylene chromophores incorporated at the focal point, the scaffold, and the periphery of the dendrimer. An energy gradient between the periphery and the core is thus generated and allows an efficient transfer of excitation energy (see picture).

Angew. Chem. **2002**, *114*, 1980 – 1984



T. Weil, E. Reuther, K. Müllen* .... 1900 – 1904

Shape-Persistent, Fluorescent Polyphenylene Dyads and a Triad for Efficient Vectorial Transduction of Excitation Energy

Keywords: chromophores · dendrimers · dyes/pigments · energy transfer · light harvesting

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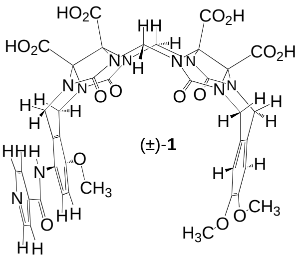
Enantiomeric self-recognition is triggered by addition of $[Pd(ONO_2)(en)]$ (**2**; en = 1,2-ethylenediamine) to a solution of (±)-**1** in water, a process that results in a 2:2 aggregate ($\mathbf{1}_2 \cdot \mathbf{2}_2$ and $(ent\text{-}\mathbf{1})_2 \cdot \mathbf{2}_2$) of well-defined geometry. The use of analytical ultracentrifugation as a tool for the elucidation of molecular weight and stoichiometry in synthetic self-assembly studies is highlighted.

Angew. Chem. **2002**, *114*, 1985 – 1987



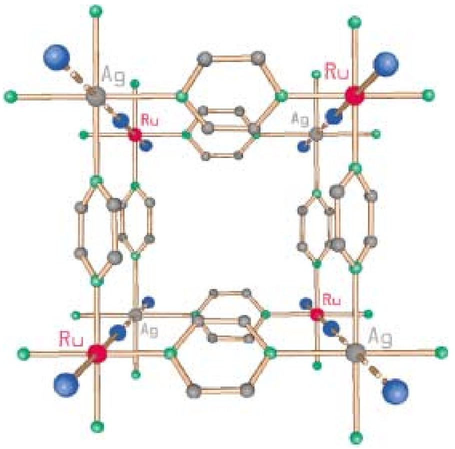
L. Isaacs,* D. Witt .... 1905 – 1907

Enantiomeric Self-Recognition of a Facial Amphiphile Triggered by $[\{Pd(ONO_2)(en)\}_2]$

Keywords: amphiphiles · hydrophobic effect · palladium · pi interactions · glycoluril · self-assembly

Three structural motifs have been obtained by using the novel building block *trans*-[$RuCl_2(pyz)_4$] with different silver salts: A two-dimensional network with an unprecedented double-honeycomb topology, a three-dimensional array with the rutile (6,3) structure, and an interesting tetragonal network with both Ru and Ag in octahedral environments, which can be related to the rock-salt topology (see picture).

Angew. Chem. **2002**, *114*, 1987–1991



L. Carlucci, G. Ciani,* F. Porta,
D. M. Proserpio,
L. Santagostini 1907–1911

Crystal Engineering of Mixed-Metal Ru–Ag Coordination Networks by Using the *trans*-[$RuCl_2(pyz)_4$] (pyz = pyrazine) Building Block

Keywords: coordination polymers · N ligands · ruthenium · silver

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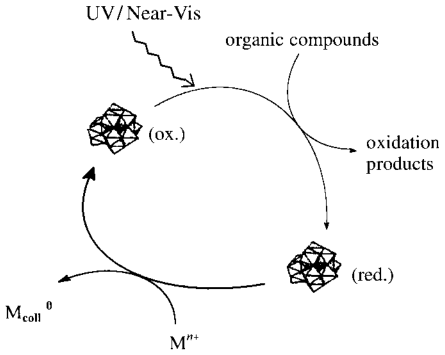
Fine metal nanoparticles of Ag, Au, Pd, and Pt were obtained at room temperature, by simple mixing of the corresponding metal ions with reduced polyoxometalates (POMs) that serve both as photocatalysts and stabilizers, according to the cycle shown.

Angew. Chem. **2002**, *114*, 1991–1994



A. Troupis,* A. Hiskia,
E. Papaconstantinou* 1911–1914

Synthesis of Metal Nanoparticles by Using Polyoxometalates as Photocatalysts and Stabilizers

Keywords: homogeneous catalysis · nanostructures · photochemistry · polyoxometalates

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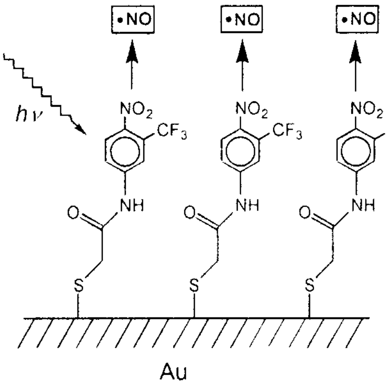
Quantitative release of NO is exclusively controlled by light excitation in a self-assembled monolayer of an NO donor on a gold surface (see picture). The low excitation energy required, the absence of noxious side effects, the thermal stability under physiological conditions, and the ease of preparation are additional advantages offered by the monolayer-modified gold plate.

Angew. Chem. **2002**, *114*, 1994–1997

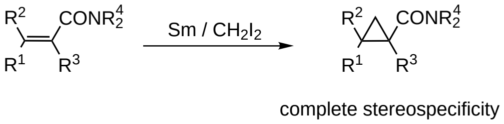


S. Sortino,* S. Petralia, G. Compagnini,
S. Conoci, G. Condorelli 1914–1917

Light-Controlled Nitric Oxide Generation from a Novel Self-Assembled Monolayer on a Gold Surface

Keywords: nitrogen oxides · photochemistry · monolayers

Samarium learns another trick: Complete stereospecific cyclopropanation of α,β-unsaturated amides, in which the double bond is di-, tri-, or tetrasubstituted is promoted by Sm/CH_2I_2 [Eq. (1)]. The reaction is high yielding and unaffected by the bulk of the substituents R^1–R^4.



(1)

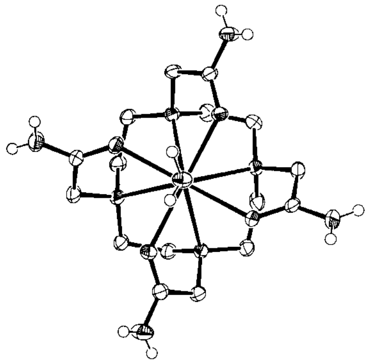
Angew. Chem. **2002**, *114*, 1997–1999

J. M. Concellón,* H. Rodríguez-Solla,
C. Gómez 1917–1919

Complete Stereospecific Cyclopropanation of α,β-Unsaturated Amides Promoted by Sm/CH_2I_2

Keywords: carbenoids · cyclopropanations · samarium · stereospecificity

Contrast agent for magnetic resonance imaging: The exchangeable amide protons in the Yb^{3+} complex of 1,4,7,10-tetraazacyclododecane-1,4,7,10-tetraacetamide (see crystal structure) act as efficient antennae for transfer of saturated spins to bulk water. Saturation of all eight protons in a 5 mM solution of this complex results in a 38 % decrease in the signal intensity of bulk water. The compound thus has promise as a magnetization-transfer contrast agent for magnetic resonance imaging.



Angew. Chem. **2002**, *114*, 1999 – 2001

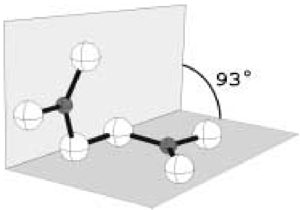
S. Zhang, L. Michaudet, S. Burgess, A. D. Sherry* .... 1919 – 1921

The Amide Protons of an Ytterbium(III) dota Tetraamide Complex Act as Efficient Antennae for Transfer of Magnetization to Bulk Water

Keywords: amides • imaging agents • lanthanides • macrocycles • NMR spectroscopy

---

By using high-resolution X-ray powder diffraction, we have determined the first crystal structure of a peroxodicarbonate compound, synthesized by electrocrystallization at −20°C. The constitution of the peroxodicarbonate anion was established and all structural details, including its conformation (see picture), can be understood qualitatively in terms of classical concepts of the chemical bond.



Angew. Chem. **2002**, *114*, 2002 – 2004

R. E. Dinnebier, S. Vensky, P. W. Stephens, M. Jansen* 1922 – 1924

Crystal Structure of $K_2[C_2O_6]$—First Proof of Existence and Constitution of a Peroxodicarbonate Ion

Keywords: electrocrystallization • peroxodicarbonate • solid-state structures • structure eluciation • X-ray powder diffraction

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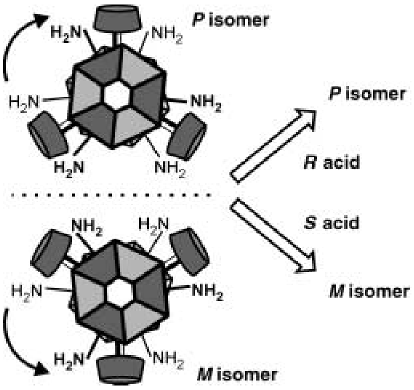
Stereospecific recognition of substrate molecules for certain chiral carboxylic acids is achieved by a noncovalent receptor system based on acid–base interactions of amino groups in the host system with the carboxylic acids. Enantioselectivity in the binding process is caused by secondary interactions with a chiral platform that preorganizes the amino functionalities (see scheme).



Angew. Chem. **2002**, *114*, 2004 – 2009

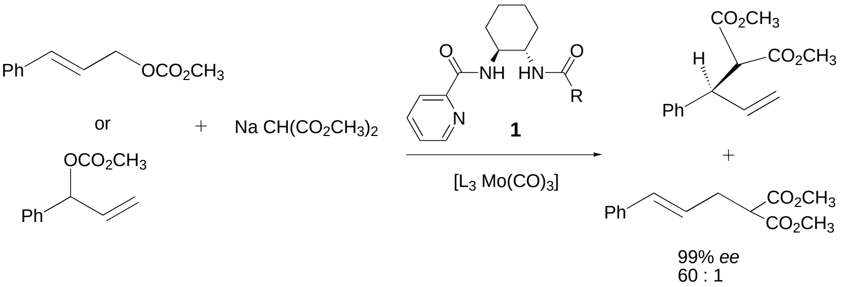
T. Ishi-i, M. Crego-Calama, P. Timmerman,* D. N. Reinhoudt,* S. Shinkai .... 1924 – 1929

Self-Assembled Receptors for Enantioselective Recognition of Chiral Carboxylic Acids in a Highly Cooperative Manner

Keywords: acid – base complexation • chirality • host – guest systems • hydrogen bonds • noncovalent interactions • supramolecular chemistry

---

Unusual coordination in the asymmetric allylic alkylation catalyzed by molybdenum (see scheme) was revealed by a study on several ligands, for example, **1**. Unexpectedly, only the nitrogen atom of one picolinamide group coordinates to Mo, while the other amide group rigidifies the system. Based on the effectiveness of the bisdeprotonated ligand, the observed reaction can be rationalized and new ligands can be designed for asymmetric induction in allylic alkylations.



Angew. Chem. **2002**, *114*, 2009 – 2012

B. M. Trost,* K. Dogra, I. Hachiya, T. Emura, D. L. Hughes,* S. Krska, R. A. Reamer, M. Palucki, N. Yasuda, P. J. Reider .... 1929 – 1932

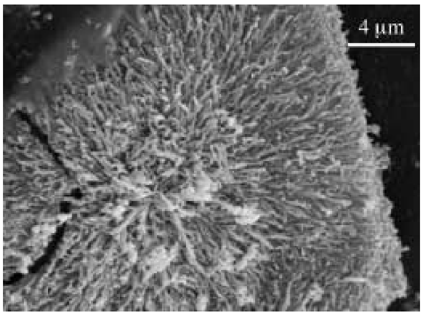
Designed Ligands as Probes for the Catalytic Binding Mode in Mo-Catalyzed Asymmetric Allylic Alkylation

Keywords: allylic compounds • asymmetric catalysis • ligand design • molybdenum • regioselectivity

1433-7851/02/4111-1817 \$ 20.00+.50/0

A simple mixture of thiourea and AgNO$_3$ in alkaline solution without any template or substrate, allowed to stand at room temperature, forms a unique self-supported pattern of Ag$_2$S nanorods. The picture shows a scanning electron micrograph of a typical product: a flake of polycrystalline Ag$_2$S with Ag$_2$S nanorods that radiate from a central point.

Angew. Chem. **2002**, *114*, 2012 – 2014



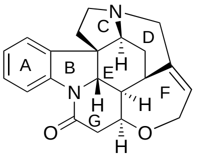
Q. Lu, F. Gao, D. Zhao* .... 1932 – 1934

Creation of a Unique Self-Supported Pattern of Radially Aligned Semiconductor Ag$_2$S Nanorods

Keywords: nanostructures · self-assembly · silver · sulfur

The power of palladium catalysts is shown in a total synthesis of (−)-strychnine (**A**). The construction of all the rings of this challenging molecule relied on Pd^0- or Pd^{II}-catalyzed reactions. The final step in this efficient synthesis involved the reduction of (+)-isostrychnine by a known method to form (−)-strychnine.

Angew. Chem. **2002**, *114*, 2014 – 2016



A

M. Nakanishi, M. Mori* .... 1934 – 1936

Total Synthesis of (−)-Strychnine

Keywords: alkaloids · allylic compounds · Heck reaction · palladium · total synthesis

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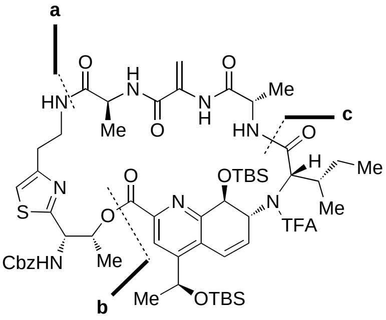
An efficient construction of the quinaldic acid macrocycle (see picture) of the antibiotic thiostrepton is based on state-of-the-art asymmetric synthesis. The 27-membered macrocycle includes a quinaldic acid moiety, a thiazole ring, and a dehydroalanine unit. The key steps in the convergent assembly included: a) amide bond formation, b) esterification, and c) macrolactamization.

Angew. Chem. **2002**, *114*, 2017 – 2020



K. C. Nicolaou,* B. S. Safina, C. Funke, M. Zak, F. J. Zécri .... 1937 – 1940

Stereocontrolled Synthesis of the Quinaldic Acid Macrocyclic System of Thiostrepton

Keywords: antibiotics · asymmetric synthesis · macrocycles · natural products · total synthesis

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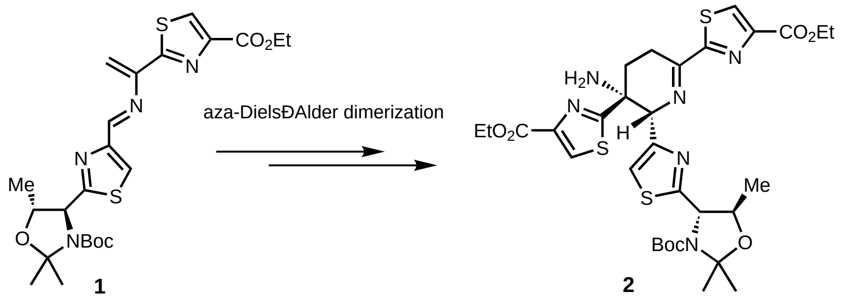
The key step in the dimerization of the azadiene **1** is a hetero-Diels – Alder reaction. The product **2** constitutes the dehydropiperidine core of the antibiotic thiostrepton.



Angew. Chem. **2002**, *114*, 2021 – 2025

K. C. Nicolaou,* M. Nevalainen, B. S. Safina, M. Zak, S. Bulat 1941 – 1945

A Biomimetically Inspired Synthesis of the Dehydropiperidine Domain of Thiostrepton

Keywords: antibiotics · asymmetric synthesis · cycloaddition · natural products · total synthesis

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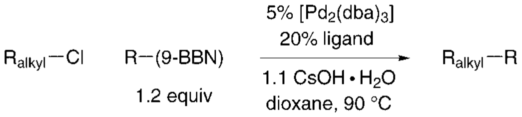
The window of reactivity is relatively narrow in the first Suzuki cross-coupling of alkyl chlorides with alkyl 9-borabicyclo[3.3.1]nonane (9-BBN) derivatives catalyzed by $[Pd_2(dba)_3]$ [Eq. (1); dba = (*E*,*E*)-dibenzylideneacetone]: whereas good yields are obtained with the ligand tricyclohexylphosphane for ligands that are appreciably larger or smaller, essentially no coupling is observed. As the conditions are compatible with a variety of functional groups, this method introduces a new class of substrates into the family of potential partners in palladium-catalyzed cross-coupling reactions.



$$R_{alkyl}{-}Cl \quad \underset{1.2\ \text{equiv}}{R{-}(9\text{-BBN})} \xrightarrow[\text{1.1 CsOH}\cdot\text{H}_2\text{O, dioxane, 90 °C}]{5\%\ [Pd_2(dba)_3],\ 20\%\ \text{ligand}} R_{alkyl}{-}R \qquad (1)$$

Angew. Chem. **2002**, *114*, 2025–2027

J. H. Kirchhoff, C. Dai,
G. C. Fu* 1945–1947

A Method for Palladium-Catalyzed Cross-Couplings of Simple Alkyl Chlorides: Suzuki Reactions Catalyzed by $[Pd_2(dba)_3]/PCy_3$

Keywords: alkyl chlorides · cross-coupling · homogeneous catalysis · palladium · P ligands

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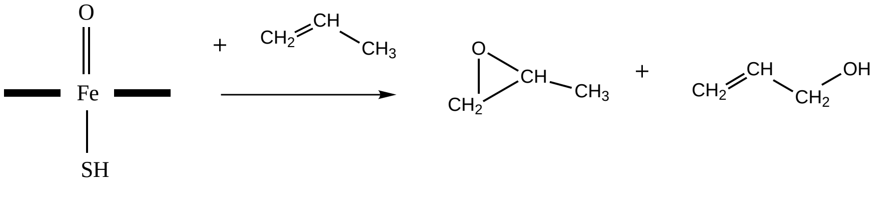
Changes of two orders of magnitude or more in the epoxidation to hydroxylation ratio of propene by the iron-oxo species **1**, the primary active species of cytochrome P450 (see scheme) occur when the molecular species is subject to NH ··· S hydrogen bonding and electronic polarization as in the protein pocket.



1

Angew. Chem. **2002**, *114*, 2027–2031

S. P. de Visser, F. Ogliaro, P. K. Sharma,
S. Shaik* 1947–1951

Hydrogen Bonding Modulates the Selectivity of Enzymatic Oxidation by P450: Chameleon Oxidant Behavior by Compound I

Keywords: density functional calculations · enzyme catalysis · epoxidation · hydroxylation · solvent effects

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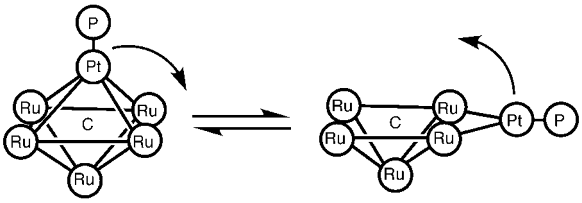
Metal in motion: The reaction of $[Ru_5(CO)_{15}(\mu_5\text{-}C)]$ with $[Pt(PtBu_3)_2]$ yields $[Ru_5Pt(PtBu_3)(CO)_{15}(C)]$. The product exists as two isomers, an open and a closed form, which interconvert rapidly on the NMR timescale by a process that resembles the diffusion of metal adatoms across a metal surface (see scheme; at 20°C the rate = 24000 s^{-1}).



Angew. Chem. **2002**, *114*, 2031–2033

R. D. Adams,* B. Captain, W. Fu,
P. J. Pellechia, M. D. Smith 1951–1953

A Dynamic Rearrangement of a Metal Cluster in a Process that Closely Resembles the Hopping Mechanism of Adatom Diffusion on Metal Surfaces

Keywords: cluster compounds · platinum · rearrangements · ruthenium

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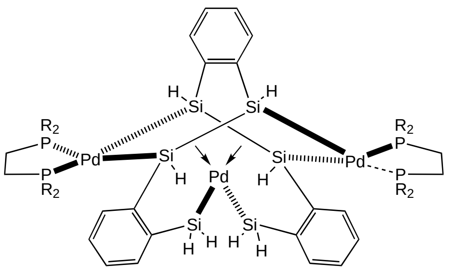
Pd^{II} not Pd^{VI}: Electronic structure calculations indicate that the central palladium atom in the trinuclear Pd compound (see picture) is bonded to two SiH_2R groups and two Si–Si σ bonds, consistent with an oxidation state of Pd^{II}, not Pd^{VI}, as might otherwise be inferred from the structural data.



Angew. Chem. **2002**, *114*, 2033–2036

E. C. Sherer, C. R. Kinsinger,
B. L. Kormos, J. D. Thompson,
C. J. Cramer* 1953–1956

Electronic Structure and Bonding in Hexacoordinate Silyl–Palladium Complexes

Keywords: bond theory · density functional calculations · electronic structure · palladium · Si ligands

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CORRIGENDUM

In the review by **L. Que, Jr.** and **W. B. Tolman** (*Angew. Chem. Int. Ed.* **2002**, *41*, 1114–1137) it was incorrectly stated that the $Fe^{III}Fe^{IV}$ complex reported by Lee et al. in ref. [54] has a bis(μ-oxo)diiron structure. In fact, in ref. [54] it is made clear that from the experimental data for the complex the mode of ligation could not be specified. The authors apologize for this mistake.

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