

Magnetic Materials

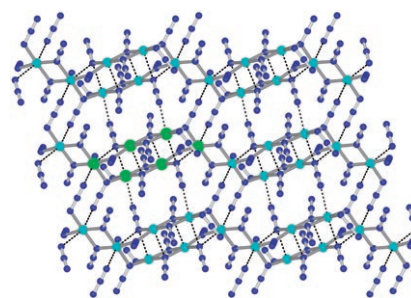
T. Liu, Y.-F. Yang, Z.-M. Wang,* S. Gao*

Two Diammonium Copper Azides with Similar Layerlike Magnetic Substructures Made of Chains of Serially Connected Cu_6 Rings Show Cation-Modulated Magnetism

Chem. Asian J.

DOI: 10.1002/asia.200800012

Tuning through spacing: Two compounds, each with a cationic diammonium ion and an anionic copper azide layer ($[\text{Cu}_6(\text{N}_3)_{14}]^{2-}$) with serially connected elongated Cu_6 rings (see anionic structure; Cu green and cyan, N blue), display magnetic properties that are tuned by the nature of the diammonium counteranions located in the interlayer spacing.



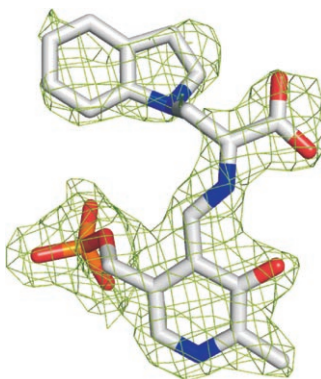
Enzyme Catalysis

T. R. M. Barends, T. Domratcheva, V. Kulik, L. Blumenstein, D. Nicks, M. F. Dunn, I. Schlichting*

Structure and Mechanistic Implications of a Tryptophan Synthase Quinonoid Intermediate

ChemBioChem

DOI: 10.1002/cbic.200700703



Way station. Quinonoid intermediates play a key role in the catalytic mechanism of pyridoxal 5'-phosphate (PLP)-dependent enzymes. Whereas structures of other PLP-bound reaction intermediates have been determined, a high-quality structure of a quinonoid species has not been reported. We present the crystal structure of the indoline quinonoid intermediate of tryptophan synthase (see figure) and discuss its implications for the enzymatic mechanism and allosteric regulation.

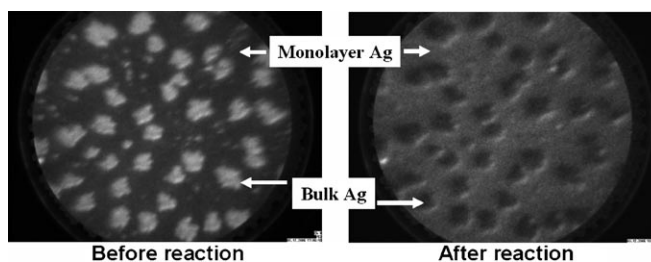
Metal Surfaces

Y.-X. Yao, X. Liu, Q. Fu,* W.-X. Li,* D.-L. Tan, X.-H. Bao*

Unique Reactivity of Confined Metal Atoms on a Silicon Substrate

ChemPhysChem

DOI: 10.1002/cphc.200700840



Electronic effects: The unusual reactivity of the Ag monolayer compared to the bulk Ag surface on Si(111) (see figure) is due to the confinement of the 5sp elec-

trons. This change in reactivity has significant effects on the surface activity and selectivity, which could result in novel catalytic properties.

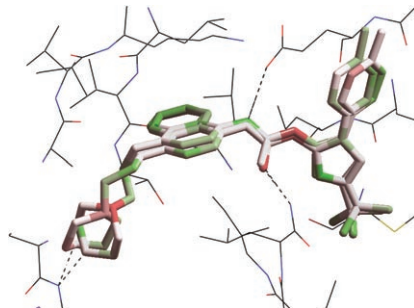
Molecular Design

I. Reulecke, G. Lange, J. Albrecht, R. Klein, M. Rarey*

Towards an Integrated Description of Hydrogen Bonding and Dehydration: Decreasing False Positives in Virtual Screening with the HYDE Scoring Function

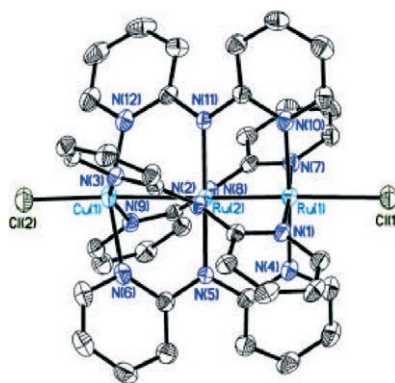
ChemMedChem

DOI: 10.1002/cmdc.200700319



HYDE is a new empirical scoring function for the evaluation of protein-ligand complexes that estimates binding free energy based on two terms for dehydration and hydrogen bonding only. In contrast to other scoring functions, HYDE accounts for destabilizing dehydration effects in a consistent manner, thereby decreasing the rate of false positive hits in virtual screening.

The nonplanar dipyridylamide ligand is widely used to stabilize homonuclear strings made of three M^{II} atoms in $M_3-(dpa)_4L_2$ complexes. Heterometallic frameworks such as $Co^{II}Pd^{II}Co^{II}(dpa)_4Cl_2$ can also be obtained. The metal strings presented here are heterometallic, non-symmetric and mixed-valent, and a $[Ru_2]^{5+}$ moiety was coupled with a Cu^+ or Ni^+ atom.



Heterometal String Complexes

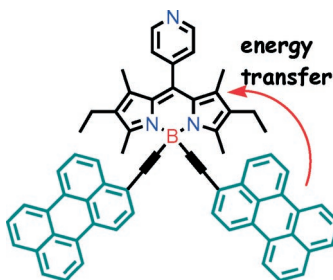
G.-C. Huang, M. Bénard,*
M.-M. Rohmer, L.-A. Li, M.-J. Chiu,
C.-Y. Yeh, G.-H. Lee, S.-M. Peng*

Ru₂M(dpa)₄Cl₂ (M = Cu, Ni): Synthesis, Characterization, and Theoretical Analysis of Asymmetric Heterometal String Complexes of the Dipyridylamide Family

Eur. J. Inorg. Chem.

DOI: 10.1002/ejic.200701159

Rapid electronic energy transfer occurs from the appended perylene units to the BODIPY-based dye, which itself is equipped with an ancillary binding unit. Cations can coordinate to the pyridine N atom and thereby switch on an intramolecular charge-transfer process. On cation binding, fluorescence from perylene increases and that from BODIPY decreases.



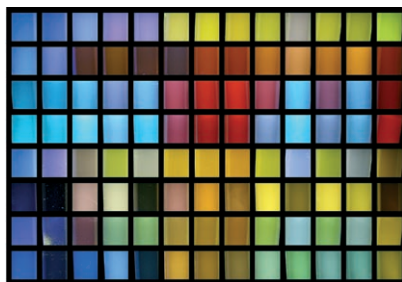
Fluorescent Sensor

M. A. H. Alamiry, A. Harriman,*
L. J. Mallon, G. Ulrich, R. Ziessel*

Energy- and Charge-Transfer Processes in a Perylene–BODIPY–Pyridine Tripartite Array

Eur. J. Org. Chem.

DOI: 10.1002/ejoc.200800159



Amine detection made easy: One fluorophore in eight different solvents (columns in graphic) allows the unambiguous identification of twelve different amines (along one row) based on the distinct fluorescence changes through excited-state proton transfer.

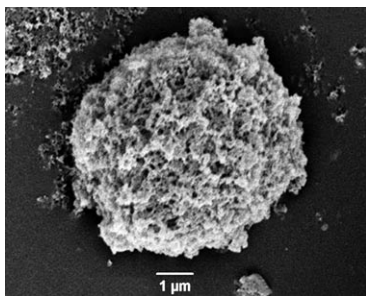
Hydroxycruciforms

P. L. McGrier, K. M. Solntsev, S. Miao,
L. M. Tolbert, O. R. Miranda,
V. M. Rotello, U. H. F. Bunz*

Hydroxycruciforms: Amine-Responsive Fluorophores

Chem. Eur. J.

DOI: 10.1002/chem.200800296



Holey starch! Mesoporous materials with tuneable characteristics have been prepared from biomass-derived α -D-poly-saccharides by a microwave-assisted strategy. Careful selection of the preparation temperature allows control of the crystallinity, particle morphology and textural properties of the resulting materials, leading to surface areas approaching $200 \text{ m}^2 \text{ g}^{-1}$ and mesopore volumes over $0.6 \text{ cm}^3 \text{ g}^{-1}$.

Mesoporous Materials

R. J. White, V. L. Budarin, J. H. Clark*

Tuneable Mesoporous Materials from α -D-Polysaccharides

ChemSusChem

DOI: 10.1002/cssc.200800012



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.