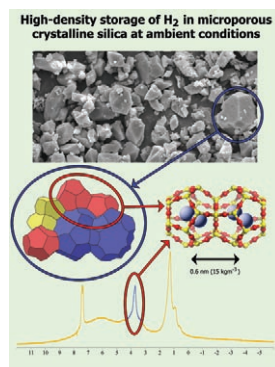
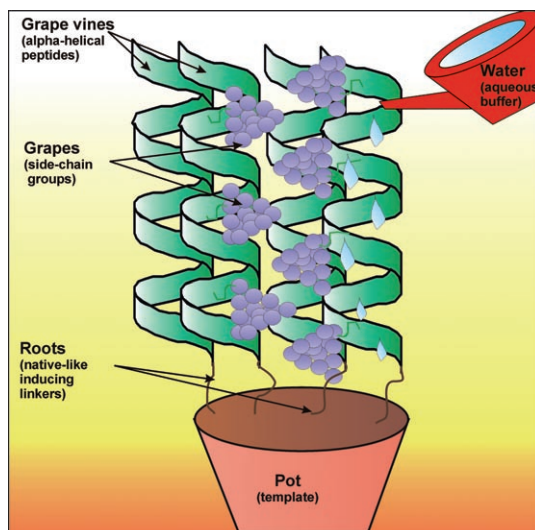


How does your garden grow?...

... With linkers (roots) between the template (pot) and the peptides (grape vines); the linkers affect the structural specificity of such template-assembled synthetic proteins. Optimal linkers (roots) can promote the construction of a native-like protein, which is characterised by well-packed side-chain groups (grapes). For more details see the Full Paper by J. C. Sherman et al. on page 3596 ff.

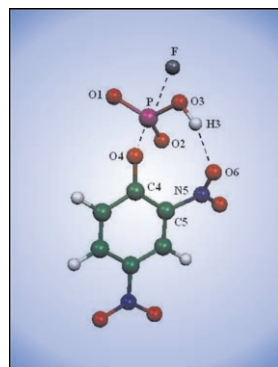
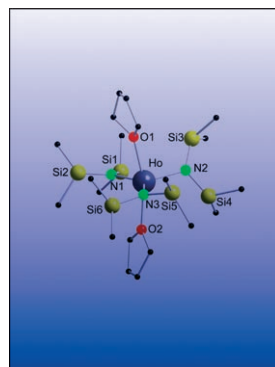


Hydrogen Storage

In their Full Paper on page 3590 ff., J. C. Jansen et al. describe high-density H₂ storage in microporous crystalline solids at ambient conditions. Conceptually, the results reported here show how the confinement of hydrogen into a porous material can lead to an improved density of storage at ambient conditions by overcoming the repulsion that takes place among the gas molecules.

Rare Earth Metals

In their Full Paper on page 3606 ff., P. W. Roesky et al. describe the synthesis of a series of yttrium and lanthanide complexes [Ln{N(SiHMe₃)₂}-[CH(PPh₂NSiMe₃)₂]}] (Ln = Y, La, Sm, Ho, Lu). The new complexes were used as catalysts for hydroamination/cyclization and hydrosilylation reactions. In addition, a combination of both reactions, a sequential hydroamination/hydrosilylation reaction, was also investigated.



Reaction Mechanisms

In their Full Paper on page 3617 ff., A. Vigroux et al. apply quantum chemistry methods coupled with a continuum solvation model to evaluate the substrate-assisted catalysis mechanism recently proposed for the spontaneous hydrolysis of phosphate monoester dianions. The results indicate that although this mechanism is unlikely to apply to aryl phosphates, it is a possibility for alkyl phosphate esters.



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