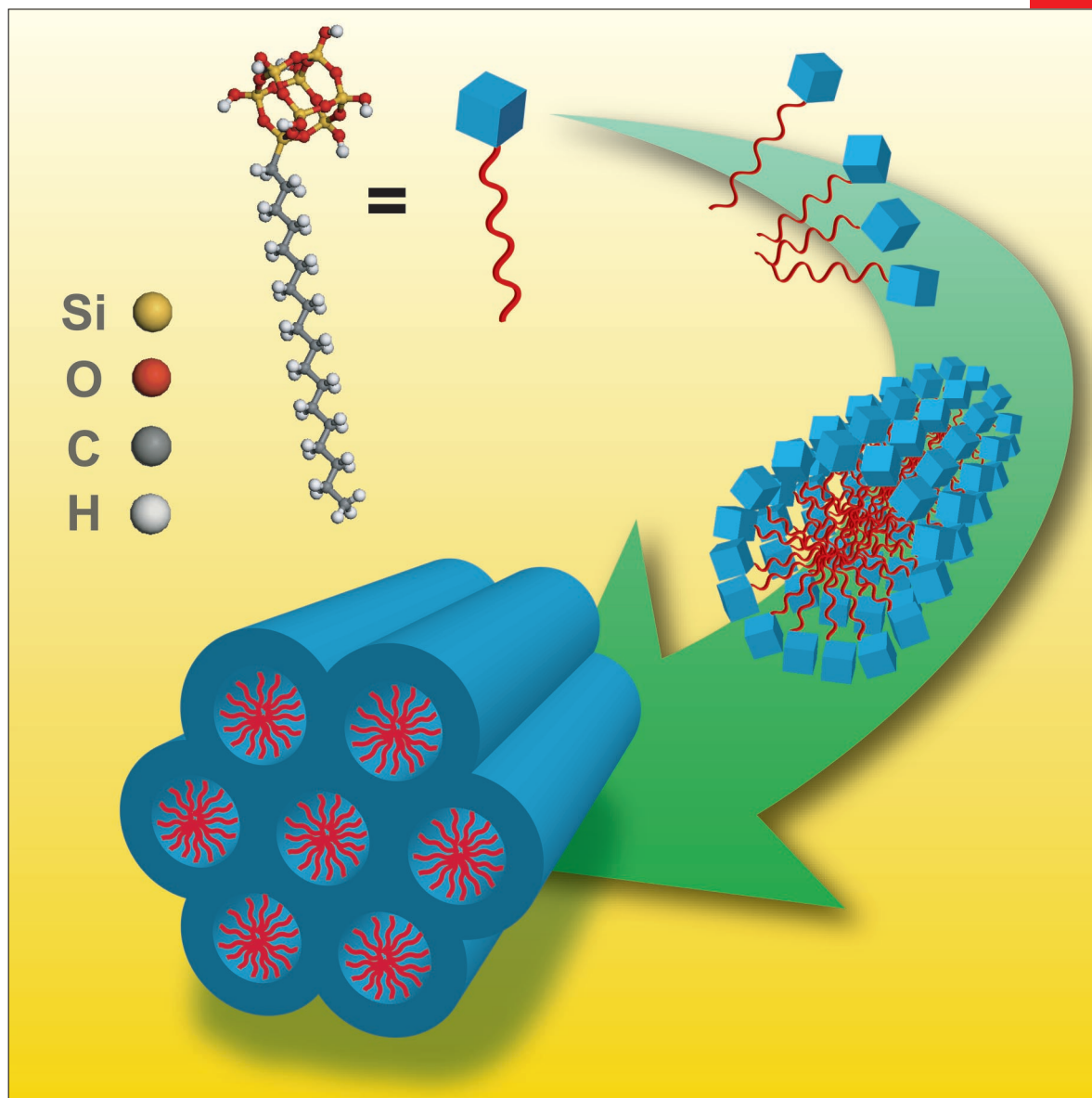


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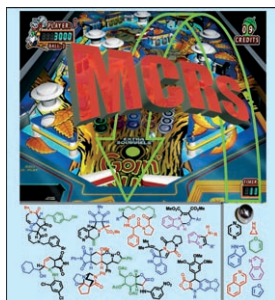
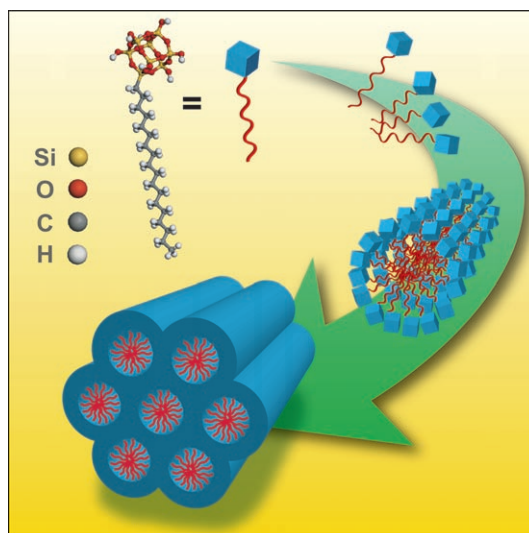
Heterocycles as Key Substrates in Multicomponent Reactions:
The Fast Lane towards Molecular Complexity
R. Lavilla and N. Isambert

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Siloxane – organic hybrids...

... with well-ordered mesostructures were synthesized through the self-assembly of novel amphiphilic molecules. In their Full Paper on page 8500 ff., K. Kuroda, A. Shimojima et al. have reported the use of a cubic octasiloxane cage as the hydrophilic head of an amphiphilic molecule. Different mesostructures can be formed depending on the number of alkyl chains per cage.

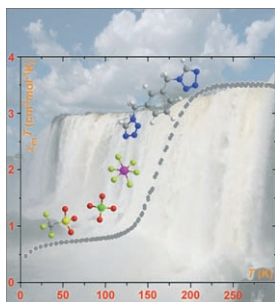
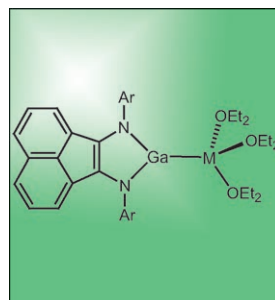


Heterocycles

In their Concept article on page 8444 ff., R. Lavilla and N. Isambert describe the use of simple heterocycles as substrates in multicomponent reactions, which enable the straightforward syntheses of complex structures and opens interesting possibilities for the study of new reactivity pathways.

Gallium–Metal Bonds

In their Communication on page 8465 ff., I. L. Fedushkin, H. Schumann et al. describe the synthesis of the unique molecular compounds containing GaLi and GaNa bonds. DFT studies of $[(\text{dpp-bian})\text{GaLi}(\text{Et}_2\text{O})_3]$ revealed that the GaLi bond is mainly formed by donation of the lone electron pair of Ga^I to the solvated lithium cation. Probably similar compounds with gallium–metal bonds may be prepared using other metals suitable for the reduction of $[(\text{dpp-bian})\text{GaGa}(\text{dpp-bian})]$.



Magnetic Properties

In their Full Paper on page 8486 ff., P. Gamez, J. Haasnoot, et al. describe how the use of a rigid linker in a 1D spin-crossover polymer allows the cooperativity of the transition to be maintained on changing the counterion. Their “bottom-up” approach represents an exciting alternative, based on the idea that the miniaturization limit of an electronic function is the molecule.

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