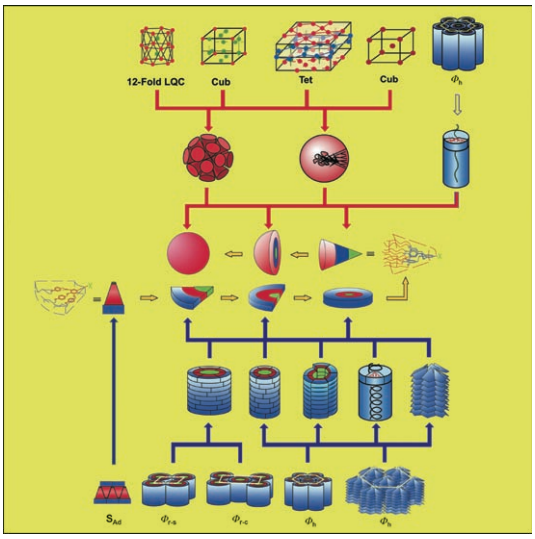
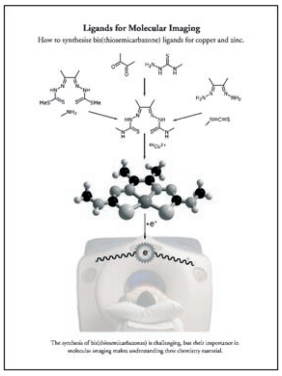
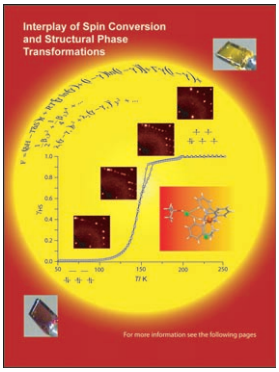
CHEMISTRY
A EUROPEAN JOURNAL

… with up to three generations of amphiphilic dendrons based on AB, constitutional isomeric AB_2, and AB_3 biphenyl-4-methyl ether building blocks were synthesized by Percec et al., as described on page 6216ff., and analyzed by using the retrostructural analysis method shown. These dendrons self-assemble into hollow and non-hollow supramolecular dendrimers up to twice as large as those for the architecturally related benzyl ether. These results expand the structural diversity of non-hollow and hollow supramolecular dendrimers and demonstrate the generality of self-assembling dendrons based on amphiphilic arylmethyl ethers.

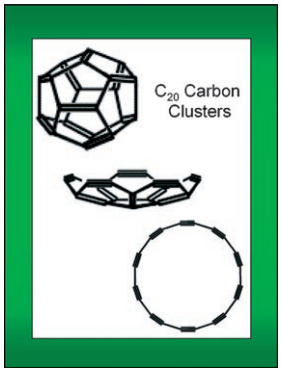




Ligands for Molecular Imaging
Bis(thiosemicarbazones) have attracted attention as ligands for ^{64}Cu, a key element in the next generation of radioisotopes for use in positron emission tomography (PET) and radiotherapy. These relatively simple looking compounds are synthetically challenging and in their Concept on page 6194 ff., M. Christlieb and J. R. Dilworth present a discussion of the synthetic experiences from various groups from 1954 to 2005.



Solid-State Phenomena
Spin-crossover behavior depends as much on molecular properties as it does on intermolecular interactions, including both the spin active and the spin inactive components. In their Full Paper on page 6207 ff., K. W. Törnroos et al. describe their investigations of spin-crossover processes in solvated tris(2-picolylamine)iron(II) dichloride complexes.



Fullerene Chemistry
The lowest-energy members of the C_{20} family of trivalent polyhedral carbon clusters are calculated to be a cage, a bowl, and a ring. In their Full Paper on page 6268 ff., H. Prinzbach et al. describe the synthesis of the C20 fullerene through a series of 22 "one-pot" operations.