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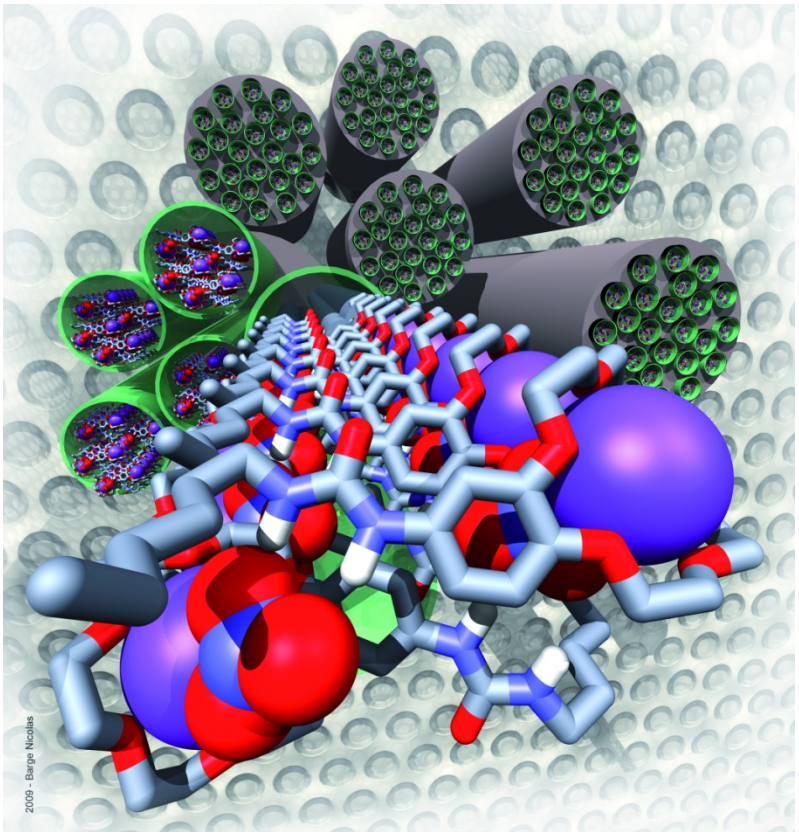
DYNAMIC CONSTITUTIONAL MATERIALS.
CRYSTALLIZATION- AND SOL-GEL-DRIVEN SELF-SORTING OF FUNCTIONAL SUPRAMOLECULAR ARCHITECTURES

Keywords: *Dynamic constitutional materials, supramolecular chemistry, dynamic combinatorial libraries, selection, evolution.*

We describe some of most representative examples of *metallosupramolecular architectures* and *dynamic hybrid materials* recently published by our group in which supramolecular functional devices are *constitutionally self-sorted* by crystallization or by sol-gel polymerization. The self-selection is based on constitutional interactions resulting in the dynamic amplification of self-optimized architectures. The *dynamic constitutional materials* reported here therefore illustrate the convergence of the combinatorial self-sorting of dynamic combinatorial libraries (DCLs) with the specific self-optimized functions, extending the application of *constitutional dynamic chemistry* from materials science to *functional constitutional devices*.