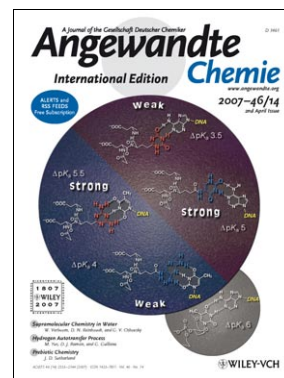


Cover Picture

Gopi Kumar Mittapalli, Kondreddi Ravinder Reddy, Hui Xiong, Omar Munoz, Bo Han, Francesco De Riccardis, Ramanarayanan Krishnamurthy,* Albert Eschenmoser,* and Gopi Kumar Mittapalli, Yazmin M. Osornio, Miguel A. Guerrero, Kondreddi Ravinder Reddy, Ramanarayanan Krishnamurthy,* and Albert Eschenmoser*

2,4-Dioxo- and 2,4-diamino derivatives of the 5-aminopyrimidine nucleus, which are attached to an oligopeptide backbone, display inverse base-pairing strengths with complementary DNA and RNA compared to the corresponding 2,4-diamino- and 2,4-dioxotriazine derivatives. In their Communications on pages 2470 and 2478 ff., R. Krishnamurthy, A. Eschenmoser, and co-workers point to a remarkable correlation between pairing strength and ΔpK_a values of pairs of complementary bases.

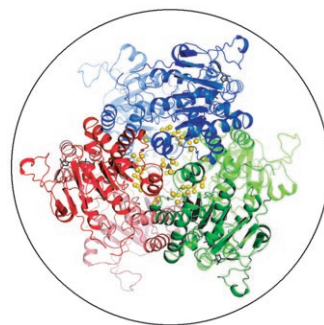
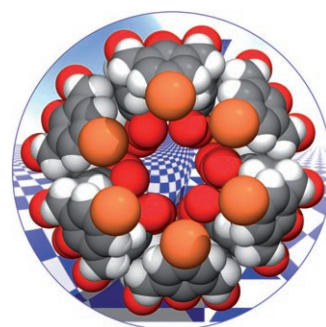


Supramolecular Chemistry in Water

The Review by W. Verboom et al. on page 2366 ff. focuses on the formation and reactivity of supramolecular aggregates in aqueous media. Such media are the environments in which natural self-assembly processes occur.

Calixarenes

In their Communication on page 2394 ff., J. L. Atwood and R. M. McKinlay demonstrate the assembly of six calix[4]arene molecules by hydrogen bonding. The observed toroidal shape represents an exceptional topology for noncovalent assemblies.



Metal-Storage Proteins

The cavity shell of a molybdenum/tungsten-storage (Mo/WSto) protein acts as a polytopic host for noncovalently or weakly bonded polyoxotungstate guests. A. Müller, U. Ermler, and co-workers discuss this “biological supramolecular chemical system” in their Communication on page 2408 ff.