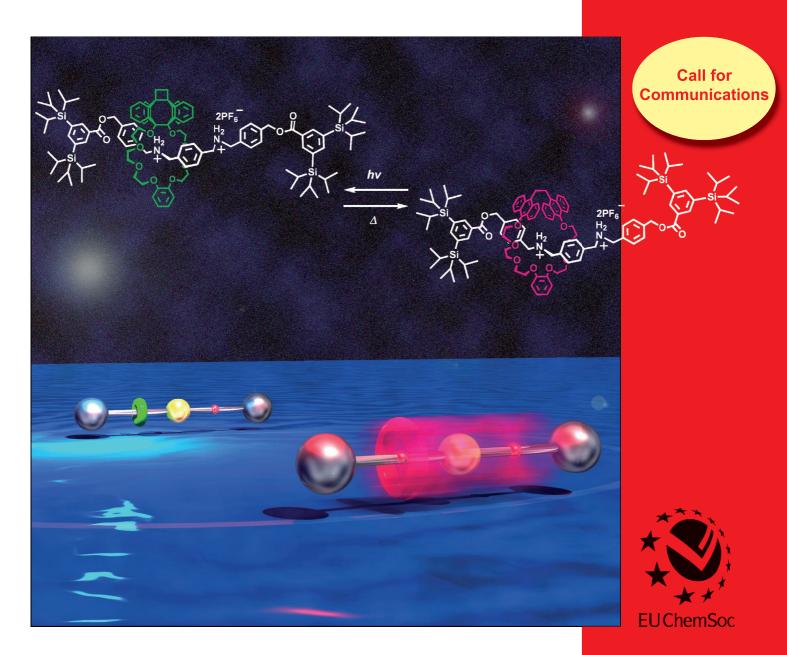
CHEMISTRY A EUROPEAN JOURNAL 14/11 2008



Concept New Redesigned Zinc-Finger Proteins: Design Strategy and Its Application S. Negi, Y. Sugiura et al.





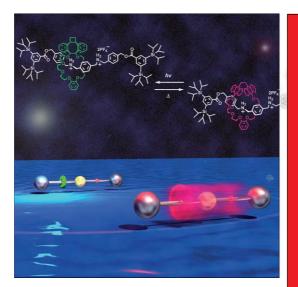
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Machines at the molecular level...

... are in perpetual Brownian motion. Their movements have to be stopped effectively. In their Full Paper on page 3427 ff., K. Hirose et al. describe a reversible brake system that works quantitatively in response to external photochemical and thermal stimuli. The rate of shuttling motion was proved to be reduced to less than 1% by reducing the size of the ring component from [30]crown-8 to [24]crown-8 macrocycles.

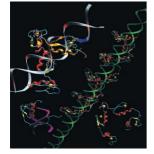




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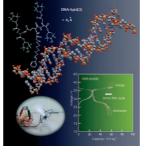


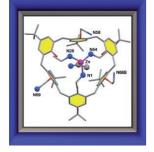
Bioinorganic Chemistry

Artificial zinc-finger proteins with a designed non-consensus and functional linker can expand the natural recognition mode of the zinc-finger proteins. In their Concept article on page 3236 ff., S. Negi, Y. Sugiura et al. describe some of the latest deveolpoments in this field of chemistry.

DNA-Lipid Batteries

In their Full Paper on page 3250 ff., T. Masuda et al. present the first example of a DNA-based secondary battery, and show that the TEMPO-carrying DNA-lipid complexes undergo two-stage redox reactions leading to large capacities. The DNA-lipid complexes could be applied to cathode-active materials in the organic radical battery, which features quick charge and discharge, and high power density.





Calixarenes

In their Full Paper on page 3316 ff., I. Jabin et al. discuss their development of an elegant and unique strategy for the quantitative 1,3,5-tris protection of a calix[6]hexaamine. This highly selective reaction was achieved thanks to the synergistic combination of coordination and host-guest chemistry.



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