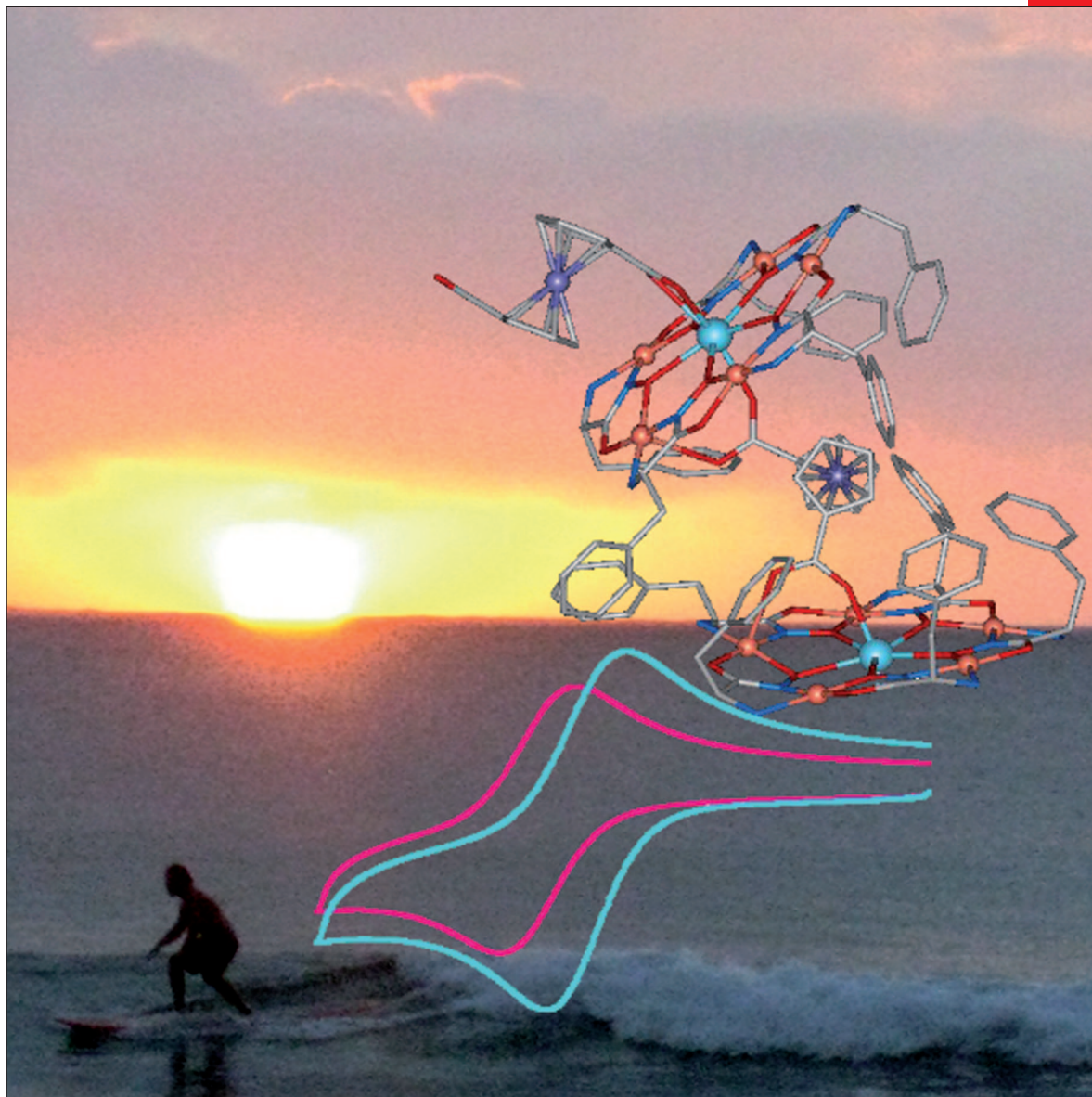


# CHEMISTRY

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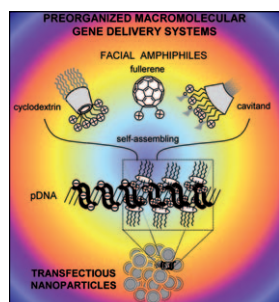
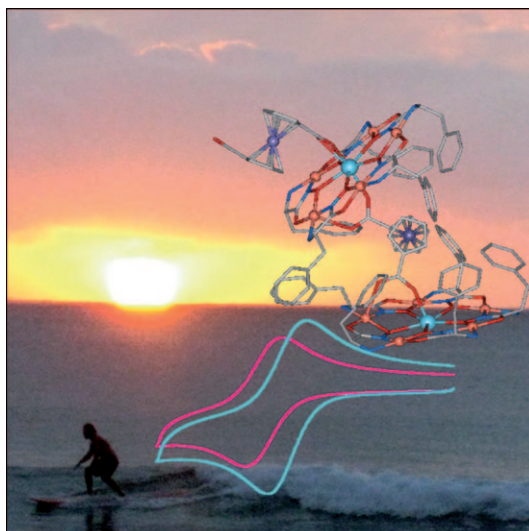
### Concept

Preorganized, Macromolecular, Gene-Delivery Systems  
C. Ortiz Mellet, J. M. García Fernández and J. M. Benito

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... cyclic voltammetry allows for the quantitative assessment of redox-active and redox-inactive guest binding to paramagnetic supramolecular complexes, which is described in the Full Paper by V. L. Pecoraro et al. on page 6786 ff.

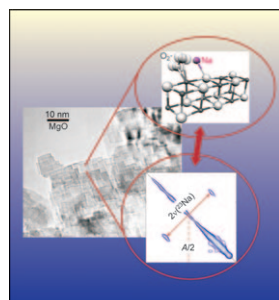
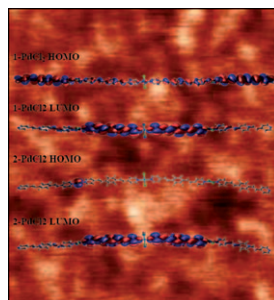


## Gene Therapy

Gene therapy is perceived as a revolutionary technology with the potential to cure almost any disease. In their Concept article on page 6728 ff., C. Ortiz Mellet, J. M. García Fernández and J. M. Benito describe the role of synthetic organic chemistry in this field of research by providing tools to create tailor-made molecules of increasing complexity. Preorganization of functional elements onto macromolecular platforms has the potential to allow control of the self-assembling behavior of discrete architectures to produce nanometric objects that can be programmed to complex, compact, deliver, and release plasmid DNA in a target cell.

## Coordination Polymers

In their Communication on page 6744 ff., M. E. van der Boom et al. demonstrate that they can tune the band gaps of relatively long (>10 nm), surface-bound metal-organic oligomers while preserving the adopted structure and chemical framework. The current study demonstrates a viable systematic strategy to improve and control electrical properties of organic materials.



## Surface Chemistry

Bonding of molecular oxygen to metal atoms that leads to the formation of  $O_2^-$  ions represents the first step in oxygen reductive activation, and the initial stage of a long process that leads to the incorporation of oxygen into oxide lattices. In their Full Paper on page 6776 ff., M. Chiesa et al. track down the reaction pathway between sodium atoms supported at the surface of magnesium oxide and oxygen molecules by using a combined EPR and quantum chemical approach.

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