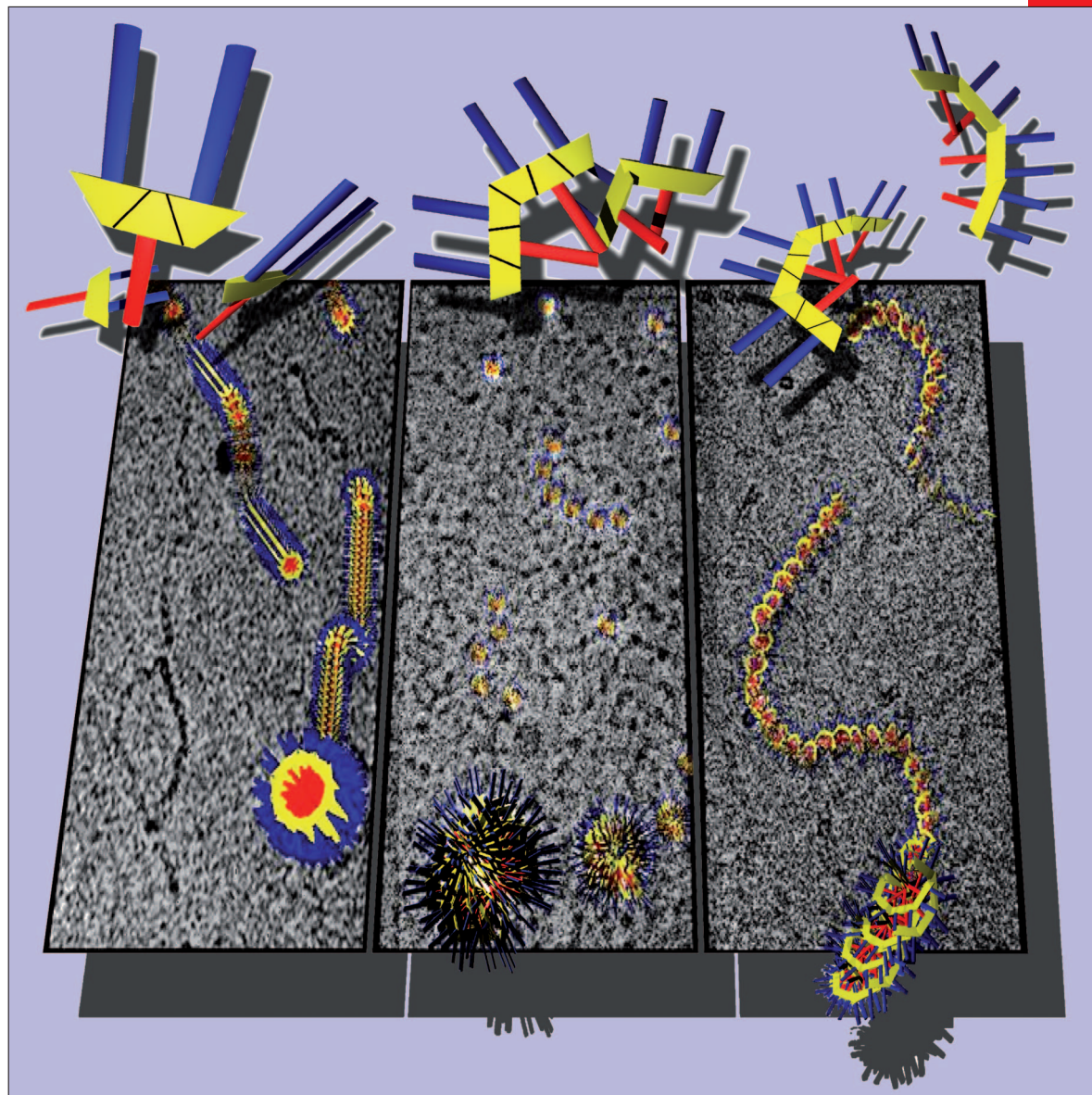


# CHEMISTRY

## A EUROPEAN JOURNAL

16/45

2010



### Concept

Integrating Replication-Based Selection Strategies  
in Dynamic Covalent Systems  
D. Philp and V. del Amo

 WILEY-VCH

A Journal of

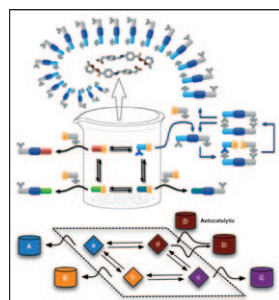
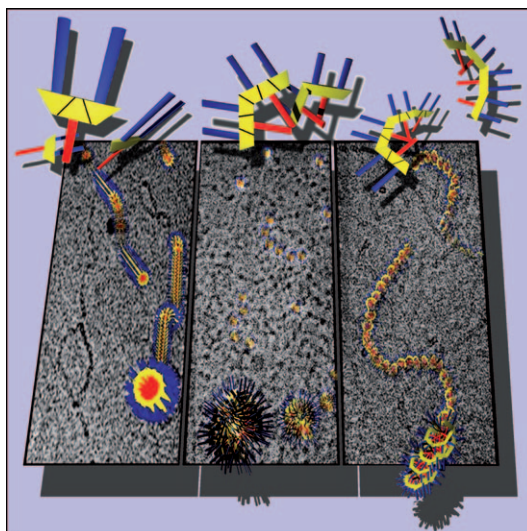


ChemPubSoc  
Europe

Supported by

**ACES**

... is a long-standing challenge in supramolecular chemistry. So far, most models for structure–morphology relationships emphasize the connection between the building block curvature and object dimension and shape; however, the application of such models remains troublesome because of difficulties with describing the local curvature of molecular building blocks. In their Full Paper on page 13417 ff., J. H. van Esch et al. describe the design and synthesis of a new amphiphilic system, based on oligothiophenes, in which the local curvature easily follows from the molecular structure and is directly connected to the aggregate morphology and dimensions.

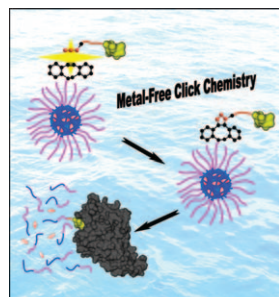
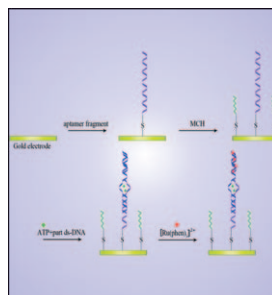


## Self Replication

In their Concept article on page 13304 ff., D. Philp and V. del Amo describe the role of kinetically and thermodynamically controlled processes within different dynamic covalent chemistry frameworks. The application of a replicating system within a dynamic combinatorial library of compounds as a method to influence the selection of a product is also explored.

## Biosensors

A label-free sandwich-type electrochemiluminescence (ECL) aptasensor for highly sensitive detection of ATP has been developed based on target-induced conjunction of split aptamer fragments by the use of  $[\text{Ru}(\text{phen})_3]^{2+}$  intercalated into double-strand DNA as the ECL probe. For more details see the Communication by G. Xu et al. on page 13356 ff.



## Drug Delivery

In their Full Paper on page 13360 ff., G.-J. Boons et al. show that soft materials such as organomicelles modified by cyclooctynes can conveniently be functionalized with various biologically relevant modules by strain-promoted alkyne–azide cycloadditions. The ligation is highly efficient, does not require toxic reagents, and is compatible with a wide variety of functional modules. It has been found that protein–ligand binding leads to disassembly of the particles thereby providing a mechanism for triggered drug release.

 GERMANY	 NETHERLANDS
 BELGIUM	 ITALY
 FRANCE	 SPAIN
 PORTUGAL	 GREECE
 CZECH REPUBLIC	 POLAND
 SWEDEN	 HUNGARY
 AUSTRIA	 ChemPubSoc Europe

Supported by  
**ACES**

Chemistry—A European Journal is jointly owned by the 14 Chemical Societies shown above and published by Wiley-VCH. This group of Societies has banded together as Chemistry Publishing Society (ChemPubSoc) Europe for its combined publishing activities. The journal is also supported by the Asian Chemical Editorial Society (ACES).