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# Angewandte Chemie

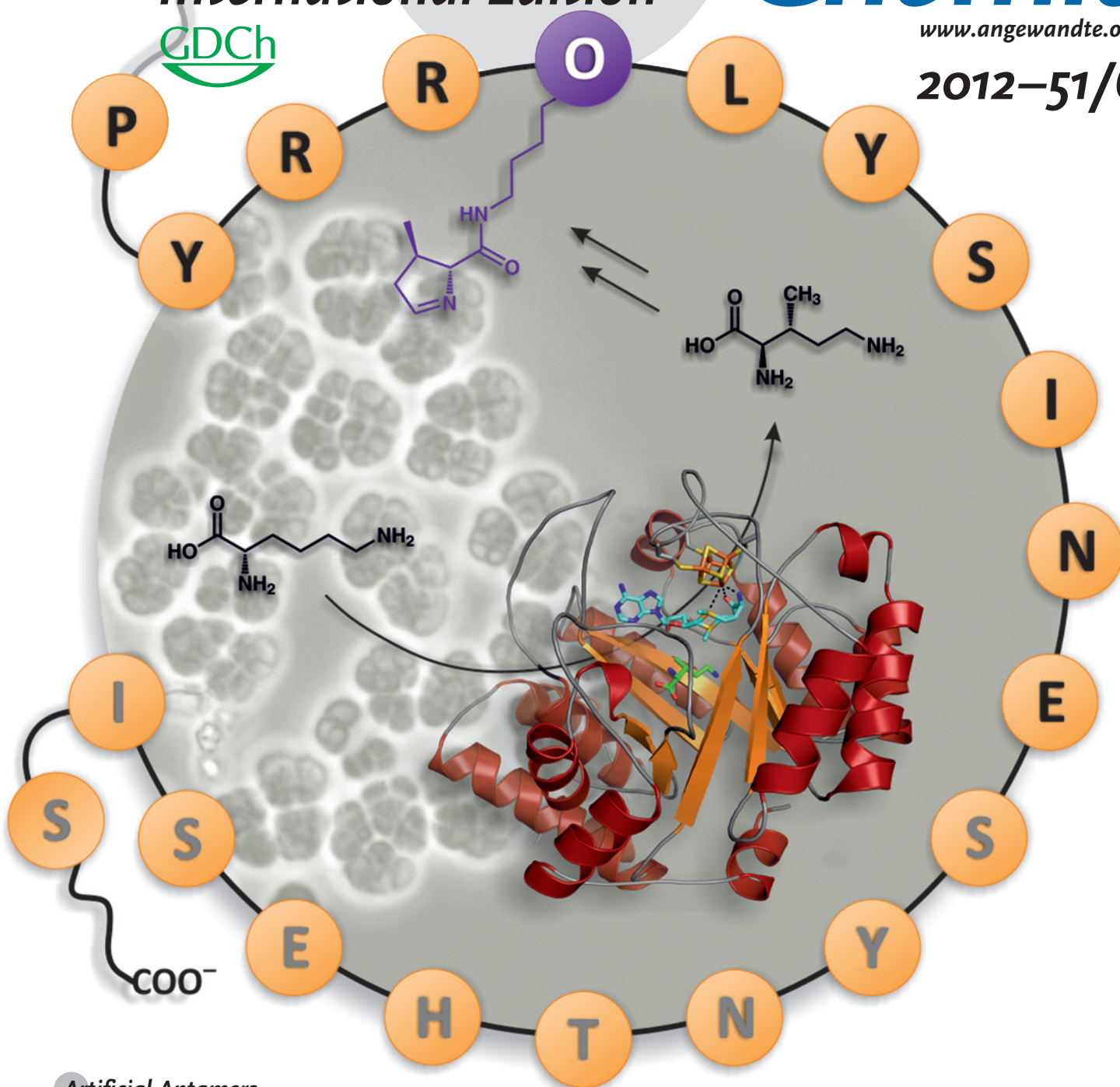
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## Artificial Aptamers

Review by M. Mascini et al.

## Main-Group Metal-Alkyl Compounds

Highlight by W. Clegg

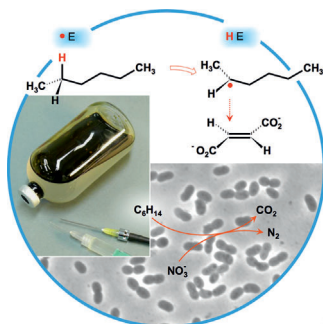
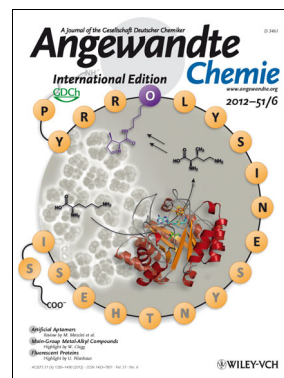
## Fluorescent Proteins

Highlight by U. Nienhaus

## Cover Picture

**Felix Quitterer, Anja List, Wolfgang Eisenreich, Adelbert Bacher, and Michael Groll\***

The unusual amino acid pyrrolysine is found in the active site of the methylamine methyltransferases of certain methanogenic archaea. Methylornithine, an intermediate in pyrrolysine biosynthesis, is formed by the PylB-catalyzed isomerization of lysine. In their Communication on page 1339 ff., M. Groll and co-workers present the crystal structure of PylB in complex with its reaction product and suggest a fragmentation–recombination mechanism via a glycy radical intermediate.

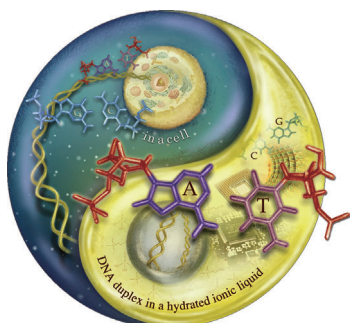
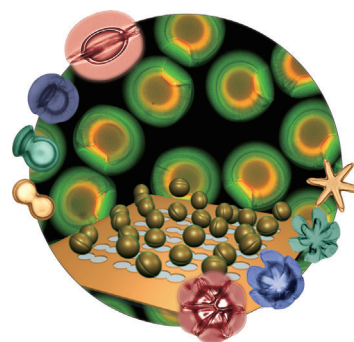


### Alkane Activation by Bacteria

H. Wilkes et al. investigate the anaerobic C–H activation of *n*-alkanes by bacteria in their Communication on page 1334 ff. The reaction occurs stereospecifically, and the mechanism is in complete contrast to the known oxidation of alkanes by oxygenases.

### Origami of Hydrogel Bilayers

In their Communication on page 1420 ff., S.-M. Yang and co-workers show planar bilayer microparticles composed of active and passive layers that can transform into microcapsules with a closed compartment.



### Hydrated Ionic Liquids

In their Communication on page 1416 ff., H. Tateishi-Karimata and N. Sugimoto show that A–T base pairs are more stable than G–C base pairs in an ionic liquid.