

A Journal of the Gesellschaft Deutscher Chemiker

# Angewandte Chemie

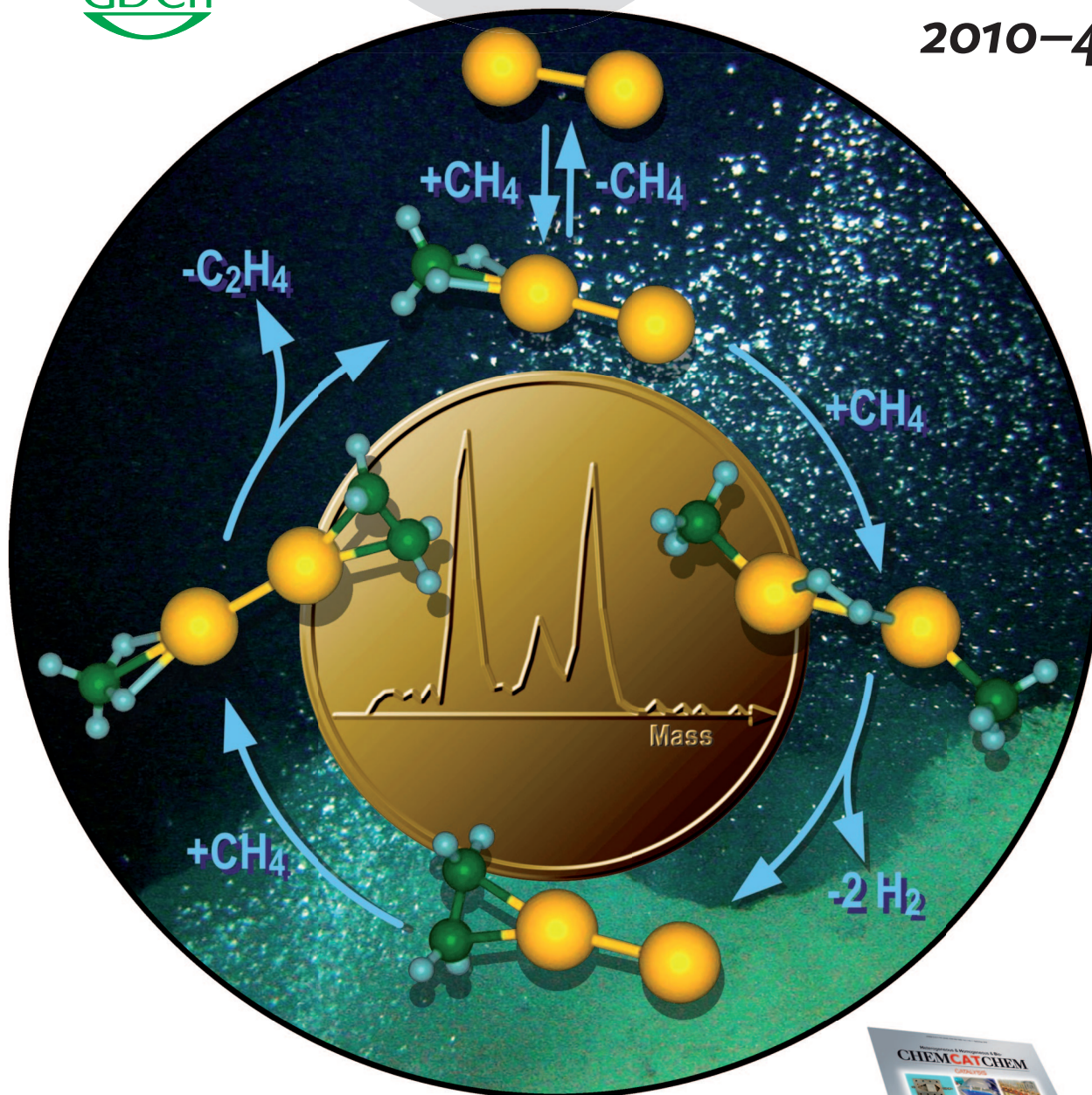
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## Nanoprobes

M. Orrit et al.

## Organocatalysis

B. Westermann et al.

## Methane Activation

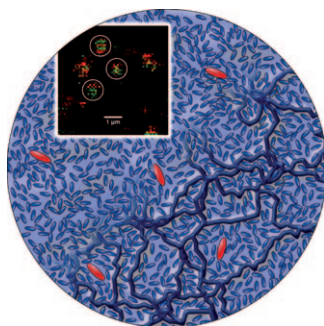
D. Schröder



## Cover Picture

**Marcel Gsänger, Joon Hak Oh, Martin Könemann, Hans Wolfgang Höffken, Ana-Maria Krause, Zhenan Bao,\* and Frank Würthner\***

**Cooperation is the key** in the gas-phase formation of ethene by gold-dimer cations. As the cycle in the cover picture shows, two methane molecules are required to initiate the dehydrogenation step. A third methane molecule then cooperatively triggers the release of ethylene. The background shows submarine methane evolution, which represents an important geological methane source. In their Communication on page 980 ff. T. M. Bernhardt, U. Landman, and co-workers present the results of their combined gas-phase and theoretical investigation.

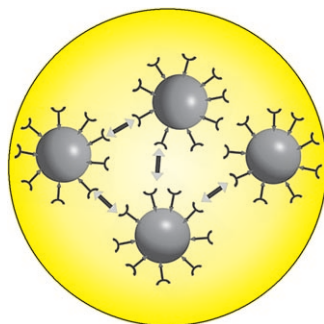
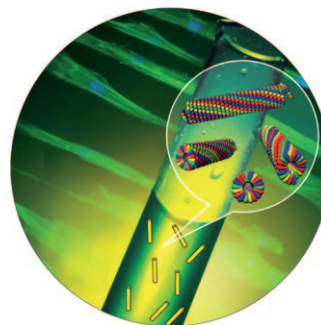


### *Nanoprobes*

Optical signals from single molecules provide information on the structure and dynamics of the environment around the molecule. In their Review on page 854 ff., M. Orrit et al. present the uses of single molecules in studying condensed matter.

### *Surface Patterning*

Drying a solution of tobacco mosaic virus particles results in the formation of a range of patterns. In their Communication on page 868 ff., Z. Niu, Q. Wang, and co-workers report how the assembled structure can be controlled by a range of factors.



### *Halogen Bonding*

Halogen bonding facilitates the assembly of gold nanoparticles into supramolecular assemblies. In their Communication on page 926 ff., M. E. van der Boom and co-workers describe how the morphology of the aggregates can be controlled.