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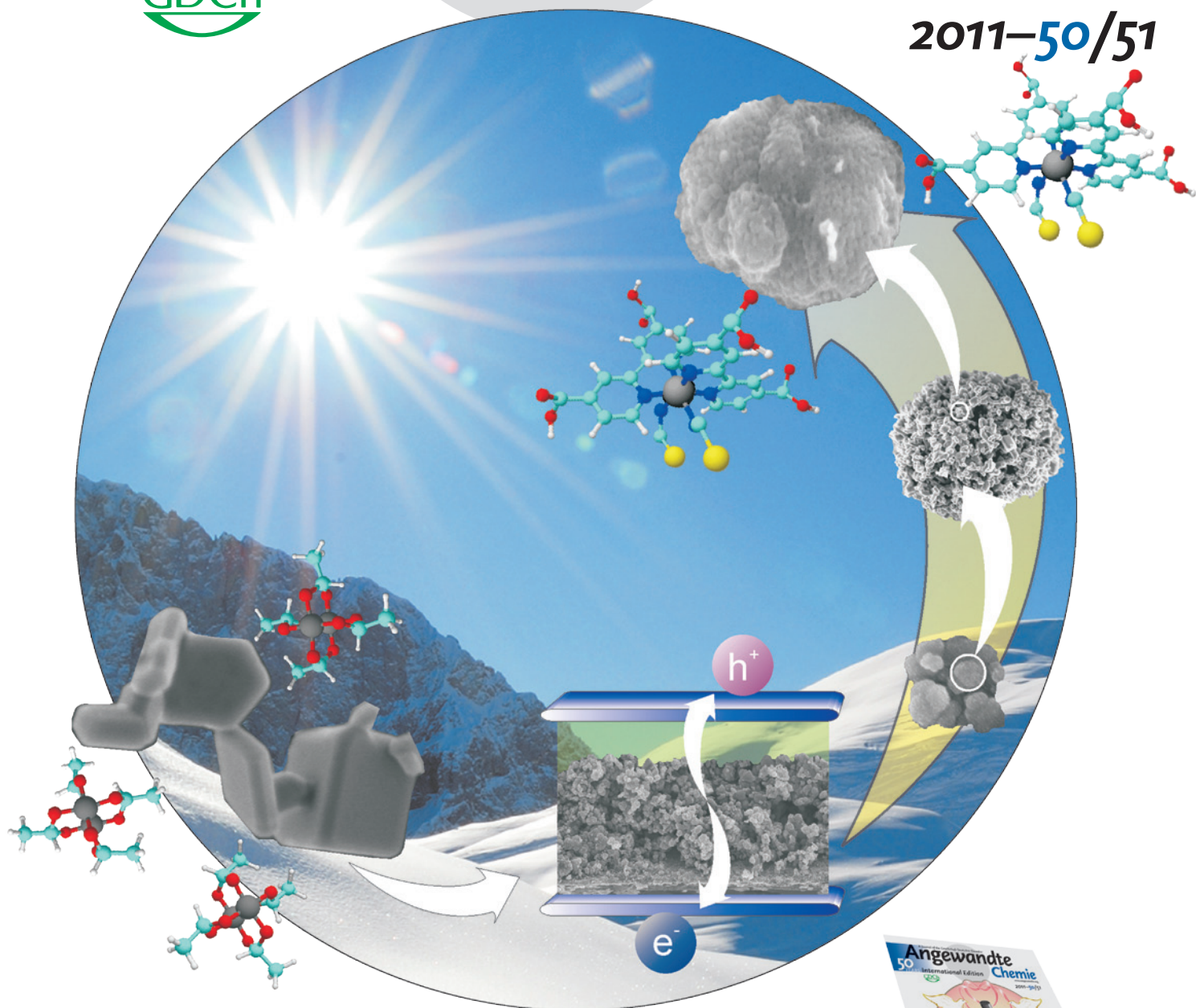
# Angewandte Chemie

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**Optochemical Genetics Urea Chemistry**

Review by D. Trauner et al.

**Urea Chemistry**

Minireview by J. Clayden and N. Volz

**Highlights: DNA-Demethylation • Metal-Mediated Deformylation • Asymmetric  $\alpha$ -Alkylation**

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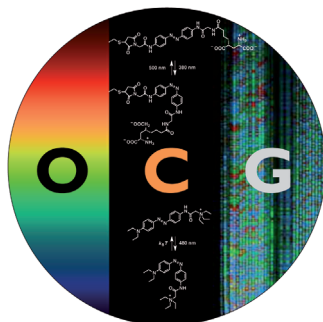
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 **WILEY-VCH**

## Cover Picture

**Nafiseh Memarian, Isabella Concina, Antonio Braga, Seyed Mohammad Rozati, Alberto Vomiero,\* and Giorgio Sberveglieri**

**Hierarchically structured** ZnO photoanodes for dye-sensitized solar cells can be fabricated by spray pyrolysis, as shown by A. Vomiero and co-workers in their Communication on page 12321 ff. These photoanodes can achieve a top photoconversion efficiency of 7.5 %, as for ZnO-based cells. The technique is simple, cheap, and it can be scaled up to cover large areas.

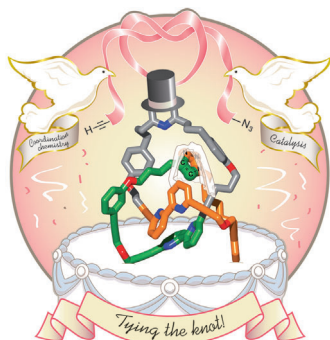
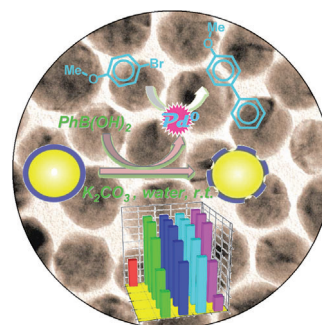


### **Optochemical Genetics**

D. Trauner et al. show in their Review on page 12156 ff. how voltage-gated and ligand-gated ion channels can be endowed with synthetic photoswitches. The resulting artificial photoreceptors can be used to optically control neurons with exceptional precision.

### **“Nanoparticle” Catalysis**

C. Amatore and co-workers describe in their Communication on page 12184 ff. the mechanism of a nanoparticle-catalyzed Suzuki–Miyaura coupling. The source of the catalytic activity was traced to Pd<sup>0</sup> species leaching into the aqueous reaction solution.



### **Chemical Topology**

In their Communication on page 12280 ff., D. A. Leigh et al. report the synthesis of a 76-atom trefoil knot. Copper(I) ions act both as a template to position the building blocks and as a catalyst for the final bond-forming reaction.