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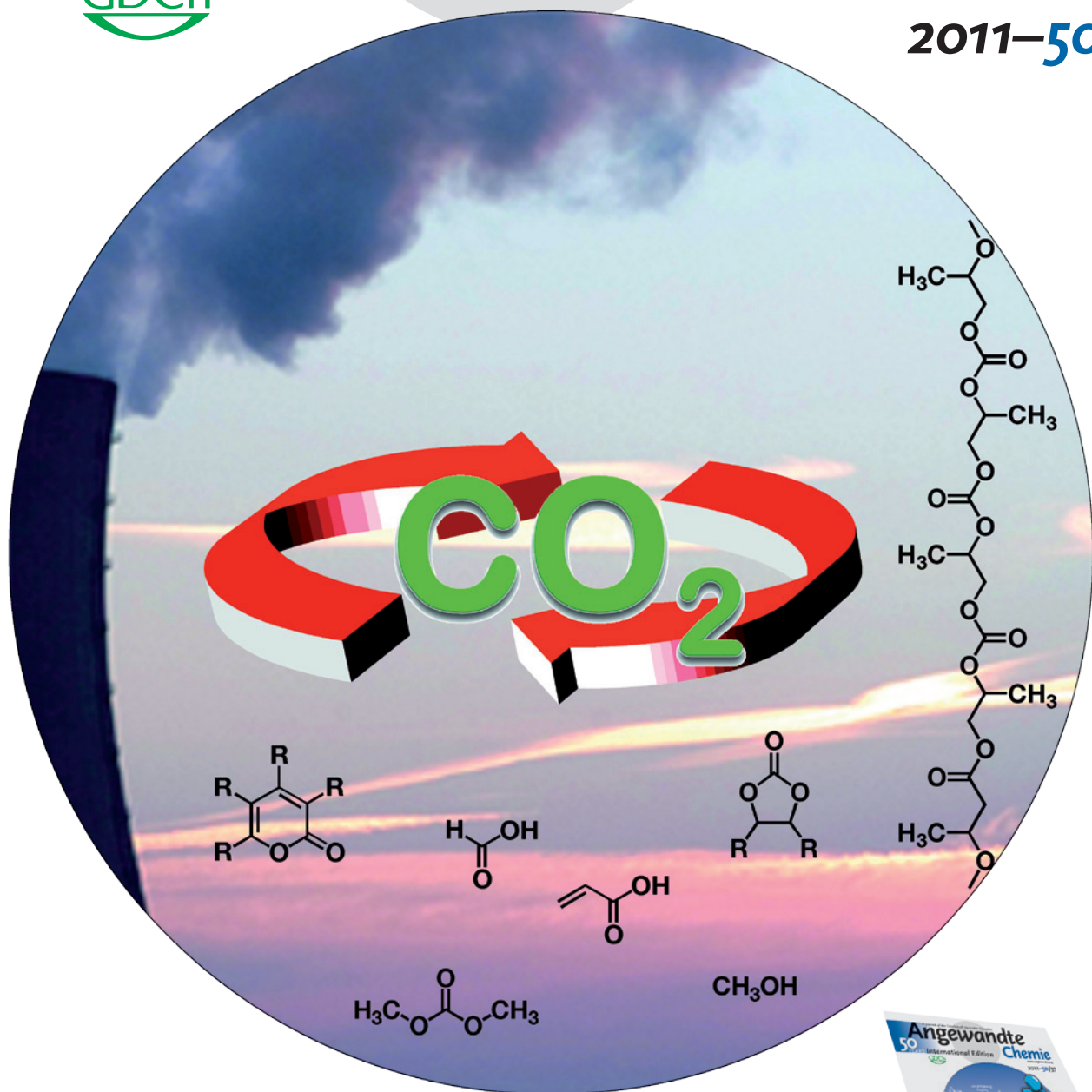
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Catalytic Conversion of CO₂

B. Rieger, F. E. Kühn et al.

Pictet–Spengler Reaction

J. Stöckigt, H. Waldmann et al.

Nanostructures for Optical and Electronic Applications

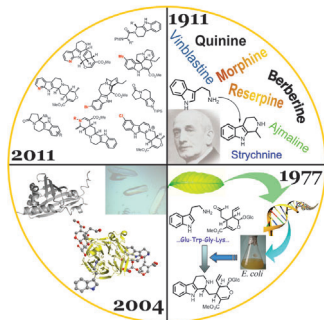
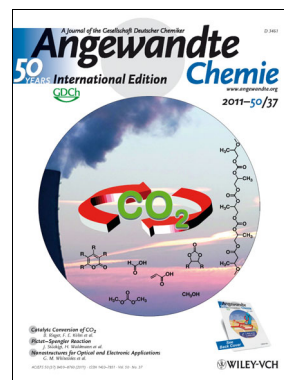
G. M. Whitesides et al.



Cover Picture

**Mirza Cokoja, Christian Bruckmeier, Bernhard Rieger,*
Wolfgang A. Herrmann, and Fritz E. Kühn***

The activation of carbon dioxide is one of the major tasks of catalysis today. CO₂ is a ubiquitous and cheap C₁ feedstock for the synthesis of raw and fine chemicals, yet its use as a reactant in industrial synthesis is comparatively scarce. The transformation of CO₂ into acids, esters, lactones, and polymers with molecular transition-metal catalysts is a future alternative application. B. Rieger, F. E. Kühn et al. present the current catalysts and products in their Review on page 8510 ff.

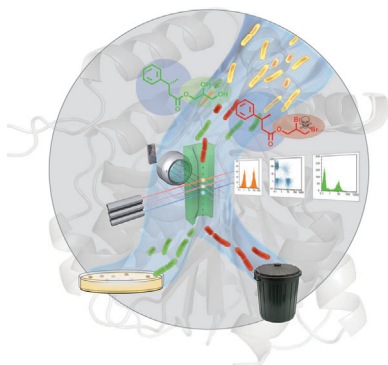
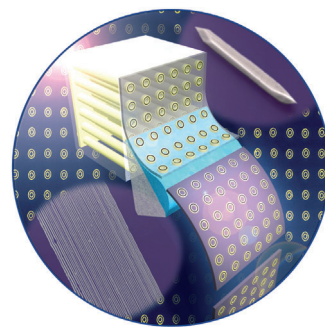


Pictet–Spengler Reaction

The discovery of the Pictet–Spengler reaction 100 years ago has provided the most important method for the synthesis of alkaloids. The status of research in both enzymatic and non-enzymatic methods for this reaction is described in the Review by J. Stöckigt, H. Waldmann et al. on page 8538 ff.

Nanoskiving

Nanoskiving is an experimentally simple and inexpensive method of generating nanostructures for applications in optics and electronics. Its working principles including examples of its application in the laboratory are explained by G. M. Whitesides et al. in their Review on page 8566 ff.



Protein Engineering

In their Communication on page 8584 ff, D. Böttcher, U. T. Bornscheuer, and co-workers outline a basic principle to select *E. coli* bacteria that express an enzyme with desired enantioselectivity. An evolutionary pressure using two pseudoenantiomeric esters leads to growth or death of the host.