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Berberine Bridge Enzyme

**Photochemical Reactions**

T. Bach and J. P. Hehn

**Shape Control**

Y. Wang and J. Fang

**Asymmetric Catalysis**

M. Bandini

**Porous Molecules**

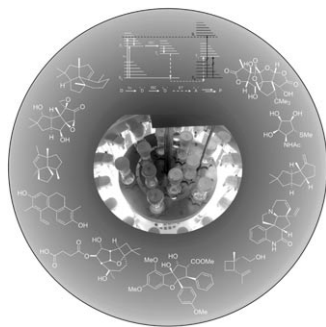
A. I. Cooper



## Cover Picture

**Joerg H. Schrittwieser, Verena Resch, Johann H. Sattler, Wolf-Dieter Lienhart, Katharina Durchschein, Andreas Winkler, Karl Gruber, Peter Macheroux, and Wolfgang Kroutil\***

**Berberine bridge enzyme (BBE)** from the California poppy enantioselectively converts benzyloisoquinolines into berbines by oxidative C–C coupling that consumes  $O_2$  as a stoichiometric oxidant. In their Communication on page 1068 ff., W. Kroutil and co-workers describe the first biocatalytic application of BBE on a preparative scale. Novel optically pure benzyloisoquinolines and berbines were prepared by BBE-catalyzed oxidative kinetic resolution of racemic substrates. Cover picture by V. Resch.

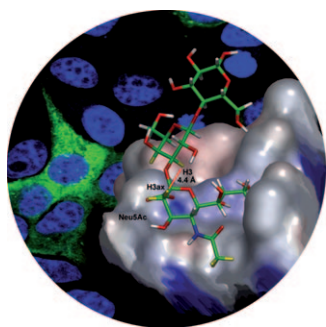
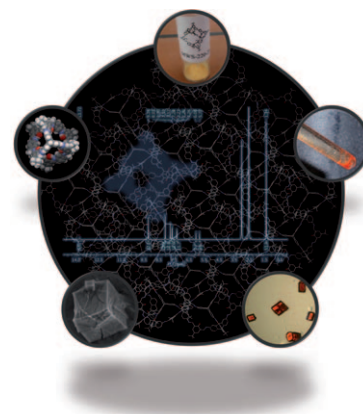


### **Photochemical Reactions**

Synthetic chemists have often been reluctant to use photochemical reactions in organic synthesis. T. Bach and J. P. Hehn show in their Review on page 1000 ff. that this reserve is unfounded by highlighting the most important photochemical transformations that have been employed in natural product synthesis.

### **Cage Compounds**

In their Communication on page 1046 ff., M. Mastalerz and co-workers describe a functionalized cage compound with exceptionally high surface area and remarkable gas-adsorption properties.



### **Rotaviruses**

M. von Itzstein and co-workers describe in their Communication on page 1055 ff. how  $\alpha$ -GM3 ( $\alpha$ -2,3-sialyllactose) binds to the rotavirus surface protein VP8\* with both the sialic acid and galactose moieties contributing to the binding event.