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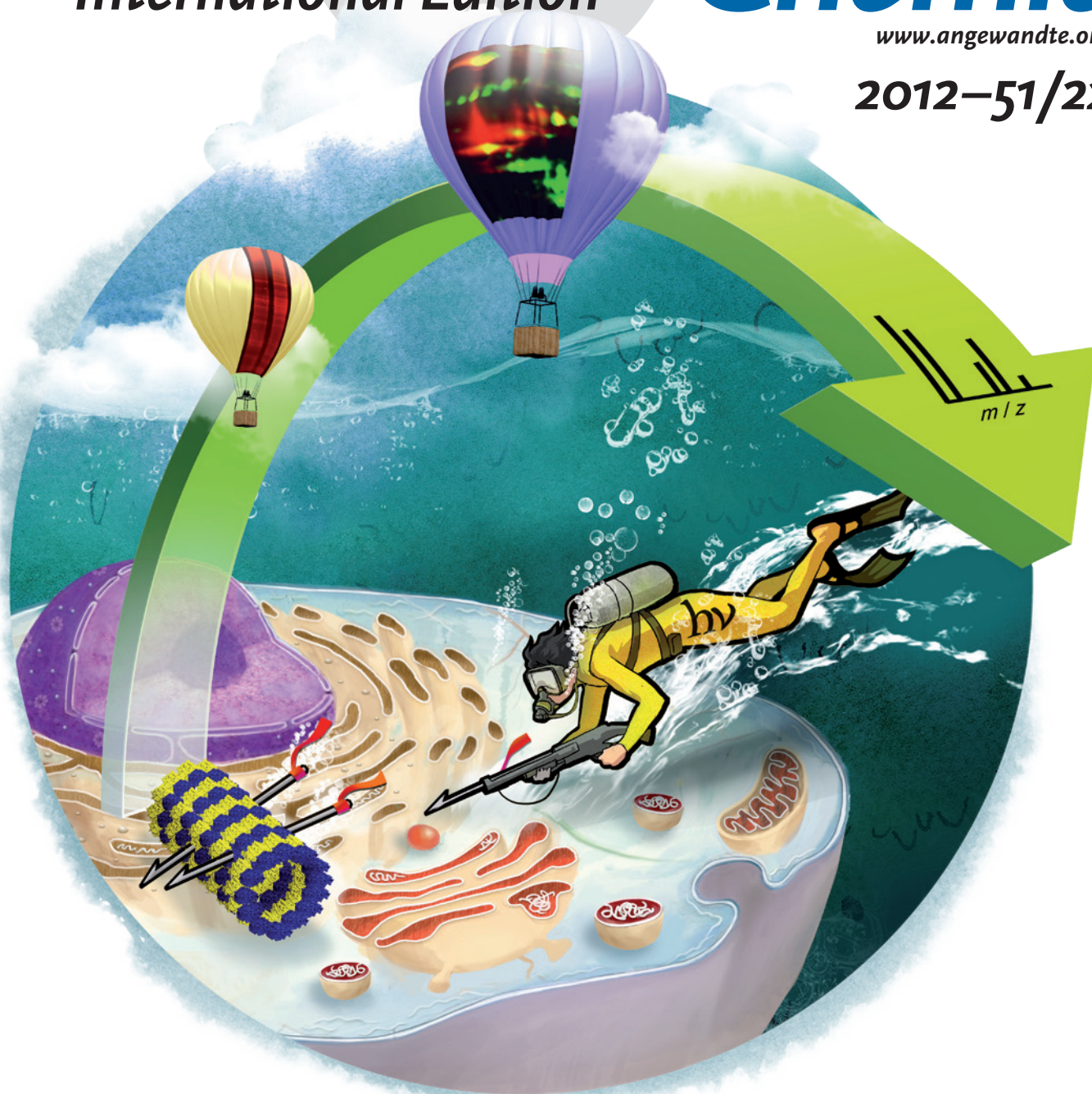
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The Molecular Frontiers Foundation

Editorial by B. Nordén

Curcumin

Review by G. Rimbach et al.

Artificial Nanochannels

Minireview by L. Jiang et al.

Highlights: Organocatalysis • Drug Delivery Systems

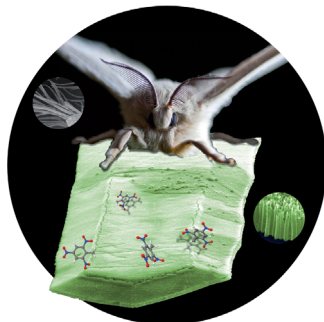
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Cover Picture

Jongmin Park, Sangmi Oh, and Seung Bum Park*

Target identification is the crown jewel of chemical biology. In their Communication on page 5447 ff., S. B. Park et al. have developed a new target identification method, fluorescence difference in two-dimensional gel electrophoresis (FITGE), to observe the interactions between proteins and small molecules in an intact cellular environment. FITGE successfully identifies protein differentiation between specific and nonspecific binding of photoaffinity probes.

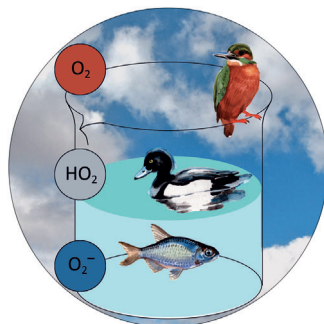


Chemical Sensors

Silicon microcantilevers modified with a layer of vertical TiO_2 nanotubes, which are inspired by the silkworm sensilla, can be used to detect TNT. The sensor function is explained by V. Keller et al. on page 5334 ff. Photo of the silkworm: Dominique Gellez.

Molecular Machines

D. A. Leigh et al. describe in their Communication on page 5480 ff. how a small molecule walks along a track and performs a task, namely quenching fluorescence at the end of the track.



Atmospheric Chemistry

M. F. Ruiz-López et al. describe on page 5413 ff. how the chemistry at the air–water interface of the atmospherically relevant radicals $\text{HO}_2^\bullet$ and $\text{O}_2^{\bullet-}$ is different from both the bulk and the gas-phase chemistry.