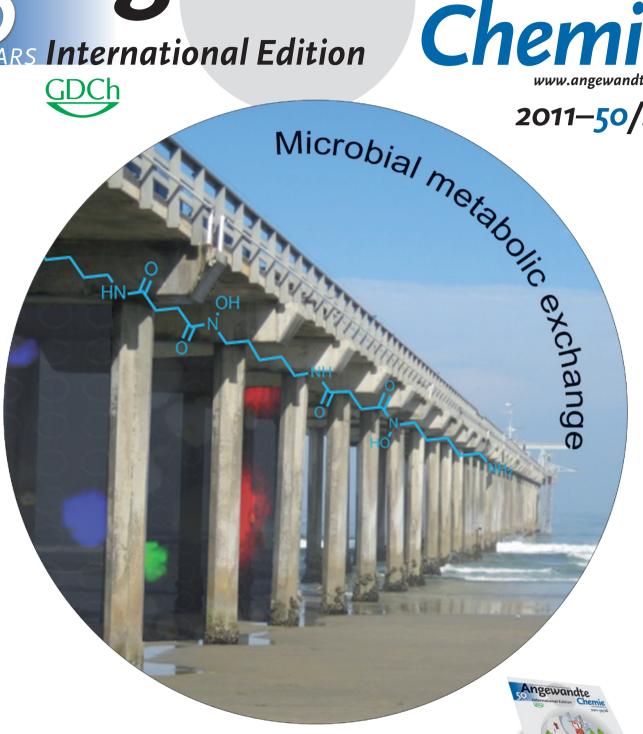


2011-50/26



Upconversion

M. Haase and H. Schäfer

Highlights: Iron Catalysis · Chromatin Disruptors · Polymer Design

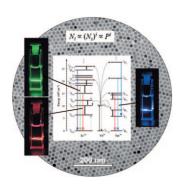


Cover Picture

Yu-Liang Yang, Yuquan Xu, Roland D. Kersten, Wei-Ting Liu, Michael J. Meehan, Bradley S. Moore, Nuno Bandeira, and Pieter C. Dorrestein*

Imaging mass spectrometry has been used to study microbes found on the Scripps pier at the Scripps Institution of Oceanography of the University of California, San Diego (shown in the cover picture) that sits in the Pacific ocean. P. C. Dorrestein and co-workers describe in their Communication on page 5839 ff. how this technique can be used to connect the chemistry of microbial metabolic interactions with phenotypic changes as well as to uncover chemical phenotypes that cannot be observed by the naked eye.



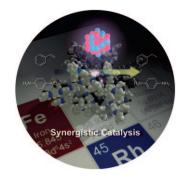


Upconversion

The development of upconverting (UC) nanophosphors has become a promising field of materials science. In their Review on page 5808 ff., H. Schäfer and M. Haase recount the synthesis, properties, and applications of UC nanoparticles.

Hydrogenation

Rh/Fe bimetallic nanoparticles in dendrimers have improved catalytic activity towards the hydrogenation of olefins, as H. Nishihara et al. describe in their Communication on page 5830 ff.





Microreactors

In their Communication on page 5952 ff., D.-P. Kim and co-workers describe a simple microchemical approach for the continuous in situ generation, on-demand separation, and reaction of toxic and explosive diazomethane.