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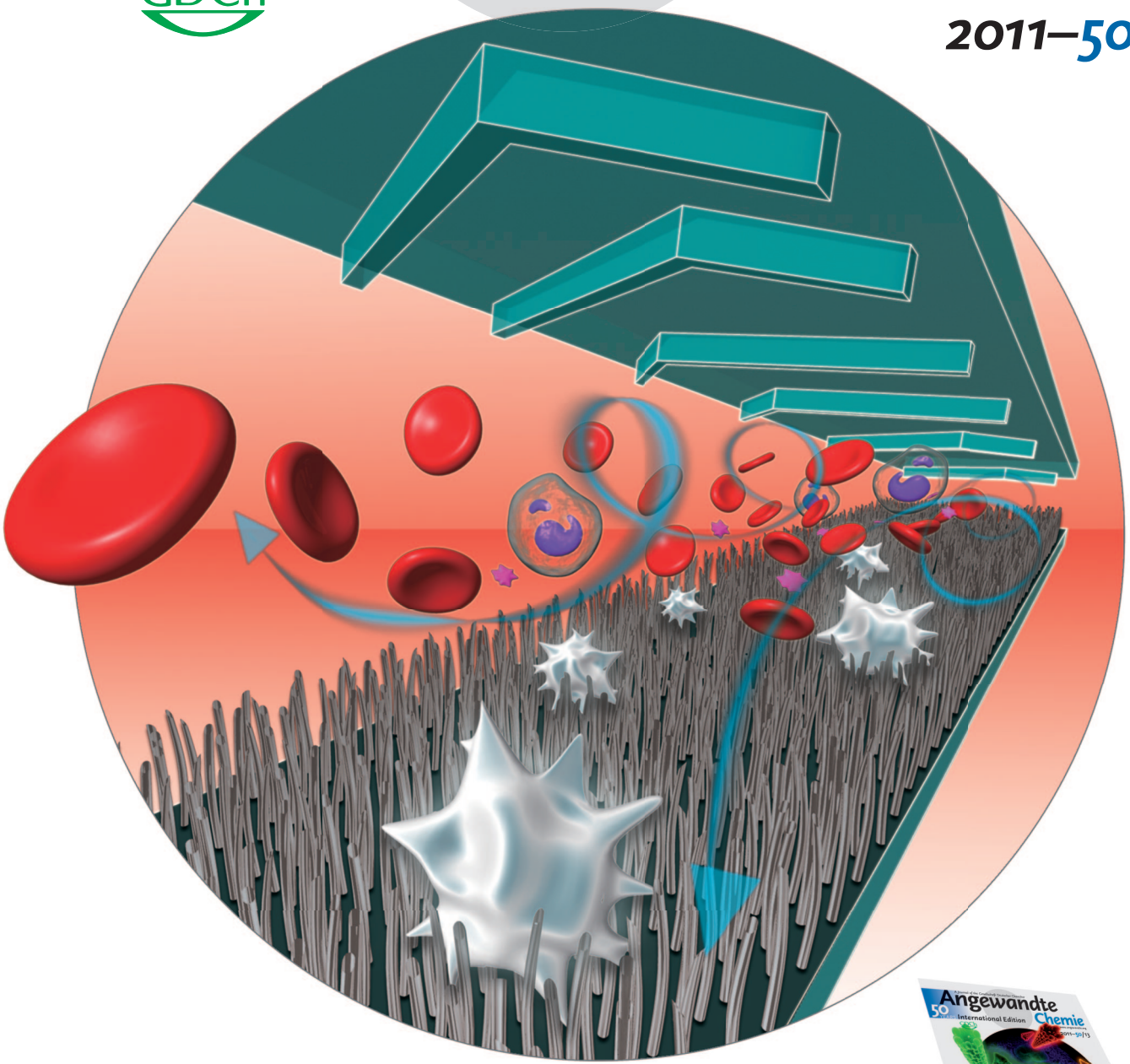

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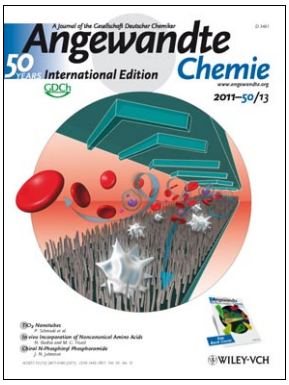
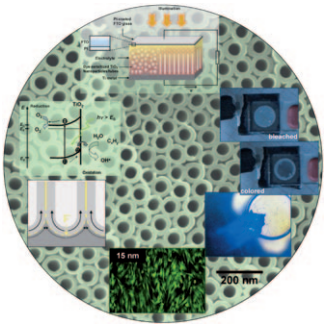
Cover Picture

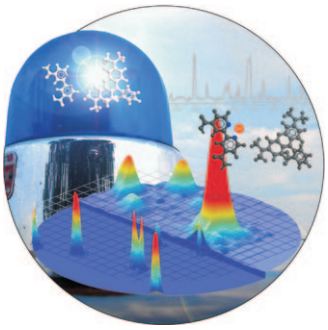


Shutao Wang, Kan Liu, Jian Liu, Zeta T.-F. Yu, Xiaowen Xu, Libo Zhao, Tom Lee, Eun Kyung Lee, Jean Reiss, Yi-Kuen Lee, Leland W. K. Chung, Jiaoti Huang, Matthew Rettig, David Seligson, Kumaran N. Duraiswamy,* Clifton K.-F. Shen,* and Hsian-Rong Tseng*

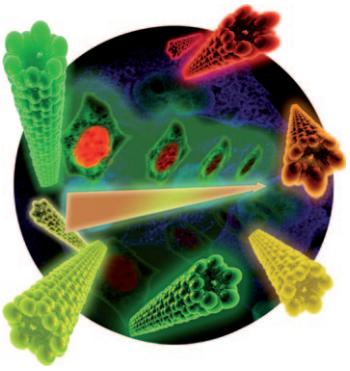
A capture-agent-coated nanostructured substrate is combined with a microfluidic chaotic mixer to give a new-generation technology for cancer diagnosis. In their Communication on page 3084 ff. H.-R. Tseng and co-workers show that with this system it is possible to isolate circulating tumor cells from whole blood with great efficiency, thus opening up opportunities for the early detection of cancer metastasis not possible with existing technologies.



TiO_2 Nanotubes
Titanium dioxide is one of the most investigated materials. TiO_2 nanotubes, which have outstanding properties and great potential in applications, play a particularly important role. P. Schmuki et al. provide an overview of this field in their Review on page 2904 ff.



High-Resolution Microscopy
In their Communication on page 2940 ff. D.-P. Herten et al. use a chemical reaction, the coordination of copper(II) ions to a fluorescence probe, to overcome Abbe's resolution limit in fluorescence microscopy. Their technique offers an alternative to light-based methods for localizing individual molecules.



Silicon Nanowires
Y. He, S. T. Lee, and co-workers describe, in their Communication on page 3080 ff., silicon nanowires (SiNWs) that are multicolored and highly fluorescent. SiNWs show potential in optoelectronic and biological applications. The pictured SiNWs are used as fluorescent probes in long-term cellular imaging.