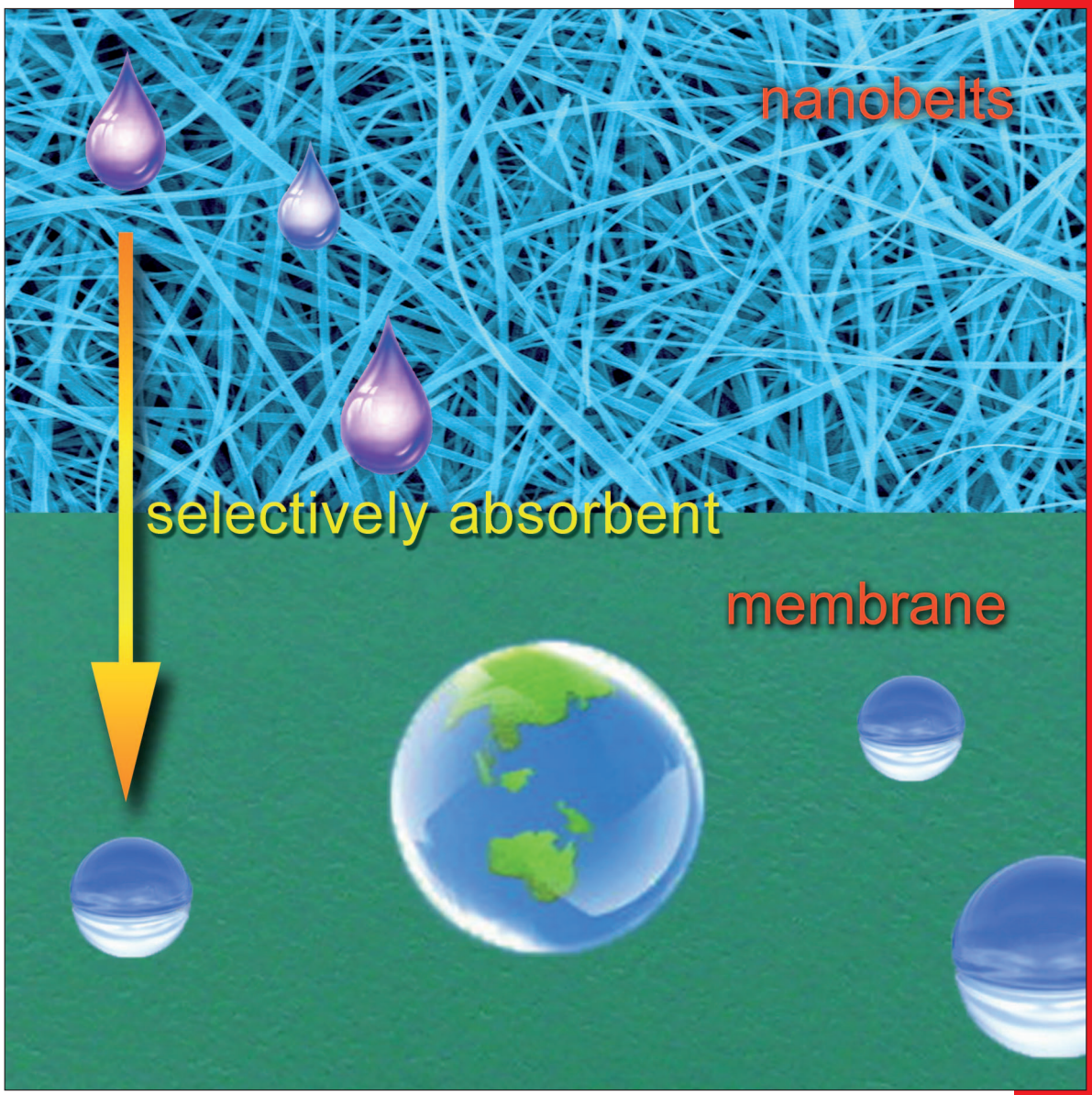
CHEMISTRY

A EUROPEAN JOURNAL

16/48

2010



A Journal of

ChemPubSoc Europe

Minireview

Asymmetric Hydrogenation of Minimally Functionalised Terminal Olefins: An Alternative Sustainable and Direct Strategy for Preparing Enantioenriched Hydrocarbons

M. Diéguez et al.

Supported by ACES

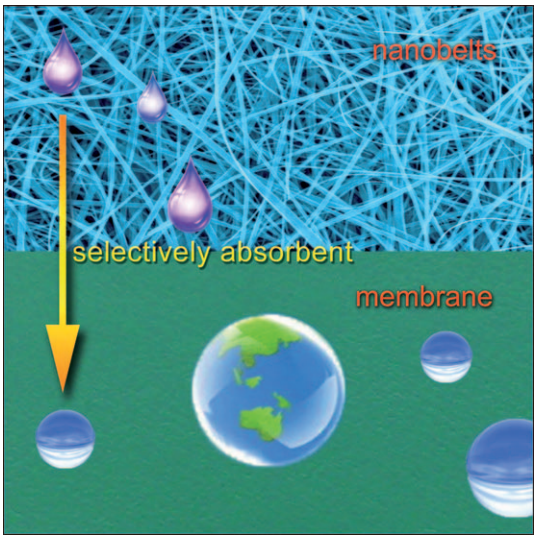
WILEY-VCH

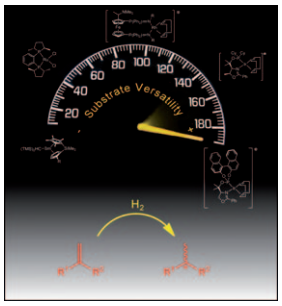
CEUJED 16 (48) 14209–14588 (2010) · ISSN 0947-6539 · Vol. 16 · No. 48 · 2010

www.chemeurj.org

CHEMISTRY
A EUROPEAN JOURNAL

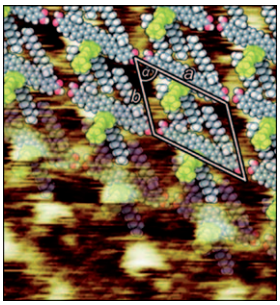
... free-standing, paper-like, highly oriented membranes composed of ammonium vanadium oxide ($NH_4V_4O_{14}$) nanobelts have been created by taking advantage of the nanoscaled self-assembly of the architecture, and exhibit controllable wetting behavior ranging from superhydrophilic to superhydrophobic (when coated with silicone molecules). The as-obtained $NH_4V_4O_{14}$ nanobelt membranes can selectively absorb a variety of both polar and nonpolar organic solvents; moreover, they can even separate two mixed solvents with very similar polarities and absorb solid contaminants in organic solvents. For more details see the Full Paper by J. Hu et al. on page 14307 ff.

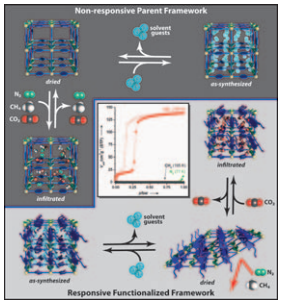




Hydrogenation Reactions
In their Minireview on page 14232 ff., M. Diéguez et al. discuss the progress made in the asymmetric hydrogenation of minimally functionalized terminal olefins as a new, alternative, sustainable, and direct strategy for preparing enantioenriched hydrocarbons. Ir/P,N catalytic systems are state of the art in the asymmetric hydrogenation of minimally functionalized terminal olefins. In this respect, the recent introduction of biaryl phosphite moieties into ligand design has led to a major improvement in substrate versatility.

Self-Assembly
The self-assembly of a properly designed 3D building block exposing a vertically oriented azobenzene when physisorbed on HOPG in its trans form has been investigated by STM. The switching of the monolayer consisting of upright oriented *trans*-azobenzenes to the corresponding monolayer based on *cis*-azobenzenes has been triggered by light. For more information see the Communication by S. Hecht, P. Samorì et al. on page 14256 ff.





Metal–Organic Frameworks
In their Full Paper on page 14296 ff., R. A. Fischer et al. describe the functionalization of well-known rigid metal–organic frameworks, $[Zn_4O(bdc)_3]_n$ and $[Zn_2(bdc)_2(dabco)]_n$ (bdc = 1,4-benzene dicarboxylate, dabco = diazabicyclo-[2.2.2]octane), with additional alkyl ether groups of the type $-O-(CH_2)_n-O-CH_3$ ($n = 2$–4). This initiates unexpected structural flexibility, as well as very high sorption selectivity towards CO_2 over N_2 and CH_4 in the porous materials.