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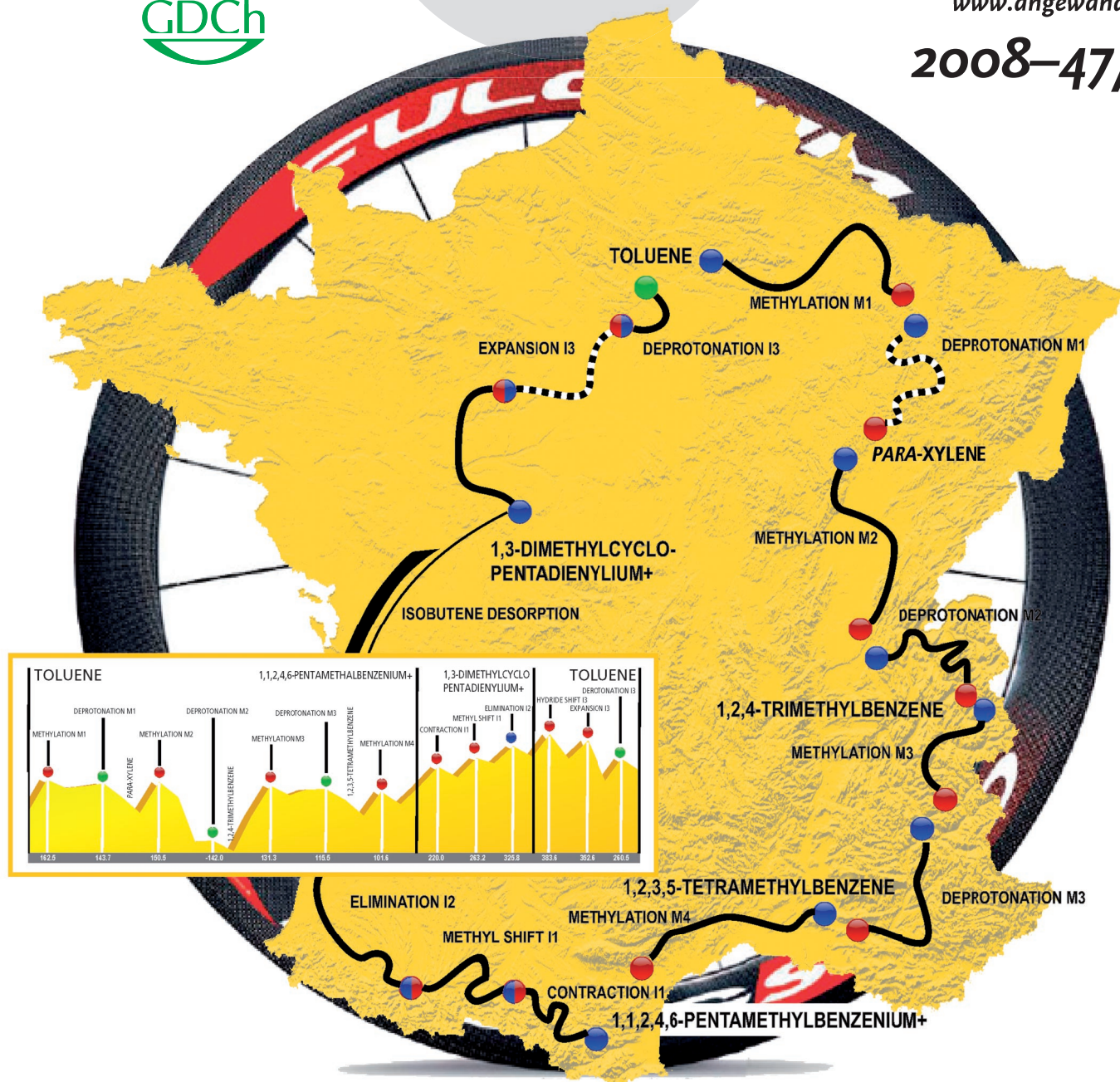
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Magnetic Nanoparticles

J. Cheon *et al.*

Metall–Organic Polyhedra

O. M. Yaghi *et al.*

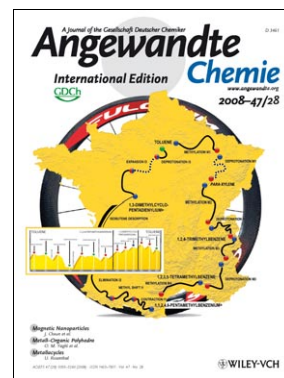
Metallacycles

U. Rosenthal

Cover Picture

David M. McCann, David Lesthaeghe, Philip W. Kletnieks, Darryl R. Guenther, Miranda J. Hayman, Veronique Van Speybroeck, Michel Waroquier, and James F. Haw*

A *complete catalytic cycle* for the conversion of methanol into olefins (MTO) in zeolite HZSM-5 is presented by J. F. Haw et al. in their Communication on page 5179 ff. The cycle is fully consistent with theoretical and experimental observations, and can be compared to a cycling race, with stages leading up to a finish that coincides with the starting point. For each stage, specific reaction barriers need to be overcome, as in the mountain stages of the Tour de France which separate the wheat from the chaff.

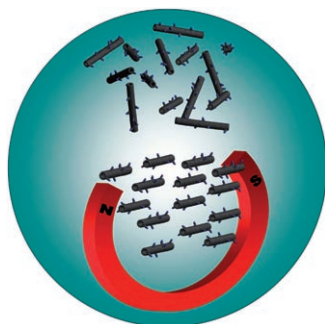
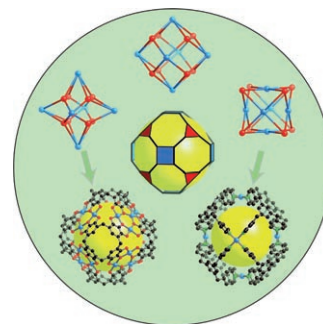


Magnetic Nanoparticles

J. Cheon et al. describe the use of synthetic magnetic nanoparticles in magnetic resonance imaging in their Review on page 5122 ff. The properties of the particles can be tailored through use of surface ligands and different metal ions.

Metal–Organic Polyhedra

In their Review on page 5136 ff, O. M. Yaghi et al. present an overview of the design principles for metal–organic polyhedra. The findings can be used to achieve the targeted assembly of such systems from secondary building units and linkers.



Nanotechnology

J. Tumpane et al. show how functionalized carbon nanotubes can be oriented in a weak magnetic field in their Communication on page 5148 ff. Relaxation measurements then allow their length to be determined.