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Dr. Jekyll
 CuSO_4

Mr. Hyde
 AgSO_4

The strange case of...

Thiol–Ene Reaction

C. E. Hoyle, C. N. Bowman

Normalizing Photocatalysis Data

T. Maschmeyer, M. Che

Metal–Organic Membranes

F. Kapteijn, J. Gascon

Porous Organic Polymers

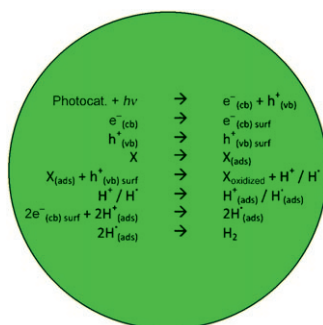
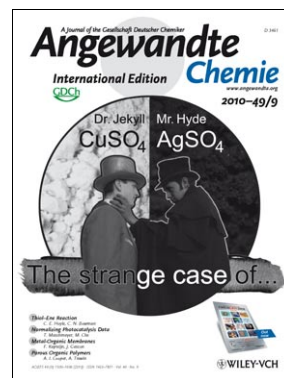
A. I. Cooper, A. Trewin



Cover Picture

Przemysław J. Malinowski, Mariana Derzsi, Zoran Mazej, Zvonko Jagličić, Bartłomiej Gawęł, Wiesław Łasocha, and Wojciech Grochala*

Deep-black AgSO_4 (Mr. Hyde) is a narrow-bandgap semiconductor and an extremely strong oxidant. W. Grochala and co-workers show in their Communication on page 1683 ff. that it differs in all important physicochemical properties from its lighter congener, unreactive colorless CuSO_4 (Dr. Jekyll). Unusually strong antiferromagnetic coupling persists up to the temperature at which AgSO_4 thermally decomposes (ca. 120 °C), which sets it apart from all other transition-metal sulfates.

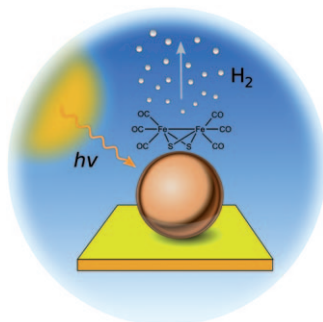
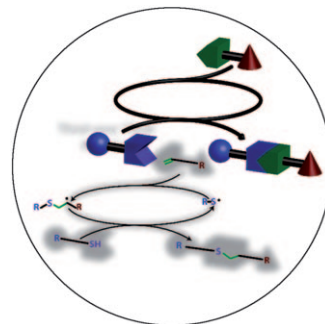


Reliable Catalysis Data

In their Essay on page 1536 ff., T. Maschmeyer and M. Che look for a way to improve the comparability of studies of the activity of catalysts for the photocatalytic production of hydrogen from water.

The Thiol–Ene Reaction

The reaction of thiols with alkenes shows many of the characteristic attributes of click chemistry. In their Review on page 1540 ff., C. E. Hoyle and C. N. Bowman present the status of research into this chemistry using examples from diverse research areas.



Quantum Dots

In their Communication on page 1574 ff., T. Nann, C. J. Pickett et al. present an efficient photocathode for photoelectrochemical dihydrogen production. The system consists of low-cost, non-toxic elements and is an economical alternative for hydrogen production.